# Foreign language teaching and learning in Chinese higher education: emerging challenges

**Edited by**
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# Foreign language teaching and learning in Chinese higher education: emerging challenges

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# Editorial: Foreign language teaching and learning in Chinese higher education: emerging challenges

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Editorial on the Research Topic
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## 1 Introduction

Foreign-language education has always been a strategic priority in China, but the last decade has seen an unprecedented convergence of pressures: hyper-globalization, the Belt & Road Initiative, the national "Double First-Class" agenda, curriculum-ideology mandates, demographic changes in the student population, and a tidal wave of educational technologies crowned by generative artificial intelligence (AI) (Lei and Qin, 2022; Zhou and Hou, 2025). Amid this turbulence, conventional examination-driven pedagogies, standardized curricula, and one-size-fits-all assessments are increasingly in conflict with learner diversity, labor-market uncertainty, and internationalization agendas.

It is against this backdrop that the current Research Topic invited empirical and theoretical research to interrogate, explain, and ultimately contribute to managing these tensions from the perspectives of learners and teachers alike. Following a stringent peer review, 16 papers were accepted for publication in three Frontiers journals (Psychology, Education, and Language Sciences). Collectively, they offer a panoramic overview of where the field is now, where the gaps lie, and the way it is likely to go.

## 2 Exploring emerging challenges in language teaching and learning

To provide a coherent synthesis of the findings presented in this Research Topic, and to reflect the multifaceted nature of the research, we grouped the 16 papers into four overlapping clusters: (1) affective–motivational dynamics; (2) policy, ideology, and curriculum; (3) technology-mediated teaching and learning; and (4) classroom environment, pedagogy, and assessment. This thematic organization not only clarifies the main research avenues but also underscores their interconnections. While presented in isolation here, these threads often overlap within single studies—a testament to the systemic intricacy of foreign-language teaching today.

## 2.1 Affective and motivational dynamics (six articles)

The first cluster highlights the crucial role of affect and motivation in foreign-language learning, an area marked by increasing theoretical and empirical sophistication. Huang et al. employed a quasi-experimental design to trace self-, co- and socially shared emotion-regulation strategies during project-based collaborative learning (PBCL) in Academic English. Their fine-grained temporal analysis revealed how emotional turbulence—rather than just cognitive load—accounts for success or failure in collaborative tasks. Jin et al. drew upon positive-psychology approaches to demonstrate that trait emotional intelligence (TEI) predicts perceived language performance via the sequential mediation of academic self-efficacy and foreign-language anxiety (FLA). Zhao et al. investigated the triadic relation between foreign-language enjoyment (FLE), conscientiousness, and willingness to communicate (WTC), finding that conscientiousness partially mediates the FLE–WTC relationship.

Wang et al. used multi-group structural-equation modeling with 606 EFL students to demonstrate that a mastery-goal classroom climate promoted engagement indirectly (via self-efficacy) for both genders, but a performance goal climate only helped male students. Chiang confirmed the use of a 15-item Self-Determination Motivation Scale adapted for Chinese university learners, providing a psychometrically sound tool for future affect research. Sukjairungwattana, Xu et al. compared Beijing and Macao English majors, finding that "involution" (内卷)—a characteristically Chinese term describing hyper-competition—interacted with anxiety to influence motivation profiles. Collectively, these investigations highlight that Chinese tertiary FLE learners now necessitate gender-sensitive, region-sensitive, personality-sensitive, and culturally sensitive socio-emotional support, including constructs deeply rooted in Chinese culture such as "involution." Together, this body of research indicates the need for more subtle, context-sensitive interventions that respond to the dialectical relationship between affect, motivation, and learning outcomes.

## 2.2 Policy, ideology, and curriculum innovation (four articles)

Building on affective-motivational findings, the second cluster turned to the macro-level forces that shape foreign-language education in China today. Hu et al. leveraged Latent Dirichlet Allocation and Word2Vec analyses of 20 years of policy documents, showing a post-Belt and Road pivot from test scores toward intercultural communicative competence and formative feedback. Mei offered a micro-implementation of "curriculum ideology and politics" in an English-linguistics course, documenting gains in conceptual understanding, moral reasoning and classroom engagement. Sukjairungwattana, Hu et al. provided a systematic review of higher-education internationalization in Asia, highlighting English-medium instruction (EMI) tensions between global capital and local identity. Gu provided the first nationwide audit of Italian language programs, tracing their

growth from the 1950s to 24 current degree-granting institutions but flagging shortages in qualified instructors and up-to-date materials. A cross-cutting insight from these studies is that national policy is simultaneously outward-looking (e.g., EMI, the Belt and Road Initiative) and inward-oriented (e.g., values education), compelling curriculum designers to balance global competence with ideological alignment. This tension between internationalization and ideological conformity highlights the complexity of policy enactment and curriculum reform in an era of rapid change.

## 2.3 Technology-mediated learning and teaching (four articles)

In response to the digital transformation sweeping through education, the third cluster of contributions examined how technology is reshaping both the practice and perception of language teaching and learning. Yan et al. used metaphor analysis with 281 undergraduates to reveal ambivalent conceptualizations of generative AI—ranging from "tool" and "brain" to "medicine" and even "addictive drink." Tian and Wang adapted the GETAMEL framework to investigate interpreting instructors' uptake of tablets for digital note-taking, identifying perceived ease of use, facilitating conditions and social influence as decisive factors. Zhou et al. introduced a Translanguaging-Multiliteracies Learning-Design (LDTMP) via design-based research; pilot data showed significant boosts in student agency across self-efficacy, decision-making and perceived teacher support.

Wu qualitatively remodels the reading-to-write process, identifying recursive planning and rereading loops that bridge source comprehension with target production-insights valuable for e-portfolio and AI-assisted writing platforms. Technology affordances are expanding faster than pedagogical capacity or infrastructure; success hinges on instructor digital competence, institutional policy, and learners' critical data literacy. At the same time, the articles underscore the need to resolve ambivalent attitudes toward technology so that innovation translates into meaningful learning experiences.

## 2.4 Classroom environment, pedagogy, and assessment (two articles)

Finally, the fourth cluster brought its focus back to the micro-level of the classroom, where the interplay of environment, pedagogy, and assessment shapes the lived experiences of students and teachers. Ye synthesized decades of research on classroom environment (CE) effects on engagement, calling for multi-layered interventions—from seating arrangements to teacher emotional labor—to engineer "positive CE." Lo and Shi demonstrated, through mixed-methods data on 310 Hong Kong undergraduates, that reading contemporary English fiction within a content-based ESL course promotes not only language skills but also empathy and reflective thinking. These findings reaffirm the centrality of classroom climate and pedagogical design, while highlighting the

value of literature and content-based instruction in fostering both linguistic and socio-emotional growth.

## 3 What do we know now?

Across these studies, a number of key conclusions can be drawn. Affective wellbeing emerges as foundational; from PBCL to EMI classrooms, emotion regulation, enjoyment, and self-efficacy consistently trump purely cognitive variables in the prediction of performance and engagement. Policy in Chinese higher education is multi-vector, drawn toward international benchmarks such as global rankings and English-medium instruction but also drawn to respond to domestic ideological imperatives, with the consequence that curricular hybrids are still being developed. Technology appears double-edged: digital note-taking, translanguaging software, and particularly generative AI offer the promise of personalized, multimodal learning but also pose threats of dependency, ethical compromise, and inequitable access. Finally, learner diversity is increasing; regional, gender, personality, and disciplinary differences now forge distinctive motivational pathways (Xu, 2025), so that "massified" higher education can no longer be served by one-size-fits-all solutions.

## 4 Future directions: confronting the AI frontier

Though numerous contributions touched on AI, the field is still in the exploratory stage, and we outline five high-priority research directions in the near term. First, the establishment of key AI literacy and academic integrity frameworks is crucial (Abuadas and Albikawi, 2025; Dou et al., 2024). Students need to be taught not only how to use ChatGPT-like tools but also how to critique, verify, and ethically incorporate AI-generated content (Batool et al., 2024), and research in the near term should investigate detection versus education responses to plagiarism and "prompt engineering" concerns (Nugumanova et al., 2025). Second, adaptive, context-aware feedback is worthy of more attention (Ni and Xu, 2025), including research on large-language-model feedback attuned to Chinese learners' interlanguage levels, particularly for less-resourced languages such as Italian or Portuguese, and exploring teacher–AI co-feedback models concerning workload, trust, and learning outcomes (Huang et al., 2025). Third, the effects of AI on teacher professional identity need to be longitudinally traced as instructors renegotiate roles from knowledge transmitters to learning designers in classrooms with chatbots and auto-grading systems. Fourth, equity and access need to be mapped in detail, investigating discrepancies in bandwidth, hardware, and paid AI subscriptions across Tier-1, Tier-2, and vocational colleges and designing low-cost interventions to narrow digital divides. Fifth, altering governance, data privacy, and localization concerns need to be examined, especially how China's data security laws intersect with global AI ecosystems and which compliance models can support ongoing innovation and collaboration worldwide.

Methodologically, the discipline can benefit from additional mixed-methods (Mahapatra, 2024), classroom-based experimentation (Oubibi, 2024), cross-regional comparative investigations Sukjairungwattana, Xu et al., and adherence to open-science practices such as preregistration and data sharing, which will hasten cumulative knowledge and incremental progress.

## 5 Conclusion

The sixteen articles gathered in this Research Topic collectively illuminate the multi-layered challenges—and nascent opportunities—facing foreign language education in Chinese higher education. Together, they show that affective wellbeing, policy alignment, technological agility and culturally responsive pedagogy are not ancillary but central to cultivating the multilingual (Chen et al., 2025), interculturally competent graduates who are in demand from national agendas and global labor markets alike (Kim et al., 2024).

As generative AI rapidly redefines what it means to learn, teach, and use a foreign language, the community must move beyond either-or debates toward evidence-based, ethically grounded integration strategies. We hope the insights offered here will catalyze such work and serve as a reference point for scholars, practitioners and policy-makers committed to navigating the next decade of foreign language education in China.

## Author contributions

WX: Conceptualization, Supervision, Writing – original draft, Writing – review & editing. PW: Conceptualization, Writing – review & editing.

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# Regulation of emotions in project-based collaborative learning: an empirical study in academic English classrooms

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In spite of the increasing popularity of project-based collaborative learning (PBCL) as a pedagogy, real successful collaboration cannot always be achieved due to the cognitive, motivational and social emotional challenges students encounter during collaboration. Recognizing the challenges and developing regulation strategies to cope with the challenges at both individual and group level is essential for successful collaboration. In the last decades, a growing interest has been developed around socially shared regulation of emotions and how it is interwoven with self-regulation and co-regulation. However, capturing the process of students' emotional challenges and regulations in a long and dynamic project proves difficult and there remains a paucity of evidence on how co-regulation and socially-shared regulation co-occur with learners' cognitive and emotional progress in project-based collaborative learning. The purpose of the present study is to investigate and identify what kind of social emotional challenges students encountered during PBCL and how they regulate themselves and the groups in order to finish the projects. A quasi-experimental research design was adopted in an academic English classroom, with thirty-eight students self-reporting their challenges and regulations three times after finishing each of the projects. The results of qualitative analysis plus a case study of two groups indicate that students encounter a variety of social emotional challenges and employed different levels of co-regulation and socially shared regulation in addition to self-regulation, leading to varying collaboration results and experiences. The findings of the study offer insights into the emotional regulation in PBCL and shed light for future design of pedagogical interventions aiming at supporting socially shared regulation.

KEYWORDS

PBCL, social emotion, self-regulation, co-regulation, socially-shared regulation

## 1 Introduction

With the advent of the era of knowledge economy and the development of artificial intelligence, the traditional way of teaching and learning has become increasingly difficult to meet the needs of future society. Cultivating students' 21st century skills has become a consensus and important trend of education today and learning has been moving from a purely individual and externally programmed endeavor (i.e., planned and executed with the

aid of a teacher) to learning in and with groups (Li et al., 2022). Collaborative learning, with its potential benefits of promoting higher-order thinking, communication, and leadership skills, has been advocated in almost all levels of education. In project-based learning (PBL) tasks, students need to go through a series of processes such as finding problems, collecting and analyzing data, communicating with each other, reflecting, etc., which can lead to deep learning and better learning effects on the one hand, and contribute to developing critical thinking, communication skills, teamwork spirit, problem solving and other critical skills on the other hand (Kim and Lim, 2018). Therefore, project-based collaborative learning (PBCL) is increasingly used as an innovative educational approach in a large variety of courses in higher education (Lin, 2018). Introducing PBCL into college academic English classrooms has also been found to not only positively influence the language skills and academic development of English learners, but also promote students' higher-order thinking skills and academic identity construction, stimulate students' independent learning, and cultivate students' communication skills and team spirit (Li and Wang, 2018).

However, collaborative learning tasks are quite demanding for students as multiple individuals are required to share responsibility for a common goal, and learners will inevitably encounter cognitive, motivational, and emotional challenges (Järvelä et al., 2015). Project-based collaborative learning, with its complex ill-structured learning task, gives rise to even more challenges than traditional well-structured learning tasks (Volet et al., 2009). Engaging in PBCL, learners need to constantly negotiate and defend themselves, step out of their comfort zones, and change their initial thoughts and perspectives in an effort to seek a sense of identity and belonging, all of which may evoke more socio-emotional conflicts (Näykki et al., n.d.). Unresolved challenges and conflicts can lead to negative emotions, frustration, and even anger, weaken the process and results of collaborative learning, and even make it impossible for group projects to continue (Hämäläinen, 2012).

In order to resolve the challenges in collaborations, students need to engage themselves in regulation (Greene, 2018). Regulation is "intentional, goal-oriented meta-cognitive behavior through which learners monitor and control cognitive, affective, motivational, and behavioral aspects to achieve more ideal learning" (Boekaerts, 2011). Early regulation models mainly focused on the self-regulated learning (SRL) of individual learners and social context only played a mediating role in affecting cognition and the achievement of personal goals (Boekaerts et al., 2000). In the past two decades, more and more researchers from computer-supported collaborative learning (CSCL) moved their attention from individual regulation to social forms of regulation. They expand the SRL theory of educational psychology and stress that students in collaborative learning need to engage themselves in co-regulation and socially-shared regulation. By negotiating and constructing a shared regulation through deliberate and strategic planning, monitoring, controlling, and evaluation of cognition, motivation, emotions, and behaviors of a group, socially shared regulated learning (SSRL) has been recognized as an essential aspect of collaborative learning success (Panadero and Järvelä, 2015).

Nevertheless, it is a challenge to capture, measure and understand SSRL in authentic classrooms due to the highly interactive and dynamic nature of SSRL in collaboration. Following tradition of self-regulation, previous SSRL focused more on metacognitive strategies group members use to regulate their collective activity and relatively little attention was given to regulation of emotion and motivation. Therefore, little is known about what socio-emotional challenges group members encounter and how SRL, CoRL, and SSRL activities interweave with learners' cognitive and emotional progress in collaborative learning (Nguyen et al., 2023). To fill the gap, more empirical research is needed regarding the regulation of emotion and how classroom teachers can design adaptive support and guide to promote students' regulation in complex social learning situations in PBCL. Students' experiences and attitude in collaborative learning is a "black box" for most teachers. Teachers lack sufficient understanding of the challenges students experience during collaboration, especially those related to emotional challenges, resulting in far insufficient guidance and support in collaboration tasks. This study aims to explore and identify the socio-emotional challenges encountered by students in PBCL and how group members employ strategies and construct regulation at both individual level and group level to ensure the smooth progress and accomplishment of the project.

## 2 Literature review

The concept and definition of regulation in the field of psychology can be traced back to the concept of "metacognition," which refers to an individual's knowledge about his or her own cognition and regulation of cognitive processes (Lavell, 1979). Researchers then further proposed the concept of "self-regulation" and pointed out that metacognition consists of two parts: learning-related knowledge that helps learners monitor and self-regulation mechanisms focusing on monitoring learning, including planning, identifying problems, modifying strategies, monitoring activities, evaluating and reviewing, etc. (Baker, 1984). The research on self-regulation in the field of educational psychology evolved and developed with the rise of constructivist learning theory in the 1980s. Today's widely accepted definition of "self-regulated learning" (SRL) has gradually been expanded to include not only learners' cognitive and metacognitive behaviors, but also motivation and emotion.

## 2.1 Social forms of regulation in collaborative learning

Self-regulation is defined as a learner's ability to set and manage their own learning goals, monitor their performance, instruct themselves and reflect on their performance (Hadwin and Oshige, 2011). SRL is a core concept in educational psychology, giving rise to multiple models and a large amount of research based on these models over the past few decades (Panadero, 2017). These SRL models, from a social cognitive perspective, treats regulation as an individual process and focuses on the self-regulation of individual students even though they acknowledge the importance of social context in collaborative learning. The new model proposed by Hadwin et al. systematically defines and distinguishes three different forms of regulation in collaborative learning, namely, self-regulated learning (SRL), co-regulated learning (CoRL), and socially-shared regulated learning (SSRL) (Zimmerman, 1989). The model complements the traditional models of self-regulation from a social perspective, pointing out that students need to engage themselves in the three types of regulatory processes of different natures at the same time (Figure 1).

FIGURE 1
Three types of regulation in a collaborative group.
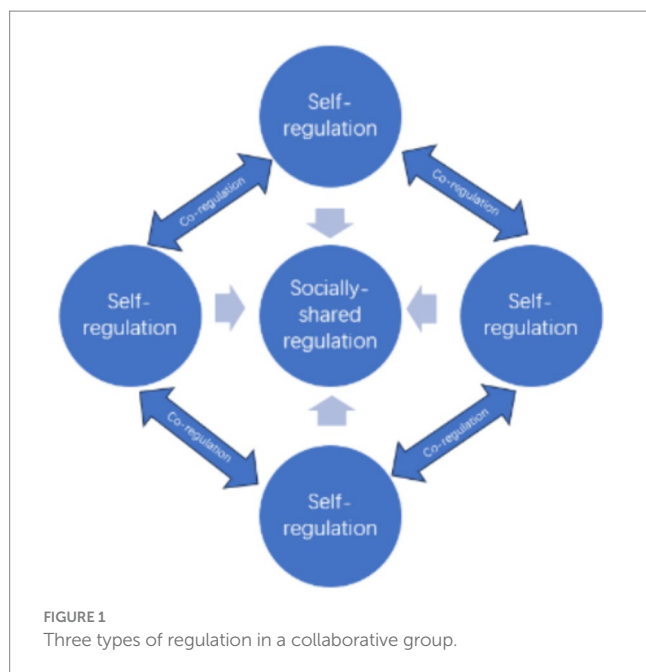
SRL as the strategic planning, execution, reflection, and adaptation learners make based on their personal interpretation of task and strategic knowledge is a process that occurs at all stages of learning (Järvelä et al., 2016). CoRL occurs when an individual's regulated activities are directed, supported, modified, or constrained by other group members. SSRL occurs when a group regulates as a collective, such as by building and maintaining interdependent or collectively co-constructed regulatory processes, beliefs, and knowledge to achieve common outcomes. Among these three forms of regulation, self-regulation is well established and has been confirmed by many studies for the past decades. As for the two forms of social regulation, different theoretical perspectives have different focus. Researchers based on Vygotsky's sociocultural theory emphasize the importance of co-regulation and believe that social interaction with more capable peers can promote the development of self-regulation. Research based on social construction theory, however, pays more attention to socially-shared regulation, believing that successful learners in collaboration should involve themselves in two processes: shared knowledge building and shared regulation. This socially-shared regulation in which multiple members jointly regulate their behaviors, motivations, and emotions in a synchronized and effective manner is the key to successful collaboration (Schunk and Zimmerman, 2008).

## 2.2 Socio-emotional challenges in PBCL

Emotional challenges and even conflicts are a natural part of human interaction and thus also of collaborative learning (Näykki et al., 2014). Compared with socio-cognitive conflict which can be positively related to team outcomes by elaborating different viewpoints through the conflict, socio-emotional conflict is regarded as negatively related to group cohesion, commitment, satisfaction and performance (Van den Bossche et al., 2006). Emotional challenges can emerge at different stages of collaboration for various reasons. Causes of challenges found in collaborative learning include individual differences, such as conflicting goals, different priorities or different working and communication styles. Conflicts in the collaboration process such as team members' different levels of commitment and different ways of solving problems can also bring about challenges.

Regardless of the origin of the challenges, addressing and responding to the emotional challenges is critical to engaging all members in effective collaboration and ultimately ensuring that the group's goals are achieved (Järvenoja et al., 2019). Emotional regulation is an individual's capacity to understand others' emotions, as well as the ability to modify the emotional experience when it is interfering with group goals and social interaction. (Boekaerts, 2011) While earlier researchers in individual learning context focused mainly on self-regulation, more and more studies found that effective self-regulated learners should be able to understand their own and others' emotional reactions and strategically monitor and regulate emotion in the social environment that may interfere with the learning process (Nguyen et al., 2023). The field of CSCL has also gradually built a theoretical framework of socio-emotional regulation, establishing the importance of group socio-emotional regulation for successful collaborative learning (Kreijns et al., 2003).

Emerging emotions are shaped by the different task, cognitive, motivational, and interpersonal factors among which the students are situated and in pedagogical approaches such as PBCL, socio-emotional challenges can be heightened (Lajoie et al., 2015). In PBCL, students are usually given an ill-structured task, which involves collaboration, negotiation, and often cognitive dissonance, thus require more effort, persistence, and sustained motivation than traditional, well-structured tasks. Success of PBCL, therefore, is highly dependent on the learners' socio-emotional regulation, which involves group processes invoked to address the emotions of the group (e.g., shared frustration over a negative group grade), resolve group challenges, or sustain positive interactions between group members. (Järvelä et al., 2016)

## 2.3 Socio-emotional regulations

Currently there are two lines of research studying socio-emotional regulation strategies in collaborative learning. Some researchers focus on the importance of social interactions during collaboration, believing that involving students in non-task-related interactions is necessary to develop positive relationships by prompting group members to understand each other and become a healthy learning community (Järvenoja and Järvelä, 2009). Good social interaction allows group members to gain a sense of relatedness, team cohesion, trust and mutual respect, making socially-shared regulation possible. Researchers found that some students use strategies of social reinforcement and task structuring to ensure quality of group interactions in collaboration (Andriessen et al., 2013).

Another line of research focuses on the social emotions triggered by various challenging situations in collaboration and the regulation strategies students adopted to cope with them. In the collaborative learning process, both the emergence of emotional conflicts and the regulation process usually go unnoticed, and it is not easy to accurately capture students' social emotions in collaboration in a timely manner. Researchers can use students' self-report after collaboration as well as technology-enhanced multimodal data during collaboration to reveal trigger events and capture challenges and social regulation. A

considerable number of research focuses on how individuals attempt to regulate their own emotion and have linked SRL positively to academic achievement (Dent and Koenka, 2015). Others focus on social forms of regulation and found that groups engaging in more SSRL processes tend to engage in higher quality collaboration and enact deeper learning strategies (Ucan and Webb, 2015). Both CoRL and SSRL are regarded as being essential to productive collaborative learning as they can lead to sustained engagement as well as increased interaction and better communication among group members. (Su et al., 2018) In an exploratory study to determine what socio-emotional regulation strategies students utilized in a project-based learning environment, researchers found that students would target their emotions by using behavioral, interpersonal, cognitive, motivational, and a combination of cognitive and motivational strategies. Most of the strategies were used at SRL, CoRL and SSRL levels, but some were observed only at the group level (Lobczowski et al., 2021).

In spite of the increasing number of studies supporting positive impact of different forms of regulation in collaborative learning, more pedagogical evidence is still needed regarding socio-emotions that develop in social learning environments and whether and how students engage themselves in emotion regulation. Currently, a gap remains in the literature regarding emotion regulation forms and strategies used by students in project-based collaborative learning environments (Lobczowski et al., 2021). The present study aims to identify socio-emotional challenges encountered by students in academic English classroom and how they employ various forms of regulation in PBCL. Specific research questions this study tries to address are the following: (1) What kind of socio-emotional challenges do different groups of students experience in a project-based collaborative learning environment? (2) How do students regulate their emotions in coping with challenging situations and how do different forms of regulation interweave and interact in authentic collaboration? Our hypothesis is that different groups of students might encounter different challenging events or situations that may inhibit collaboration in conducting complex projects collaboratively. In such situations where emotions negatively impact learning and collaboration, SRL is not sufficient and students need to either regulate other students (CoRL) or negotiate and collectively regulate collectively (SSRL) in order to achieve personal goals and ensure the progress of collaboration.

# 3 Methods

## 3.1 Participants and research design

Participants of the present study were 38 ($N = 38$) first-year students, 16 female and 22 males students, majoring in software engineering from a university of technology in China and the experiment was conducted in a mandatory academic English class. English proficiency levels of all students are rated advanced as all students took the placement exam and were placed in A class. The teaching goal of this course is to improve students' academic English proficiency, enabling them to engage in academic research, participate in academic conferences, and write academic papers in academic English. All students need to finish three projects collaboratively during 13 weeks within the same group and give an oral report of a

group presentation as well as a written report. Students consented to participate were randomly assigned to nine groups of 4–5 people without considering their previous collaboration experiences and strategies. Topics of projects included shared bicycles, live streaming, social media, comparison of mobile operating systems, etc. Each project lasts for three weeks, and the process is led by students in a self-directed learning environment without teacher intervention. Most groups communicate through a combination of asynchronous discussions in WeChat groups, online meetings, and face-to-face synchronous discussions. The teacher and students from other groups will evaluate the project performance during the presentation (Figure 2).

## 3.2 Instrument

Regulation in collaboration is not only more complex, but also more difficult to measure. The research tradition of SRL regard regulation strategies as a kind of abilities that learners have when completing learning tasks and therefore mainly rely on questionnaires to measure learners' ability to regulate their own cognition, motivation, and behavior. However, this measuring method assuming regulation as a relatively stable ability is difficult to capture the complex social forms of regulation involved in collaborative learning process. In the field of CSCL, many studies advocate capturing dynamic regulation by analyzing learner interactions with the help of technological tools and environment. The main limitation of this method is that both data Research Topic and analysis are extremely challenging and time-consuming, making it difficult to use in large-scale research and often limited to case studies. In addition, this method is difficult to investigate the complex social challenges students may experience over time because not all challenges experienced by learners can be observed and recorded.

To identify the real time socio-emotional challenges students experience and their efforts to regulate emotions at individual and group level during collaborative learning, Järvenoja et al. designed an Adaptive Tool for Emotional Regulation (AIRE) (Järvenoja et al., 2013). AIRE focuses on assessing learners' experiences of socio-emotional challenges and how learners regulate emotions and motivation in different learning tasks and different situations, and is considered to mark a new stage in the development of socially shared regulation tools (Splichal, 2018). The AIRE tool is unique in that it seeks to capture the changing adaptive character of the entire regulation process by focusing on four interrelated components of student self-reported subjective experience.

The AIRE tool was used in the present study because the 13-week long project-based collaborative learning tasks is a longitudinal asynchronous experiment design and this tool is particularly suitable for repeatedly measuring students' change of emotional challenges and corresponding regulation strategies gradually developing over time to cope with different situations in each collaborative learning task.

## 3.3 Data collection

Data for this study consisted of questionnaires adapted from the AIRE tool completed by all students shortly after each project

**FIGURE 2**
Pedagogical design and teaching schedule.
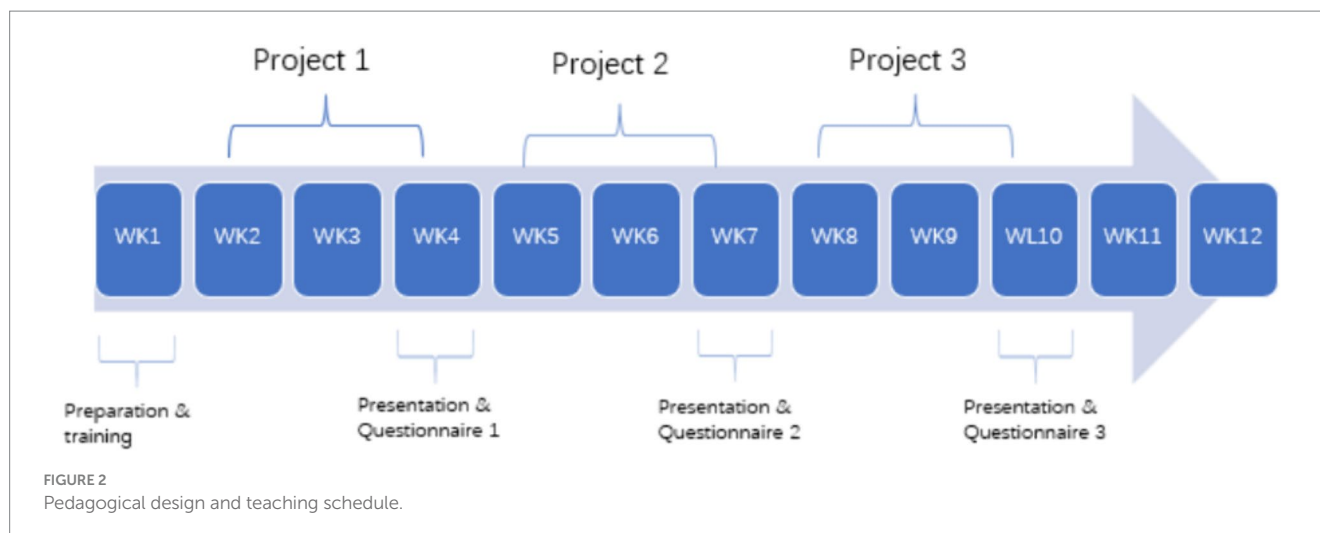
TABLE 1 Socio-emotional challenges categories and possible situations.

| Categories | Possible challenging situations |
|---|---|
| Personal priorities | A. Our goals for the project were different |
| | B. We had different priorities |
| Work and communication | C. We seemed to have incompatible styles of working |
| | D. We seemed to have different styles of interacting. |
| | E. People in our group did not connect very well with one another |
| Team work | F. Some people were not fully committed to the group project |
| | G. People had very different standards of work |
| | H. Group members were not equal. |
| | I. Some people were easily distracted |
| Collaboration | J. Our ideas about what we should do were not the same |
| | K. We differed in our understanding of the concepts/task |
| External constraints | L. We had different personal life circumstances or family / study & work commitments |

presentation. The purpose, structure and filling method of the questionnaires were explained to the students in detail before they filled it out for the first time. All students filled out the same questionnaires with the same items after each project, and 102 valid questionnaires were recovered. In addition to using questionnaires for quantitative analysis, two focus groups were also selected for in-depth interviews. With the consent of the eight students in the two groups, further qualitative analysis was conducted on their questionnaires and interviews. The chat log of the group chat is also provided by the two groups to gain insight into their real time interaction.

The questionnaires consist of four parts, which not only include the challenges students experience in collaborative learning situations (part 2) and students' emotional regulation of challenges at the individual and group levels (part 3), but also include group members' personal goals (part 1) and goals achievement reflection on the situation (part 4). All the socio-emotional challenge scenarios and regulation types follow the original instrument of AIRE with only some minor change of wording to fit the academic English projects. The second part (Table 1) gives twelve socio-emotional challenges

divided into five categories: personal priorities, work and communication, team work, collaboration, and external constraints. Students rated the challenges they encountered that triggered social–emotional regulation using a five-point Likert scale (0 = did not happen, 4 = big challenge). The questionnaires give specific examples of each challenge to help students to understand the specific challenges. For example, challenges regarding incompatible styles of working are that some students wanted to start right away while others wanted to plan first and start to work after that. After rating the challenges, students were asked to pick two out of 12 as their biggest challenges.

The third part (Table 2) aims to identify different forms of regulation by giving choices of 12 regulatory strategies used by students to control emotions and maintain motivation when faced with the two biggest socio-emotional challenges, including four self-regulation strategies, four co-regulation strategies and four socially-shared regulation strategies. Students were also asked to use a five-point Likert scale to rate the frequency with which specific coping strategies were used at both the individual and group levels (0 = did not happen, 4 = happen a lot).

In order to better understand the challenges encountered by students, the first part allows students to choose their most important personal goals in the project, while the fourth part allows students to reflect and evaluate whether their own goals have been achieved and whether the group has played a positive or negative role. To better adapted to Chinese students' learning purpose for academic English projects, students were only given 8 options out of the 12 options in original instrument.

# 4 Results

## 4.1 Descriptive data and analysis

Based on the data collected in the second part of the 102 questionnaire responses, the frequencies of two biggest challenge types reported by students in each project and the sum of the frequency of the biggest challenge types in all three projects were calculated. A one-sample, chi-squared test was performed across the three tasks to test the distribution of different challenge types. Even

TABLE 2 Self-regulation, co-regulation, and socially-shared regulation strategies reported.

| Type of regulation | Example of strategies to cope with challenges |
|---|---|
| Self-regulation (SR) | I convince myself that it could actually be a good thing, because… |
| | I tried to act more flexible. |
| | I tried to understand that the others were not simply trying to be difficult but they had different goals. |
| | I tried to accept the situation and realize that some people were prepared to put in more work than others. |
| Co-regulation (CoR) | I told the others that we needed to accept that some people were prepared to put in more work than others. |
| | I told the others we needed to be more flexible in order to find a compromise/solution for the situation. |
| | I tried to explain to others that we needed to understand different goals. |
| | I tried to convince someone that the others were not simply trying to be difficult and we can solve the situation. |
| Socially-shared regulation (SSR) | We understood that we have to reconcile our goals closer to one another. |
| | We solve the situation by compromising to accommodate everyone's goals. |
| | We decided that we had to work out the situation together in order to carry on working. |
| | We accepted that different members have different goals and we organized our working according to that. |

TABLE 3 Frequencies and proportions of the different challenge types reported.

| Challenge categories | Project 1 | | Project 2 | | Project 3 | | Total | |
|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % |
| Personal Priorities | 14 | 21.5 | 11 | 17.5 | 6 | 10.5 | 31 | 16.8 |
| Work & communication | 16 | 24.6 | 16 | 25.4 | 13 | 22.8 | 45 | 24.3 |
| Team work | 20 | 30.8 | 18 | 28.6 | 19 | 33.3 | 57 | 30.8 |
| Collaboration | 10 | 15.4 | 12 | 19 | 15 | 26.4 | 37 | 20 |
| External constraints | 5 | 7.7 | 6 | 9.5 | 4 | 7 | 15 | 8.1 |
| Total | 65 | 100 | 63 | 100 | 57 | 100 | 185 | 100 |

the most frequent type reported by students is teamwork (30.8%); followed by challenges related to work and communication (24.3%), and challenges related to the collaboration (20%). Relatively minor challenges are those related to personal priorities (16.8%), and challenges related to external constraints (8.1%). The chi-squared test confirmed that this distribution of the challenges did not occur by chance (Table 3).

A chi-squared analysis did not indicate a significant difference in the distribution of challenges between the tasks. However, the biggest challenges reported by students changed as the teams progressed from the first to the third project, with challenges related to the collaboration increasing (15.4, 19, and 26.4%, respectively), while challenges with work and communication fluctuating (24.6, 25.4 and 22.8% respectively). Challenges related to personal priorities changed considerably, ranging from 21.5% in the first project to 17.5% in the second and only 10.5% in the third. The frequency of challenges related to external constraints remained consistently lowest (7.7, 9.5, and 7%) from the first to the third project, respectively.

As for the regulation types, students reported all three different types of regulation: self-regulation, co-regulation, and shared regulation across all their projects. Regardless of the project or type of challenges, students reported both self-regulation and social forms of regulation. In general, self-regulation and socially- shared regulation appear more frequently than co-regulation (Table 4). The means of regulation did not differ across the different challenges and tasks when analyzed using a one-way ANOVA test.

## 4.2 Case studies

It is worth nothing that the frequency of challenges and shared regulation experienced by different individual within the same group can vary greatly. In order to better explain the consistency or differences in students' shared regulation reports and gain an insight into the different dynamics between groups, the questionnaires of two different groups (Group C and Group F) after the end of project 2 were selected for detailed comparison. These two groups were selected because Group C had the best performance in group presentation, and all group members clearly stated that their collaboration was very pleasant. Group F, however, encountered a very big crisis during the

though students worked in the same group, the situation was different in each task and the challenges were presumably different. Therefore, students' responses were treated as independent, although the same students responded to the same questions after each project. Variations within the challenge types and a chi-squared test of the relationship between challenges and different projects/times are also presented to indicate changes in the challenges. For the answers in the third part, the means and standard deviations of the three regulation forms reported by the students were calculated. Mean values across challenge types and three different forms of task regulation were analyzed using one-way ANOVA tests.

The greatest challenges reported by students spanned the 12 challenges listed and the frequency varied across the three different projects (Table 3). In terms of the total frequency of the three projects,

TABLE 4 Means and standard deviations of self-regulation, co-regulation, and socially-shared regulation strategies reported.

| Regulation | Projects | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Project 1 | | Project 2 | | Project 3 | | Sum | |
| | M | SD | M | SD | M | SD | M | SD |
| Self-regulation | 7 | 3.7 | 6.8 | 4.4 | 6.5 | 3.7 | 6.7 | 3.8 |
| Co-regulation | 5.2 | 3.1 | 4.5 | 2.8 | 3.7 | 3 | 4.4 | 3.1 |
| Socially-shared regulation | 7.2 | 4.3 | 7.5 | 4.9 | 8.1 | 4.9 | 7.6 | 4.7 |

project and even asked the teacher for help. Questionnaires from the two groups were selected for further qualitative analysis. Each group member's detailed responses regarding personal goals, group accommodation, three forms of accommodation, goal achievement, and group evaluation were put into group files. All members in the two groups were also invited for an semi-structured in-depth interviews to provide more detailed descriptions of their questionnaires. In accordance with the questionnaire, the interview questions also focused on students' perception of their collaboration and conflicts and challenges encountered by the groups, strategies taken to cope with challenges.

Group C (Figure 3) consists of three boys and one girl. According to their self-reports on the questionnaire, their personal goals are different, some aimed to improve their English but others pay more attention to socializing and learning from others. Most of their perceived socio-emotional challenges came from work and communication. C1 and C2 reported that the main challenge came from different communication styles, C3 and C4 reported that the challenge was different from personal standards for work, but even the biggest challenge they selected was 1 on the scale, which means very small challenge. Facing the challenge, except for C2 (C2 = 1), the other three members all reported more socially-shared regulation (C1 = 10 C3 = 9 C4 = 7), followed by self-regulation.

An interview with all four members reveals that they found no big socio-emotional challenges in their group and most challenges can be resolved by regulating themselves. They only need to activate socially-shared regulation on rare occasions when there were negative emotions. In accordance with the results of the questionnaire, the group members were able to act together in order to achieve their personal goals although interpretations of the challenging situation differed.

Group F (Figure 4) consists of two boys and two girls. According to their self-reports, the four students had considerable differences in their personal goals and experiences of socio-emotional challenges. The goal of F1 is to avoid stress and negative results; the goal of F2 is to learn from each other and socialize; the goal of F3 is to get high scores; and the goal of F4 is to enjoy the process. All four students reported a maximum level of challenge of 4 (big challenge), especially in the work and communication category. F3 particularly reported as many as 7 out of 12 socio-emotional challenges, and all rated 3 or 4. However, in the face of so many challenges, F3 chose to engage herself more in self-regulation (F3 = 12) instead of co-regulation with other students (F3 = 5) and socially-shared regulation (F3 = 2), while the other three group members all worked very hard to construct shared regulation (F1 = 9 F2 = 8 F4 = 11) within the group. F2 assumed more responsibilities than others--she not only applied more self-regulation

(F2 = 12), but also worked very hard to regulate other team member (F2 = 15) in order to maintain the group cohesion and pushed the project to proceed normally as planned (Figure 4).

Chat log of group F revealed that both F2 and F3 did a lot of work for the group while F1 and F4 were not very active. But as the project progressed, a negative feeling gradually emerged in the group. Interpersonal dynamics were troubled even dysfunctional interactions occurs in group F. Analyzing the interaction of group F, the type of interaction that challenged the group's collaboration include overruling and undermining interaction (see Figure 5) found in previous studies (Barron, 2003). The interview reveals that the major reason was due to the differences in individual goals and interpretations of the situation or "a lack of a common ground," as mentioned by F3.

As for the regulation of the emotion, the interview revealed that all four members tried what they could to regulate the big socio-emotional changes, especially F2 and F3. F2 was the only one who attempted to co-regulate the emotion of the group but the negative atmosphere made the various regulation strategies less effective. Faced with the increasing tension, F3 focused on proceeding with the task by using metacognitive regulation like dividing the jobs among the students (see Figure 6) instead of engaging herself in socio-emotional regulation, making it impossible for the whole group to reach a high level of shared-regulation.

# 5 Discussion

The present empirical study of project-based collaborative learning investigates the emotional challenges experienced by college students and their regulation strategies used to cope with the challenges during their PBCL in academic English classroom. The following are the conclusions.

## 5.1 Emotional challenges vary within groups and between projects

Consistent with the findings of some previous research, almost all students more or less experience a variety of socio-emotional challenges during the complex project-based learning process and the biggest emotional challenges centered around two sources, namely, differences in teamwork and challenges related to work and communication. Case study reveal that different groups can have totally different experiences--students in Group C experienced fewer challenges, and the degree was very low even if they did. In Group F, on the contrary, almost all student felt considerable challenges. One member (F3) felt seven out of the 12 challenges, including not committing enough by some team members, different work and communication styles, different attitude toward work, different standards, unequal relationships, lack of connection, etc. The challenges felt by other group members mainly come from the way of communication with F2.

Previous research has shown that both the pedagogical structure and the students' increasing experience of one another may affect the nature of the challenges they encounter. In PBCL, ill-structured tasks resulted in more challenges regarding the different working and interacting styles of group members remain high in some groups from the first project to the last one. Overruling and Undermining

FIGURE 3
Profile of group C after project 2.



FIGURE 4
Profile of group F after project 2.
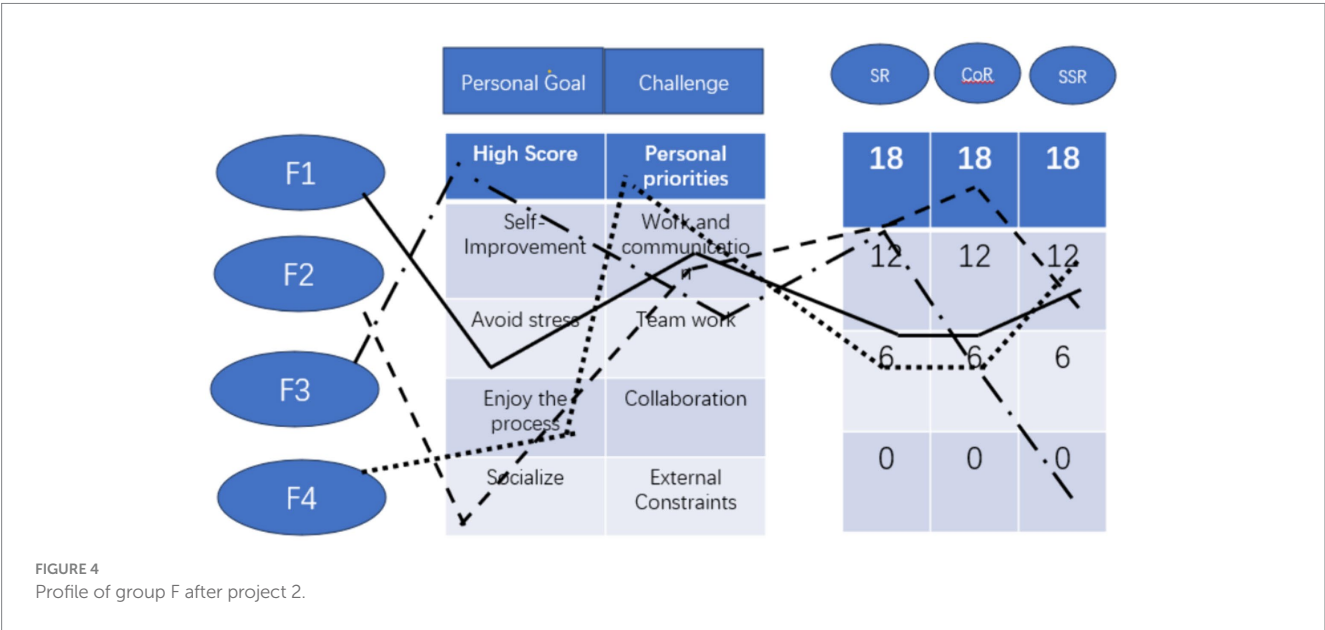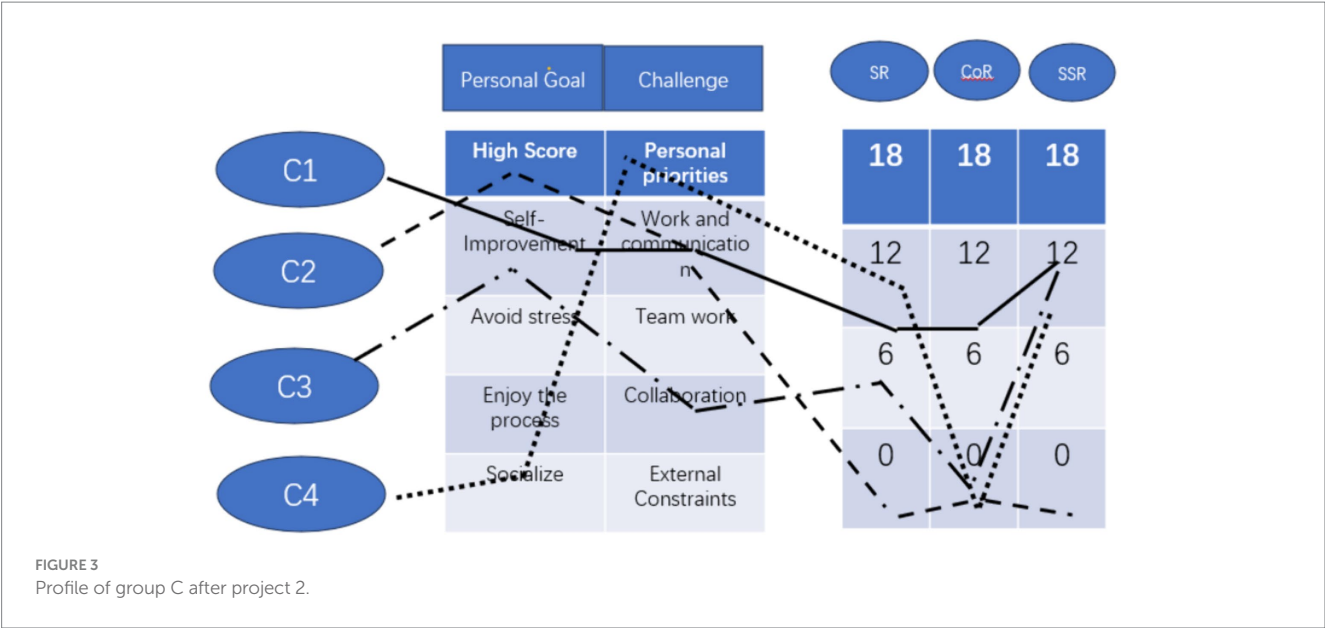
interaction narrowed the participation possibilities of the group members (Barron, 2003) and this type of interaction was visible throughout the group F chat. Unlike findings of previous research which shows that with the gaining experience of project-based learning and increasing familiarity of team members, students' perceived challenges can decrease steadily, the present study shows that real classroom situation is much more complicated. Emotions are socially constructed, but they are experienced personally (Näykki et al., 2014). Students' experience and interpretation of socio-emotional challenges will affect their emotional experience and even if there is only one member who failed to optimize her strategic regulation when these challenging events occur, it could lead to dysfunctional groups as well as maladaptive individual and group learning performance.

## 5.2 Socially-shared regulation is crucial for successful PBCL

Most groups of the present study engaged in different forms of regulation when faced with challenges, including self-regulation, co-regulation, and socially-shared regulation, with socially-shared regulation being most frequent and co-regulation least frequent. Case comparison shed light on differences between groups, showing that the greater the perceived challenges, the more self-regulation strategies and socially shared regulation strategies were used. In the case of group F, F2 engaged in a lot of socially-shared regulation as well as self-regulation to make the group project proceed smoothly. Contrary to F2, F3 was faced with the most challenges, but only tried to solve the problem through self-regulation and failed to construct the

**FIGURE 5**
Overruling and undermining interaction by F3.



**FIGURE 6**
Examples of socio-regulation in group F.

socially-shared regulation with her teammates. It is worth noting that in Group C, there were also students like C2 who reported very little socially-shared regulation but did not prevent the whole group to construct socially-shared regulation. This might due to the fact that all members of group C experienced much less challenges than group F. From questionnaires and interviews, C2 was found to be the weakest

student in the group and he was very dependent on other students in the group, contributing very little to the group. Unlike F2 who gave a lot of troubles to her group, C2 was a typical "free rider."

Previous research has shown that when students encounter socio-emotional challenges, they may self-regulate or co-regulate, and students tend to engage in socially-shared regulation when they

encounter social-cognitive challenges (Meyer and Turner, 2006). This is partly in line with the findings of the present study. The emotional challenges felt by students in Group C were very low and the main challenges came from the cognitive challenges related to the project. Therefore, students in the group did not need to co-regulate and engaged themselves mostly in socially-shared regulation. However, the findings of less successful groups like Group F are contrary to that of the previous study. For Even though all members in Group F perceived big emotional challenges, only F2 tried very hard to co-regulate but in vain. F3 only resorted to using metacognitive regulation, which made the situation even worse. The findings of the present study indicate that self-regulation of all members and socially-shared regulation of three members still could not prevent the groups from failing. Unlike previous research which emphasized critical role of socially-shared regulation (Frijda, 2005), co-regulation of emotion is also very important for coping with the socio-emotional challenges in collaboration.

# 6 Conclusions and implications for future research

The limitations of this study should be noted. Since it is a semi-experimental study conducted in a natural classroom setting, the sample size of the data was not large enough. As a diachronic study, the duration of the time was also not long enough. Future research on social–emotional regulation can be improved from the following aspects.

The present study is based on students' self-report of socially-shared regulation, which might not be the real shared-regulation emerging in the collaboration process. It is suggested that more informative measures for revealing regulatory processes in collaborative learning is needed. The latest CSCL research emphasizes the use of multimodal data with the help of artificial intelligence to capture shared regulation in collaborative learning process in order to better monitor the real-time status of regulation in collaboration (Splichal, 2018).

Findings of this search also point out the need to support socio-emotional regulation in PBCL. Some researchers have proposed that CSCL tools can be used to support regulation in collaboration, as long as the supported goals move from the knowledge building process to the regulation process (Miller and Hadwin, 2015). The present study indicated that failure in regulating resulted in the failure of collaboration and groups need support and guidance to promote ideal social–emotional interactions (Järvelä et al., 2023). It is worth noting that repeated use of questionnaire tools such as AIRE enables students to understand their learning goals and enhance their awareness of regulation process through reflection and the tool in itself can serve as support of regulation.

Research on metacognition and self-regulation emphasizes the importance of the development of strategy, which gradually becomes more automatic and eventually transferable to new learning situations. Developing interventions that scaffold and support students' skills of regulation would be a worthwhile future direction (Kim and Lim, 2018). Studies have shown that providing students with external scripts for reflection in project-based learning can effectively promote the formation of internal scripts for students' socially-shared regulation (Splichal, 2018). As the project continues to progress, students will continue to adjust their regulation strategies (Kwon and Liu, 2014). The benefits of using project-based learning in academic English classrooms can go beyond language learning and prove to be valuable to coping with the emerging challenges in higher education.

# Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

# Ethics statement

# Author contributions

LH: Writing – review & editing, Writing – original draft. RW: Writing – review & editing, Methodology, Data curation. JH: Writing – review & editing, Supervision, Methodology.

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# Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

# Publisher's note

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# The evolution of China's English education policy and challenges in higher education: analysis based on LDA and Word2Vec

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China proposed the Belt and Road Initiative to strengthen regional connectivity so as to embrace a brighter future together. Since the Initiative was put forward, it has brought many challenges to China's English education policy. By employing Latent Dirichlet Allocation (LDA) and Word2Vec, this study analyzes the evolution of topics and challenges in China's English education policy under the Belt and Road Initiative. The results indicate that after the initiative, the policy focus has changed. English education has shifted from testing abilities to cultivating students' intercultural communication skills in order to meet the needs with countries alongside the "Belt and Road". Moreover, teaching strategies that were examination-oriented have also changed to emphasizing teaching methods and feedback. The focus and teaching strategies have also undergone great changes. China's English education policy has shifted from focusing on improving students' writing skills, English proficiency, and creativity to conducting in-depth research and addressing specific issues, including challenges in linguistics, media influence, educational institutions and programs, online courses, attitudes and self-efficacy, use of multiple languages and globalization, teaching issues, and curriculum design. These findings shed light on how the Belt and Road Initiative changed China's English education policy and provide further directions for future research.

KEYWORDS

China's English education policy, the Belt and Road Initiative, challenges, higher education, LDA, Word2Vec

## 1 Introduction

The research on English education policy in Chinese higher education can be traced back to the Reform and Opening up (Cheng and Wang, 2012). Guo (2013) indicated that English has become an essential part since then because China began to transform from planned economy to market economy. China's English education policies in higher education have shifted from emphasis on skills to communication abilities. This change reflects the characteristic of China's English education policies being constantly adjusted with the changes in social demands. Therefore, it needs to be understood within the context since the Reform and Opening Up. However, Mavroidis and Sapir (2019) indicated that since the 21st century, especially in 2005, China joined the WTO's Government Procurement Agreement, which promoted the liberalization of international trade and investment; China actively participated in and promoted the Asia-Pacific Economic Cooperation (APEC), including in the fields of

economy, trade, investment, science and technology. At that time, English was not only an important communication tool, but also occupied a crucial position in trade, finance, technology and diplomacy (Hu and Lei, 2014). In addition, China has also strengthened cooperation with developing countries, put forward the concept of South–South cooperation, and supported the development of other developing countries through technical assistance, economic cooperation (Huang et al., 2018). It also holds a significant position in international trade, finance, technology, and diplomacy (Hu and Lei, 2014). China has gradually realized the importance of English language education in the international communication and economic development, and began to increase the investment (Hu, 2005). In particular, in September 2013, President Xi Jinping proposed the Belt and Road Initiative (Fallon, 2015). The Belt and Road Initiative is China's international economic ambition aimed at promoting economic development across the three sub-regions of Asia, Europe, and Africa. The initiative encompasses infrastructure construction, policy, trade, financial support, and cultural exchanges, and has the potential to reshape the economic landscape of these regions (Zhang et al., 2021).

In the context of globalization, with the rapid development of China's economy and the increasing cross-cultural exchanges (Branstetter and Lardy, 2006), EMI (English as a Medium of Instruction) failed to meet the needs of international students from diverse backgrounds (Li et al., 2020). These factors have prompted studies on multilingualism and foreign language education policies in Chinese higher education (Jin and Cortazzi, 2006). However, under the Belt and Road Initiative, there are also challenges for English education in China. College English teachers are faced with challenges such as a lack of business knowledge, insufficient practical experience, and inadequate learning abilities (Du, 2018). English teachers in China usually find it difficult to incorporate practical and business-oriented content into their courses, primarily because they have limited exposure to that environment. While these teachers have extensive academic backgrounds, they lack practical experience, making it difficult for them to provide language skills applicable to professional contexts and resulting in a reliance on traditional teaching methods (Lei and Medwell, 2022). The Belt and Road Initiative has placed higher demands on English teaching in Chinese universities, including improving listening and speaking abilities, enhancing the infusion of English culture, and emphasizing the value of Business English (Li, 2019). Wang (2020) analyzed the necessity of English teaching resource development, identified problems in past resource development, and proposed recommendations for resource development in terms of development strategies, development process, resource evaluation, and resource development.

Despite China always pay great attention to curriculum quality and the implementation of a series of reform and innovation policies under the Belt and Road Initiative, increasing the quantity and quality of talents has become an urgent goal (Qian, 2019). Therefore, there is a greater need to focus on the cultivation of English talents and integrate research related to the Belt and Road Initiative (Zhang, 2017). In order to comprehensively review past literature and gain a deeper understanding of the English education policy in higher education, some researchers have examined the role of English in China's economical and political contexts from a historical perspective (Adamson, 2002). Poon (2010) has reviewed the language practice in Hong Kong with a historical overview. Furthermore, researchers have

analyzed the function of EMI from a public policy perspective of language policy, including principles of normative legitimacy, feasibility, allocative effectiveness, and fairness (Hu and Alsagoff, 2010). They have also explored the expectations of policy regarding instructional transformation and progress made in achieving this goal through surveys of teachers, administrators, and policy makers (Gao, 2011). Additionally, researchers have also studied Chinese English teachers who adopt new English textbooks and summarized their experiences (Niu-Cooper, 2012). In-depth discussions have taken place regarding English language policies in mainland China and Hong Kong high schools (Li et al., 2023).

In Hong Kong, bilingual educational policies are an important component of the education system (Lau, 2020). High school students in Hong Kong perceive relatively low levels of English learning challenges and tend to adopt English-related learning strategies (Pun and Jin, 2021). As a special administrative region of China, Hong Kong has the potential to cultivate talents with a global perspective, proficient language skills, and cross-cultural competence. However, Hong Kong's engagement with the Belt and Road Initiative is influenced by complex factors such as social, political, and educational issues (Choi and Adamson, 2020), posing challenges to its educational policies. Additionally, there is another special administrative region in China, Macau. English has been recognized as an important language in Macau since the mid-1980s (Botha and Moody, 2020). However, research suggests that EMI in Macau faces challenges, including difficulties in promoting bilingual academic and disciplinary proficiency in English and the mother tongue (Wang and Yu, 2023), as well as challenges faced by Macau students and teachers such as vocabulary demands in English education, listening difficulties, mother tongue influence, and limited interaction opportunities (Reynolds et al., 2022). In light of these challenges, the findings call for critical attention to the role of learner agency and contextual realities in shaping EMI learners' actual strategy use in contexts (Yu et al., 2021). Both Hong Kong and Macau play important roles in China's Belt and Road Initiative (Berlie, 2020). In fact, as part of the Greater Bay Area with Hong Kong and Macau, the alignment between the Belt and Road Initiative and the domestic and global integration is a strategic focus of the Chinese government (Hui et al., 2020). Xu and Sukjairungwattana (2022) conducted a comprehensive study on the opportunities, challenges, and strategies for the sustainable development of higher education in Macau from the perspective of the Guangdong-Hong Kong-Macau Greater Bay Area.

Recently, reasonable solutions have been proposed to promote the development of language education in China (Liu and Biao, 2021). While there is a high demand for curriculum quality, there are few studies that utilize advanced analytical methods to comprehensively evaluate and optimize the implementation of educational policies. Therefore, this paper employs the Latent Dirichlet Allocation (LDA) topic model for research. Prior to this, many scholars have utilized the LDA model for relevant studies in the fields of healthcare (Wu et al., 2014) and patent intelligence (Wang et al., 2014). Currently, there is little research that analyzes the evolution of topics in literature on China's English education policy in higher education during the Belt and Road Initiative period. Analyzing the evolution of theme can help comprehensively grasp the trajectory and internal logic of the development of China's higher education English policies, and provide valuable basis for further improving related policies and educational practices. This paper fills this gap and innovates in research methods.

Different from traditional literature reviews article, this study uses the LDA model combined with Word2Vec word vector technology to systematically and accurately sort out the evolution of topics by mining the texts of literature. This paper aims to fill this gap and further answers the following question:

Q1: What are the topics of English education policy and challenges in China's higher education before and after the Belt and Road Initiative?

Q2: How do the topics in English education policy in China's higher education evolve before and after the Belt and Road Initiative?

Q3: What are the challenges of English education policy in China's higher education before and after the Belt and Road Initiative?

# 2 Research methodology

This research employed LDA topic model, the high-frequent research topics of English education policy in higher education from 2005 to 2024 was investigated. Then the cosine similarity was calculated with Word2Vec Continuous Bag of Words (CBOW) and Sankey diagram can visualize the evolution of topic. Skip-gram in Word2Vec can summarize challenges in different periods.

## 2.1 Data collection

"English Education policy in China's Higher Education" published in Web of Science Core Collection during January 2024. The research code is TS = (("China" OR "Chinese") AND ("Higher" OR "University" OR "College" OR "Tertiary") AND ("English") AND ("Education") AND ("Policy" OR "Policies" OR "Strategy" OR "Strategies") and publish year is during 2005–2024. The study aims to analyze the transformation of the topic and challenges China's higher education faced before and after the Belt and Road Initiative. The Initiative was put forward in 2013. Therefore, we defined 2005–2012 as T1, 2013–2024 as T2. We have retrieved 423 articles published in English in total, T1 contains 36 articles and T2 has 387 articles, respectively.

## 2.2 Data preprocessing

To improve the reliability of the analysis, the text needs to be cleared. The separation of words and build up of vocabulary modal is achieved through "NLTK" in python (Bird et al., 2009). NLTK is a python library for processing human language data. It provides a series of tools and resources to perform natural language processing (NLP) related tasks. NLTK can complete the following steps: Tokenization, which splits the raw text into individual words. It then removes stop words by deleting some high-frequency but weaker meaning words like "the," "is," "at," etc. Next is stem extraction/lemmatization, which normalizes words to their root form or base form to better perform topic analysis.

## 2.3 LDA model

### 2.3.1 LDA model design

Latent Dirichlet Allocation (LDA) is widely employed in digging out the topic and topic model of feature structure in non-structured text. Through unsupervised machine learning, it can offer the probability distribution of topic in each text. Through abstracting the topic distribution, it can cluster similar topics and analyze the text, then potential topics which will come upon in the future can be predicted (Blei et al., 2003). It can bring a clear text and help to further explore the deep information in the text. Blei et al. (2003) indicated that LDA model is composed of variational three-layer Bayesian model, which shares a logical hierarchy. Each layer is controlled by its own set of parameters. In this model, M represents the number of articles in the training corpus, K represents the number of topics. For each document $m\epsilon_{\{1,2...,D\}}$, $N_m$ represents the length of document m, that is, the total tokens of each document after tokenization. θ and φ stands for the probability distributions of document topics and topic words, respectively. The parameter α is the prior for the topic distribution on documents, also known as a hyperparameter. The parameter β is the prior for the word distribution on topics, also known as an algorithm input. Parameters w and z reflect the probability distributions of feature words in the document collection, as shown in Figure 1.

### 2.3.2 Determining the optimal number of topics

In the process of building up LDA model, it is usually necessary to set the number of topics based on the size of the text collection. In this paper, the determination of the optimal number of topics is based on the evaluation of topic coherence using the approach proposed by Röder et al. (2015). Topic coherence measures are used in this study. The formula for computing topic coherence is as follows:

$$C_{UMass}(T) = \sum_{m=2}^{M} \sum_{l=1}^{m-1} log \frac{D(w_m, w_l) + 1}{D(w_l)}$$

This paper calculates the coherence scores for both the T1 and T2 periods and determines the optimal number of topics based on the scoring results. The optimal number of topics for the T1 is 6, while for the T2, it is 8 (as shown in Figures 2, 3).

### 2.3.3 LDA topic modeling

This study utilizes the GENSIM in python to train an LDA model on preprocessed texts. Based on the results of coherence calculation, the number of topics, K, is set as 6 for the T1 and 8 for the T2. The model is configured with parameters passes = 30, random-state = None, alpha = "symmetric," eta = None, with 30 iterations. For each topic, the top 10 words with the highest probabilities are extracted and sorted in descending order based on their frequencies.

## 2.4 Word2Vec

Word2Vec was developed by Mikolov et al. (2013). It is a technique used to represent words as continuous vectors. It is a distributed representation method based on neural networks. The goal of Word2Vec is to learn approximate representations of words with semantic similarity in a vector space. Word2Vec is on the basis of the assumption that words with similar contexts in natural language often have similar meanings. Based on this assumption, the Word2Vec model learns distributed representations of words by analyzing large scale corpus. Mikolov et al. (2013) pointed out that Word2Vec has two
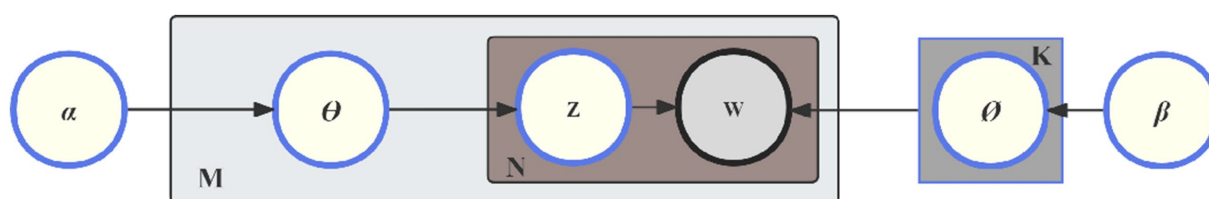
**FIGURE 1**
LDA model design.
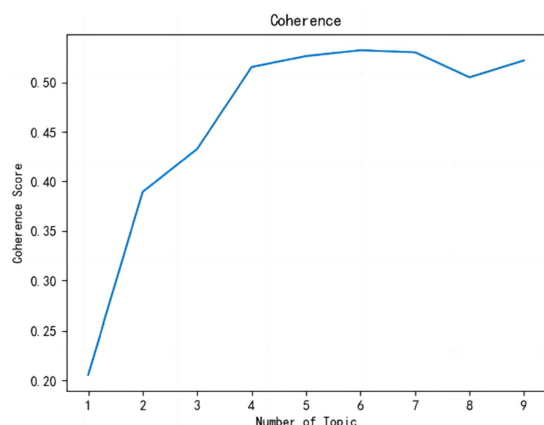


**FIGURE 2**
T1 coherence.
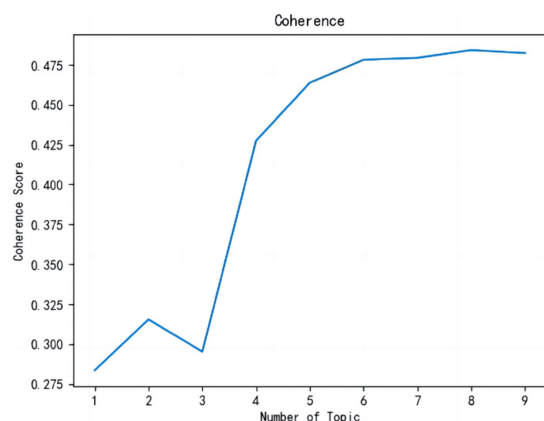


**FIGURE 3**
T2 coherence.

main model architectures: Continuous Bag of Words (CBOW) and Skip-gram. The essence of both models is to train a neural network to predict the context or target word of a given word.

### 2.4.1 Computing topic vectors in CBOW

In the CBOW model, the input to the model is the context words, and the output is the target word. The goal of the model is to predict the target word based on the context words. (The principle is illustrated in Figure 4.)

This paper utilized the Word2Vec model to train a 100-dimensional CBOW word vector model based on the given text data. The model was trained with a window size of 5, a word frequency threshold of 1, using 4 threads, and underwent 100 iterations. Finally, the obtained word vectors are used to calculate the cosine similarity for subsequent analysis.

### 2.4.2 Modeling with skip-gram

In the skip-gram model, the input to the model is the target word, and the output is the context words of the target word. The objective of the model is to predict the context words based on the target word. The principle is illustrated in Figure 5.

## 2.5 Cosine similarity calculation

In this paper, the cosine similarity between the topic vectors of T1 and T2 is computed. Cosine similarity is a measure of similarity between vectors, and it ranges from −1 to 1. A value closer to 1 indicates a higher similarity between vectors, while a value closer to −1 indicates a lower similarity. The calculated similarity data is stored in a data-frame (Table 1) for further visualization, the numbers in the first column and the first row represent the topics in the T1 period and T2 period, respectively. This data will be used to generate a Sankey diagram.

Cosine similarity is a measure of the similarity between two vectors, ranging from −1 to 1. In this analysis, the topics from periods T1 and T2 are both represented as vectors, and their cosine similarities are calculated. The closer the cosine similarity is to 1, the more similar the two topic vectors are; the closer to −1, the less similar they are. In Table 1, the first column and first row correspond to the topic numbers of periods T1 and T2, respectively. The values in the table are the cosine similarities between the topic vectors of periods T1 and T2. For example, the similarity between topic 0 of T1 and topic 7 of T2 is 0.201861. By calculating the cosine similarities between the topic vectors of periods T1 and T2, it can reflect the consistency and changes between the topics of the two periods. A higher similarity indicates the topics' contents are more similar and the changes are smaller between the two periods; a lower similarity means the topics have undergone greater changes. These similarity data provide the basis for the subsequent Sankey diagram visualization, which can intuitively show the evolution of topics over time.

## 3 Results and discussion

### 3.1 Keywords

After LDA modeling for the T1 and T2, keywords cloud visualizations were generated based on the frequency of each keyword
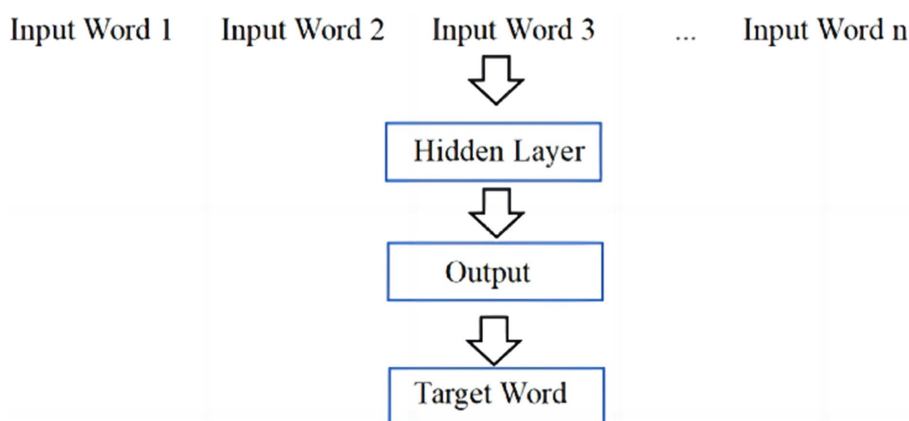
FIGURE 4
CBOW.
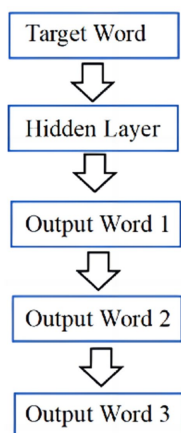


FIGURE 5
Skip-gram.

in T1 and T2. The keywords cloud visualizations are shown in the Figures 6, 7.

According to the word cloud in Figure 6 during the T1 period, there are six topics.

Topic 0: "writing," "participants," "academic," "development," "proficiency," "region," "vocabulary," "practices," "social."

Topic 1: "test," "Cantonese," "support," "creative," "role," "major," "CECR (Common European Framework of Reference for Languages)," "data," "mainland," "factors."

Topic 2: "reform," "market," "ICT (Information and Communications Technology)," "paper," "practice," "experience," "provision," "attitudes," "examination," "communication."

Topic 3: "online," "pedagogy," "intercultural," "environment," "publication," "level," "socialization," "future," "model," "survey."

Topic 4: "ICT," "assessment," "article," "compliments," "bilingual," "ability," "autonomy," "learner," "current," "tests."

Topic 5: "international," "classroom," "national," "interviews," "ESL (English as a Second Language)," "journal," "courses," "performance," "HSS (Humanities and Social Sciences)," "practice."

In T1 period, during this stage, the policy began to support the integration of Information and Communication Technology (ICT) into teaching and improve teaching methods and practice to enhance students' learning outcomes. Additionally, scholars during this period had already recognized the importance of intercultural communication competence and international education in cultivating students' global perspectives and intercultural communication competence (Hu, 2005). However, overall, the English education policy in China during this period placed a greater emphasis on developing students' writing skills and improving academic proficiency. Therefore, the policies during this period mainly focused on improving the English examination system and related aspects.

In the topics from 0 to 7 after the Belt and Road Initiative (T2), Topic 0: "classroom," "social," "perceptions," "multilingual," "article," "practice," "schools," "intercultural," "perceived," "paper" (Figure 7).

Topic 1: "international," "bilingual," "resources," "revealed," "business," "content," "competence," "management," "Japanese," "multilingualism."

Topic 2: "contexts," "experiences," "based," "current," "focus," "influence," "reports," "international," "identities," "subject."

Topic 3: "national," "qualitative," "challenges," "programmers," "data," "medical," "lack," "online," "studying," "issues."

Topic 4: "self-efficacy," "professional," "EMI," "listening," "participants," "satisfaction," "writing," "improve," "instructors," "potential."

Topic 5: "identity," "countries," "development," "quality," "engagement," "skills," "provide," "differences," "semi-structured," "discussed."

Topic 6: "EFL (English as a Foreign Language)," "LOTE (Language Other Than English)," "EMI (English as a Medium of Instruction)," "academic," "questionnaire," "global," "attitudes," "linguistic," "agency," "motivation."

Topic 7: "EMI," "pedagogical," "knowledge," "translanguaging," "feedback," "health," "effective," "attention," "performance," "examines."

TABLE 1 Cosine similarity calculation.

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 0 | −0.129648 | 0.189121 | −0.09066 | −0.226286 | 0.027621 | 0.048874 | 0.13499 | 0.201861 |
| 1 | 0.072763 | 0.115919 | 0.171581 | 0.03712 | −0.025868 | −0.0445 | 0.251426 | −0.068916 |
| 2 | −0.067174 | 0.001314 | 0.159769 | −0.036222 | 0.139034 | 0.061245 | −0.013023 | 0.241857 |
| 3 | −0.037507 | −0.12843 | 0.068671 | 0.001158 | −0.030733 | −0.108409 | 0.187197 | 0.055338 |
| 4 | 0.032424 | −0.208882 | 0.498143 | −0.067629 | −0.144574 | −0.130269 | 0.196144 | 0.098108 |
| 5 | −0.044767 | 0.049534 | 0.094771 | 0.270535 | 0.142885 | 0.207163 | −0.027814 | −0.000686 |



FIGURE 6
T1 keywords cloud.

During T2 period, scholars focused more on practice, intercultural communication, international education cooperation, bilingual education, and challenges in online learning. The policies during this period also paid more attention to students themselves, such as their professional development, engagement, attitudes, background characteristics, identity, and even aspects related to student health and attention, which is consistent with Li (2019).

## 3.2 Evolution of challenges

The purpose of this article is to analyze the challenges in China's higher education English education policy during T1 and T2 periods. Therefore, in the Skip-gram modeling, the target word chosen is "challenges." The results of the execution display the top five words most closely related to "challenges" in the T1 and T2 periods, as shown in Tables 2, 3.

During the T1 period before the Belt and Road Initiative, the challenges in China's English education policy mainly focused on improving students' writing abilities, English proficiency, and creativity, as well as emphasizing practice. In the post Belt and

Road Initiative period (T2), China's higher education English education policy shifted toward investigating and addressing challenges in areas such as research and interviews on educational challenges, linguistics and media influences, educational institutions and programs, online courses and academic research, attitudes and self-efficacy, multilingualism and globalization, teaching and current educational issues, as well as curriculum design and writing. The above findings confirm the viewpoint of Hu (2005).

## 3.3 Evolution of topics

This study presents the evolution of topics in the T1 and T2 using a cosine similarity calculation. The Sankey diagram in Figure 8, illustrates the transition from the T1 period on the left column to the T2 period on the right column.

From the Topic Evolution Map in Figure 8, it can be observed that before and after the Belt and Road Initiative, there have been numerous and complex evolutions in the topics of China's English education policy. Based on the cosine similarity calculations, this

**FIGURE 7**
T2 keywords cloud.
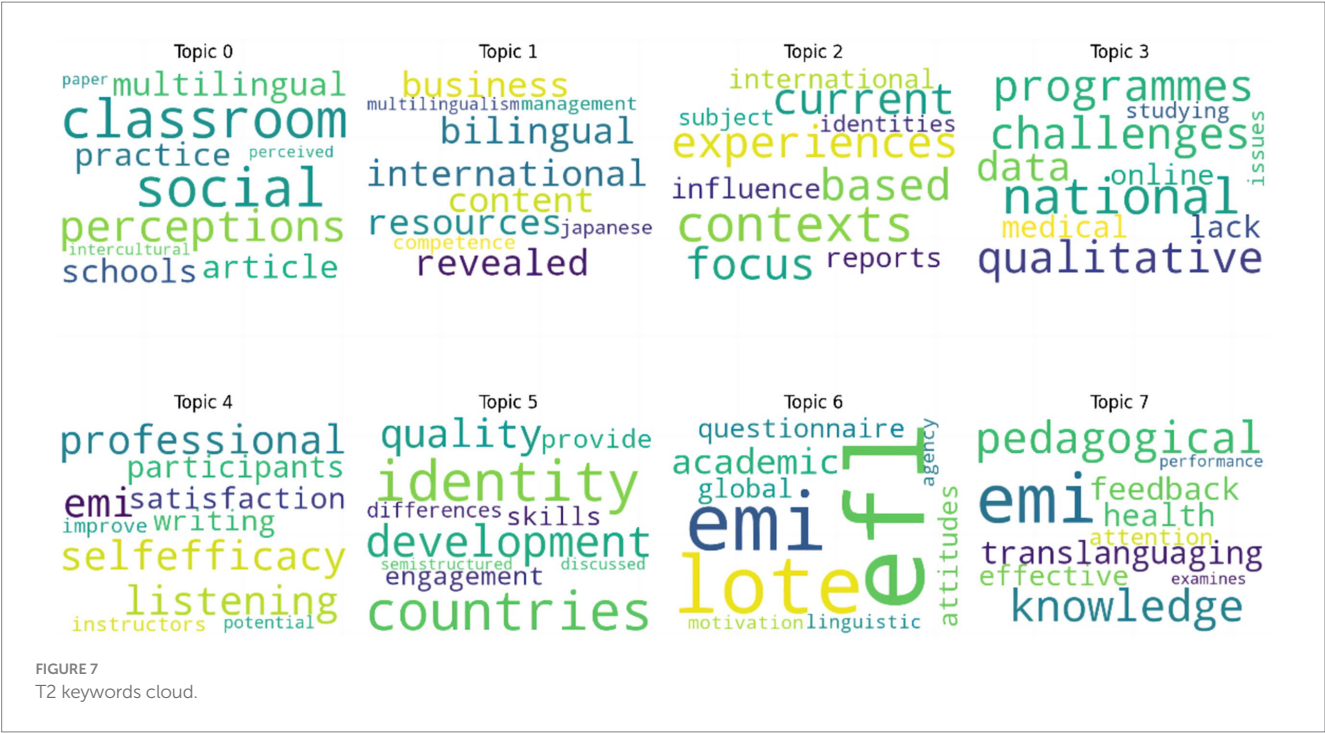
TABLE 2  T1 keywords frequency.

| Word | Frequency |
|------|-----------|
| Writing | 0.7425274848937988 |
| Proficiency | 0.7348564863204956 |
| Aims | 0.72028648853302 |
| Creative | 0.7192969918251038 |
| Practice | 0.7175012826919556 |

TABLE 3  T2 keywords frequency.

| Word | Frequency |
|------|-----------|
| Key | 0.9995166063308716 |
| Support | 0.999503493309021 |
| Countries | 0.9995002150535583 |
| Disciplinary | 0.999491810798645 |
| Context | 0.9994884133338928 |

paper selects seven pathways with values greater than 0.3 for in-depth analysis. These pathways include the transition from Topic 0 in the T1 period to Topic 1, 2, 6, and 7 in T2 period, as well as the transition from Topic 2 in the T1 period to Topic 1, 6, and 7 in the T2 period. Based on these pathways, this paper integrates two main evolving themes.

### 3.3.1 Shift in focus from examinations to cultivating students' intercultural communication skills

In T1 period before the Belt and Road Initiative, China's English education policy primarily focused on education related to writing, academic skills, and vocabulary. The vocabulary included terms related to classroom teaching and learning, such as "participants" and "vocabulary," indicating that before the Belt and Road Initiative, the main focus of China's English education policy was on cultivating students' English proficiency through examinations (Sun et al., 2017). However, the Belt and Road Initiative requires extensive cooperation between China and countries along the route, leading to an increase in cross-cultural exchanges (Branstetter and Lardy, 2006). Therefore, in T2 period, there are more vocabulary terms related to internationalization, intercultural communication,

and national aspects. This reflects the influence of the Belt and Road Initiative on the promotion of strategies to cultivate students' intercultural communication skills, highlighting the increasing emphasis in the education field on the importance of internationalized education and cross-cultural communication. For example, Hong Kong, which originally prefers EMI (Pun and Jin, 2021), and Macau are expected to place greater emphasis on nurturing students' multilingual abilities and cross-cultural communication skills under the complex influence of the Belt and Road Initiative (Choi and Adamson, 2020) to meet the demands of multicultural exchanges in a globalized context (Zeng and Wang, 2023).

### 3.3.2 Evolution of teaching strategies

Before the Belt and Road Initiative, teaching strategies primarily focused on exam-oriented approaches. During this period, the education system placed a general emphasis on educational reforms and improving students' exam scores in order to stand out in the competitive job market (Li et al., 2023). However, after the Belt and Road Initiative, scholars began to realize that traditional teaching methods and assessment approaches may not meet the needs of students in the era of globalization (Feng, 2023). Therefore, Yu et al.

**FIGURE 8**
Topic evolution map.
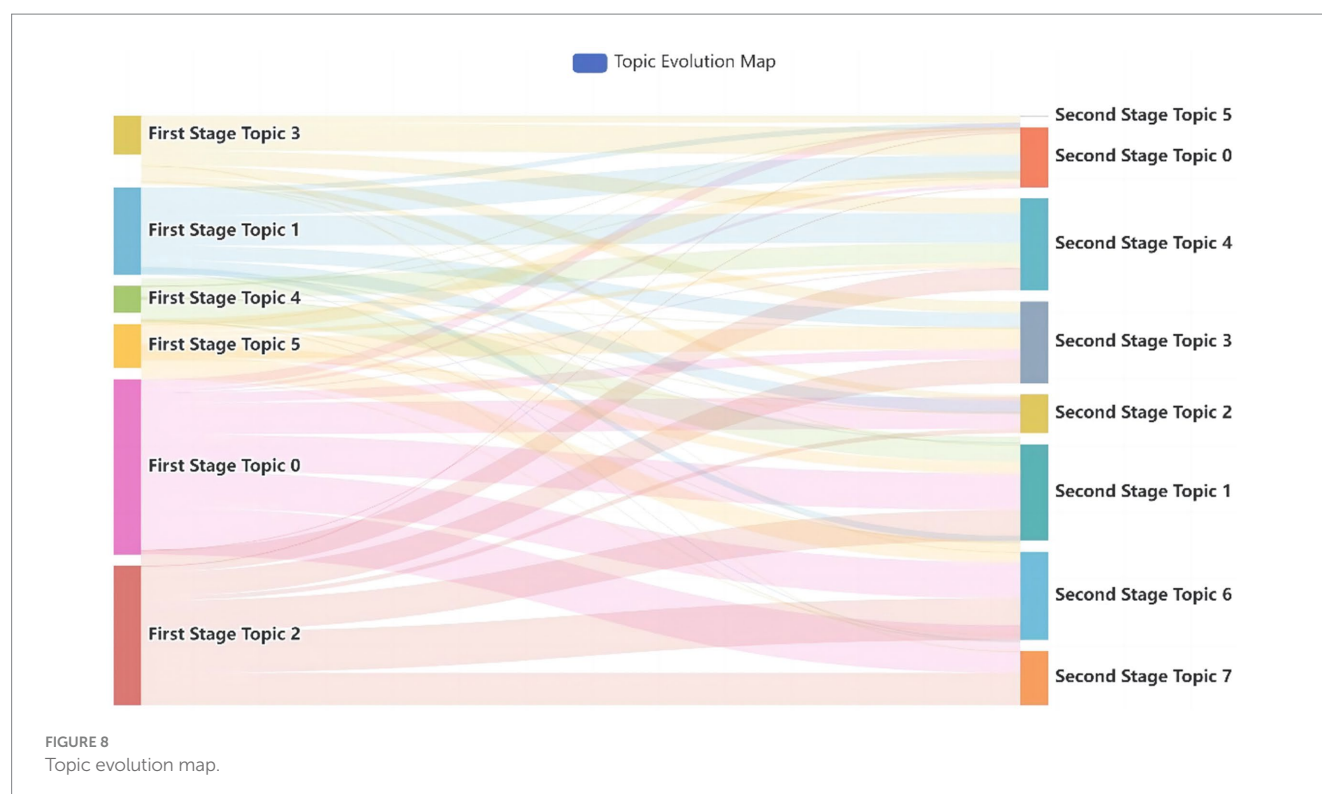
(2022, 2023) conducted a research on blended learning and found that it yielded significantly better learning outcomes than traditional learning methods. They also found that students exhibited significantly stronger learning motivation in blended learning compared to traditional English learning. This transformation reflects the response to new demands (Qian, 2019) and challenges (Du, 2018) in China's English education after the Belt and Road Initiative.

### 3.3.3 English education and multilingual education

In the context of the Belt and Road Initiative, Zhang (2017) and Qian (2019) argued that it is necessary to place greater emphasis on cultivating English talents. However, in T2 period following the initiative, the enthusiasm for English education in Chinese higher education is cooling down. Nevertheless, the demand for higher English proficiency was increasing (Fan, 2023). Additionally, during this period, more terms related to multilingual education emerged, such as English as a Foreign Language (EFL) and Languages Other Than English (LOTE). This evolutionary path aligned with the situation identified by Li et al. (2020), who stated that EMI failed to meet the needs of international students from diverse backgrounds. This indicated that under the influence of the Belt and Road Initiative, education authority was paying more attention to language education and the development of multilingual abilities.

## 4 Conclusion

China has proposed the Belt and Road Initiative to strengthen regional connectivity. To have a better understanding of the impact of the Initiative on China's English education policy, this study employs LDA and Word2Vec to reveal the high-frequency research topics in China's English education policy from 2005 to 2024. Through calculating the cosine similarity of the CBOW and visualizing the topic evolution using Sankey diagrams, and further summarizing the challenges faced in different periods using the skip-gram in Word2Vec, the study finds that the Initiative had a profound impact on China's English education policy. The Initiative has led to a shift in policy priorities, which is consistent with the study of Yu et al. (2021). From focusing on improving students' writing ability, English proficiency, and creativity, to cultivating students' cross-cultural communication skills so as to meet the cooperation needs of countries along the Belt and Road. In order to enhance students' learning outcomes and motivation, the teaching strategies have also undergone significant changes, shifting from an exam-oriented approach to an emphasis on teaching methods and feedback.

Meanwhile, the challenges faced by English education policy have also evolved from emphasizing students' basic skills and practical skills to conducting in-depth research and solving real-life problems in the education. These findings provide policymakers with a more comprehensive and in-depth understanding about the English education policy, enabling them to better address the educational needs and challenges in the context of globalization.

However, this study is not without limitations. This study only analyzes journals from Web of Science, and the language is limited within English, in the future, the research can take journals written in other languages into consideration to make a more comprehensive analysis. Moreover, Future research can verify the

findings of this study through other research methods like surveys, interviews, and case studies, and further explore the impact of Belt and Road Initiative. This study will provide important insights for the reform of China's English education policy in the future.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding authors.

## Author contributions

FL: Conceptualization, Formal analysis, Writing – original draft, Writing – review & editing. HH: Conceptualization, Data curation, Methodology, Writing – original draft. ZL: Writing – review & editing, Visualization.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Student engagement in foreign language learning: relations with classroom goal structure, self-efficacy, and gender

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The present study examined the effects of classroom goal structure, self-efficacy, and gender on student engagement among college students ($N = 606$) learning English as a foreign language in China. Data analysis using multi-group structural equation modeling found that mastery classroom goal structure impacted male students' engagement both directly and indirectly through self-efficacy, whereas only the indirect path via self-efficacy was significant for female students. Performance classroom goal structure had a significant effect on student engagement for male students but not female students. Thus, self-efficacy can not only impact student engagement but also mediated the relations between mastery classroom goal structure and student engagement regardless of student gender. These findings suggest that creating a classroom environment that highlights the importance of working diligently and holding optimistic beliefs in one's language capacities can promote English learners' engagement across genders. However, a classroom climate that emphasizes demonstrating competence and high performance relative to others might promote engagement for men, but not for women.

KEYWORDS

foreign language learning, student engagement, classroom goal structure, self-efficacy, gender differences

## 1 Introduction

Student engagement is a vital component of successful foreign language learning, as higher engagement is linked to more proficient language skills (O'Neal et al., 2018; Zhang et al., 2020; Khajavy, 2021). Student engagement in foreign language learning is influenced by learners' individual characteristics such as self-efficacy, grit, motivation, and emotion (Yin, 2018; Khajavy, 2021; Bai et al., 2022) as well as contextual factors including classroom environment, classroom goal structure, and peer interactions (Wei, 2014; Zhang and Hyland, 2018; Sulis and Philp, 2021). Although prior research indicates that both individual and environmental factors are important, most studies have examined these factors separately; more research is needed to examine how these factors may interact in promoting student engagement (Svalberg, 2009; Lawson and Lawson, 2013; Mercer, 2019).

Additionally, previous research studies have found that men and women may have different experiences when learning foreign languages, including differences in motivation, self-efficacy, engagement, and class perceptions (Henry and Cliffordson, 2013; Diseth and Samdal, 2015; Oga-Baldwin and Nakata, 2017). However, although gender differences in specific factors were investigated in previous studies, little research has examined possible

gender differences in terms of the relations among individual and environmental factors (e.g., classroom goal structure, self-efficacy, and student engagement) in the foreign language learning process. Therefore, the present study aimed to investigate the associations among language learners' perceived classroom goal structures, self-efficacy, and student engagement as well as the possible effects of student gender.

## 1.1 Language learning in the Chinese context

When examining language learning, contextual factors beyond the classroom environment should be considered, since factors such as cultural values and social expectations can influence student learning (King and McInerney, 2014; Wang and Rao, 2019). Previous studies have indicated that Chinese students showed more performance-oriented goals than North American students, likely due to the more competition-oriented educational system in China (Shih, 2005). However, it is an overgeneralization to view Chinese students as only performance-focused (Matsumoto and Yoo, 2006; Wang and Rao, 2019). It is also important to acknowledge important differences between secondary education and university education in China; university education tends to be more mastery-oriented than secondary education (Yu, 2005). In relation to English language learning specifically, English is a core skill for Chinese university students (Li et al., 2008). Many universities in China require students to pass a national English test (i.e., College English Test) before they graduate. However, this test is criterion-rather than norm-referenced. Therefore, mastering the language is more important than outperforming others for Chinese college students' success in English language learning.

## 1.2 Student engagement

Over the last two decades, a large body of research has indicated that student engagement is directly and indirectly linked to positive learning behaviors and outcomes including critical thinking ability, interest and motivation, and mastery of broad academic skills such as problem-solving (Carini et al., 2006; Christenson et al., 2012; Skinner and Pitzer, 2012; Fredricks et al., 2016; Yin, 2018). Engagement can also serve as a protective factor against negative outcomes such as poor academic performance, student burnout, and school dropout (Krause and Coates, 2008; Finn and Zimmer, 2012; Wang and Eccles, 2012).

Although there has been large variation in how student engagement is defined, there is consensus that engagement is a multidimensional construct with behavioral, cognitive, and emotional aspects (Schaufeli et al., 2002; Fredricks et al., 2016). Schaufeli et al. (2002) conceptualized student engagement in the context of higher education as a fulfilling and positive state of mind, characterized by three dimensions: vigor, dedication, and absorption. Vigor refers to high energy and mental resilience while studying, willingness to engage in effort, and persistence regardless of difficulties; dedication is characterized by being actively and strongly involved in one's study and experiencing a sense of significance, enthusiasm, inspiration, and challenge; and absorption means being fully concentrated and happily engrossed in one's

study, whereby time passes quickly and one has difficulties detaching from study or work (Schaufeli et al., 2002, 2006).

### 1.2.1 Student engagement and language learning

Although students may have domain-general levels of engagement with academic tasks, many students vary in their engagement across content areas (e.g., a student may be more or less engaged in math versus history; Sinatra et al., 2015). However, research on student engagement specific to foreign language learning has not drawn much attention until recent years (Akbari et al., 2016; Mercer, 2019; Zhang et al., 2020; Khajavy, 2021). Although research in this area is limited, there is evidence that engagement can facilitate students' foreign language performance and lead to more fruitful and practical language learning experiences (O'Neal et al., 2018; Zhang and Hyland, 2018; Zhang et al., 2020; Khajavy, 2021). For example, Zhang et al. (2020) found that engagement positively predicted English listening and speaking performance, as well as intention to continue studying English, and moderated the relations of language learning motivation with performance and intention to continue in a sample of Chinese university students.

### 1.2.2 Student-level predictors of engagement

Student engagement in foreign language learning can be impacted by learner characteristics such as motivation and emotions (Yin, 2018; Khajavy, 2021). As an example, Khajavy (2021) investigated the relations of grit (i.e., perseverance and interest), emotions, and students' language engagement with second language (L2) reading comprehension among college students who learned English as a foreign language in Iran. The results showed that perseverance, interest, and emotions were all significant predictors of engagement, which further affected students' L2 reading comprehension.

### 1.2.3 Classroom-level predictors of engagement

Along with individual level factors, student engagement can be influenced by contextual factors such as elements of the class environment, course instructors, and peer interactions (Baralt et al., 2016; Zhang and Hyland, 2018; Sulis and Philp, 2021). For example, Sulis and Philp (2021) examined college students' perceptions when learning French as a foreign language in the UK and found that learners were engaged and willing to interact in the target language when they were provided opportunities for challenges along with support to meet these challenges, received support that matched their learning needs and interests, and had positive relationships with peers and teachers.

## 1.3 Self-efficacy

Self-efficacy is defined as an individual's beliefs in his or her perceived capabilities to complete a goal-oriented activity or task in a particular setting (Bandura, 1997). In academic settings, students who feel highly efficacious about learning are more likely to set challenging learning goals, apply effective learning strategies, and persist regardless of failures; in contrast, those with low self-efficacy are inclined to choose easy academic tasks, expend less effort, and be more anxious in the face of obstacles (Bandura, 1997; Stevens et al., 2004; Ouweneel et al., 2013; Mills, 2014). In other words, self-efficacious students are motivated and engaged in their learning, which further increases their competence as learners.

### 1.3.1 Self-efficacy and language learning

When it comes to studies in foreign language learning, previous literature has revealed that self-efficacy is positively related to engagement (Graham, 2007; Bai et al., 2022) and language proficiency (Mills et al., 2006, 2007; Barber et al., 2015). More specifically, higher self-efficacy relates to greater engagement, which further enhances students' language skills. In an example, Busse and Walter (2013) found positive relationships between self-efficacy beliefs and self-perceived effort expended in the language learning process in a group of first-year college students learning German as a foreign language. Consistent with Busse and Walter's findings, when Bai et al. (2022) explored the relations between motivational factors (e.g., academic self-efficacy) and learning behaviors (e.g., class engagement) among high school students learning English as a foreign language in Singapore, academic self-efficacy was a significant predictor of class engagement after controlling for other variables for both male and female students.

### 1.3.2 Student-level predictors of self-efficacy

A body of studies have revealed that self-efficacy, especially self-efficacy in language learning, was influenced by other individual factors, including L2 learning motivation, interest, and anxiety (Woodrow, 2011; Raoofi et al., 2012; Roshandel et al., 2018). For example, Woodrow (2011) examined the relations between English writing anxiety, self-efficacy, and English writing performance among college students in China and found that students' English writing anxiety significantly predicted their writing self-efficacy, which in turn predicted their English writing performance.

### 1.3.3 Classroom-level predictors of self-efficacy

Apart from the internal factors, studies have also indicated that external factors such as classroom climate, feedback from teachers, and interaction with teachers and peers can affect learners' self-efficacy in language learning (Gorsuch, 2009; Moghari et al., 2011). As an example, Gorsuch (2009) found that positive classroom environment, interaction between instructors and students, and interaction among peers were related to greater language learning self-efficacy among US undergraduate students.

## 1.4 Classroom goal structure

Research on classroom goal structure posits that teachers convey various motivational messages to their students through instructional practices (Ames, 1992). Initially, two types of classroom goal structures were identified: mastery-oriented and performance-oriented (Ames and Archer, 1988; Ames, 1992). The mastery-oriented classroom goal structure refers to students' perceptions of aspects of the classroom climate that highlight learning, effort, and diligence in honing their skills. Conversely, the performance-oriented classroom goal structure describes students' perceptions of elements of the classroom that underscore their abilities relative to those of others and demonstrate their competence.

Empirical studies have indicated that mastery-oriented classroom goal structures are related to adaptive patterns of learning (Michou et al., 2013; Uçar and Sungur, 2017; Gertsakis et al., 2021). For example, in a study of science learning among middle school students in Turkey, Uçar and Sungur (2017) found that students who perceived mastery goal structures showed higher engagement and self-efficacy in science classes. However, research on the role of performance-oriented goal structures has not reached a consensus. Some research has revealed that performance-oriented classroom goal structure was associated with maladaptive learning behaviors or had no association with learners' motivation or behaviors (Middleton and Midgley, 1997; Ohtani et al., 2013). On the other hand, a few studies reported that a performance goal structure could facilitate learning (Pajares et al., 2000; Lavasani et al., 2011). Thus, the relations among classroom goal structures and students' learning behaviors and outcomes are still inconsistent in various studies and need to be investigated further.

### 1.4.1 Classroom goal structure and language learning

With a limited amount of research examining the role of classroom goal structure in foreign language learning, evidence indicates that mastery-oriented classroom goal structures can positively predict students' language learning motivation and behaviors (Wei, 2014; Bardach et al., 2018). For example, Wei (2014) examined the relations among Chinese college students' perceptions of English classroom goal structures, L2 motivational self-system (e.g., ideal and ought L2 self), and motivated behavior when learning English. The results showed more positive impacts of mastery classroom goal structure than of performance classroom goal structure. However, little research has been conducted to examine the relations between classroom goal structure and other motivational outcomes (e.g., self-efficacy and student engagement) in foreign language learning contexts.

## 1.5 Gender differences in foreign language learning

Traditional Chinese culture advocates that men should be brave, assertive, and dominant, whereas women should be subordinate to men and behave in more passive or submissive ways (Li, 1998; Ho et al., 2020; Xu et al., 2022). Although the status of women in China has improved in recent decades (United Nations Development Programme, 2024), Chinese women still experience gender discrimination in the workplace (Kuhn and Shen, 2013; Zhang et al., 2021) and there is a continuing expectation that women will be the ones primarily responsible for taking care of home and children (Leung, 2003; Zhang et al., 2022), whereas men will be responsible for supporting the family financially (Qing, 2020). These gendered expectations may influence college students in a variety of ways, such as choice of major and career aspirations (Yang et al., 2024).

As a result of these gendered expectations and socialization experiences, gender might play a role in students' language learning (Meece et al., 2006; Oga-Baldwin and Nakata, 2017). Research has found that male and female students engage differently with learning foreign languages (Henry and Cliffordson, 2013; Oga-Baldwin and Nakata, 2017). Specifically, female students on average hold a more positive attitude toward foreign cultures and language communities and favor interdependence and social collectivism more than male students when learning a foreign language, which may contribute to greater language learning achievement among female students (Meece et al., 2006). In addition, teachers may have differing expectations for students based on gender (Wang et al., 2023), which may in turn affect student engagement and performance (Li and Rubie-Davies, 2017).

### 1.5.1 Gender and language learning self-efficacy

Previous studies have explored gender differences in students' language self-efficacy. However, the research literature has not reached a consensus. Some studies revealed that female students reported stronger self-efficacy in language learning than male students (Pajares and Valiante, 2001; Wang et al., 2013; Kim et al., 2015), whereas others found male students had higher self-efficacy in English language learning than female students (Bai et al., 2022). Still other research found no gender differences in self-efficacy (Schnell et al., 2015).

### 1.5.2 Gender and classroom goal structure

Although gender differences have been investigated with regard to student engagement and self-efficacy in foreign language learning, this issue has rarely been discussed in previous studies on the effects of language learners' perceived classroom goal structure on their language learning. In the literature on classroom goal structure in other academic domains, perceived classroom goal structure appeared to play a more important role for male students in general (Linnenbrink-Garcia et al., 2008; Diseth and Samdal, 2015), however it is not clear whether this would apply in foreign language learning.

## 1.6 The current study

In summary, student engagement, self-efficacy, and classroom goal structure are found to be important factors in students' learning and academic performance (Wei, 2014; Khajavy, 2021; Bai et al., 2022). However, little research has investigated the interactive relations of these factors simultaneously, especially in the language learning process. Also, although previous research has explored gender differences in student engagement and self-efficacy, few studies have discussed gender differences in the relationships among these factors (i.e., classroom goal structure, self-efficacy, student engagement). Therefore, the purpose of this study was to explore the relations among classroom goal structure, self-efficacy, and student engagement, as well as the possible role of gender in such complex associations. Three research questions were addressed in this study:

1. Do mastery classroom goal structure and performance classroom goal structure have direct effects on self-efficacy and student engagement in English language learning across genders?
2. Does self-efficacy have a direct effect on student engagement in English language learning across genders?
3. Do the two types of classroom goal structures have indirect effects on student engagement in English language learning through self-efficacy across genders?

## 2 Method

## 2.1 Participants

Participants were 606 university students recruited from three universities in northeastern China. All participants were English major students in different tracks, including English education,

English translation, English and international business, and British and American literature. There were 443 female students (73.1%) and 163 male students (26.9%) in this sample, which was consistent with the overall gender proportion of English majors. The age range of the participants was 18–24 years ($M = 20.05$, $SD = 1.05$).

## 2.2 Procedure

The study was approved by the institutional research board at the University of Kansas. During their language classes, participants were provided with an informed consent statement. Those who consented completed measures in paper and pencil format. Participation in this research project was voluntary and anonymous.

## 2.3 Measures

Items in the present study were all phrased in terms of "English class" and "learning English" rather than "class" and "learning" in general. All items in the current study were measured on a 7-point Likert scale from *strongly disagree* (1) to *strongly agree* (7).

### 2.3.1 Classroom goal structure

Classroom goal structures in English class were assessed using Wei's (2014) measure, which has been used to measure the English classroom goal structure among Chinese college students with good reliability and validity. Two subscales were included: mastery-oriented classroom goal structure (5 items; e.g., *My English teacher wants us to understand our work, not just memorize it*), and performance-oriented classroom goal structure (5 items; e.g., *my English teacher calls on those students who get good grades more than other students*). The Cronbach's alpha coefficients in the current sample for both measures were good ($\alpha = 0.82$; 0.80, respectively).

### 2.3.2 Self-efficacy

Self-efficacy in learning English was assessed by adapting Wang et al.'s (2001) measure (10 items; e.g., *It is easy for me to stick to my aims and accomplish my goals when learning English*). This measure was originally used to assess students' academic self-efficacy in China, it has been widely used and shows good validity and reliability (Fu et al., 2005; Zhang et al., 2015). The Cronbach's alpha value of this scale for the current study was good ($\alpha = 0.91$).

### 2.3.3 Student engagement

Items to measure student engagement were adapted from UWES–9S (Schaufeli et al., 2006) and the Chinese version of UWES–S (Fang et al., 2008). These measures showed good reliability and validity, and have been widely used in different countries (Chen and Lai, 2017; Carmona-Halty et al., 2019). The scale included nine items, three items for each of three subdimensions: vigor (i.e., high levels of energy and mental resilience, willingness to invest effort in study, and persistence through difficulties), dedication (i.e., a sense of significance, enthusiasm, inspiration, and challenge), and absorption (i.e., being fully concentrated and engrossed in study). The Cronbach's alpha coefficient for this scale was 0.92.

## 2.4 Data analyses

Relations among variables were tested using structural equation modeling (SEM) for the full sample, and gender differences were examined using multi-group structural equation modeling (MGSEM). Hair et al. (2012) recommended that before testing the relationships of a group of variables in a structural model, all measurement models of these variables should be first validated using confirmatory factor analysis (CFA). The CFA aims to confirm the relationships between indicators and latent variables based on theoretical and empirical considerations and compare between nested models using a chi-square difference test (Kline, 2005). Also, before MGSEM was conducted, measurement invariance analysis was needed ensure the measures were invariant for different groups (Schmitt and Kuljanin, 2008). Both SEM and MGSEM were estimated with full information maximum likelihood (FIML), since there were missing data in the current sample. However, the missing data in the present study were less than 5% (0.19%), which is considered inconsequential (Schafer, 1999). The following indices are presented as indicators of global model fits: Chi-square, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residuals (SRMR). Typically, CFI values ≥0.90, RMSEA values <0.08, and SRMR <0.08 indicate an acceptable global model fit (Byrne, 2001). In addition, based on Chen's (2007) recommendations for evaluating the measurement invariance among the models, a change of ≤0.01 in CFI and a change of ≤0.015 in RMSEA indicate invariance. The mediated effects were conducted by a bootstrapping approach (MacKinnon, 2008). All the analyses were conducted using the Lavaan Package in 4.3.0 (Rosseel, 2012).

# 3 Results

## 3.1 Descriptive statistics

For all samples (full sample, male students, and female students), the means of mastery classroom goal structure, self-efficacy, and engagement were higher than the midpoint of the scale, whereas performance classroom goal structure was lower than the midpoint of the scale (see Tables 1–3). The results also showed that all study variables except performance classroom goal structure in the full sample and the male sample were significantly related to student engagement. Also, self-efficacy showed the highest correlations with student engagement across the samples.

## 3.2 Measurement invariance

To explore if there were differences between male and female students in the interplay of the variables, tests for measurement invariance were conducted with full sample. First, the indices indicated good fit for the configural model: $\chi^2(716) = 1510.724$, $p < 0.001$, CFI = 0.913, RMSEA = 0.061 (90% CI [0.056, 0.065]), SRMR = 0.062. As the configural invariance was acceptable, the metric model was tested. The metric model also had an acceptable fit to the data: $\chi^2(741) = 1567.428$, $p < 0.001$, CFI = 0.910, RMSEA = 0.061 (90% CI [0.056, 0.065]), SRMR = 0.066. The difference between the metric model and the configural model was small, ΔCFI = 0.003, ΔRMSEA = 0, which

**TABLE 1** Descriptive statistics for full sample.

| | MC | PC | SE | EN |
|---|---|---|---|---|
| MC | -- | | | |
| PC | −0.18** | -- | | |
| SE | 0.30** | −0.001 | -- | |
| EN | 0.24** | −0.04 | 0.52** | -- |
| M | 5.55 | 3.75 | 4.28 | 4.52 |
| SD | 0.94 | 1.16 | 1.17 | 0.98 |

MC, mastery classroom goal structure; PC, performance classroom goal structure; SE, self-efficacy; EN, student engagement.
*$p < 0.05$, **$p < 0.01$.

**TABLE 2** Descriptive statistics for male sample.

| | MC | PC | SE | EN |
|---|---|---|---|---|
| MC | -- | | | |
| PC | −0.09 | -- | | |
| SE | 0.46** | 0.11 | -- | |
| EN | 0.36** | 0.06 | 0.60** | -- |
| M | 5.75 | 3.97 | 4.74 | 4.82 |
| SD | 1.02 | 1.30 | 1.38 | 1.11 |

MC, mastery classroom goal structure; PC, performance classroom goal structure; SE, self-efficacy; EN, student engagement.
*$p < 0.05$, **$p < 0.01$.

**TABLE 3** Descriptive statistics for female sample.

| | MC | PC | SE | EN |
|---|---|---|---|---|
| MC | -- | | | |
| PC | −0.24** | -- | | |
| SE | 0.19** | −0.09* | -- | |
| EN | 0.16** | −0.12* | 0.45** | -- |
| M | 5.48 | 3.68 | 4.13 | 4.42 |
| SD | 0.90 | 1.11 | 1.05 | 0.92 |

MC, mastery classroom goal structure; PC, performance classroom goal structure; SE, self-efficacy; EN, student engagement.
*$p < 0.05$, **$p < 0.01$.

indicates that constraining the factor loadings to be equivalent across gender did not significantly affect the model fit. In other words, the factor loadings were invariant across gender. Then the scalar model was tested by further constraining the intercepts to be equivalent across genders. However, the scalar model showed an unacceptable fit: $\chi^2(766) = 2446.139$, $p < 0.001$, CFI = 0.817, RMSEA = 0.085 (90% CI [0.081, 0.089]), SRMR = 0.078. Also, the difference between the metric model and the scalar model was large, ΔCFI = 0.093, ΔRMSEA = 0.024. Therefore, the interrelations among the study variables exhibited different structural patterns for male and female students.

## 3.3 Multi-group structural equation modeling

Since the measurement invariance indicated that there were significant differences in the two groups between metric and scalar

models, multi-group structural equation modeling (MGSEM; shown in Figures 1, 2) was used to test for differences between male and female students. The global fit of MGSEM indicated an acceptable fit to the data: $\chi^2$ (716) = 1510.724, $p < 0.001$, CFI = 0.913, RMSEA = 0.061 (90% CI [0.056, 0.065]), SRMR = 0.062. The results showed that $R^2$ for male students' self-efficacy and engagement were 0.189 and 0.519 respectively, and $R^2$ for female students' self-efficacy and engagement were 0.269 and 0.029, respectively. Specifically, it indicated that 18.9% of the variance of male students' self-efficacy in English learning and 51.9% of the variance of male students' engagement were explained by the model. Additionally, 26.9% of the variance of female students' self-efficacy in English learning and 2.9% of the variance of female students' engagement were explained by the multi-group model.

The results of MGSEM indicated that mastery classroom goal structure had significant impact on students' self-efficacy for both genders (male students, $\beta = 0.43$, $p < 0.001$; female students, $\beta = 0.14$, $p = 0.02$). In other words, both male and female students showed higher self-efficacy when they perceived a more mastery-focused language learning environment. However, when it came to the role of mastery classroom goal structure in engagement, mastery classroom goal structure was positively related to engagement for male students ($\beta = 0.26$, $p = 0.002$), but unrelated for female students ($\beta = 0.08$, $p = 0.16$). Thus, male students' engagement in learning English might be facilitated when they are exposed to the classroom that aims to improve their language skills, but that is not the case for female students.

The MGSEM models showed that the paths from performance classroom goal structure to self-efficacy were not significant for either male ($\beta = 0.06$, $p = 0.49$) or female students ($\beta = -0.07$, $p = 0.27$), indicating that students' self-efficacy might not be influenced by the competitive classroom environment regardless of gender. However, the influences of performance classroom goal structure on engagement in the MGSEM models were not the same. It showed significant relationships for male ($\beta = 0.15$, $p = 0.045$) but not for female students ($\beta = -0.05$, $p = 0.41$), which suggested that the perceptions of performance-oriented classroom goal structure might increase male students' engagement in English learning, but not female students' engagement.

For the path from self-efficacy to engagement, the results showed that self-efficacy can predict engagement for both male ($\beta = 0.55$, $p < 0.001$) and female students ($\beta = 0.49$, $p < 0.001$). The findings revealed that if students had a higher self-efficacy, they might be more willing to engage in learning English. The results of bootstrapping revealed mastery classroom goal structures had significant indirect effects on student engagement in English language learning through self-efficacy across genders. In other words, when students were exposed in a class where the instructors aimed to improve their language skills, students might have a higher self-efficacy, which in turn would further boost their engagement. Particularly, the indirect effect of mastery classroom goal structures for male students was 0.18, $p = 0.021$ (95% CI [0.03, 0.34]). The indirect effect of mastery classroom goal structures for female students was 0.49, $p < 0.001$ (95% CI [0.23, 0.76]).

## 4 Discussion

The purpose of this study was to identify the relations among classroom goal structure, self-efficacy, and student engagement, as well as the role of gender on the associations among these variables, for a sample of college students studying English as a foreign language
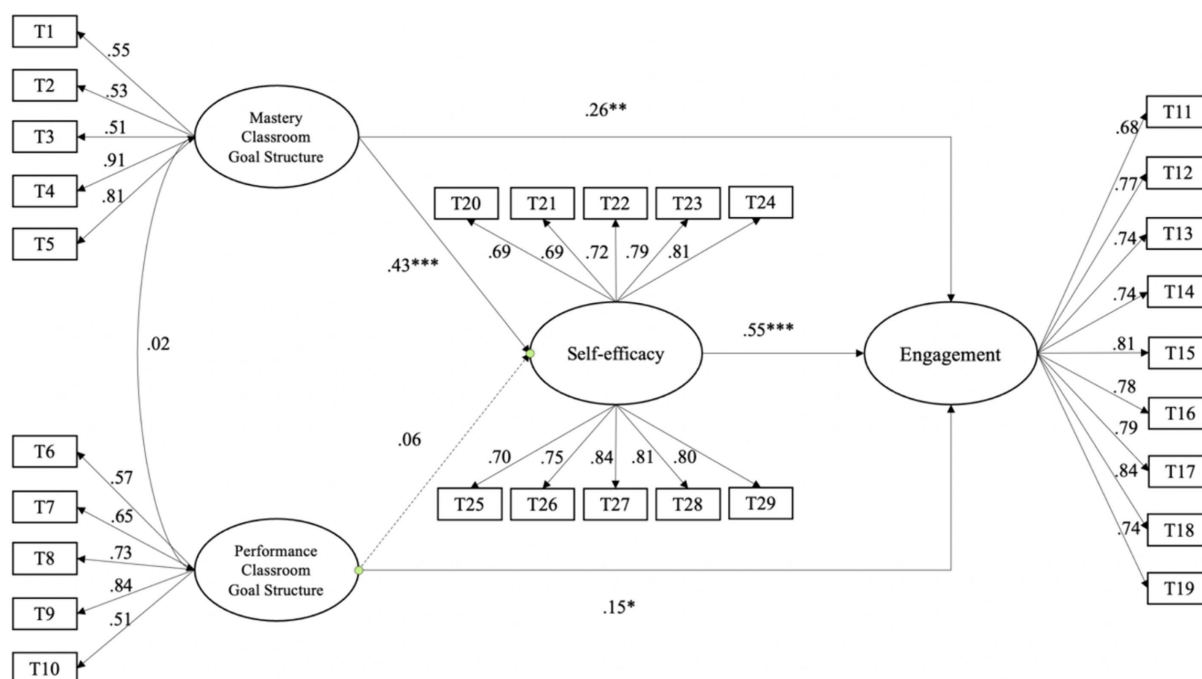


FIGURE 1
Multi-group structural equation modeling for male sample. Estimates are standardized. Standardized estimates are from a completely standardized solution. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

**FIGURE 2**
Multi-group structural equation modeling for female sample. Estimates are standardized. Standardized estimates are from a completely standardized solution. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.
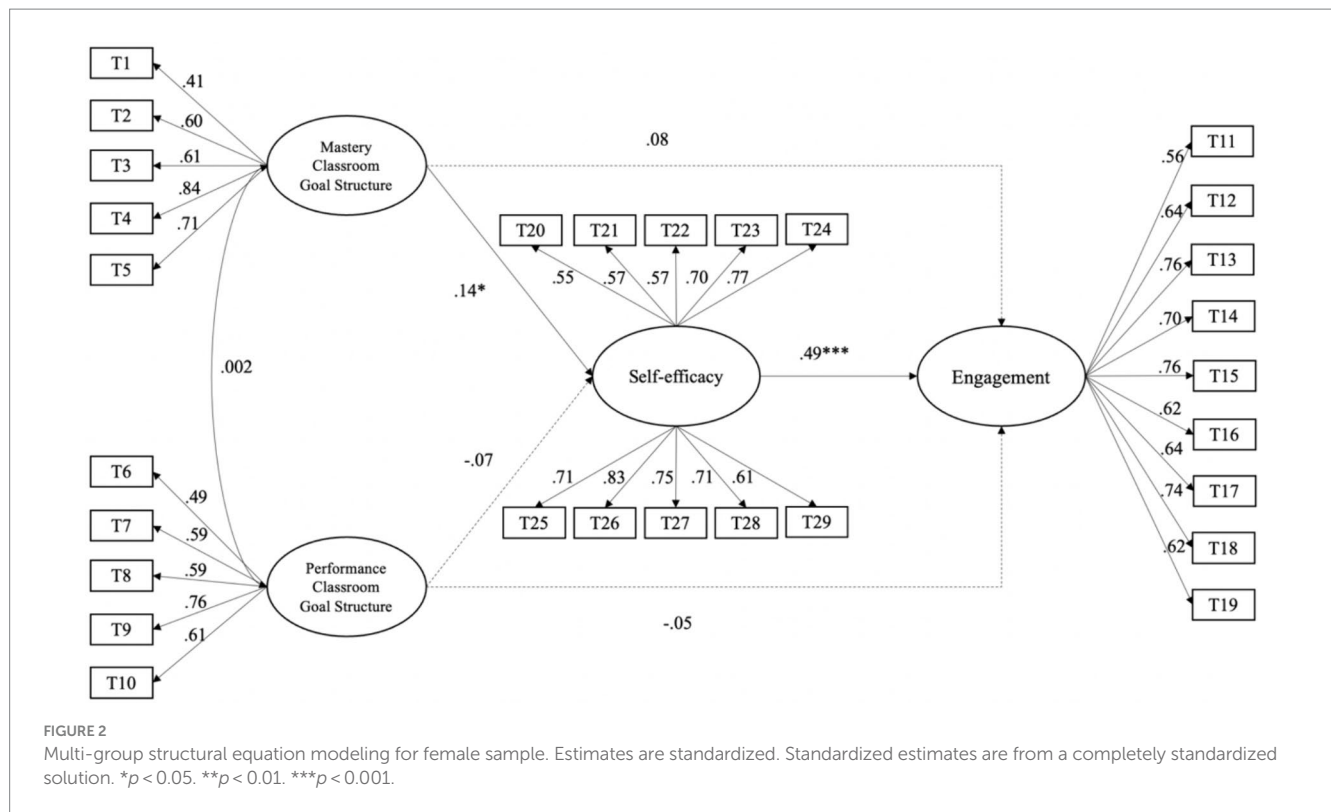
in China. In general, the findings indicated that mastery classroom goal structure had both direct and indirect impacts on student engagement for male students, but only the indirect effect existed for female students. Performance classroom goal structure related to student engagement for male students but not for female students. In addition, self-efficacy predicted student engagement and mediated the relation of mastery classroom goal structure to student engagement across genders.

It is worth noting that the participants reported higher mastery classroom goal structure than performance classroom goal structure; that is, overall students reported that their English classes and instructors tended to focus on the promotion of English language skills and highlight the role of diligence and effort, rather than encouraging them to demonstrate their competence or to compare their performance with others'. Such results were counter to previous studies, which indicated that classrooms in China were more performance-oriented (Shih, 2005). There might be several reasons for this discrepancy. First, the participants in the current study were college students who had already passed the national college entrance exam; focus on this exam may drive much of the performance orientation for K-12 students in China. Second, English language competence is a key practical skill for many jobs. Thus, mastering the language may be more important than outperforming others for college students who are concerned with future career success, not just academic performance.

The results of the MGSEM model showed that the relations among the three variables of interest varied across gender. First, mastery classroom goal structure positively predicted students' self-efficacy across genders, but it only had a direct effect on student engagement for men. However, performance classroom goal structure was not related to students' self-efficacy across genders,

although performance classroom goal structure had a significant and positive direct effect on student engagement for men. This finding may be due, in part, to the view of assertiveness and dominance as desirable characteristics for men to possess (Li, 1998; Ho et al., 2020; Xu et al., 2022); men may thus be more engaged when classrooms provide the opportunity for these gender-role-consistent behaviors. These findings are also in accordance with some other research highlighting that classroom goal structure was more beneficial to male students' engagement than female students' (Linnenbrink-Garcia et al., 2008; Diseth and Samdal, 2015). The differential effects of performance classroom goal structures for men and women may be one possible explanation for the inconsistency in findings about the effects of performance goal structures in the existing literature.

Furthermore, the MGSEM model revealed that self-efficacy plays a substantial role in predicting student engagement for both male and female students. Such findings were in agreement with Bai et al.'s (2022) study on gender differences with regard to the relations between self-efficacy and engagement in foreign language learning, indicating that students' self-efficacy showed predictive power on their class engagement for both genders. The findings of the current study seem to reconfirm previous studies, suggesting that understanding and improving students' self-efficacy beliefs was a crucial aspect to promote language learning engagement for both male and female students (Ouweneel et al., 2013; Kim et al., 2015).

In terms of the indirect effects, the results of the MGSEM model showed that mastery classroom goal structure can facilitate students' engagement through promoting language self-efficacy across genders, but only had a direct effect on engagement for men. Such findings

implied that men's engagement can be promoted by both perceiving mastery classroom goal structure in the language class and language self-efficacy; whereas women's engagement was only directly influenced by their language self-efficacy.

Overall, the findings of MGSEM analyses indicated that classroom goal structure had more of an impact on men than women. However, this does not mean that classroom goal structure had no impact on women's engagement, since the results showed that mastery classroom goal structure can also facilitate women's engagement by improving their self-efficacy. Moreover, self-efficacy was also a crucial factor facilitating student engagement for all students, and both the findings of this study and others (Gorsuch, 2009; Moghari et al., 2011; Uçar and Sungur, 2017) show that aspects of the classroom environment can impact self-efficacy. It is also worth noting that the variables included in this study accounted for substantially more variance in student engagement for male students than for female students. This indicates that the variables included in this study did a better job of explaining what affects engagement for men than for women. In other words, compared to male students, classroom goal structure and self-efficacy might not be the most meaningful factors when considering how to engage female students. Other factors, such as learning goals beyond mastery and performance (e.g., social goals), beliefs and attitudes about language learning, emotional experiences in the classroom, or student-teacher relationship quality, might potentially have greater explanatory power for women.

## 4.1 Limitations

It is worth noting that the findings of the present study should be interpreted within certain limitations. First, the measurement of classroom goal structure included only mastery and performance goals. Recent approaches to examining motivation using achievement goal theory have used more complex frameworks of goals (e.g., mastery-approach, mastery-avoidance, performance-approach, performance-avoidance) and have included other types of goals (e.g., social goals) in examining student goals and classroom goal structures (Bardach et al., 2018, 2020; Gertsakis et al., 2021). Future studies can try to further explore the relations among these three variables by investigating the more complex role of classroom goal structure in foreign language learning. Second, while the sample of this study covers three universities in Northeast China, this sample only included English majors, which may limit the generalizability of the findings to all college students. Future research should attempt to recruit more participants whose majors are not English but who are learning English as a foreign language. Third, although the sample in the present study was consistent with the overall gender proportion of English majors in Chinese universities, the gender balance in the SEM modeling was skewed toward women. Studies with more balanced samples across gender should be conducted to verify the relations among these variables in the future.

## 4.2 Implications

In the current study, the findings indicated that student engagement in foreign language learning was predicted by classroom goal structure and students' language learning self-efficacy. The findings also showed that the effects of classroom goal structure and self-efficacy on student engagement in language learning varied across genders. Such findings add to a growing body of literature that speaks to the importance of environmental and individual factors to engagement for language learners (Yin, 2018; Zhang and Hyland, 2018; Khajavy, 2021; Sulis and Philp, 2021), which might have some implications for foreign language teaching.

First, the results of the current study support the significant role of mastery classroom goal structure in facilitating student English language learning engagement, suggesting that English teachers should create a classroom environment that underscores improving students' language skills and capabilities by encouraging them to spend more time and energy to work diligently and industriously. In addition to creating this kind of classroom environment, English teachers are encouraged to develop strategies and activities to improve students' optimistic beliefs in their capacities for successfully mastering the target language, which in turn promotes students' language learning engagement. Strategies such as the use of meaningful learning tasks and assessments, allowing for autonomy and choice, providing supportive feedback, and allowing for social interaction in the classroom can help instructors to create a mastery-oriented classroom environment (Lüftenegger et al., 2014).

Further, this study found diverse effects of performance classroom goal structure on student engagement across genders. Specifically, performance classroom goal structure had a positive effect on engagement for male students, but no effect for female students. This finding implies that English teachers should consider gender differences in students' learning beliefs and behaviors, and make a rational use of the different effects of different types of classroom goal structure accordingly. Even though, in most situations, English teachers should create a classroom climate that focuses on encouraging students to put in more effort to improve their English capacities, reasonable activities and tasks to promote benign competitions can also be beneficial to student engagement and language learning, especially for male students, without being detrimental for female students.

## 5 Conclusion

The current study examined the relationships among classroom goal structure, self-efficacy, student engagement, and gender among Chinese college students learning English as a foreign language. The results indicated that mastery classroom goal structure positively predicted students' self-efficacy, which in turn affected students' engagement across genders. However, mastery classroom goal structural had a direct effect on student engagement only for male students. Moreover, although performance classroom goal structure had no effect on self-efficacy for both genders, it had a significant effect on student engagement for male students. Self-efficacy always played a significant role in student engagement in the process of language learning regardless of gender. The findings of this study suggest that English teachers should strive to promote student self-efficacy, and that both mastery and performance goal structures can facilitate student engagement.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

This study was approved by the IRB at the University of Kansas. The study was conducted in accordance with local laws and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

HW: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Writing – original draft, Writing – review & editing, Project administration, Validation. MP: Conceptualization, Investigation, Project administration, Supervision, Validation, Writing – original draft, Writing – review & editing. HL: Formal analysis, Methodology, Validation, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Developing a self-determination motivation scale for English learners with Chinese background

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"Interest" is one of the most important factors that trigger English learning behavior, and self-determination theory believes that "interest" and "value" are important factors associated with target behavior. Therefore, the purpose of this study is to construct and establish a "Self-Determination Motivation Scale of English Learners" based on the core concept of self-determination theory, which encompasses the three innate needs. There were 169 participants, all university students from various majors with Chinese backgrounds, who were taking English classes at a university. The research tool is extracted from the Learning Climate Questionnaire (LCQ) (six questions on autonomy), perceived competence for learning (PCS) (four questions on competence), and basic psychological needs (BPN) in general (eight questions on relatedness) and developed an 18-item questionnaire. The data were obtained from the existing three different self-determination questionnaires and analyzed using confirmatory factor analysis (CFA). The results show that after CFA, 15 items of the scale, which were extracted from the existing three different self-made questionnaires, were maintained, and the removed three items are all reverse items. The reliability of the developed 15-item scale is 0.95. The conclusion is that the developed 15-item scale is more suitable for university English learners with a Chinese background, although the existing three different self-determination questionnaires are still valid and reliable. Three suggestions for future research include adding expert validity for item review, adjusting the number of reverse items, and having more participants to master the scale. The implications, limitations, and future research plans are presented in this paper.

KEYWORDS

SDT, English learning motivation, scale development, EFL, higher education

## 1 Introduction

Self-learning is becoming increasingly important in higher education when applying artificial intelligence (AI) in education. Self-learning also plays a role that cannot be overlooked in English language education. If the level of student's self-determination is proven to impact education significantly, then the self-determination theory which emphasizes the interest of individuals and the value behind the learning behaviors can also apply to English language learning. Gou and Okita (2001) and Wen (1997) identified that learning motivation is vital in teaching a second language. Furthermore, learning motivation is a significant factor in the effectiveness of language learning. Gardner and Tremblay (1995) found that second language achievement positively correlates with motivation. Brown (2014)

emphasized the importance of intrinsic motivation in second language learning in the book titled Principles of Language Learning and Teaching. This study encourages cultivating students' intrinsic motivation rather than extrinsic motivation to induce students' learning desires. This is because behaviors with strong intrinsic motivation are more likely to produce self-directed learning (Deci and Ryan, 1985). Based on the self-determination theory developed by Deci and Ryan, it provides contemporary English language learners with the opportunity to make self-determined choices. The self-determined choices can fully meet their personal interests and needs while building self-efficacy, value, and the value behind learning goals, inducing behavioral motivation more effectively (Chiang, 2011). To transform external motivation into internal motivation with a high degree of self-determination, the ideal approach is to meet the basic learning needs of students, enabling them to become interested in learning English from the heart (Wang and Reynolds, 2024; Wang and Wang, 2024). Compared to the traditional passive English education method, self-directed English language learning inspired by the internal motivation to meet the basic needs of learners can have a long-term effect. As such, learners are generally more able to continue learning, which verifies the importance of the self-learning theory in English education. However, the present self-determination-related studies tend to apply the theory on healthcare (Resnicow et al., 2022), medical care (Ntoumanis et al., 2021), and disabilities (Hansen et al., 2023) to help people with dissatisfaction in a variety of needs recover themselves. The same goes for physical education. The theory has mildly touched upon education such as physical education (Adefila et al., 2020; Saugy et al., 2020; Vasconcellos et al., 2020) is because the theory is arguably helpful in athleticism and health. On the other hand, the theory has not adequately emphasized English learning and there is deprivation in the specific self-determination motivation scale for English learners.

Based on the above, the objectives of this study are as follows:

1. To analyze the relationship between self-determination motivation and English learning motivation.
2. To develop a self-determination motivation scale for English learners.

# 2 Literature review

## 2.1 Motivation for English learning

Based on motivational concepts for learning English, Liang and Lai (2003) suggest that learning motivation is the basis of learning behaviors that support the motivation and direction of a learner's behavior. This affects their persistence, commitment, learning achievement, autonomy, and enthusiasm.

Gardner and Lambert (1972) used foreign language learning motivation to suggest that if learners have a high level of learning motivation, their willingness to learn, and their learning experiences will increase. Furthermore, individuals can gain a sense of accomplishment and become more willing to participate in second language learning activities. The authors also examined the main aspects of language learning motivation, including motivation intensity, desire for language learning, and attitude toward language learning through scales.

Hong (2012) summarized the motivation of foreign language learning into two parts: extrinsic and intrinsic motivation. Extrinsic motivation refers to an individual's engagement in foreign language learning activities to obtain external material and social rewards or to avoid punishment. In contrast, intrinsic motivation refers to an individual's engagement in a foreign language learning activity because the activity is interesting and satisfying as the main reason. This is due to the internal motivation of the self to engage in the activity.

Zhang (1996) proposed that motivation can maintain activities that have already been instigated and guide the internal process of the activity toward a specific goal. Motivation is formed according to its origin and classification and is easily affected by external environmental factors, i.e., "extrinsic motivation." However, when it relates to intrinsic needs, it is referred to as "intrinsic motivation." To promote better academic performance, Deci and Ryan (2000a,b) found intrinsic motivation to be a natural motivational tendency that increases knowledge and skills according to human intrinsic interests. Furthermore, extrinsic motivation differs from intrinsic motivation because it is caused by the satisfaction of extrinsic requirements or potential rewards (Lin, 2008).

## 2.2 Self-determination theory

Since 1995, Ryan and Deci have published a series of related discussions regarding SDT, a theory of the motivational process of human self-determined behavior. The theory holds that humans are active organisms with innate potential for psychological growth and development. Self-determination leads to the potential for empirical choice. This represents a free choice of action made by an individual based on a complete understanding of their personal needs and environmental information. The theory includes three needs, three social agencies, three types of motivations, four regulations, and internalization, as discussed below.

According to SDT, the three basic human needs are the "need for autonomy," the "need for competency," and the "need for relatedness," which are innate and present in no sequence. With the support of social context, there is more chance that the basic human needs will be fully satisfied, where the motivation could become internalized from extrinsic to intrinsic motivation. In other words, human self-determination behavior is socially interactive, not independent, and motivation is dynamic for sustaining a high level of learning motivation. Therefore, how or to what extent human basic needs are satisfied in the context of society is key to determining internal motivation.

Moreover, humans have three critical psychological needs. That only when the three basic human needs are met will the performance behavior be ideal. This suggests that the meaning of human behavior in pursuit of these three basic needs arises from instinct (Chiang, 2011). A sense of autonomy refers to the perception of the degree of control an individual has over their actions. When individuals believe that their actions are motivated by their own free will rather than being ordered, forced, or threatened, they are more likely to be willing to their chosen goals. Competence refers to the degree to which an individual feels able to control and be competent in their environment. As such, individuals tend to select the jobs or tasks that they find moderately challenging to gain a sufficient sense of competence. Relatedness involves the degree to which an individual feels emotionally connected to others. When an

environment can provide enough acceptance, care, and emotional strength, it promotes individuals to accept various challenges and achieve psychological growth. The innate nature of humans is to enhance and integrate these three needs to reach a suitable state for social development and wellbeing (Deci and Ryan, 1985, 2000a,b, 2002). SDT suggests that when individuals can make their own choices, their self-abilities are more able to satisfy the three basic needs: autonomy, competence, and relatedness. They can be integrated into the surrounding group atmosphere. They can also automatically and spontaneously engage in certain behaviors to sustain intrinsic learning (Van den Broeck et al., 2010).

The existing self-determination-related studies about measuring English learning motivation are rare and, in these present studies, the scales as research tools were mostly modified from basic psychological needs (BPN). For example, Leeming and Harris (2022) used the restructured BPN named Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS) and also the Language Learning Orientation Scale (LLOS) in investigating 600 Japanese university students' English learning motivation. Alamer (2022) restructured BPN and used the Self-Determination Theory of Second Language Scale (SDT orientations) to 366 Saudi university students, Jeon (2022) used BPN directly to investigate the motivation of 179 Korean primary students to learn English.

The BPN scale is a 21-item scale addressing need satisfaction in general in one's life and was originally satisfied for people to develop and function in a healthy way (Deci and Ryan, 2000a,b). Nevertheless, BPN is universal and fits in a wide range of empirically isolated contexts. Using a variety of questionnaire items targeting the three innate needs, to be more precise and effective, is an alternative way of developing a more suitable scale of learning motivation. The learning climate questionnaire (LCQ) pertains to autonomy support and is used to assess students' learning status with respect to the autonomy of an individual instructor and peers, whereas the perceived competence scale (PCS) is one of the most face valid questionnaires designed to assess constructs from SDT. Therefore, using the six autonomy question items from LCQ, the four competence question items from PCS, and eight relatedness question items from BPN as a whole new scale for English learners can alternatively provide them a more concise and convenient learning advice.

# 3 Research design

This study recruited 169 university students in Taiwan in a variety of majors. The participants were taking an English course, and they were motivated to send back the original in-print questionnaire with 18 items.

The research tool was a survey questionnaire called the Self-Determination Motivation Scale for English Learners. The scale was divided into three dimensions with 18 questions: factor autonomy, factor competence, and factor relatedness. The questionnaire items were retrieved from the LCQ (six questions on autonomy), perceived competence for learning (four questions on competence), and Basic Need Satisfaction in General (eight questions on relatedness). The LCQ was adapted by Williams and Deci (1996) from the healthcare climate questionnaire (Williams and Deci, 1996). The PCS is a 4-item short questionnaire and is one of the most face-valid instruments designed to assess participants' feeling of competence about, say, taking part in an English course, and engaging in a more active behavior regularly. The alpha measure of internal consistency for the perceived competence

items in these studies was above 0.80 (Williams and Deci, 1996; Williams et al., 1998). The basic need satisfaction in general is a 21-item questionnaire that addresses the need satisfaction of relatedness from SDT (Deci and Ryan, 2000a,b; Gagné, 2003). Internal consistency of the scale in the current sample was considered excellent: Cronbach's alpha is 0.90 (Lataster et al., 2022). The scales were all English versions.

The data collection was taken place in class in a semester and the selected participants were from 10 different departments in a university. A total of 169 questionnaires were collected, and after deducting invalid questionnaires, 169 valid questionnaires were counted. Data were analyzed using descriptive statistics, Item analysis along with comparisons of extreme groups, correlation analysis, confirmatory factor analysis (CFA), and reliability, and all the statistical analyses of the study were conducted by SPSS 26.

# 4 Findings

## 4.1 Descriptive statistics

Table 1 shows that the majority of participants, 112 (66.3%), were women, while 57 (33.7%) were men. There were 11 freshmen (6.5%), 9 sophomores (5.3%), 9 seniors (5.3%), and 1 person (0.6%) who did not answer the question in this part.

## 4.2 Item analysis

### 4.2.1 Comparisons of extreme groups

The study showed that items 13 and 16 had $p$-values >0.05 and <0.05, respectively. Additionally, item 16's CR value was negative, indicating the performance of each extreme group is opposite, indicating no discrimination. Therefore, items 13 and 16 with no discrimination are needed to be deleted for the next step.

### 4.2.2 Correlation analysis

The criterion for the choice of items is that the correlation coefficient must reach 0.3 or higher (DeVellis, 1998). In this study, all 18 items' correlation coefficients are more than 0.3 but three of them do not reach 0.3. They are items 13, 16, and 17, meaning the items are not corresponding to the scale. Therefore, the three items were heterogeneous.

### 4.2.3 Cronbach's α value when item deleted

Table 2 represents that all 18 items are not increasing when deleted but three of them are against it. They are items 13, 16, and 17, meaning the items are not corresponding to the scale. Items 13 and 16 are non-discriminative and heterogenous. Their Cronbach's α are increasing when they are deleted. The two items need to be deleted for validity and reliability analysis, while item 17 remains.

### 4.2.4 Confirmatory factor analysis, CFA

After item analysis, the 16 items (excluding items 13 and 16) were used to extract factors with eigenvalues greater than 1 for validity. Due to the dimensions being set up, all factors are to be extracted with a certain number of dimensions based on the need of study (Wu, 2009). According to Hair et al. (2010), it is recommended that the factor loading should be more than 0.5 and the variance should be more than 60%. Table 3 presents the results of the CFA conducted in this study.

TABLE 1 Descriptive statistics.

| | Number | Percentage (%). |
|---|---|---|
| Gender | | |
| Male | 57 | 33.7 |
| Female | 112 | 66.3 |
| Major | | |
| Health management | 28 | 17.2% |
| Advertising and marketing | 23 | 14.1% |
| Finance | 21 | 12.9% |
| Leisure management | 20 | 12.3% |
| Business management | 15 | 9.2% |
| Commercial design | 12 | 7.4% |
| Business technology | 8 | 4.9% |
| Maritime | 7 | 4.3% |
| International business | 6 | 3.7% |
| Accounting | 6 | 3.7% |
| Not answered | 17 | 10.4% |
| Grade | | |
| Freshmen | 11 | 6.5 |
| Sophomore | 9 | 5.3 |
| Junior | 76 | 45.0 |
| Senior | 9 | 5.3 |
| Five-grader | 63 | 37.3 |
| Not answered | 1 | 0.6 |
| $N = 169$ | | |

TABLE 2 Results of item analysis.

| Item number/content | Comparisons of extreme groups (CR value) | Cronbach's α | Cronbach's α when item deleted | Note | Assigned factor |
|---|---|---|---|---|---|
| 1 | 11.73*** | 0.70 | 0.88 | ◎ | 1 |
| 2 | 9.04*** | 0.59 | 0.88 | ◎ | 1 |
| 3 | 10.52*** | 0.67 | 0.88 | ◎ | 1 |
| 4 | 11.50*** | 0.71 | 0.88 | ◎ | 1 |
| 5 | 9.65*** | 0.68 | 0.88 | ◎ | 1 |
| 6 | 8.33*** | 0.66 | 0.88 | ◎ | 1 |
| 7 | 12.95*** | 0.78 | 0.87 | ◎ | 2 |
| 8 | 11.61*** | 0.75 | 0.88 | ◎ | 2 |
| 9 | 11.20*** | 0.73 | 0.88 | ◎ | 2 |
| 10 | 11.35*** | 0.70 | 0.88 | ◎ | 2 |
| 11 | 15.83*** | 0.73 | 0.88 | ◎ | 3 |
| 12 | 15.32*** | 0.76 | 0.88 | ◎ | 3 |
| 13 I pretty much keep to myself and do not have a lot of social contacts. (R) | 1.82 | 0.03 | 0.91 | × | 3 |
| 14 | 10.08*** | 0.58 | 0.88 | ◎ | 3 |
| 15 | 13.82*** | 0.68 | 0.88 | ◎ | 3 |
| 16 There are not many people that I am close to. (R) | −4.10*** | −0.38 | 0.91 | × | 3 |
| 17 | 2.10* | 0.04 | 0.90 | △ | 3 |
| 18 | 13.23*** | 0.73 | 0.88 | ◎ | 3 |

**TABLE 3** KMO and Bartlett's test.

| Kaiser−Meyer−Olkin measure of sampling adequacy | | 0.92 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2009.6 |
| | df | 105 |
| | Sig. | <0.001 |

**TABLE 4** Summary of CFA.

| Item number/content | Components | | | Factor |
|---|---|---|---|---|
| | 1 | 2 | 3 | |
| 5 | **0.816** | | 0.304 | 1 |
| 2 | **0.768** | | | 1 |
| 3 | **0.748** | 0.349 | | 1 |
| 4 | **0.730** | | 0.366 | 1 |
| 6 | **0.618** | 0.455 | | 1 |
| 1 | **0.603** | | 0.449 | 1 |
| 10 | | **0.815** | | 2 |
| 8 | 0.308 | **0.783** | | 2 |
| 7 | 0.382 | **0.741** | 0.325 | 2 |
| 9 | 0.484 | **0.693** | | 2 |
| 11 I really like the people I interact with. | | **0.595** | 0.589 | 2 |
| 15 | 0.334 | | **0.773** | 3 |
| 18 | 0.368 | | **0.756** | 3 |
| 14 | | 0.354 | **0.696** | 3 |
| 12 | | 0.532 | **0.620** | 3 |
| Eigenvalue | 4.01 | 3.72 | 3.25 | |
| % of variation | 26.74 | 24.82 | 21.64 | |
| cumulative % | 26.74 | 51.56 | 73.20 | |

Extraction method: principal axis factoring. Rotation method: Varimax with Kaiser normalization.
[a]Rotation converge in four iterations. Factor: 1. autonomy 2. competence 3. relatedness.

**TABLE 5** Reliability.

| | item number | Cronbach's α |
|---|---|---|
| 1 Autonomy | 6 | 0.91 |
| 2 competence | 5 | 0.92 |
| 3 Relatedness | 4 | 0.85 |
| Overall | 15 | 0.95 |

However, the result shows that Factor 3 contains only one item (item 17) which is against the 3-item principle, so it should be deleted for the second time CFA. The rest of 15 items were distributed in three dimensions: 6 items in Factor 1, 5 items in Factor 2, and 4 items in Factor 3. Table 4 represents the number of the need for autonomy (6), competence (5), and relatedness (4). In Table 4, item 11 belongs to Factor 2 (Competence) but it was initially in Factor 3 (relatedness).

## 4.3 Reliability

According to Nunnally (1978), 0.70 is the minimum acceptable confidence value. Table 5 indicates that the three needs' Cronbach's α is from 0.85 to 0.92 with an average of 0.95.

In short, after item analysis, CFA and the reliability analysis, the Self-Determination Motivation Scale of English Learners could be summarized into three factors, similar to SDT, with a total of 15 items. The scale questions are shown in Table 6.

## 5 Discussion and conclusion

This study investigated relevant studies on self-determination and English learning to meet the three research objectives. Current studies indicate that self-determination motivation plays a vital role in English learning and that the result of developing an English scale based on SDT in this study was feasible. All items in the Self-Determination Motivation Scale of English Learners were adequately

TABLE 6 Self-determination motivation scale for English learners.

| Factor | | Content |
|---|---|---|
| 1. Autonomy | 1 | I feel that my instructor provides me with choices and options. |
| | 2 | I feel understood by my instructor. |
| | 3 | My instructor conveyed confidence in my ability to do well in the course. |
| | 4 | My instructor encouraged me to ask questions. |
| | 5 | The instructors listened to how we would like to do things. |
| | 6 | The instructors tried to understand how we see things before suggesting new ways to do things. |
| 2. Competence | 7 | I feel confident in my ability to learn this material. |
| | 8 | I am capable of learning the material in this course. |
| | 9 | I am able to achieve my goals in this course. |
| | 10 | I feel able to meet the challenge of performing well in this course. |
| | 11 | I really like the people I interact with. |
| 3. Relatedness | 12 | I get along with people I come into contact with. |
| | 13 | I consider the people I regularly interact with to be my friends. |
| | 14 | People in my life care about me. |
| | 15 | People are generally pretty friendly toward me. |

constructed from the items of the selected three related questionnaires and analyzed properly. The scale in this study comprised 15 questions and it retained the same three factors as SDT does.

The scale deleted the three reverse questions from the original scale for three reasons. First, the judgment of university-aged students was insufficient for interpreting or reading reverse questions, which affected the results of completing the questions. It caused them not to be statistically significantly different. Second, from a psychological perspective, the social attitude of the Chinese tends to conceal evil and promote good. As such, they have a more lenient way of judging reverse questions, resulting in less judgmental results. Third, the scale items were initially written in English. The survey could be lost in the translation of the reverse item. This could result in a loss of focus regarding the scale prediction's purpose, leading to low discrimination.

Item 11 (I really like the people I interact with) was assigned to Factor 3, referring to the relatedness dimension. However, after the CFA analysis, it was moved to Factor 2, which relates to the competence dimension for three reasons. First, the line between competence and relatedness might not be as clear as the scale intended for presenting to students with a Mandarin background learning English. Second, Western people tend to "feel" the environmental atmosphere. In contrast, Chinese culture tends to see getting along with surrounding people as a need to survive in society based on the convention of "yi he wei gui," meaning "harmony is what matters" in English. Therefore, the significance represents a need for competence compared to the feeling of relatedness when comparing Chinese and Western cultures, respectively. Third, the social distance between people from a Chinese background is not as close as in Western countries (Park, 2009). Western people are more likely to have larger groups of friends, whereas people in Chinese culture tend to make a smaller social circle with families, neighbors, and those they are familiar with. Based on the above, the phrase "the people I interact with" may have a broader explanation than a small circle that they take

as a competence or capability of maintaining the entire social relationship in the Chinese context.

The findings indicate that the 15 items are crucial for university English learners with a Chinese background in datafication of the human needs in SDT. To meet the two research objectives, this study analyzed and explored the present questionnaires in autonomy, competence, and relatedness of SDT. They are also vital in promoting students' interest in learning. Based on the above findings, the present questionnaires are written in English and mostly used for a variety of areas, rather than learning English as a second and foreign language. The results show that the developed 15-item scale is with a reliability of 0.95 after CFA. With it, the developed scale can provide meaningful learning opportunities through a suitable academic setting. This can help learners with Chinese backgrounds understand the satisfaction of the feelings of autonomy, competence, and relatedness to achieve better academic outcomes in school.

Most importantly, the satisfaction of the three innate needs is the starting point of learning motivation toward intrinsic motivation the interest of an individual may occur spontaneously. In other words, the developed scale is more suitable and provides an alternative for university English learners with a Chinese background to excavate what they need and what they lack for basic needs, leading them in the right way of learning English as a second or foreign language.

The study limitations exist due to workforce and time constraints. The study was also limited by the lack of conducting expert validity for the possibility of adding reserve items back into the scale. Future research should examine the formative 15 items by inviting more university participants and processing relevant analysis. Research should also explore the modification possibilities to make the scale easier for English learners and instructors.

# 6 Suggestions for further research

Based on the Conclusion section, suggestions are made for further research.

1. Add expert validity for item review

It is needed to have experts examine more on the aspects of competence and relatedness, based on the results of item 11, to require further confirmation for better and clearer descriptions in the two dimensions, avoiding speaking on the line and ambiguity.

2. Adjust the number of reverse items

It is suggested that if reverse items are deleted in some way, then adding back reverse items with different content or discretion when extending the item bank is another way to keep the variety of questionnaires because they may have their affections in the original scales as consideration.

3. Have more participants to master scale

Limited by research funding and manpower, 169 university students were selected by random sampling, and after statistical analysis, the scale was further established with good validity and reliability. However, to master the scale, it is worth sampling with more as the better sample size.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## Ethics statement

Ethical approval was not sought for the present study because of the national laws. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and institutional requirements. Verbal informed consent was obtained from all subjects before the study.

## Author contributions

JC: Writing – original draft, Writing – review & editing.

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## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# A review of classroom environment on student engagement in English as a foreign language learning

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The construct of learning engagement is receiving increasing attention since it has been proved by a majority of researches that higher learning engagement is linked to positive educational outcomes. While a list of learner-internal factors (e.g., academic emotions) and learner-external factors (e.g., teachers' working engagement) have been revealed as important antecedents of English as a foreign language (EFL) students' learning engagement, the role of classroom environment (CE) as a salient factor has received scant attention. Notably, to the best of the author's knowledge, no review study has been conducted on this issue. Thus, inspired by this gap, the purpose of the present review article is to evaluate the existing literature on the influence of CE on EFL students' learning engagement, which is a relatively less charted territory but with great significance, to illuminate the ways of securing, maintaining and enhancing students' engagement in foreign language classrooms by means of creating a positive CE. The central information of the article is organized into three parts. First, based on educational research, an overview of the constructs of learning engagement and CE is explicated. Second, the influence of CE on EFL learners' engagement is highlighted. At last, implications of the existing studies are summarized and suggestions for further studies are provided.

KEYWORDS

learning engagement, classroom environment, academic achievement, EFL, classroom climate

## 1 Introduction

Foreign language learning is an arduous and emotionally-laden journey. There is widespread consensus among applied linguistics researchers that learning engagement is of paramount importance along this journey. Positive educational outcomes of high learning engagement include, but are not limited to, meaningful learning (Hiver et al., 2021a,b), enhancement of learning efficiency and achievement (Dörnyei, 2019; Mercer, 2019), amelioration of academic boredom and disaffection (Fredricks et al., 2004), high academic aspirations and increased mental health (Archambault et al., 2009), as well as higher school completion-rates (Reschly and Christenson, 2012). Unfortunately, students become increasingly disengaged as they progress through school (Klem and Connell, 2004; Wang and Holcombe, 2010; Fredricks, 2011). Competing for students' attention and keeping them engaged in meaningful and persistent learning in face of multitudinous distractions is an ongoing challenge for educators and researchers globally (Barkley, 2010; Mercer and Dörnyei, 2020).

Consequently, it is vital to comprehend and develop knowledge regarding the factors that foster EFL learning engagement, in order to maximize the power of learning engagement in yielding more favorable educational outcomes. A few studies have disclosed that the variances in EFL learning engagement can be attributed to both contextual factors (e.g., teachers' working engagement) and personal factors (e.g., growth mindset, self-regulation, emotion, trait emotional intelligence) (e.g., Reschly and Christenson, 2012; Jiang and Dewaele, 2019). It is noteworthy that a proportion of these studies have supported CE as a significant determinant in language learning (Fraser, 1994; Fisher and Khine, 2006; Hattie, 2012). In fact, due to the distinctive interpersonal and social nature of EFL classrooms, CE is a key element contributing to EFL learning engagement (Pishghadam et al., 2021). CE is constituted by the quality of emotional and social interactions in the classroom (Ryan and Patrick, 2001). In EFL learning, a positive CE is requisite to promote active participation in communicative activities and interactions (Derakhshan et al., 2022a,b). The crucial role of CE has been succinctly summed up by Earl Stevick (1980) when he stated that in language learning, "success depends less on materials, techniques and linguistic analyses, and more on what goes on inside and between the people in the classroom" (p. 4). However, to the best of the author's knowledge, apart from some recent studies (e.g., Hiver et al., 2021a,b; Qiu, 2022), the impact of CE on learning engagement in EFL research has received scant attention. Moreover, as the review of available literature reveals, no theoretical review has been carried out on the role of CE in EFL learning engagement. Given that the classroom is the major micro-context in which English is instructed as a foreign language, understanding the essential ingredients of an optimal CE in which learners' engagement thrives is of great significance. Therefore, building on previous studies, the present conceptual review intends to present the theoretical and empirical underpinnings of CE and EFL learning engagement, and particularly the role of CE in EFL learning engagement.

# 2 Literature review

## 2.1 Methods and data

To systematically examine the constructs of learning engagement, CE, and their relationship, a systematic literature review has been conducted in one of the most reliable database: Web of Science. The time frame for the search was not limited, because it was more appropriate to include both not the latest but highly cited literature and the latest ones. We formulated a search string based on our understanding of and knowledge of EFL learning engagement and CE, and referred to the search string used in other related studies. The search was first conducted by combing key words: "learning engagement" OR "student engagement" AND "EFL" OR "L2"; "classroom environment" OR "classroom climate" AND "EFL" OR "L2." Then in order to focus how CE can influence learning engagement, more search was performed with the combination of the key words: "learning engagement" OR "student engagement" AND "classroom environment" OR "classroom climate." The selected articles are representative and of high quality, including journal articles and book chapters. Publications written in non-English language were excluded.

## 2.2 Learning engagement

The construct of engagement originated from educational psychology and the learning sciences (Hiver et al., 2021a,b). Despite numerous studies devoted to examining engagement in science, technology, mathematics and engineering, research on engagement in foreign language learning has lagged relatively behind (Philp and Duchesne, 2016; Oga-Baldwin and Fryer, 2018; Mercer, 2019). Nevertheless, language learning engagement research has increased exponentially in the 21st century since Dörnyei and Kormos (2000) proposed that "active learner engagement is a key concern" for all instructed language learning (Hiver et al., 2021a,b). Notably, it has recently become one of the most prevalent research topics among positive psychology researchers who focus on the role of positive emotions in educational outcomes (Macintyre et al., 2019; Wang et al., 2021).

In a broad sense, engagement refers to action. Action constitutes the defining and central characteristic of learning engagement (Skinner et al., 2009; Skinner and Pitzer, 2012; Lawson and Lawson, 2013; Fredricks et al., 2016; Mercer, 2019), which is a notion reiterated across frameworks and definitions (Hiver et al., 2021a,b). For instance, Skinner et al. (2009) described engagement as "energized, directed, and sustained actions." Indeed, it is precisely this defining characteristic that distinguishes this construct from its related and easily confused companion constructs such as motivation. While motivation represents the initial intention, engagement represents the subsequent action (Reschly and Christenson, 2012). However, compared with the richness and width of research on motivation, the research on learners' engagement in language learning is relatively limited (Mercer and Dörnyei, 2020). In fact, in the language teaching domain, where the key notion of "learning-by-doing" is deeply embedded in the predominant pedagogical approaches, engagement is particularly crucial, for active participation in practice and communication through utilizing the language is essential for learners' language development (Hiver et al., 2021a,b).

In a narrow sense, learning engagement has been conceptualized variably and diversely with a lack of consensus due to the varied research contexts and foci in the literature (Reschly and Christenson, 2012). For example, Skinner and Pitzer (2012) proposed four nested contexts, namely, prosocial institutions, school, classroom, and learning activities, with different aspects of engagement highlighted in each context. According to them, among the four contexts, classroom engagement is particularly critical and is defined as "constructive, enthusiastic, willing, emotionally positive, and cognitively focused participation with learning activities." Similarly, Platt and Brooks (2010) described second language (L2) learning engagement as "learners' meaningful involvement and expenditure of effort, as a natural result of deliberate attention and active participation." Considering the domain-specificity of learning engagement in language classrooms, Svalberg (2009) pioneered the model of Engagement with Language (EWL), which is defined as "a cognitive, and/or affective, and/or social process in which the learner is the agent and language is object." In brief, it refers to learners' thinking and talking about language. Additionally, Svalberg (2009) also stresses the social nature of engagement and the importance of classroom relationships (e.g., peer, group and teacher–student relationships), for interaction is the key to language development. With the impact of EWL, the quantity, quality and form of discourse

and interaction used by the learners have been focused on as the indicators of engagement in a considerable amount of engagement research in second/foreign language learning (Baralt et al., 2016).

Despite the heterogeneous conceptual frameworks and definitions, it is widely agreed that engagement is a multidimensional construct. Especially in relatively recent researches in the field of applied linguistics, engagement is widely considered as comprising four overlapping and interdependent components, namely, cognitive, behavioral, emotional (affective) and social (Svalberg, 2009; Baralt et al., 2016; Philp and Duchesne, 2016; Lambert et al., 2017). For instance, Philp and Duchesne (2016) defined it as "a state of heightened attention and involvement, in which participation is reflected in cognitive, social, behavioral and affective dimensions as well." Cognitive engagement refers to sustained attention and mental effort in learning process (Philp and Duchesne, 2016). Behavioral engagement concerns the amount and quality of students' participation in class and time spent on tasks (Fredricks et al., 2004; Reschly and Christenson, 2012), with learners' degree of effort, persistence, and active involvement as leading indicators (Philp and Duchesne, 2016). Emotional engagement pertains to the affective quality of students' participation (Zhou et al., 2021), relating to learners' feelings of attachment, belonging, and interest (Núñez and León, 2019), with enthusiasm, interest, and enjoyment identified as essential indicators (Skinner et al., 2009), and can be operationalized as degree of willingness, purposefulness and autonomy (Svalberg, 2009). It may also include students' feelings of connection or disconnection with their peers in the class (Philp and Duchesne, 2016). Lastly, social engagement, pertaining to the quality and amount of interactions with and participation between interlocutors, characterizing the relational nature of language learning (Philp and Duchesne, 2016; Zhou et al., 2021). Though not included in all engagement models, social engagement occupies a particularly significant role in language learning since social interaction offers opportunities for language practice (Philp and Duchesne, 2016) and can facilitate overall engagement (Svalberg, 2009). Learners tend to be more effective in language learning when they are socially engaged (Storch, 2008; Moranski and Toth, 2016; Svalberg, 2017). Emotional engagement and social engagement are closely linked to each other (Philp and Duchesne, 2016). The four dimensions are distinct but interrelated (S. Mercer, 2019,). According to Oga-Baldwin and Nakata (2017), optimally engaged learners are on task, thinking and enjoying the learning process. So in respect to foreign language learning, it should be fair to conclude that emotional engagement and social engagement should be paid particular attention to due to the inherently relational nature of language learning process, in which positive interactions such as encouragement and listening, and positive emotions such as enjoyment and enthusiasm are particularly salient. Learners' willing to interact and communicate in EFL classrooms is influenced by the quality of relationships with peers and teachers. Therefore, it is crucial to create an optimal CE in which positive emotions and interactions can thrive.

What's promising for educators is that learning engagement is not a static attribute of students. Instead, it is an dynamically malleable and mutable state or process (Svalberg, 2009), situated and highly context-dependent (Reschly and Christenson, 2012; Hiver et al., 2021a,b), thus alterable and various in response to learning environments (Skinner and Pitzer, 2012; Shernof et al., 2016). In other words, learning engagement itself is not a psychological variable, but

connected more to learners' relationships and responses to the learning environment (Järvelä and Renninger, 2014). A learner's engagement does not emerge in a vacuum, but partly grows out of cultures, communities, peers, classrooms and specific tasks and activities within the classrooms (e.g., Finn and Zimmer, 2012; Pianta et al., 2012; Shernof, 2013). This dynamic and context-dependent nature indicates a potential for capitalizing well-constructed interventions to enhance learning engagement through both intrapersonal and contextual conditions (Hiver et al., 2021a,b). Since contextual factors are the area where EFL teachers can exert relatively greater influence on, the present study delves into the impact of CE on learning engagement as well as strategies to engage EFL learners through optimization of CE.

## 2.3 Classroom environment

The learning environment of a classroom milieu consists of physical environment and psychological environment. Though physical environment such as facilities, spaces and lighting plays a role in students' safety and comfort, psychological environment has been historically focused on in most educational research (Dorman, 2008), both as an outcome measure and an antecedent variable (Fraser, 1986). In educational settings, CE refers to the "atmosphere, ambience, tones or climate that pervades the particular setting"(Dorman, 2008). Similarly, Cheng (1994) defined CE as the social quality of the classroom, relating to perceptions and feelings about social relationships among students and teachers. This also resonates with Gabryś-Barker's (2016) definition of CE as "the overall feeling of milieu inhabitants (i.e., students and teachers) regarding classroom interactions, involvement, and academic experience." The terms classroom (psychological) environment, classroom atmosphere, and classroom (social) climate are often used interchangeably when scholars refer to classroom learning environment (Cheng, 1994). Emotion and relationship (e.g., friendliness, competitiveness, cooperation, cohesiveness, support) are the central features of CE (Harve et al., 2012). CE is most often measured subjectively in that it is the perception of the situation that governs behavior in that situation instead of the objective reality (Fraser, 1986).

CE theory has been theoretically underpinned by Moos (1973) conceptual framework for human environments, which understood the relationship of humans to the environment from a holistic and ecological point of view and believed that human behavior is a function of both the person and the environment (Moos, 1973). The framework classified human environments into three basic dimensions, namely, Relationship Dimension, Personal Growth Dimension, and System Maintenance and Change Dimension. While relationship dimension focuses on the nature and intensity of personal relationships within the environment, personal growth dimension focuses on opportunities for personal development and self-enhancement. System maintenance and system change dimensions assess the extent to which the environment is orderly, clear in expectations, maintains control and is responsive to change (Moos, 1973). Moos' theory has become the foundation for understanding the nature of any setting considered as a human environment, especially school environment and CE. Accordingly, Moos and Trickett's (1974) Classroom Environment Measure characterizes CE as having four levels: the relationship level, with involvement, affiliation and teacher

support as indicators; the individual-growth level, with task-orientation and academic competition as indicators; the system-maintenance level, with order and organization, rule clarity and teacher control as indicators; and finally system-development level, with teaching innovation as indicator.

The internal characteristics and evolution of the learner group made up of teachers as the central figures and students as active members determine CE over time (Dörnyei and Murphey, 2003). In other words, teachers, peers, self and content together establish CE (Holley and Steiner, 2005). The nature of the teacher-student interaction is one of the key variables determining a successful CE (Fisher and Khine, 2006). Teacher-student rapport stimulates a pleasant CE, induces beneficial classroom experiences, boosts positive academic emotions, and finally results in better academic performance (Reyes and Torio, 2021). Besides, student–student relationship is also important (De Ruiter et al., 2019). Supportive and sympathetic interactions with peers is a salient feature of a positive and productive CE (Taherian et al., 2021). Therefore CE is mutually constituted instead of solely by teachers (Dorman, 2008). However, teachers are the main figures in creating a positive CE in class (Batubara et al., 2020), possessing leadership influence on CE (Cheng, 1994). Teacher support is crucial for creating a positive CE and protecting students against social marginalization (Andersen, 2023).Teachers also play a major role in establishing, directing and sustaining constructive and active interactions (De Ruiter et al., 2019). A teacher's warmth and sensitivity contribute to healthy teacher-student relationships and CE (Pianta et al., 2002; Sun et al., 2022). Teacher care stimulates creating a CE of mutual respect (Dickinson and Kreitmair, 2019). Happier teachers are more likely to create a happier class for students, since foreign language enjoyment is relatively more teacher-dependent (Moskowitz and Dewaele, 2019; Dewaele and Li, 2020). Teachers with growth mindset are more likely to create a positive CE (Hoose, 2021). Moreover, teachers' social and emotional competence and well-being are important factors contributing to create a conducive CE (Jennings and Greenberg, 2009). Socially and emotionally competent teachers set the tone of the classroom by developing supportive and encouraging relationship, while burned-out teachers and the CE created by them can be harmful to students (Jennings and Greenberg, 2009). Furthermore, teachers' leadership style and use of power also shape CE (Cheng, 1994).

## 2.4 The role of CE in EFL learning engagement

CE may interact with students' personal characteristics and finally affect students' learning motivation and engagement (Lewin, 1943). Perhaps the most commonly used model for understanding the impact of perceptions of CE on engagement is grounded in self-determination theory (SDT). According to Ryan and Deci (2002), educators can foster learners' learning engagement by meeting their three fundamental psychological needs: the needs for competence, autonomy and relatedness in that individuals seek experiences that fulfill these needs through interaction with the environment. In other words, to the degree that the learning environment supports opportunities for students to develop senses of competence, autonomy and positive relations with others, to such a degree students' learning engagement and achievement will be enhanced (Wang and Holcombe, 2010). Of note, Reeve (2013) suggests that learner engagement also

change the nature of the environment. In short, environmental affordances for learning and learning engagement influence each other reciprocally.

Results of a few recent empirical researches have also provided convincing evidence that the quality of CE is a significant determinant of student learning engagement. For instance, Naznne et al. (2019) inspected the effect of CE on student's attitude toward school. Altogether 203 students from different private and government schools in Pakistan through cluster sampling technique participated in the study via questionnaires. The study showed that CE is a significant predictor of students' attitude toward school. Likewise, Cheng (1994) investigated the relationship between CE and student's effective performance via questionnaires through a large sample of 21,622 students. The results of Pearson and canonical correlation analyses revealed that students' attitude toward school and teachers are most sensitive to CE variation. Though these studies did not examine the impact of CE on overall learning engagement directly, the construct of attitude toward school or learning is an important emotional/affective component of student engagement (Fredricks et al., 2004).

It's worth noting that personalized environment is of great importance to learning engagement. For example, in Cayubit (2022) study, the hierarchical multiple regression revealed that a conducive CE increases students' academic motivation and predicts students engagement. Personalization and satisfaction were identified as important facets of CE, making unique contributions to learning engagement. Similarly, according to Klem and Connell's (2004) longitudinal study, when students perceive teachers as creating a caring, well-structured learning environment where expectations are high, distinct and fair, they are more apt to report engagement in school. Creating more personalized educational environments, with teacher support as a major indicator, can result in higher student engagement, attendance and scores, for personalized learning environment make students feel more supported by and connected to school.

Moreover, teacher support and peer support are influential factors of learning engagement. For instance, Lu et al. (2022) investigated the relationship among learning environment perceptions, personal characteristics and situational engagement (dynamic engagement). For this purpose, longitudinal real-time data were collected from 105 college students in smart classrooms at a university in central China. The study found that perceived teacher support was the most influential factor for deep cognitive and emotional engagement, for in collaborative learning, teachers' evaluation, guidance and feedback are crucially important for promoting deep cognitive and emotional experiences. The study also found that the perception of social support (peer support) predicted all situational engagement dimensions. The reason might be that connectedness contributed to reflective thinking and inquiry learning. Peer interaction promotes students' interests, motivation, active participation, and positive emotional experience as well. The study also indicated that personal motivational factors can moderate the relationship between environment perception and learning engagement. Furthermore, Miao et al. (2022) examined the impacts of teacher–student interaction, student–student interaction, and social presence on learning engagement in online learning environments. To this end, they collected data via 3 questionnaires from 354 full-time undergraduate students of various majors in a large public Chinese university. The data analysis confirmed the effects of classroom interaction and social presence on students' learning engagement. They pointed out that it is crucial for teachers to provide organizational and educational support as a scaffoldings process in the

early phases of collaboration so as to sustain group regulation, enhance interaction and group acquaintance. Teachers should also help group members avoid internal conflicts in order to create an attractive and motivating learning environment, which will have a positive influence on students' emotional engagement.

Furthermore, in language teaching field, researchers also conducted a few empirical studies in this regard. For one, Derakhshan et al. (2022a) investigated the relationship between teacher care, teacher-student rapport, and L2 learning engagement. To achieve this, both quantitative and qualitative data were obtained through three scales and interview from 223 Iranian and 208 Polish L2 students. The study demonstrated that both teacher-related factors such as rapport and care and context-related factors including a pleasant CE play significant roles in promoting students' engagement perceptions. In a same vein, Derakhshan et al. (2022b) explored the relationship among CE, growth language mindset, boredom, and student engagement among English as a foreign language (EFL) learners. To this end, 287 English major students from various universities in Iran participated in the study via an online survey. The structural equation modeling results revealed that CE significantly and directly predicated EFL learning engagement. Last but not least, Bardakci et al. (2018) investigated the relationship between school social climate, CE, attitude toward English course and student engagement. Data collected from 734 high school students showed that perceptions of CE, attitudes toward English course, and school social climate significantly predicted student engagement.

## 3 Discussion

To conclude, the main purpose of this study is to elucidate the role of CE in EFL students' learning engagement and thus generate some fresh insights for any parties concerned with EFL education. As such, this study has extended the previous understanding of CE and learning engagement and provided a fuller picture of their relationship. Supported by both theoretical underpinnings of the two constructs and empirical studies, this study asserts the following two points:

Firstly, CE perception held by students is a crucial influential factor of EFL learning engagement. From the literature reviewed, it can be inferred that a positive CE is essential in securing and ensuring learners' motivation and engagement, while a CE perceived as negative and threatening can be a barrier to students' learning engagement. A positive EFL CE including features such as warm, respectful, emotionally supportive and organized can provide more opportunities for interaction and communication in EFL classrooms, and thus can be a source of learning engagement. It is illogical to contend that the promotion of EFL students' learning engagement only relies on teachers' pedagogical or technical knowledge or skills. Authentic instruction and learning cannot happen unless teachers' pay attention to and handle properly the social and emotional aspects of learning (Brackett et al., 2009).

Secondly, in EFL classrooms, it is the teachers who play a crucial and leading role in developing a positive CE. So it is of great necessity for EFL teachers to make efforts to reflect on and improve their educational thoughts and practices in order to create a friendly, cooperative, safe, and caring CE, so that students' psychological needs such as competence, autonomy and relatedness can be met. Therefore, EFL teachers need to be equipped with not only a good mastery of linguistic knowledge and teaching methodology, but also a good understanding of psychological, interpersonal and affective aspects of language education, as these aspects strongly influence students' learning engagement and ultimately learning performance. Thus, teacher educators should attach more importance to social and emotional skills in curriculum planning in order to cultivate pre-service EFL teachers' ability in maintaining good rapport with students, in making quality communication with students, and in caring about students in an appropriate way.

## 4 Limitations and suggestions for future studies

However, the limitations of this review study should be noted and addressed for future studies. The present study mainly has two limitations. The first limitation is potential publication bias. As with any review of the published literature, the researcher might have a tendency to handle positive reports. The second limitation lies in the lack of direct empirical data. This study only serves as a starting point for educators and researchers in their endeavors to develop more knowledge on the role of CE in EFL students' learning engagement. Therefore, more empirical studies need to be done to move the field forward. One line of possible research would be to investigate how the environmental conditions of psychological and social dimensions affect teachers. Another possible direction would be to explore the relation between teachers or students' individual characteristics such trait emotional intelligence and classroom social climate. Moreover, investigation of CE from a cross-cultural perspective is also significant.

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# Metaphorical conceptualizations of generative artificial intelligence use by Chinese university EFL learners

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The unveiling of ChatGPT 4o by OpenAI, a multimodal large language model powered by Generative Artificial Intelligence (GenAI), has injected interest and incited debate throughout the echelon of education institutions regarding its prospective benefits and drawbacks. Nonetheless, investigations into the learners' perceptions of GenAI use in learning English as a Foreign Language (EFL) remain markedly insufficient. The study adopts an explorative stance and aims to explore the attitudes and perceptions of Chinese EFL learners toward GenAI use in language learning through the application of metaphor analysis. Data were collected from 281 EFL students of varying majors in four key universities across China by completing a sentence using metaphors to elicit their attitudes and perceptions toward GenAI use in language learning. Through qualitative analysis of metaphorical constructs, including HUMANS, TOOL/ MACHINE, BRAIN, RESOURCES, FOOD/DRINK, and MEDICINE metaphors, the study unveils a spectrum of attitudes toward GenAI. While some language learners perceived GenAI as supportive, helpful, and intelligent, others expressed concerns about over-reliance and potential loss of critical thinking skills. The findings underscore the importance of considering learners' diverse attitudes and beliefs toward GenAI use and application in language learning pedagogy. The implications of these findings for the future integration of GenAI in language education are discussed, complemented by recommendations for further research and pedagogical practice.

KEYWORDS

GenAI, students' perceptions, metaphor analysis, Chinese EFL learners, students' attitudes, language learning

## 1 Introduction

"The development of full artificial intelligence could spell the end of the human race…. It would take off on its own, and re-design itself at an ever-increasing rate. Humans, who are limited by slow biological evolution, could not compete, and would be superseded (Hawking, 2014)." A somewhat dystopic outlook offered by the late astrophysicist, yet with sheathed fundamental truths, presents the emerging obstacles, and opportunities that shall test the resolve of stakeholders within second language acquisition (SLA) for the next decade or beyond.

In May 2024, OpenAI unveiled ChatGPT 4o, the multimodal large language model powered by generative artificial intelligence (GenAI), a series of similar products were introduced by tech rivals, notably Google's Gemini and Anthropic's Claude. These

technological innovations not only garnered interest across diverse disciplines and multiple tiers in academic institutions (Su and Yang, 2023), but also assumed, by many within academia, to have opened a pandora's box for its uncertain impact on educators and learners (Luo et al., 2024). Optimists emphasized its capabilities to enhance education through its accessibility to personalized and responsive support of problem-solving and critical thinking (Baidoo-Anu and Ansah, 2023) and leverage students with improved research and writing skills (Kasneci et al., 2023). Moreover, advocating the technology for its empowerment of learners from low-income or middle-income regions who are deprived of access to education resources, and provided with greater inclusivity (Wang et al., 2023). Pessimistically, the negative impact of the technology is underscored by invalid information, biased viewpoints, academic integrity, education resource disparity, and the decimation of disciplines (Barrot, 2023; Rudolph et al., 2023; van Dis et al., 2023).

Despite the technology's recency, it is difficult to imagine a language learning landscape in the future in which GenAI is nulled, hence, further evaluations of GenAI could provide greater insight into the revision of current and new avenues of its application in English as a foreign language (EFL) setting. Studies in the broad education context have investigated the attitude and perception of AI quantitively and qualitatively across various tiers of education (Chai et al., 2021; Mertala et al., 2022; Anderson, 2023; Lim, 2023). Yet, investigations into the perceptions, attitude, and conception of GenAI post-launch of ChatGPT4, within the EFL setting, and targeting a higher education demographic remains under-explored. The extent to which the systems or technologies of GenAI is perceived by students in the language educational setting remains inconclusive (Li et al., 2022). Thus, a metaphor analysis of GenAI from the student's perspective in EFL setting will address the present limitations by providing additional flexibility, adaptation, or imagination.

## 2 Literature review

### 2.1 Students' perception of GenAI use in EFL education

Traditionally, AI in language education was primarily employed in the role of an "intelligent tutor," and subsequently as for "assessment and evaluation" as well as "adaptive systems and personalization" (Liang et al., 2023). The emergence of GenAI-powered large language models has demonstrated heightened effectiveness and enhanced specialization for tasks relating to the aforementioned contexts. Studies associated with GenAI in SLA predominately focus on applications relating to foreign language writing quality (Hwang et al., 2023), automated feedback (Yang et al., 2023), plagiarism identification (Casal and Kessler, 2023), and speaking performance (Fathi et al., 2024).

Abundantly noted in the literature on the subject matter, GenAI's ability to provide instantaneous and personalized feedback on grammar, syntax, spelling, and vocabulary (Bishop, 2023; White et al., 2023) directly influences the quality of EFL writing, which results in the majority of research focus in language learning being tendered to the context. Guo and Wang (2023) examined the ability of GenAI to support teacher feedback in argumentative writing tasks by comparing feedbacks generated by conventional and GenAI-mediated sources.

Consequently, the results further supported the foundation for the perception that the new generation of AI is capable of rectifying time constraint issues and liberating teachers to engage in core pedagogical responsibilities (Barrot, 2023). Moreover, Zhao (2023) evaluated the pedagogical applications of GenAI as a writing assistant for use during the writing process, instead of the revision and editing stages, analyzing its capabilities to suggest alternatives for variance in tone and length. Thus, it alludes to the imperativeness for language learners to develop a positive attitude and proficiency for GenAI use in autonomous learning activities. Yan (2024) applied a mixed-method approach to evaluate the GenAI feedback-seeking abilities of three EFL learners in L2 writing classrooms. The findings revealed the perception of a role transition in language learners from feedback *recipients* to *seekers*, creating an educational setting of increased involvement with enhanced agency, creativity, and proactivity. Subsequently, the participants held a positive perception of GenAI's implication for learning outcomes, a consequence of the instantaneous provision of feedbacks and explanations. The immediate application, direct influence, and impact level of GenAI relating to EFL writing practices suggests a necessity for further exploration into the context.

In the realm of speaking-based learning, GenAI is capable of providing a natural and ubiquitous partner for conversation, addressing previous restrictions both internal and external to a conventional educational context (Fathi et al., 2024). Limitations of peer linguistic competence and teaching resource constraints are areas that GenAI can prospectively offer favorable avenues of recourse. Considering the comparable level of language proficiency among the majority of EFL students, the potential for gaining extra insight from peer-to-peer interactions may encounter obstacles (Fryer et al., 2019). Fathi et al. (2024) investigated the use of a GenAI chatbot to support speaking activities in comparison with traditional peer-interaction speaking activities. The results indicated that GenAI-supported interactive speaking activities exhibited more effectiveness in enhancing speaking skills and willingness to communicate. This finding was confirmed by a study on L2 Korean speakers, which additionally evinced a reduction in speaking anxiety (Kim and Su, 2024). Jeon (2024) explored the motivational variables influenced by GenAI-mediated language learning by assessing the impact of pedagogical, technological, and social affordances of chatbots on the psychological aspects of 36 Korean EFL learners. The results imply that the motivations of students to pursue language learning are affected by their perception of chatbots. When perceived as authentic interlocutors, students exhibited a willingness to engage in conversational tasks with the chatbot and persisted in applying the technology in language learning. Conversely, perceiving the chatbot as a *machine* resulted in negative attitudes toward the class and reduced their willingness to communicate. Students who perceived chatbots to be pedagogically valuable exhibited a tendency to minimize individual technical limitations and maintained a willingness for continued use (Fryer et al., 2019), thereby facilitating intrinsic motivation to perform tasks (Dörnyei, 2002). Students that primarily interacted with the chatbot revealed positive perceptions due to the creation of an environment with reduced social anxiety (Kim and Su, 2024), which corroborated previous sentiments.

The novelty and niche of the technology have yet to result in educators and students ignoring GenAI's ability to address obstacles and challenges that are insurmountable for conventional methods. Despite the recent scholarly focus on writing and speaking

applications, the maturation and development of additional GenAI functions underscores its immense application potential across multiple facets of language education, which leaves a broad context for researchers to further investigate (Yan, 2023).

## 2.2 Conceptual metaphor and metaphor analysis

Exploration into the conceptualization that humans possess of specific objects is a means to comprehend their surrounding environment, concurrently, it permits the understanding of their behaviors, and ways relationships are established with others (Schmitt, 2005). Metaphors, a tool for conceptualization, provide the capability to transfer meaning which permits comprehension for the manner that humans interpret events, facts, and concepts through analogies (Saban et al., 2007). Its function transcends mere literary grammar beyond a form of stylistic add-ons that enhances the literariness of writing, metaphors are a fundamental aspect of the language practiced every day, more importantly, it is representative of reasoning and thinking (de Guerrero and Villamil, 2002; Shaw et al., 2021). According to the conceptual metaphor theory, it is argued that a significant proportion of thinking are embodied by conceptual metaphors which reflect the manner in which an individual represents their surrounding world and their experiences within the world context to themselves (Lakoff and Johnson, 1980). For example, when "learning" is described as "a process of construction," the student is reflecting their understanding of the specific subject through "building," which may be allude their worldly interpretation of "learning" as "a step-by-step process," can be effectively executed with a "blueprint," and potentially require considerable investment of financial and psychological resources (Oxford et al., 2014; Wegner et al., 2020). Thus, language of the metaphoric nature can assist to reveal the subconscious beliefs and attitudes, and implicit assumptions that lie beneath consciously held opinions and actions for specific subjects (McGrath, 2006) which have been utilized for reflection and awareness development (Cameron and Maslen, 2010) among education stakeholders to shape classroom practices (Tobin, 1990) and to mediate classroom learning and predict learning behaviors (de Guerrero and Villamil, 2002).

The acquisition of metaphoric natured language that reveals subconscious beliefs requires inquiries to employ the means to conduct analysis metaphorically. Metaphor analysis (MA), defined as a method that systematically examines elicit or spontaneous metaphors as a means to uncover underlying conceptualizations (de Guerrero and Villamil, 2002), is a practice that offers an assorted bundle of information on the perceptions, attitudes, and values of education stakeholders for specific subjects (Amin, 2015). The analytical method is based on relevant investigations of metaphors in cognitive linguistics (Lakoff, 1993), revealing metaphors to be conceptual representatives of subconscious or deep thought. Commonplace metaphorical expressions can be analyzed to identify underlying views if these metaphors are systematically examined (Jin and Cortazzi, 2011). The present method requires respondents to provide three key elements, notably a target domain, source domain, and entailment. Generally, two approaches are applied to collect metaphoric data. The first extracts the spontaneous use of metaphors from instances of discourse that occur naturally such as conversations

or interviews (Armstrong, 2008). The second approach instruct individuals to deliberately generate explicit metaphors by means of research-constructed prompts such as "X is like Y" (Cortazzi and Jin, 2020). In studies that pertain to the L2 education context, the elicitation approach to manufacture metaphors have become increasingly commonplace for the investigation of subjective knowledge and concepts (McGrath, 2006; Saban et al., 2007).

MA have revealed notable characteristics of language teaching through elicited metaphors, for example, a facilitator of intercultural connections (Farrell, 2011) and the diversity of roles in which a language teacher will possess for varying language aptitudes and competences (Nguyen, 2016). Additionally, it was applied to evaluate the experts' personal narratives of language learning strategies to uncover insights into sociocultural background, way of thinking, sense of identity, underlying realities and underlying motivations (Oxford et al., 2014). While Tabata-Sandom et al. (2020), by means of elicited metaphors from Japanese learners, indicated learners' belief were mediated by longitudinal factors which produced evolving interpretations of social realities across multiple time scales. The results, generally, showcased a positive belief about the learners' progress, access to cultural perspectives, and sense or change of identity while highlighting paradoxical experiences, for example, "learning" was viewed as both "fun" and "difficult." In the EFL context, studies that applied to examine the students' beliefs on speaking English and being a good speaker (Dincer, 2017), student's perception of English writing (Erdogan and Erdogan, 2013; Wan, 2014), the role of teachers (Saban et al., 2007; Wan et al., 2011), feedback in second language writing (Yu et al., 2023), students' belief about textbooks and English public speaking anxiety (Gao and Tay, 2023).

However, studies that investigate the metaphors for GenAI in relation to learning or teaching have been sparse, possibly attributing to relatively recent nature of the subject matter in the language learning field. Lim et al. (2023) elicited metaphors to analyze the conception of artificial intelligence education for young children by pre-service childhood teachers. The study examined the responses of 137 pre-service early childhood teachers in the United States to discover the manner in which AI is conceptualized positively or negatively among seven metaphor categories. The results alluded that the teachers' beliefs about the methods related to AI in a learning setting may be an important indicator of the thoughts and attitude of teachers when adopting AI in curriculums and its perception by students. While Carbonell et al. (2016) analyzed the manner metaphors act to characterize emerging technologies (e.g., artificial intelligence), their evolution and the public perception of such objects. The study presents the manner in which metaphors in society influence the evolutionary development of technologies while revealing the opposite holds true, indicating a two-way process. It goes to suggest that technologies are capable of creating the emergence of new structures of feeling and perception which highlights the need for MA of new technologies with immense disruptive potential that can alter the shape and dynamic of society, namely GenAI. Despite the findings proposed in the study, its subject of focus predate the wide public access of GenAI which suggests the need for renewed investigation into the topic. Anderson (2023) analyzed the conceptualization of GenAI's (ChatGPT) capabilities and limitations with the dichotomic metaphors of *tool* or *collaborator* extracted from recent scholarly and news discourse, and author's individual writing process. The results emphasized the value of adopting multiple metaphors to more accurately portray GenAI's

unique characteristics that insufficiently embody human components and extends to implications in its utilization. The study highlighted that GenAI, more specifically ChatGPT, exists beyond the definition of a *tool*, which is capable of generating poetic content that could potentially construed as "creative." At the same time, its technical dependence on human manipulation and inability to be attributed with ethical responsibility prohibit the technology to be defined as a *friend*, *coauthor,* or *collaborator*. The multiple metaphor proposal reflects the varying manner individuals apply its functions to daily, professional or academic activities which warrants further investigation.

In regards to the general conceptualization of GenAI, paradoxical positions surrounding the discourse of the technology have become the status quo perception within higher education, a juxtaposition of the vast challenges it presents for educators (Stokel-Walker, 2023) and immense opportunities it creates for educators and students (Pavlik, 2023). The capability of GenAI Chatbots to intelligently generate responses which effectively mimic human qualities have seen it referred to as a *friend*, *philosopher*, and *guide* (Chatterjee and Dethlefs, 2023), while critics classify the technology as a *foe* that obstructs novel insight, suggesting its use to be high-tech plagiarism. The perceptional paradox of GenAI extends beyond its potential rewards and hazards, the restrictiveness and accessibility toward its intended users are in contradiction. While advocated to be a beneficiating force for all humanity by the technology's parent companies, financial, and geographical restrictions are implemented which may detrimentally widen the socio-economic gap between student populations and hinder the democratization of knowledge (Lim et al., 2023). The technology's application in education have spawned a perception of the *successful*, effective users with accessibility, and *losers*, non-users with accessibility restricted due to circumstances (Luo et al., 2024). Nonetheless, GenAI is perceived to offer higher education members of non-English speaking profiles, through translation and language editing functions, equity in opportunity and educational resources.

## 2.3 The present study

At present, GenAI remains an emerging technology with unpredictable disruptive potential central to the future of EFL, which necessitates further exploration to disclose the perception, value, and belief that students hold toward the technology. Thus, it is timely and paramount to explore the issues of GenAI in the EFL context for Chinese university students through an analysis of metaphorical language, thereby uncovering the conceptualization of GenAI in the learning experience of students. Additionally, the present study seeks to examine the underlying factors that affect the teaching and refinement of EFL curriculums through the use of metaphor analysis. Since the metaphor is based on the EFL student's perception of GenAI, it can provide information on the propensity for future curriculum implementation and curriculum improvement (Shaw et al., 2021). Specifically, for these purposes, the study attempts to address the following questions.

(1) How do Chinese university students use metaphor to indicate GenAI use in L2 learning?
(2) What attitudes do Chinese university students hold toward GenAI use in L2 learning?

## 3 Materials and methods

### 3.1 Participants

The sampling method employed was convenience sampling, gathering a total of 281 university students from four key universities in China. These students represented diverse academic backgrounds, including 200 from English majors. The sample comprised predominantly female students, with 226 (80.4%) females and 55 (19.6%) males. Their ages ranged from 18 to 26 ($M = 20.79$, $SD = 1.517$). Participants encompassed all academic levels, with 48 freshmen (16.0%), 44 sophomores (15.7%), 95 juniors (33.8%), and 97 seniors (34.5%). They all speak Chinese as their L1 and learn English as their L2.

### 3.2 Instruments and data collection

Metaphorical data were obtained through the administration of online questionnaires, structured with specific objectives. Firstly, the questionnaire sought to articulate the purpose and voluntary aspect of participating in this study. Secondly, it aimed to procure demographic data from the participants. Thirdly, the questionnaire provided two exemplar metaphorical constructs, formulated as "GenAI in learning English is …" to assist in stimulating subsequent metaphorical expressions. The questionnaire core involved a prompt requesting participants to formulate their own metaphors by completing the sentence: "In my English learning, GenAI is _____, because _____." This open-ended question encouraged participants to draw upon personal experiences and perceptions to create unique metaphorical constructs. To facilitate and stimulate the generation of metaphorical expressions, the questionnaire included two exemplar metaphorical constructs with explanations. Participants were presented with statements such as, "In my English learning, GenAI is a bridge, because it connects me to a wealth of knowledge that I would not have access to otherwise," and "GenAI in learning English is like a dictionary, because GenAI can provide definitions, translations, and explanations, akin to how a dictionary is used to look up words and their meanings." These examples were provided to assist participants in conceptualizing and framing their own metaphorical responses.

Data collection occurred through the online platform *Wenjuanxing*, with the survey link disseminated within WeChat groups to solicit voluntary participation from students. Prior to engagement, participants were briefed on the research's objective and requested to provide written responses in the form of a metaphor, reflecting their perceptions of GenAI use in L2 learning. Additionally, participants were asked to accompany their metaphor with a written explanation. All participants provided consent to partake in the study voluntarily. The completion of the writing tasks typically required participants to allocate approximately 5–10 min.

### 3.3 Data analysis

The overall data analysis adhered to the established approach outlined by Cameron and Low (1999), which involved collecting linguistic metaphors, generalizing them to conceptual metaphors, and

using the findings to suggest understandings or construct people's beliefs. The whole procedure involved three steps: (a) data coding and elimination, (b) sorting and categorizing, and (c) analyzing data.

Initially, linguistic metaphors provided by participants (e.g., "GenAI is like a friend") were subjected to coding procedures, wherein each response was meticulously analyzed to discern three fundamental components: the topic (i.e., GenAI), the vehicle (i.e., the comparative term), and the ground (i.e., the underlying relationship between the topic and the vehicle). Notably, certain metaphors failed to meet the criteria for analytical validity. Consequently, guided by the parameters delineated by Saban et al. (2007), 18 literal statements from five first-year students, two second-year students, six third-year students, and three fourth-year students were omitted from the analysis. This selective exclusion resulted in a refined sample comprising 281 participants and 298 remaining metaphors for further analysis. Next, conceptual metaphors were examined individually before integrating the findings to obtain a more comprehensive perspective. To ensure consistency in metaphor data analysis, inter-coder reliability was established. A linguistics doctoral colleague was enlisted to review all 298 linguistic metaphors and categorize them into six conceptual categories based on the metaphors themselves, the entailments provided by participants, and similarities with other metaphors. The proposals made by the guest linguist were then compared with the initial categorization. In cases of discrepancies, the researchers engaged in a negotiation process to achieve consensus. This process involved re-evaluating the metaphors, considering alternative perspectives, and occasionally re-categorizing metaphors based on new insights from the discussions. For instance, the metaphor "GenAI is like a human brain," was initially categorized by the guest linguist under the HUMAN metaphor. However, after extensive discussion, it was concluded that it would be more appropriately categorized under the BRAIN metaphor. This decision was based on the recognition that the metaphor primarily emphasizes the cognitive and processing capabilities of GenAI, which align more closely with the functions of a brain rather than the broader characteristics of a human.

Following Miles and Huberman's (1994) formula, which calculates the agreement rate by dividing the number of agreements by the total number of agreements plus disagreements, the initial inter-coder agreement rate stood at 99%. Regular discussions were conducted regarding categorization and the formulation of suitable conceptual categories. Discrepancies in classification were addressed through negotiation until a mutual decision was reached. Additionally, students' metaphors are categorized based on both the metaphors and their entailments, discerning positive, negative, or critical attitudes toward GenAI use in L2 learning, achieving a perfect inter-coder agreement rate of 100%.

# 4 Findings

The research team members transcribed and translated the data and categorized the metaphors by identifying naturally occurring themes. The following findings present the metaphors based on types of metaphors created (Figure 1) and learners' attitudes (Figure 2).

## 4.1 Quantitative findings

### 4.1.1 Types of metaphors created by L2 learners

The types of metaphors generated by EFL learners can be classified into six superordinate categories. The "Humans" category exhibits the highest frequency, with 148 instances, indicating a pronounced tendency among learners to anthropomorphize GenAI. The second most prevalent category, "Tool/Machine," comprises 87 instances, reflecting a perception of GenAI as a functional and instrumental entity. The remaining categories include "Brain" (eight instances), "Resources" (44 instances), "Food/Drink" (seven instances), and "Medicine" (four instances). This distribution of metaphorical constructs elucidates the diverse conceptualizations through which EFL learners understand and relate in GenAI.

### 4.1.2 Attitudes toward GenAI through metaphors

The analysis of participants' attitudes toward GenAI use in EFL learning reveals the following is as following distribution: 82% positive metaphors, 2% negative metaphors, and 16% critical metaphors. This distribution indicates a predominantly positive perception of GenAI among the language learners, with a significant portion adopting a critical perspective that weighs both the advantages and challenges. The notably low percentage of negative metaphors suggests minimal outright opposition to GenAI among the participants surveyed.

## 4.2 Qualitative findings

### 4.2.1 HUMANS metaphor

The analysis reveals 148 HUMANS metaphors provided by participants. Based on Table 1, it is evident that individuals frequently conceptualize GenAI through metaphors associated with familiar human roles and relationships. These metaphors reflect how students relate to GenAI in ways that mirror human interactions, indicating a strong anthropomorphization of the technology. The specific metaphors and their entailments offer insight into the varied and complex roles that GenAI plays in the EFL learners' experiences.

GenAI is conceptualized as a supportive figure (assistant) that aids students in learning authentic expressions and assists in editing and refining articles. This suggests a perception of GenAI as a reliable helper that enhances the quality of their work and learning process. Moreover, GenAI is likened to an English teacher who provides localized sentences, corrects grammatical errors, and facilitates speaking practices. This metaphor indicates EFL learners' trust in GenAI to improve their language skills and provide immediate, constructive feedback, akin to a human instructor. Students characterize GenAI as a valuable aid in their academic work, improving the quality of language learning and providing practical assistance in editing and the comprehension of nuanced expressions.

Students describe GenAI as a friend who can be consulted for advice and support during challenging periods. While acknowledging the potential imperfections in GenAI's responses, they value its presence as a comforting listener and source of assistance, reflecting a significant emotional connection. The *Friend* metaphor suggests an emotional reliance on GenAI for support and advice, indicating that EFL learners value its presence beyond mere academic assistance.

GenAI is perceived as a highly knowledgeable and intelligent entity (personal advisor) that provides guidance across various aspects
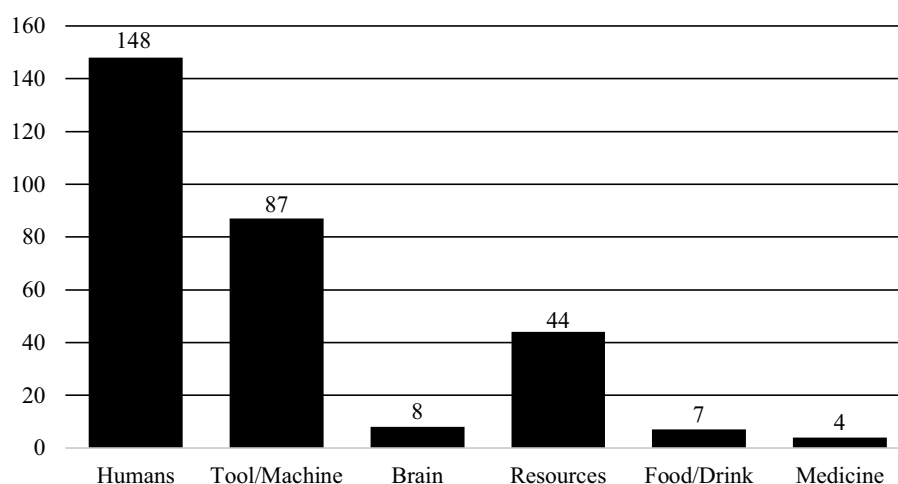
FIGURE 1
Different types of metaphors.
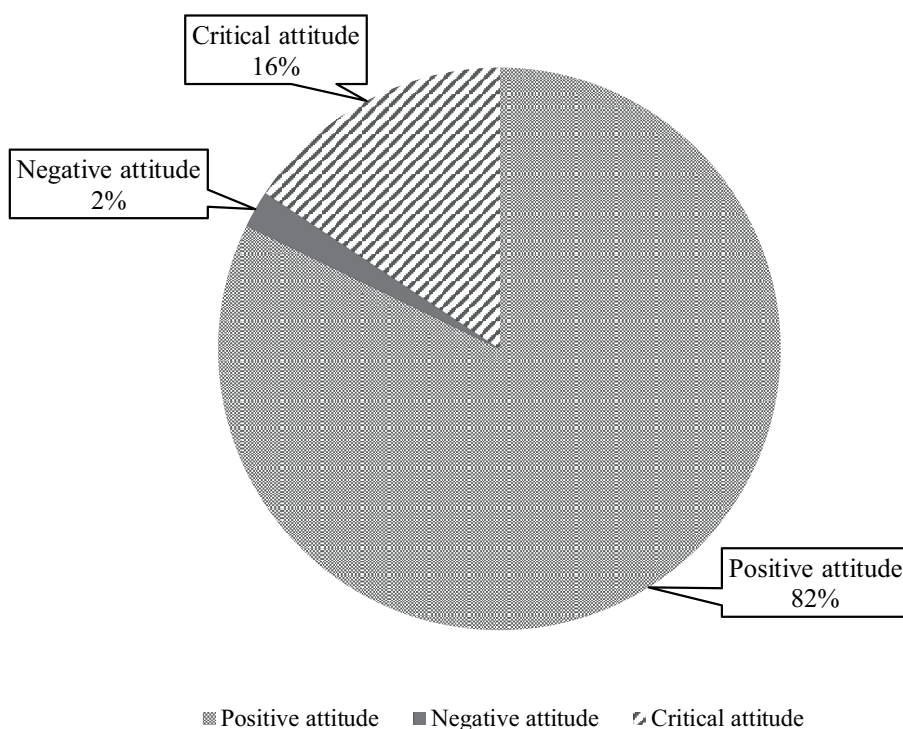


FIGURE 2
Students' attitudes toward GenAI use in L2 learning through metaphors.

of life. This metaphor implies that students view GenAI as a comprehensive resource capable of logical application and personalized responses, demonstrating a high level of trust in its capabilities. Viewing GenAI as a personal advisor reflects a high level of trust in its knowledge and intelligence, with students relying on it for comprehensive guidance and personalized responses.

Additionally, GenAI is conceptualized as a source of inspiration and wisdom (wiseman), providing novel perspectives and supplementing students' own thinking and writing. This metaphor underscores the value EFL learners place on GenAI's ability to enhance their creativity and intellectual endeavors. The *Wiseman* metaphor indicates that students regard GenAI as a source of intellectual enrichment, providing new ideas and supplementing their learning with additional knowledge.

Overall, these metaphors and their entailments reveal that the students perceive GenAI as a multifaceted tool that plays critical roles in their academic and personal lives. The students regard it not only as a practical aid but also as a comforting presence and a source of

**TABLE 1** Examples of HUMANS metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Assistant | 41 | GenAI can help me learn some very authentic expressions and assist me in editing and polishing articles. |
| English teacher | 35 | GenAI can provide more localized sentences to make my expressions closer to those of native speakers. They can help correct grammar mistakes and practice speaking with me. can promptly resolve any questions I have, practice English language usage with me, and provide corresponding suggestions. |
| Friend | 30 | When encountering difficulties, I can seek advice from GenAI (although what they provide may just be a bunch of nonsense). When I have negative emotions, I can treat them as a sounding board, and they will patiently reply (although what they say may also be a bunch of nonsense). When studying, if I have some questions, I may consult GenAI. For example, if a teacher asks us to read an article, I may use tools like GPT to search for background information about the article, the author, and other related materials (although sometimes what it generates is really hard to describe…). |
| Personal advisor | 11 | GenAI is exceptionally intelligent and incredibly knowledgeable, encompassing almost all knowledge and information in the English-speaking world, and capable of logically applying it to almost any scenario. Additionally, it can answer my questions, provide guidance, and adjust whenever I am dissatisfied. |
| Wiseman | 10 | GenAI can provide inspiration and additional knowledge at any time and place. It helps me come up with perspectives that I may not have thought of and supplements the theoretical shortcomings in my writing. |

inspiration, indicating a predominately positive attitude toward its use in EFL learning.

### 4.2.2 TOOL/MACHINE metaphor

A total of 87 TOOL/MACHINE metaphors were elicited from students to gage their perception of using GenAI in EFL learning. This category encapsulates their diverse experiences and expectations regarding its capabilities and limitations. The metaphorical constructs delineated in Table 2 illustrate the multifaceted aspects of EFL students' conceptualization of GenAI, revealing insights into its perceived strengths and weaknesses.

Students conceptualize GenAI as a resource (learning tool) that provides ideational support and assistance with English-related tasks, particularly when confronted with intellectual impasses. This conceptualization suggests that students perceive GenAI as a supportive tool that aids in overcoming obstacles and enhancing learning experiences. The metaphor of *translation machine* acknowledges GenAI's capability to provide accurate translations, highlighting its pivotal role in fostering language comprehension and communication. Students appreciate its efficacy in rendering accurate translations of texts, thus enhancing their grasp and acquisition of the target language. Consequently, students generally view GenAI as a useful tool that bolsters their learning by providing ideas, assistance, and precise translations. These metaphorical constructs reflect a positive attitude toward its utility in facilitating language-related tasks.

The metaphor of *The Thread Sewing Fabric* implies a perception of GenAI's textual production as a process of "stitching" together existing content, suggesting skepticism toward its creative faculties and autonomy in generating novel ideas. This metaphorical construct reflects a critical stance on GenAI's generative capabilities, highlighting its perceived limitations in producing genuinely original content. The students regarded the technology as a tool that reconfigures and amalgamates existing content rather than engendering original concepts.

GenAI is viewed as an entity capable of algorithmically producing analogous results based on integrated experiences, akin to navigational systems recommending routes. This metaphor emphasizes its role in summarizing information and broadening perspectives, while concurrently recognizing that the ultimate

decision on which learning path to pursue relies on human discernment. It underscores the importance of critical thinking and judicious evaluation of GenAI's responses. This metaphor indicates a balanced view that recognizes the value of GenAI's guidance while maintaining the necessity of critical thinking.

GenAI was metaphorized as a mobility aid for non-disabled individuals. This cautionary metaphor serves as an admonition about the potential dangers of indolence or dependency resulting from excessive reliance on GenAI. It emphasizes the significance of maintaining an equilibrium in GenAI usage, ensuring that it supplements rather than supplants human capabilities. The metaphor cautions about dependency which highlights concerns about becoming over-reliant on the technology in language learning. Students acknowledge the potential risks and emphasize the need to use GenAI as a supplement rather than a replacement for effort.

Additionally, GenAI was compared to an *airplane or anything high-reward but high-risk*. This metaphor recognizes the potential benefits of GenAI in expediating English learning, similar to how airplanes facilitate long-distance travel. However, it simultaneously highlights the importance of acknowledging GenAI's limitations and potential fallibilities, suggesting that while it can be highly advantageous, it also harbors risks that necessitates judicious management. This metaphor encapsulates the Janus-faced nature of GenAI, recognizing its substantial benefits for language learning while also acknowledging the potential for errors. It implies a need for meticulous oversight and cognizance of GenAI's constraints.

In sum, these TOOL/MACHINE metaphors illustrate a complex and multifaceted perception of GenAI among EFL learners, characterized by appreciation of its support and utility, critical awareness of its limitations, and an emphasis on the need for balanced and discerning use.

### 4.2.3 BRAIN metaphor

Eight BRAIN metaphors were identified, reflecting students' positive beliefs regarding the utilization of GenAI in EFL learning. These metaphorical constructs, encompassing *human brain*, *external brain*, and *super brain*, underscore students' perceptions of GenAI as a powerful cognitive amplifier that augments human intelligence and problem-solving prowess.

TABLE 2  Examples of TOOL/MACHINE metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Learning tool | 30 | GenAI can provide ideas and assists in English-related tasks. When my thoughts are blocked, the content provided by AI helps me break free from limitations. |
| Translation machine | 25 | GenAI is sometimes accurate in its translations. |
| Airplane or anything high-reward, high-risk | 6 | The advantages of GenAI invention are apparent, much like how airplanes greatly facilitate long-distance travel. Similarly, GenAI can greatly facilitate English learning. However, just as airplanes have a probability of accidents, GenAI can also make mistakes. Ignoring these errors could potentially lead to disastrous consequences. |
| A wheelchair for non-disabled individuals | 3 | GenAI may seem like a bit of an unnecessary extravagance, as I could do it myself, but I still seek GenAI assistance. It feels like I am just being lazy. |
| The thread sewing fabric | 2 | I feel that GenAI writing is a process of taking existing content and stitching it together, as GenAI does not possess subjective consciousness or the ability to write independently. |
| A map showing multiple routes to the destination | 2 | GenAI can algorithmically produce similar results for different processes based on integrated experiences. This process resembles intelligent maps recommending routes based on previously successful passages by people. For me, its role lies in summarizing experiences and expanding perspectives, while the judgment of whether the route can be smoothly traversed and is suitable for current needs still relies on human decision-making. |

Equating GenAI to a human brain bespeaks students' conceptualization of it as a cognitive prosthesis capable of reducing mental exertion and enhancing efficiency. The comparison implies a perception of GenAI as an invaluable resource for streamlining cognitive tasks and heuristics processes, resembling the analytical and logical faculties of human cognition. This metaphor reflects a profound level of confidence in GenAI's analytical and logical capabilities.

Describing GenAI as an *external brain* reveals a belief in its capacity to proffer alternative perspectives and holistic solutions transcending individual cognitive boundaries. This metaphor suggests that students envision GenAI as a collaborative instrument that complements human intellect, offering diverse perspectives and refined approaches to complex challenges. EFL learners value GenAI's ability to complement their own cognitive processes, providing sophisticated strategies for various intellectual quandaries.

Comparing GenAI to a *super brain* underscores a conviction in its unparalleled capacity for information processing and organization. Students acknowledge its potential to manage voluminous data sets with remarkable efficiency, highlighting its role in enhancing their cognitive capabilities by providing expeditious and well-organized information. Students recognize its potential to swiftly and effectively navigate large data sets, thereby aiding language learning and problem-solving efforts.

To summarize, the BRAIN metaphors indicate a robust appreciation of GenAI's cognitive augmentation capabilities among students. They perceive it as an invaluable resource that enhances their intellectual capacities, provides diverse perspectives, and improves efficiency in language learning and problem-solving tasks. This positive attitude underscores the significant role that students believe GenAI can play in their academic and cognitive development, positioning it as a pivotal tool in their intellectual arsenal (Table 3).

## 4.2.4 RESOURCES metaphor

A total of 44 RESOURCES metaphors were provided by students, comparing GenAI to various informational tools or references. These metaphors underscore GenAI's ability to offer knowledge, assistance, and support across different contexts. Students perceive GenAI as an expansive source of information, acknowledging its efficiency and usefulness while also recognizing its limitations.

TABLE 3  Examples of BRAIN metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Human brain | 5 | Gen AI is comprehensive in analysis, with broad knowledge coverage and logical structure, resembling results obtained by human thought and search. |
| External brain | 2 | GenAI may offer a different perspective and potentially a more comprehensive and refined approach. |
| Super brain | 1 | GenAI can search through vast amounts of information and organize it effectively. |

Students conceptualize GenAI as polymath capable of providing pertinent responses from multiple perspectives in a lucid and comprehensive manner. This metaphorical construct reflects their perception of GenAI as a vast repository of erudition, akin to an encyclopedia, offering detailed and multifaceted information across various domains. Students extol GenAI's capacity to furnish detailed and multi-perspective responses, drawing parallels to an encyclopedia tome. This metaphor indicates a high level of credence in GenAI's capacity to provide extensive and reliable information on an eclectic array of topics.

When confronted with unfamiliar topics or when concise English expressions is requisite, students gravitate toward GenAI for assistance. They envisage it as an instrument for generating outlines for articles and providing reference and succor, similar to the utilization of a compendium for guidance and support. The metaphor of a *reference book* emphasizes GenAI's role in offering guidance and assistance with recondite topics and generating outlines. EFL learners perceive it as an invaluable tool for clarifying concepts and organizing ideas.

GenAI is perceived as substantially improving the efficacy and celerity of information retrieval compared to individual forays into search engines. It facilitates more expeditious and comprehensive access to desired content, akin to unearthing essential information in a vast knowledge repository. This metaphor highlights its role in streamlining the learning process by providing swift access to relevant materials. The metaphorical

construct reflects EFL learners' appreciation of GenAI's ability to expedite their learning trajectory by providing rapid access to necessary materials.

Students acknowledge that while GenAI can proffer information for reference or as a foundation, it may not invariably be entirely veracious. This metaphor suggests a circumspect approach to utilizing GenAI, recognizing the need to critically evaluate its output and supplement it with other credible sources. This cautious stance underscores the importance of critical thinking and the need to corroborate information obtained from GenAI.

In summation, the RESOURCES metaphors depict GenAI as an indispensable instrument for language learning and research, esteemed for its extensive knowledge, efficiency, and support. However, students also recognize the paramount importance of critical evaluation and supplementing GenAI's output with other reliable sources to ensure veracity and comprehensiveness in their language learning endeavors. This balanced perspective reflects a sophisticated understanding of GenAI's potential and limitations in the educational sphere (Table 4).

### 4.2.5 FOOD/DRINK metaphor

Seven FOOD/DRINK metaphors are provided to describe GenAI, reflecting students' critical perceptions and beliefs regarding its utility and consumption. Identifying similar characteristics to *ice cream*, students conceptualized GenAI as a fount of intellectual delectation and academic sustenance, providing a source of satisfaction and fulfillment in their academic or everyday endeavors. However, there exists an awareness of moderation and caution, recognizing that excessive reliance on GenAI, akin to excessive ingestion of *ice cream*, may ultimately prove to be deleterious. Similarly, the juxtaposition to a *sports drink* highlights GenAI's role as an intellectual elixir, replenishing cognitive vigor and assisting the

completion of tasks, yet it is not deemed an absolute *sine qua non* for language learning. This metaphorical construct intimates that while students appreciate the convenience and assistance GenAI offers, they concomitantly understand that it cannot become a substitute for independent thinking and learning. Moreover, the comparison of GenAI to *pre-made meals* implies that although it provides readily accessible epistemic sustenance, students must still actively engage in the mastication and digestion of that knowledge to derive maximum benefit. Collectively, the gastronomic metaphors depict GenAI as a utilitarian and gratifying instrument, valued for its convenience and assistance in language learning. However, EFL learners also recognize the importance of balance, moderation, and active engagement in its application. The FOOD/DRINK metaphors emphasize a critical and contemplative approach to leveraging GenAI, ensuring that it complements language learners rather than supplant their independent thinking and learning trajectories (Table 5).

### 4.2.6 MEDICINE metaphor

The quartet of MEDICINE metaphors employed to describe GenAI reveals students' perceptions and beliefs regarding its role as an auxiliary and supportive entity. The Comparison of GenAI to *drugs* suggests that while it can provide temporary alleviation, it may be potentially harmful to the imagination and English proficiency longitudinally. This metaphor reflects a critical view of excessive reliance on GenAI, highlighting potential negative impacts on creativity and language skills. Resembling the attributes of *Ibuprofen*, students conceptualize GenAI as a panacea capable of ameliorating difficulties or challenges encountered in language learning pursuits. They acknowledge its effectiveness in addressing specific issues, such as writer's block or lack of clarity, and extol its capacity to provide relief. However, there persists an understanding that GenAI should not be solely relied upon as the lone viable solution. Just as *Ibuprofen* does not constitute a cure-all solution for all ailments, students recognize that GenAI's inherent limitations and its potential inadequacies in addressing underlying issues or promoting independent thinking. The metaphoric parallelism with a *quick-acting heart rescue pill*, a form of cardiac medication, underscores the urgency and importance students ascribe to GenAI's ability to expeditiously provide assistance and extricate them from dire academic struggles. Hence, the MEDICINE metaphors depict GenAI as a utilitarian and supportive instrument, valued for its ability to alleviate specific language learning challenges and provide swift assistance. However, EFL learners simultaneously recognize the need

TABLE 4 Examples of RESOURCES metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Encyclopedia | 15 | GenAI can provide users with relevant answers from multiple perspectives, in a clear and comprehensive manner. |
| Reference book | 13 | When faced with many things I do not understand, and when I want concise English, I can seek help directly from GPT. Besides that, I can also use GenAI to generate outlines for articles and so on, which can be helpful as reference and assistance. |
| Database | 12 | GenAI greatly improves efficiency and speed of retrieval compared to individually searching unfamiliar learning materials. It enables faster and more comprehensive access to desired content, akin to finding one's own nutrients in a vast knowledge repository. |
| A dictionary (immature version) | 4 | GenAI can provide some information for reference or as a basis, but it may not be entirely accurate. |

TABLE 5 Examples of FOOD/DRINK metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Sports drink | 3 | A bottle of sports drink is effective for replenishing energy after exercise, but it is not a necessity; one can still live without drinking it. |
| Ice cream | 2 | It is delicious and enjoyable to eat, but consuming too much of it is not good for me. |
| Pre-made meals | 2 | It requires further processing by humans before they can be consumed. |

for balance, critical thinking, and independent problem-solving in its employment. These metaphorical constructs emphasize a thoughtful and measured approach to utilizing GenAI, ensuring that it complements rather than supplants their academic efforts and skills in the language learning process (Table 6).

# 5 Discussion

The analysis of elicited metaphors produced by the Chinese L2 learners has suggested six conceptual themes. The most frequent conceptual metaphor, HUMAN, emphasizes the learners' perception of GenAI as human-like entities or entities with human-like qualities. The metaphorical theme underscores the learners' tendency to anthropomorphize GenAI, viewing it as possessing characteristics akin to humans, such as intelligence, assistance, and companionship, aligning with the sentiments of Anderson (2023) and Chatterjee and Dethlefs (2023). The prominence of the HUMAN metaphor suggests that learners conceptualize GenAI as active participants in their language learning journey, capable of providing guidance, support, and interaction similar to that of human counterparts. The finding discloses the learners' inclination to relate to GenAI on a human level, highlighting the significance of interpersonal dynamics and social interactions in their engagement with language learning technologies, which echo the sentiments of Yan (2024). The subcategories of the HUMAN metaphors allude to the specific roles and responsibilities learners perceive GenAI satisfy in their language learning pursuits.

The *English teacher* role indicates that GenAI has assumed the responsibilities of instructors in the language learning process, which is in line with the findings proposed by Kim and Su (2020), indicating that students hold a generally positive attitude to AI in language learning. The *Assistant* role prescribed to GenAI by the respondents, though exhibiting similarities in the entailments of the *English teacher*, presents a variance in the power dynamic between the instructor and technology. The *English teacher* conceptualization elevate the power of GenAI to an equal status of the instructor and above the student, which emphasizes a more dominant and authoritative presence in the classroom (Wan et al., 2011). Contrastively, the *Assistant* conceptualization lowers GenAI's power status below the learner and instructor, affirming its role as support to the teacher and the learning process. As noted by Lim et al. (2023), the findings potentially reflect the teacher's competence relating to GenAI application in curriculum development and characteristics of educational settings. Lim et al. (2023) suggested that despite the

technology being positively perceived by teachers, its application remains difficult for teachers to master due to insufficient expertise in computer science, which, consequently, may relegate GenAI to a supportive role. Additionally, in classrooms that emphasize an interactive dynamic, speaking-oriented EFL courses, GenAI are perceived as assistive teaching agents that support classroom practices and permit teachers to focus on qualitative interactions with language learners. Thus, the perception of respondents may be attributed to the teacher's competence for interpreting GenAI's pedagogical role in language learning environments. Furthermore, the *Wiseman* and *Personal Advisor* roles conceptualized by the respondents align with the notion of Chatterjee and Dethlefs (2023) which conceptualizes GenAI as a *philosopher* and *guide*. The respondents attach responsibilities to GenAI that extend beyond the fundamentals of language learning, operating the model as an encyclopedic source for worldly knowledge usurping the responsibilities of other disciplines in the humanities and sciences. The *Friend* metaphor indicate the formation of emotional attachments by the learners to GenAI that breach the standard ethical limitations of human and machine which presents an increasingly realistic scenario of perceived machine consciousness which is enhanced by the belief of humans that GenAI are embodying more humanistic characteristics and traits.

Similarly, the intelligent functions of GenAI have been implied in the conceptual metaphor of "BRAIN" metaphors, highlighting learners' perceptions of GenAI's cognitive capabilities and functions akin to those of the human brain, supporting the sentiments of Carbonell et al. (2016). It extends from the traditional metaphorical comparison of *computational systems* to *brains*, and considers the brain as a distinctive selectional system which is capable of understanding the environment by emphasizing experiences. By comparing the parallels between GenAI and the human brain, learners emphasize the technology's role in facilitating learning processes, streamlining tasks, and enhancing cognitive functions related to language learning (Barrot, 2023). Metaphors of this classification underscore language learners' recognition of GenAI as a powerful cognitive resource that holds capacities equivalent to their own cognitive abilities, aiding them in accessing, analyzing, and synthesizing linguistic information more efficiently as an agent of equitable competence. Through these metaphors, it appears that language learners attribute agency, personality, or social roles to GenAI as suggested by Yan (2024), and seeks to establish a sense of familiarity, trust, or relatability, thereby prompting heightened engagement with and acceptance of the technology (Jeon, 2024). However, suggesting GenAI possesses characteristics resembling of the human brain may indicate precarious implicit assumptions. Although the responses demonstrate a positive attitude and explanations, it perilously insinuates that GenAI and the human brain, an organ that distinctively defines human existence, are cognitively interchangeable. The findings echo the concerns posited by Janssen et al. (2020) and Keyes et al. (2021) which indicate a constraint to the development of critical thinking in language learners by means of restricting access to well-rounded information and personalization limits.

While humans-oriented metaphors tend to emphasize familiarity, trust, and relatability with GenAI, in the "TOOL/MACHINE" and "RESOURCES" metaphors, learners view GenAI primarily as a functional tool or resource, highlighting its instrumental role in achieving specific language learning goals. Similarly noted by Anderson (2023), the comparison draws on GenAI's capability to

TABLE 6 Examples of MEDICINE metaphors.

| Metaphors | Frequency | Entailment |
|---|---|---|
| Drugs | 2 | GenAI (in English learning) can just provide temporary pleasure but are harmful to imagination and English proficiency. |
| Ibuprofen | 1 | It can provide assistance and alleviate pain, but it should not be relied upon as a sole solution. |
| Quick-acting heart rescue pill | 1 | GenAI saves me from nights of incoherent speech, inability to express myself, and lack of ideas while doing homework. |

reduce rote operations, support creativity, and enhance practice opportunities for language learners. It is viewed as a mechanical appendage by which its effectiveness is dependent on the operator. The pragmatic perspective may yield more critical attitudes as learners evaluate GenAI's effectiveness, reliability, and impact on learning outcomes. The learners may scrutinize its utility, efficiency, and practicality, assessing whether GenAI realistically enhances the language learning experience or poses potential limitations or drawbacks. As suggested by Pavlik (2023), the critical attitudes toward GenAI use may stem from concerns about overreliance, dependency, or the limitations of AI's capacity to replicate human-like language or behavior. While recognizing the benefits of GenAI in providing assistance and support, learners remain cautious of its shortcomings or the risk of substituting genuine language learning experiences with technology-mediated interactions, a sentiment indicated by Casal and Kessler (2023).

From a more cautious perspective, the FOOD/DRINK and MEDICINE metaphors serve as reminders of the potential risks and limitations associated with GenAI use in learning contexts, exemplifying a critical attitude toward GenAI. The FOOD/DRINK metaphors, which juxtapositions GenAI to *ice cream*, suggests that while GenAI can offer immediate gratification and assistance, excessive reliance on the technology may ultimately result in detrimental behavioral traits, dependency, and hinder the development of critical thinking skills, echoing the concerns of Casal and Kessler (2023). The *ice cream* metaphor indicate that language learners are aware that indulgence in the item may produce short-term gratification, resembling GenAI's immediate resolution to a personalized inquiry regarding a learning task. However, over-ingestion could negatively affect an individual's physical health, promoting a reliance on GenAI that may impede students' ability to foster independent thinking and engage deeply with the learning materials. Meanwhile, the *sports drinks* metaphor illustrates that the utilization of GenAI is capable of creating overall benefits, yet, it is not a necessity for the completion of learning tasks. The respondents displayed limited awareness of GenAI's disruptive nature in language learning, as previous literature have sufficiently highlighted (Fathi et al., 2024), which to suggest the technology have yet to pervasively influence the behaviors and impact the surrounding environments of the respondents, as posited by Carbonell et al. (2016). Additionally, it could potentially be a consequence of regional accessibility issues, as noted Luo et al. (2024). The perception of GenAI may be further attributed to unfamiliarity and limited skill competence that EFL instructors demonstrated with its incorporation into language learning, as suggested by Lim et al. (2023). The subcategory of pre-made meals reiterates the importance of the human function in the comparison, akin to the sentiments provided by Anderson (2023) relating to the TOOL metaphors.

The MEDICINE metaphor, tantamount in nature to FOOD/DRINK metaphors, portrays GenAI as a remedy or "quick fix" for academic challenges, such as writer's block or lack of clarity. The responses suggest that while GenAI can provide "relief," overconsumption may result in abated effectiveness and dependency, potentially stifling an individual's propensity for creativity beyond the confines of GenAI's prompts and responses, sentiments echoed by Luo et al. (2024). Respondents expressed a critical attitude, advocating that GenAI should be applied judiciously and in moderation, similar to medication, as excessive reliance may mask underlying issues or inhibit students' ability to develop essential cognitive skills. Such perceptions are representative of the participants' reasoning and thinking as noted

by Shaw et al. (2021). However, the subcategories demonstrate a level of discrepancy relating to the concept of "relief" provided by GenAI, specifically the conceptualizations of *Ibuprofen* and *Quick-acting heart rescue pill*. Whereas the conceptualization of *Ibuprofen*, pain-relief medication, emphasizes the alleviation of pain to minimize suffering endured during the completion of challenging tasks, the subcategory of *Quick-acting heart rescue pill*, a cardiac medication, accentuates the urgency of the tasks and the severity of potential consequences. In essence, the MEDICINE metaphors caution against the uncritical use of GenAI in learning contexts and emphasize the importance of maintaining a balanced approach. The findings align with the notions proposed by Luo et al. (2024), suggesting that while GenAI can offer valuable assistance and support, it is essential to raise awareness among instructors and students about the functionalities of GenAI. Moreover, it is imperative to ensure all parties remain vigilant regarding the technology's limitations and strive to develop independent thinking and problem-solving skills, recognizing its increased application heightens the importance to these traits for the future.

Cumulatively, the differences in attitudes toward GenAI use in L2 learning across various metaphors reflect the complexity of learners' perceptions and interpretation of events. These attitudes are shaped by the conceptualization of GenAI's role, functionality, and potential impact on the language learning journey, particularly within the educational environment of current Chinese EFL learners in higher education (Schmitt, 2005). These nuances highlight the importance of considering learners' diverse perspectives and attitudes, and insights into sociocultural background, way of thinking, sense of identity, underlying realities and underlying motivations toward technology integration in language education (Oxford et al., 2014).

## 5.1 Implications

These findings offer several implications for L2 teaching practices. Firstly, educators should prioritize promoting critical thinking by encouraging students to evaluate GenAI-generated content actively (Zhou et al., 2023). This practice involves guide students to remain skeptical and question the accuracy and reliability of information provided by AI tools (Barrot, 2023). Secondly, curriculums should incorporate the development of AI literacy, as prevalent application of GenAI involves a pedagogical shift toward perfecting inquiry skills, a necessity induced by the technology's prompt-oriented design (Luo et al., 2024). Additionally, engagement with GenAI should be promoted, encouraging students to actively participate in the learning process rather than passively relying on AI assistance (Yan, 2024). Teachers can achieve this objective by designing activities that require students to interact with and analyze AI-generated content. Thirdly, a balanced approach to technology integration is essential to ensure that GenAI is used as a supplementary tool rather than a replacement for traditional learning methods. Educators should emphasize the importance of combining AI resources with other learning strategies to foster comprehensive language development and maintain language learning motivations (Luo et al., 2024). Additionally, addressing practice based ethical concerns related to GenAI use, such as plagiarism and intellectual property rights, should be incorporated into the curriculum through discussions and activities (Casal and Kessler, 2023). While GenAI can provide valuable support, it should not overshadow students' own agency and autonomy in the learning process. Empowering students to take ownership of their learning

journey involves instructions on the responsible manner to effectively utilize GenAI as a resource while emphasizing the importance of independent thinking and learning skills (Luo et al., 2024). Furthermore, educators, when integrating GenAI into curriculums, are to be aware of certain socio-economic, cultural, and geographical limitations, which could potentially manifest in social injustice scenarios and negation of pluralistic values. This issue requires educators to ensure the technology's accessibility for the entire student population so as to avoid granting an unjust competitive edge and hinder the democratization of knowledge (Lim et al., 2023). By implementing these concrete strategies, educators are able to optimize the benefits of GenAI in L2 learning while preparing students for responsible and effective use of technology in their academic pursuits.

## 5.2 Limitations and suggestions for future research

Limitations of the current study include the sample size and scope, as it focused solely on Chinese L2 learners' perceptions of GenAI in English learning. Future research could expand the investigation to include diverse learner populations and languages to provide a more comprehensive understanding of GenAI's impact on language learning. Additionally, longitudinal studies could be conducted to examine the long-term effects of GenAI integration in language learning environments. Furthermore, exploring the role of contextual factors such as educational settings, instructional methods, and technological infrastructure on learners' perceptions and experiences with GenAI would provide valuable insights. Methodologically, employing mixed-methods approaches combining qualitative interviews with quantitative surveys could offer deeper insights into learners' attitudes, beliefs, and behaviors regarding GenAI use. Finally, investigating the effectiveness of pedagogical interventions aimed at promoting responsible and effective use of GenAI in language learning contexts could inform the development of evidence-based instructional practices.

## 6 Conclusion

In conclusion, this study explored Chinese L2 learners' perceptions of GenAI in English language learning through metaphorical expressions. The findings revealed that learners conceptualize GenAI in diverse ways, ranging from viewing it as a helpful assistant to a powerful tool, a source of inspiration, and even a potential threat. While some learners appreciate the convenience and assistance provided by GenAI, others express caution regarding overreliance and the potential loss of critical thinking skills. These perceptions are reflected in metaphors related to human entities, tools/machines, brains, resources, and food/drink. The study underscores the need for educators to consider learners' diverse attitudes and beliefs toward GenAI when integrating it into language learning contexts. It also highlights the importance of fostering critical thinking skills and promoting responsible GenAI use to ensure optimal learning outcomes.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding authors.

## Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the patients/participants or patients/participants legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## Author contributions

YY: Writing – original draft, Writing – review & editing. WS: Writing – original draft, Writing – review & editing. XZ: Funding acquisition, Project administration, Supervision, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Integration of curriculum ideology and politics in higher education: a case study of English linguistics in China

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Amidst efforts to fulfill the Chinese government's education guide for morality building and character cultivating, curriculum ideology and politics have emerged as key aspects in higher education pedagogy. English linguistics, a staple for junior English majors and often perceived as theoretical and challenging, represents an opportunity to align with national education directives. This study explores the integration of ideological and political education within the English major's curriculum, specifically within an English linguistics course. This paper details an empirical case study conducted in a local Jiangxi university in China, where an "ideological education + linguistics" teaching model was carefully crafted and implemented in the introductory linguistics session. Methodologies included classroom observation, post-lesson questionnaire and interview, revealing enhancements in student engagement, understanding of linguistic concepts, and scientific and logical reasoning. Additionally, noteworthy improvements in teaching methodologies were reported. The findings affirm the model's feasibility and effectiveness in reinforcing the curriculum ideology and politics in major disciplines, suggesting a beneficial tripartite impact on national educational goals, student learning, and teaching innovation. Research significance indicates that by applying their experiences, front-line teachers can act as researchers, enhancing the implementation of educational research; besides theoretical studies, micro case studies are essential to validate and complement educational research, thus contributing to the development of a comprehensive theoretical framework.

KEYWORDS

English linguistics, curriculum ideology and politics, higher education, empirical case study, teaching innovation

## 1 Introduction

The principle of "fostering character and civic virtue, prioritizing moral education" is a cornerstone of China's educational philosophy. With the 2016 National Ideological and Political Work Conference of Colleges and Universities endorsing "curriculum ideological and political education," a new paradigm shift has been ushered into education, profoundly affecting teaching modalities. Institutions of higher learning, as incubators of future talents, not only need to maintain excellence in traditional academic instruction but also must integrate ideological and political dimensions into curricular content to align with national educational objectives. The foreign language curriculum, a key component of higher education and considered "a natural battlefield for curriculum ideological and political education" (Guo

and Luo, 2021), is thus under the spotlight for its pedagogical approach in English courses.

In the current foreign language courses in universities, some scholars have proposed that English major education should adhere to the concept of "based on general education, standing on professionalism, and returning to individuality"; while also should deal with the relationship between global perspective and national consciousness well (Wen et al., 2020). They emphasize the need to enhance students' problem-solving capabilities, elevate their cognitive skills (Hu, 2022), and shape well-rounded international experts proficient in their field of study (Wu, 2019). Given that external societal forces drive policy evolution in foreign language education (Shohamy, 2006), initiatives such as "building a community with a shared future for mankind" and the "Belt and Road" have put forward new language proficiency requirements for Chinese foreign language talents, also presenting a challenge to the English education ethos in the past period of time. As Chinese foreign language education has began to realize the necessity of the cultivation of cross-culture quality and ability since 21th century, cross-culture mode has transmitted from fragmented education to curriculum education, but such planning and action still fall behind in touching the deep, dynamic, systematic trans-cultural mode. This requires to form a new culture position based on the integration of love for local culture and appreciation for target country culture by starting from language (Shen, 2019). Therefore, it is a tendency to seize the opportunity of foreign language education reform under the policy to face the challenge and fill the inadequacy in all levels.

English linguistics, as an integral part of language education, exhibits both instrumental and humanistic characteristics. Its instrumentality emerges through systematic instruction on the essence, structure, function, and application aspects of language, which equips students with the skills to decode language rules, analyze linguistic phenomena, and formulate a theoretical base for subsequent teaching and research endeavors. The humanistic dimension is manifest in the way the course shapes students' awareness of language usage, identity, and the interplay between language and society. These facets collectively refine their academic literacy, critical thinking abilities, national and global outlook. However, English linguistics is also fraught with complex theories and terms, demands innovative and engaging teaching strategies to facilitate comprehension, which is achievable through curriculum ideological and political education.

Ideological and political values are embedded within the various branches of linguistics. For example: Phonology illustrates the principle of understanding the deeper essence through surface phenomena; morphology and syntax underscore the values of rigor and precision; semantics explores the dialectical connection between language and the subjective-objective reality; pragmatics promotes flexibility, politeness and conversational decorum; sociolinguistics juxtaposes linguistic variation at the micro-level against language policy at the macro-level, and so on. Besides, linking linguistic competencies to individual growth, cultural legacy, and the nation's soft power could help nurturing patriotic individuals adept in linguistic studies and proficient in English. Therefore, the course pays attention to the integration and guidance mentioned above, through the overall ideological and political elements of linguistics course in Table 1, thereby broadening cognitive horizons of students.

TABLE 1 Overall ideological and political elements of linguistics course.

| Major knowledge aspect | Ideological and political elements |
| --- | --- |
| Language with society and state | Fostering national sentiment and identity |
| Language with human and culture | Encouraging humanism and cultural confidence |
| Language with cognition and thinking | Cultivating scientific spirit and logical thinking |
| Language with life and future | Emphasizing application value and life value |

## 2 Literature review

A review of literature indicates international contributions, like Shaaban (2005) has delved into the infusion of moral education into ESL and EFL classrooms. Educational research globally recognizes the integration of ideological and political elements, which can be seen from moral education, cultural identity, social responsibility, and professional development as follows. (1) On moral education, transformational leadership within moral education helps students maintain integrity through role modeling and moral reinforcement (Effendi and Sahertian, 2022). Meanwhile, environmental moral education is pivotal in raising awareness for societal and ecological sustainability (Begum et al., 2021). (2) In addition, cultural identity is essential in modern education, which extends beyond knowledge transfer to the formation of students' identities, emphasizing the importance of reinforcing cultural connections and national values in the learning process (Millei, 2021). This shaping of identity is integrated from an early age and is instrumental in the development of moral teaching strategies (Asif et al., 2020). (3) Besides, social responsibility in education encourages students to address global issues through the inclusion of courses focusing on environmental and civic values, transitioning the educational aim from simple knowledge delivery to a broader personal and societal development (Begum et al., 2021). (4) Moreover, the continuous enhancement of professional competencies and ethical standards for teachers is crucial, as it is intimately connected with the overall quality of education (Li and Hu, 2023). Institutions of higher learning should prioritize the cultivation of educators' emotional intelligence, ethical values, and capacities for moral judgment (Quinlan, 2018; Friedland and Jain, 2022). Consequently, the integration of moral education, cultural identity, social responsibility, and professional development plays a pivotal role in the evolution of education systems. This necessitates the integration of ideological and political elements into both teaching and learning. These research findings reveal new perspectives on the incorporation of political education within major courses, compelling a reevaluation and enhancement of our pedagogical strategies.

In China, an exhaustive search on CNKI with the keywords "English Curriculum Ideological and Political Education" yields over 6,900 academic papers (until January 31, 2024), highlighting its emergence as an interest in the field of scholarly inquiry. Domestically, researchers have explored the subject from several vantage points including its significance, conceptual depth, and pragmatic application in English courses (Wu, 2019; Guo and Luo, 2021; Wang and Shi, 2021; Wen, 2021a,b; Zhao, 2021; Hu, 2022). As for specific disciplines

in English courses, research has been focused on theoretical and practice explorations, such as Comprehensive English (Zhang and Mao, 2021), Business English (Liu, 2019), English Teaching (Zhang, 2022), and Vocational English (Yang, 2020), in which practical explorations are mainly about the overall framework of one semester's curriculum, without case studies toward specific unit or content, not to mention theoretical ones which are more abstract. In terms of linguistics-related courses like English Linguistics (Wen, 2021a,b; Zhang, 2021), General Linguistics (Liang, 2019), the situation is similar. Therefore, the macroscopic view far exceeds microscopic in this field, especially with a scarcity of micro-level case studies that reveal practical implementation in the examination of linguistics curriculum. Addressing this gap, this paper positions the teaching of English Linguistics at a local university in Jiangxi, China, within the scope of curriculum ideology and politics, to explore the harmonization of national objectives with educational content. It differentiates from the studies above in showing the execution of national policy within one limited class period, also to shed light on teaching case studies research in the future. The research questions of this study are: (1) Is the implementation of curriculum ideology and politics in English linguistics course feasible and effective? (2) What should the teachers do to realize the effect?

# 3 Research design

The research was conducted in the fall of 2022. At the time of writing, the author, who is also as a teacher and researcher, is able to conduct research at a local university in Jiangxi, China. For the sake of clarity in this context, the teacher role is emphasized, as it encompasses the author's multiple identities. As case study is a well approach in qualitative research and commonly applied in education study, it was utilized with the illustration and examination of the teaching process on a linguistics content. During the teaching, English was used as the medium of instruction, and lectures were delivered based on a prepared verbatim draft. The draft played an important role and served as the basis for the following real classroom discourse, though there were some adjustment in the actual lesson. A total of 185 third-year English majors from six classes participated, all of whom are the author's students with similar learning competence and are representative of average level students. The textbook used was "Practical Course in English Linguistics, Second Edition" edited by Chen Xinren and published by Suzhou University Press. It adopts a learner-centered approach, emphasizing practicality and interactive exercises. The beginning unit, pivotal in engaging student interest, was chosen to conduct the case study, with the first lesson introducing the definition of language, world languages, and their genealogical classification. Through thematic activities in this lesson, the teacher combined multiple methods such as Competitive Quiz Method, Discussion Method, Inquiry Method to finish the teaching task. The ideological aim was to foster students' pride in their linguistic abilities and curiosity to explore the natural endowment of language, as well as raise their awareness of linguistic identity.

Next, the case study will delve into the instructional process of the curriculum ideological and political education. It uses the 90-min lesson titled "What is Language" as a model, structured into three segments: a leading-in (10 min), the acquisition of new knowledge (75 min), and a concluding summary (5 min). The time allocation for new knowledge can be seen in Table 2.

TABLE 2  Allocation of time for new knowledge.

| Content | Time |
|---|---|
| Definition of language | 20 min |
| Genealogical classification of language | 25 min |
| Origin of language | 15 min |
| Values of linguistics | 15 min |

# 4 Teaching processes

## 4.1 Leading-in (10 min)

### 4.1.1 Introduction

"Good morning, everyone! Today marks the beginning of our journey into the fascinating realm of linguistics. This discipline is dedicated to the study of language—a tool that we all use every day. Have you ever pondered the true essence of language? Language enables us to review history, envision future, and understand ourselves. It's clear that language plays an important role in our lives. By delving into linguistics, we embark on a quest to deepen our self-knowledge."

**Purpose:** To immediately capture the students' attention by positing a thought-provoking question about language and providing an insightful response, thus setting the stage for the new course in linguistics.

### 4.1.2 Engaging questions and storytelling

"I invite you to envision language as a metaphor. What images come to mind? A bridge? A key? Perhaps a black box, or a tower? Let us explore these metaphors together and extract their underlying meanings." After discussing each metaphor, turn to the famous story of the Babel Tower, encourage students to contemplate the morals and implications it has about the significance of language in human civilization.

**Purpose:** To stimulate the students' curiosity about the nature and functions of language, using vivid metaphors and a storied example to provoke thoughtful reflection and anticipation for the subsequent part.

### 4.1.3 Leading to linguistics

"The story of the Babel Tower does not just speak to our past—it also guides us toward understanding language's role in our present and future. In essence, studying linguistics is just like 'rebuilding the Babel Tower'—we strive not only to learn about diverse languages but also to unravel the profound mystery of 'LANGUAGE' itself." Provide an introductory glimpse into the key branches of linguistics as a primer for the lessons ahead.

**Purpose:** To help students transition from a tangible understanding of language to an appreciation of the theoretical and analytical approaches of linguistics, thereby underscoring its significance and breadth of study.

## 4.2 Presentation of new knowledge (75 min)

### 4.2.1 Definition of language (20 min)

"Reflecting on what we understand language to be—based upon your insightful answers and our previous discussions—let us formalize

our comprehension. Language, as we define it, is a system of arbitrary vocal symbols used for human communication. Now, we shall explain the five critical key words of this definition: 'human-specific,' 'arbitrary,' 'vocal,' 'symbol,' and 'system.'"

"For instance, consider the efforts of the notable biologist, Jane Goodall, who endeavored to teach gorillas human-like language but ultimately failed, which illustrated that language is indeed a human-specific ability. Moreover, to clarify the inherent arbitrariness and symbolic character of language, let us think of Shakespeare's timeless expression: 'A rose by any other name would smell as sweet.' These examples illuminate the intricate nature of language and its characteristics."

**Purpose:** To lead students to delve into the core of language, enable them to appreciate the precision of linguistics and to foster a sense of gratitude for this extraordinary natural endowment unique to humanity.

### 4.2.2 Genealogical classification of language (25 min)

"Now, we begin by exploring the concept of linguistic diversity through a clip of 'Hello' song with multiple languages. I invite you to listen and identify as many languages as you can. How many can you identify? Five? Six? Yes six, excellent! According to our textbook, there are approximately 6,800 spoken languages and 2,200 written ones globally. Reflecting on our earlier discussion about the 'vocal' nature of language, can anyone tell why there are more spoken than written languages? Oh, it's because that each language must be vocal, but not necessarily has the written form. This observation can lead us to thinking of the 'Pareto Principle' in linguistics and the unequal distribution of language use, with some languages being more dominant or widespread than others. Please consider the underlying reasons for this disparity. As English majors from China, it's essential to recognize that English holds the title for the most widely distributed language, while Chinese boasts the largest number of native speakers. We must strive for our bilingual proficiency in both languages to excel in global exchanges and promote our rich cultural heritage."

"To better understand language families, let us think of the human family tree. Through a map in our courseware, we'll go through the names and distributions of the world's top ten language families: … (detailed explanation). Special focus will be on the Indo-European and Sino-Tibetan language families, with short video clips demonstrating each family's linguistic features. Listen carefully. Now within the Sino-Tibetan family, let us see the status of Chinese and its brothers and sisters, speak out the principal Chinese dialects, and find out the mother tongue of you in this map."

"Reviewing the story of the Babel Tower once more, we'll ponder the pros and cons of linguistic diversity. Following group discussions, let us summarize your thoughts and reflect together. You see, it is our language that build our world, so each language is a unique world view and treasure of human culture. It may indeed make some barrier to communication among people, but there are many ways to get across it, such as using certain common language, right? So as long as we respect each other and improve our personal multilingual ability, it is not a problem. That is, to seek common ground while reserving differences, and maintain harmonious coexistence in diversity."

**Purpose:** To promote the understanding of the language ecosystem and the importance of protecting linguistic diversity; to bolster students' rational appreciation of Chinese and its members,

thus deepening their sense of national identity; and to foster appreciation for inclusivity, thus enhancing their linguistic ideologies.

### 4.2.3 Origin of language (15 min)

"Now, let us embark on a journey into the past, to a time where language was in its infancy in mystery. When we reflect on the reverence that ancient peoples had for language, we may find some information about theories of language origin. What reasons might they have had for this deep sense of 'language worship'? Please take a moment to ponder this. Now, let us examine a series of intriguing hypotheses presented in your textbook. From the 'Bow-wow Theory' suggesting language emerged from imitations of animal sounds, to the 'Pooh-Pooh Theory' which revolves around instinctive utterances caused by pain or emotion, and the 'Ding-Dong Theory' which proposes a divine resonance between objects and sounds. We also find the 'Labor Theory' attributable to repetitive cooperative work sounds, the 'Ta-Ta Theory' rooted in the manual gestures and sounds, and the 'Ritual Speech Coevolution Theory' implying a link between language development and ceremonial activities. I want you to consider: Which do you find most plausible, and why? It seems many of you lean toward the 'Labor Theory,' and I approve of your choice. It rests on a firmer scientific foundation, as argued by Engels, a great thinker, who takes into account the physiological, psychological, and social facets of language evolution. This transition from a surface-level to a more analytical comprehension is a crucial step in deepening your knowledge."

"As a homework task, find out myths and legends about the origin of language in both Chinese and Western cultures. I challenge you to contrast the story of the Babel Tower from the Bible and the legend of Cang Jie, the reputed inventor of Chinese characters. Such a comparison will expand your intellectual horizons."

**Purpose:** To foster critical and scientific evaluations in students, while establish a historical materialism perspective of language in them. The task is also to cultivate students' ability to conduct research and have creative thinking processes.

### 4.2.4 Value of linguistics (15 min)

"Transitioning from our previous discussions, let us turn to understanding the essence of our subject: linguistics. Defined as the science of studying human language, linguistics is a vast field that interrelates with the natural sciences, social sciences, and the humanities. With a rich history, this multidimensional discipline has evolved from traditional to modern frameworks, with its influence to many other fields with its theories and methods, and is continuously breaking new ground. Then about its values, let us explore it from studying the theories of language to its use across different social contexts, especially the practical applications of linguistics. How does it contribute to communication, translation, and language teaching? … (discussion). By analyzing your answers, we realize that modern linguistics is not just about studying languages in isolation, but can help us to uncover the patterns of human languages, enhancing our cross-cultural sensitivity and refining our logical abilities."

"Lastly, let us look ahead. What careers could one pursue with a linguistics degree? As we see, here are many linguistics-related jobs, like foreign language teachers, dictionary compilers, and even natural language processing engineer, if you take more specific education. I want to encourage you to embrace the discipline and prepare for the diverse opportunities that await you in the field of linguistic study."

**Purpose:** To underline the foundational attributes of linguistics as a discipline, to relate the future prospects of the field to students, and to build their confidence and interest in mastering the subject.

## 4.3 Concluding summary (5 min)

"Alright, class, let us summarize what we have covered today. Just now, we have learned the definition of language, the language families, the origin hypothesis of language and the value of linguistics, in which you have showed your genius and creative thinking. As this is our first lesson, I want you all to create a knowledge map that outlines the key points we discussed today, which would be helpful for your to form a good habit to review and reinforce the main concepts. Besides, it's important to remember that previewing new material helps us mentally prepare for the next lesson and makes connections between what we already know and what we are about to learn. So, please read the rest content of Unit 1 after the class. Additionally, I want you guys to think of questions related to linguistics and the course as a whole, since potential linguists are those good at raising questions. Your questions will be shared and discussed in the next class, so please make sure your questions are clear, and it would be better to demonstrate your critical thinking skills. That's all, see you!"

**Purpose:** To train students' ability to review and summarize, cultivate their learning habit by assigning the mind map task, and pave the way for the new lesson.

# 5 Teaching methods

After reflecting on both pre-class preparation and post-class activities and drawing upon the cumulative teaching experience of the entire course, the teacher had identified four effective teaching methods which are as follows. It is noted that the last blended teaching method is not shown in this case study, but in the semester following the first unit, it was launched by the teacher as a tentative approach in some units with an effect, and therefore is placed here. These are mainly based on the personal experience, while also some of them are suggestive for other teachers.

## 5.1 Competitive quiz method

To liven up the classroom atmosphere, integrating competitive quizzes into the curriculum proves beneficial. Take, for instance, the topic of language diversity: students might be challenged to identify as many languages as possible by listening to a multilingual "Hello" song; they could also be quizzed on the official languages of the United Nations, or languages with the largest distribution and the highest number of speakers worldwide. Competitive quizzes offer immediate engagement and assess students' breadth of knowledge. It's important to acknowledge correct answers with praise to foster a sense of achievement.

## 5.2 Discussion method

The discussion method is essential for cultivating students' ability to think and articulate their thoughts independently. For example, when exploring the topic of the linguistic family, including the

evolution and extinction of languages, students might engage in debates about the significance of language diversity. Teachers can highlight standout contributions from various perspectives and ultimately direct the conversation toward the relevance of linguistics in preserving human culture and interpreting modes of human thought. This stimulates enthusiasm and maintains a balanced lesson rhythm while preventing teacher dominance.

## 5.3 Inquiry method

To enhance active intellectual engagement, the inquiry method is an effective tool in elucidating specific knowledge points. For instance, concerning the origins of language, students could be asked to evaluate which hypothesis is most scientifically valid and to provide reasons after learning about various theories presented in the textbook. Most students would tend to gravitate toward the "labor theory," some even integrating insights from their previous ideological and political courses. Minimal prompting by the teacher can significantly deepen students' understanding of labor's influence on language development. This approach thus reinforces students' critical thinking and innovative capacities while seamlessly merging principles of Marxism with linguistics, aligning well with our goals for ideological education.

## 5.4 Blended teaching method

The "online + offline" blended teaching mode is highly conducive to fostering a more versatile learning environment. Prior to class sessions, teachers may employ online platforms like WeChat and SuperStarLearn to share succinct video summaries of key points for students to pre-study. These recorded videos facilitate prepared participation. In the classroom, the focus shifts to clarifying complex topics, addressing students' common questions, and strengthening understanding through well-designed activities. These steps also allow for evaluating self-study effectiveness and pinpointing learning gaps. Furthermore, online platforms serve as a means for post-class assessments, collecting feedback, and extending the educational engagement beyond the traditional space and time constraints, thereby enhancing overall teaching efficacy.

# 6 Evaluation of teaching effectiveness

Following the initial lesson, the author promptly distributed a questionnaire to all six classes she instructed, aiming at evaluating the effectiveness of curriculum ideology and politics. One hundred eighty-five valid questionnaires were obtained, and selected students accepted concise interviews (see below). Except the first item on personal information, the questionnaire was composed of three distinct parts, with a total of 12 questions: (1) Understanding of curriculum ideology and politics, (2) Assessment of the teacher, and (3) The sentiment toward the integration of the English linguistics course with curriculum ideology and politics. The final question solicited subjective suggestions.

In the beginning part, students roughly split equal between "unknowing" and "knowing" regarding ideological and political education within foreign language courses. When asked about their understanding, the majority indicated that they see it as either "a

unifying framework for all educational elements and a comprehensive educational concept" (26%) or as "foreign language courses carry ideological and political education, and ideological and political education is integrated into foreign language courses" (63%). Concerning the need for college teachers to infuse foreign language courses with ideological and political education, a significant 83% regarded it as essential. This reflects that the concept of curriculum ideology and politics is not foreign to college students; however, its concrete application and tangible impact require reinforcement.

In the second part, regarding the assessment for the teacher, 72% of the students reported that the course contained "a great many" or "a relatively large number" of linguistic elements related to curriculum politics, as taught by the teacher. Furthermore, 83% felt the course was "well integrated" or "relatively integrated" with China's national conditions as presented by the instructor. A notable 84% believed that it substantially or relatively aids in shaping correct ideological, moral, and aesthetic perspectives and is beneficial in nurturing patriotism, political identification, and cultural self-confidence (87%). Additionally, 87% agreed that it contributes to enhancing their language skills, analytical abilities, and cultural literacy. This data suggests that the teacher's efforts in imparting curriculum ideological and political education are effectively realized.

Finally, regarding the sentiment toward integration, a resounding 77% of students expressed "strong liking" or "moderate liking" for the integration of ideological and political education into the linguistics curriculum. Notably, students have proposed their views on the mode of integration, especially "the symbiosis of professional ethos and knowledge" and "attention to current social issues" were the foremost preferences, at 88 and 86%, respectively. This proves the need for linguistics curriculum ideology and politics to focus on these domains specifically. The last item of the questionnaire gained numerous subjective suggestions, such as "enhancing interactivity," "promoting discussions," and "implementing competitive quizzes" in pedagogical approaches, alongside "incorporating real-life teaching," "integrating current events," and "discussing buzzwords" within the content scope.

Subsequent to the questionnaire session, interviews reflected the students' passion for linguistics. For instance, some remarked that "linguistics extends beyond abstract concepts, connecting closely with real life"; "the language surveys and dialect studies introduced and conducted by the teacher have been enlightening and relevant to our career plans"; and "linguistics enhances our overall cultural literacy." These responses underscore a growing anticipation for upcoming linguistics courses, which, in turn, propels teacher enthusiasm. The aforementioned findings connote that both educational and scholarly objectives are being met in a mutually beneficial manner.

In sum, students welcome the embedding of ideological and political elements into the linguistics curriculum, yet they also delineate specific expectations for educators. Teachers are encouraged to teach content resourcefully, mobilize students' initiative, and customized the classroom content to better align with students' psychological and professional needs.

## 7 Discussion

Curriculum ideology and politics merges as a solution of pedagogy challenge. There were many studies doing the theory

research toward it, but few of them investigated the practicality. Comparing this research evaluation results and previous related works, it can be found that this study align with those in the teaching effectiveness (Shaaban, 2005; Millei, 2021; Zhang and Mao, 2021) and proposed teaching methods (Wen, 2021a,b; Zhang, 2021). However, this study provides more detailed account of implementation of teaching steps, and reveals that students may have limited understanding about the notion of curriculum ideology and politics though they generally welcome it, and they have also higher expectations of teachers. These are worth pondering by teachers and researchers.

After the analysis above, here are the answers to the two research questions. First, this case study has demonstrated that such integration of curriculum ideology and politics in English linguistics course is not only feasible, but also yields positive impacts. The integration was realized effectively within the allocated time for new knowledge, and the ideological and political aims were fulfilled through various topics and methods, the effect of which can be felt by the teacher and seen from the students' evaluation. Second, to achieve effective teaching, it is necessary to proactively identify and intertwine ideological and political elements with the curriculum content, while also organically utilize other methods, such as Competitive Quiz Method, Discussion Method, Inquiry Method, Blended Teaching Method listed above. This approach demands a commitment to a learner-centered pedagogy that creates opportunities for students' reflection, discussion and feedback. Paramount, however, is the teacher's role in setting an exemplary standard—beyond mere content delivery—to foster in students' recognition of the value of linguistics. In this process, the teacher could trigger students' critical and creative thinking, thereby enhancing their ideological and political consciousness. As the German educationalist Johann Friedrich Herbart stated, morality is generally regarded as the ultimate pursuit of humanity, and therefore also the ultimate pursuit of education (Herbart, 1806/2015). Hence, moral development, an integral aspect of character education, could be fortified through ideological and political instruction within English courses.

## 8 Conclusion

In conclusion, this case study explores the fusion of ideological and political education within the first session of an English linguistics course, illustrated by the author's personal teaching experiences. The significance lies in its alignment with the Chinese national policy and directive for English teachers in higher education in the contemporary epoch, also serving as an instructive model for foreign language pedagogy globally. It provides a detailed reference as a case study that deepens the previous teaching research of the same topic from a micro-level. However, there is more to be done. Future research should delve into the systematic exploration of methods to effectively embed ideological and political education within the English linguistics curriculum. Long-term outcomes, including student engagement, moral reasoning, and critical thinking skills, should be monitored and assessed. Comparative studies between different institutions, culturally diverse settings, and varied disciplinary contexts should also be launched to offer a richer landscape from which to derive best practices in teaching. Finally, for future teaching practice, the curriculum ideological and political education is bound

to extend with greater depth and breadth, requiring the teachers to enhance their understanding and abilities. Universities and education departments should strive together, so as to fully refine the teaching quality and maximize the goal of students' overall development.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## Ethics statement

The studies involving humans were approved by the Ethics Committee of School of Foreign Languages, Yichun University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

ZM: Formal analysis, Investigation, Methodology, Resources, Writing – original draft, Writing – review & editing.

## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# The perceptions of undergraduate students toward reading contemporary fiction in English: a case study of content-based ESL instruction at a self-financed tertiary institution in Hong Kong

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**Introduction:** The study explores the effectiveness of teaching English literature to Hong Kong undergraduate students, particularly in a general education course titled "Fiction and Life: Understanding Human Development." This course marked the first exposure for students to book-length fiction in English and critical response written in English, revealing the efficacy of using fictional works as content-based ESL instruction at the tertiary level in Hong Kong.

**Methods:** Employing a mixed-methods approach, the study included questionnaires distributed to 310 students and thematic analysis of semi-structured interview data.

**Results:** Findings indicate a largely positive attitude toward the reading and writing experience, suggesting benefits for ESL teaching and learning in Asia.

**Discussion:** The study advocates for incorporating English literature into the general education curriculum to foster a more organic and contextualized language acquisition process. This research uniquely contributes to the field by examining student perceptions in a self-financed tertiary institution context, offering new insights that have not been explored before in Hong Kong's ESL landscape.

KEYWORDS

English education, assessment, literature, content-based language instruction, student perceptions

## 1 Introduction

Teaching of English literature as a means to improving English as a Second Language (ESL) learning is a pedagogy diminishing at the tertiary level across universities in Hong Kong. Although reading English literature has been associated with a variety of benefits to learning beyond improving English proficiency, such as improving student motivation, engagement, and critical-thinking skills (Vural, 2013; Rahman and Manaf, 2017), it is implemented less and less in ESL due to the increasing incorporation of machine-based, AI-assisted pedagogies, as well as the more instrumental attitude toward language learning (Shi et al., 2024). This study investigates how tertiary students perceive themselves as English learners, especially as readers

and writers in English under the influence of a general education English subject focusing on reading contemporary book-length novels. It is a case study (Flyvbjerg, 2011) using a mixed-methods approach, comprised of questionnaire surveys and semi-structured interviews on English literature course titled "Fiction and Life: Understanding Human Development" for ESL students at a tertiary institution in Hong Kong. This introductory chapter sets out the rationale behind this research, detailing its aims, objectives and research questions, as well as prefacing the structure of this paper.

## 1.1 Rationale

This study is motivated by the importance of English to learning in Hong Kong as English is the medium of instruction across all universities. Though English literature used to be a fundamental part of the English curriculum in ESL, the rise of the communicative approach to English has seen it take a backseat compared to other methods of teaching. As a meta-analysis of teaching methods in Hong Kong (Lo and Lo, 2014) has reported, the perceived efficacy of teaching in L2 (the secondary language) has led to more use of English texts within the classroom in recent years. As students are growing increasingly reluctant to read in the digital age, incorporating imaginative literature holds notable pedagogical value within ESL instruction. Gaskins (2015) advocates adding to the typical ESL curriculum choices of short story, novel, poem and play to also include literary essays. Ghosn (2002) holds the belief that when engaging with literary works, L2 learners have the potential to expand their knowledge of the target language's nuances, such as patterns and precise vocabulary and passionate narratives, as well as deepening cultural understanding and critical thinking, which are difficult to achieve through other text types. More recent studies emphasize integrating literature into L2 instruction as a highly effective language acquisition strategy (Tsang et al., 2020; Mart, 2021). This body of work further posits literature as having potential to meaningfully contribute to L2 students' development of advanced linguistic competencies.

Furthermore, studies of the use of English literature as a form of content-based instruction are somewhat scant. A narrative review of existing studies carried out in Chinese secondary schools indicated the potential for English literature to improve the quality of ELT in China (Zhang, 2023), but the study was limited to secondary school students. Studies carried out about teacher beliefs about incorporating literary texts into ESL teaching note mixed results (Cheung and Hennebry-Leung, 2020), whilst research into student perceptions and experiences of the use of literature in their tertiary education has not previously been published. Therefore, there is a research gap that can be filled by the current case study. By focusing on a self-financed tertiary institution in Hong Kong, this study provides a fresh perspective on student attitudes toward literature in ESL, an area that has been underexplored.

Finally, there are critical questions regarding the approaches to teaching and learning English literature itself. There is a lack of consensus as to the effective ways of incorporating English literature into courses designed primarily to facilitate improved English proficiency (Nosratinia and Fateh, 2017). For this reason, research into students' perceptions of learning English literature can not only testify previous research findings such as improved motivation, engagement, and critical-thinking skills (Vural, 2013; Rahman and

Manaf, 2017) in the context of Hong Kong and Asia, but also provide pedagogic implications that may help improve course design and curriculum development to facilitate better English language acquisition that reaches beyond the grammatical and technical aspects. This study, therefore, offers a novel contribution by examining these pedagogical implications in a contemporary setting, providing updated insights that can inform future curriculum designs.

## 1.2 Aims, objectives, and research questions

The aim of this research is to inform ESL course design with regards to appropriate English literature modules. Through investigating student first-ever experiences of taking a course on fiction, it is hoped that curriculum developers may help students improve their English proficiency that is not limited to the usual quartet of listening, speaking, reading and writing but cultural understanding and critical thinking. Moreover, the study hopes to establish broader benefits of English literature education which is applicable to Hong Kong and potentially to other East Asian contexts. This study stands out by focusing on contemporary fiction, which has rarely been the focus in Hong Kong's tertiary education, thus providing new insights into modern pedagogical strategies.

The above aims can be achieved through meeting the following objectives. First, we establish how individuals who study English literature as their general ESL course perceive it as contributing to their English proficiency. Second, we investigate how these students perceive the course as contributing toward their learning experience generally. Third, we probe into how English literature can be better harnessed within ESL contexts, including features such as assessment, pedagogy, and course design.

Based on our aim and objectives, specific research questions have been developed as follows:

- What are the views of undergraduate students in Hong Kong toward reading fiction in English?
- What do students perceive as the benefits and problems of studying fiction in English as part of their general education?
- How can curriculum developers better design English modules that use literary texts for the purposes of better English Language Teaching (ELT)?

These questions guide the design of this research.

## 1.3 Structure

The remainder of this paper is structured in the following manner: First, a review of the literature will examine what has been discussed regarding the use of literature in ESL contexts. Second, it will contextualize the study and reveal a gap in the literature that this study aims at filling. Thirdly, we will explain the methodology of this research, justifying the study in terms of both its theoretical position as well as practical implications the findings section reports and analyses both the quantitative survey data and the qualitative interview data, discussing these results with regards to this study's

research questions. Finally, the conclusion summarises the study and includes recommendations for curriculum design and further research.

# 2 Literature review

## 2.1 Literature and learning

A majority of research into the ways in which teaching English Literature in ESL contexts might improve learning generally is focused on its relationship with critical thinking skills. For example, one study focused on the use of English literature in teaching creativity and critical thinking skills, highlighting positive outcomes across three areas: rational thinking, purposeful thinking, and effective relation with contexts (Rahman and Manaf, 2017). Other studies focus on trying to explain how such correlations function. For example, one study posited that studying English literature functions to this end according to reader response theory (Qamar, 2016), a literary theory that views the reader as an active agent in creating meaning through engaging with literary texts (Tyson, 2006). Other studies focus on how to use English literature toward inculcating critical thinking skills in the ESL classroom, such as through taking a problem-based approach to teaching literature (Rahman et al., 2016).

There is therefore a focus across research into the topic in understanding what aspects to learning and processing skills that exposure to literature might improve. Some of these studies are located in ESL or EFL contexts, such as one that explored the use of Bloom's taxonomy in teaching creative and critical skills through English literature in Malaysia (Rahman and Manaf, 2017). Other studies focus more broadly on the incorporation of English literature into courses and employability, suggesting that English literature is perceived to offer both intellectual challenges and practical advantages (Longstaffe, 2015). These studies broadly cohere on the perceived educational value of English literature – based on its promotion of important and transferrable learning skills – though the evidential basis supporting these connections is comparably weak.

Other studies have focused on the relationship between literature and student motivation and engagement in ESL classes. For example, one study used questionnaires to gauge the attitudes of 60 university students toward the English literature component of their ESL class, finding that the motivation to engage with the literature was linked to motivation to acquire the language skills required to comprehend the text (Awang and Kasuma, 2012). Other studies have related this increase in motivation to learning outcomes also. For instance, a study using both an experimental and control group found that self-reported motivation was higher among a group that used literature in English language teaching (ELT) than those that did not (Vural, 2013).

Despite a lack of clear empirical evidence supporting the connections between English literature and the development or enhancement of relevant learning skills, the apparent basis for improvement to student motivation may provide in itself reason to study the effects of English literature education upon language students. Through undertaking studies of student perspectives, it may be possible to infer if the assumed effects on motivation are present in a specific cultural context, such as in Hong Kong. Such a rationale is at the foundation of the primary research undertaken below.

## 2.2 English literature and English skills

Much of the literature measuring the efficacy of teaching English literature toward improving English language skills is outdated, with a paucity of studies carried out in the twenty-first century. A commentary on using literature for teaching English published in 2001 notes that using literature in the classroom was falling out of vogue due to its perceived uselessness toward incorporating a communicative approach to teaching English (McKay, 2001). However, older experimental studies did note apparent success in incorporating literature into ELT (Spack, 1985; Sage, 1987; Oster, 1989; Gajdusek, 1998). This suggests that more up-to-date studies are required.

More recent studies have noted some advantages to using literature-based ESL. One study advocated using content-based literature instruction in the secondary-school ESL classroom to promote literacy development, supposedly providing language models and integrated language skills for learners (Custudio and Sutton, 1998). However, the study relied on significantly older literature and was largely focused on the *how* of incorporating literature, much of which itself lacked a clear basis in empirical research. Generally speaking, recent research on the role of literature in the English language classroom is sparse with regards to measured outcomes.

Some studies, however, have focused on student attitudes toward literature within ESL classrooms. For instance, a study carried out in Malaysia found that students were overall positive about the use of literature within the ESL classroom, though that they were more negative about the methods used by teachers centring around comprehension tasks (Ghazali et al., 2009). One thesis on the topic examined both teachers' and students' attitudes toward the uses of literature in the ESL classroom, finding that students and teachers were both negative toward the use of literature, preferring communicative activities (Baba, 2008). Conversely, a survey of 53 ESL students found that textual type made a significant degree of difference in terms of student attitudes toward literature within ELT, explicating this in terms of student interest, motivation and engagement with specific texts or types of text (Tevdovska, 2016). This is informative given that it suggests that cultural and even personal factors (e.g., genre preference) might impact the efficacy of literature incorporation into ELT in terms of contributing toward motivation and engagement.

With regards to how English literature ought to be taught to these ends, the efficacy of content-based instruction (CBI) has been evaluated by some studies. Some studies have found positive outcomes to using this approach. For example, a literature review of the use of CBI In ESL contexts found that CBI was generally associated with positive learning outcomes when compared with other methods of instruction (Karim and Rahman, 2016). Other studies note no noticeable benefit from using CBI as compared with other methods of teaching literature. For example, one study carried out with 90 ESL learners at the tertiary level compared CBI with collaborative strategic reading (CSR) and found that there was no significant difference in outcomes between the two groups (Nosratinia and Fateh, 2017). This potentially undermines the empirical basis for the utility of incorporating literature into ELT. However, given that the focus in these studies was on content-based instruction rather than English literature specifically, it may be that the types of content and tasks associated

with literature improve outcomes through alternative mechanisms. The potential utility of literature in ELT thus remains an open question.

## 2.3 Research within Hong Kong

Some studies have lamented the decline of English literature in the English curriculum of Hong Kong since the 1980s. For example, Evans (1996) noted that the shift toward communicative language teaching had seen the status of English literature reduced in the curriculum of Hong Kong due to the perceived importance of using English to communicate within the classroom. Consequently, studies have noted that the role of English literature toward English language education has not been widely researched within Hong Kong (Poon, 2009). There is thus apparently a tendency to reintroduce literature to ELT in Hong Kong.

As stated above, much of the research carried out within this context is now outdated. For instance, one study carried out some 25 years ago criticized a focus on using abridged classical novels in English literature for ESL in Hong Kong, recommending instead that more contemporary literature be used to engage students (Kooy and Chiu, 1998). The high-school English curriculum it refers to has advanced significantly since this time, rendering many of its comments about curriculum design and practice irrelevant within the present context. With reference to student attitudes, the most recent investigation into tertiary students' attitudes toward English literature was carried out in Hirvela and Boyle (1988), indicating a need for more recent research.

There has, however, been some recent research within the context of Hong Kong as to the relationships between teaching English literature and acquiring English as a second language. One study, for example, examined ESL teachers' beliefs and practices of teaching literary texts (Cheung and Hennebry-Leung, 2020). Using lesson observations and unstructured interviews, the study found that there was inconsistency in the ways in which teacher beliefs about the role of English literature in English acquisition correlated with their beliefs, highlighting the role of emotion as impacting teacher cognition. However, as the study largely measured teacher beliefs and was focused on the relationship between cognition and practice, its relevance to students' views and experiences is limited.

## 2.4 Research gap

As the above literature review has demonstrated, there is a gap in the literature with regards to understanding student attitudes toward the use of literature in English language teaching at the tertiary level in Hong Kong. In general, a shift toward CLT has been accompanied by less perceived utility for literature within ELT, meaning that it has served less as a focus of research. The studies that do exist report mixed results for student attitudes toward English literature for English language learning and likewise mixed reports on the efficacy of its delivery through content-based instruction. A dearth of research within the context of Hong Kong generally invites further research into understanding how students perceive the incorporation of literature into ESL courses in Hong Kong universities. This study uniquely contributes by examining student attitudes in a contemporary

context, with a specific focus on modern fiction, providing new and relevant insights into the integration of literature in ESL education.

## 2.5 Theoretical framework

This study is carried out from within a social constructionist theoretical framework. Social constructionism holds that meaning – such as that comprised within student beliefs and attitudes – is influenced by institutional norms; by the same token, institutional norms are themselves products of social practices rooted in actor beliefs (Witkin, 2012). Individuals thereby make meaning out of reality through their interactions with *social* reality (Shotter and Gergen, 1994). In this way, what individuals believe about English literature's educational value will be strongly influenced by their interactions with English literary education itself, such as through ESL courses.

In terms of guiding research design, social constructionism admits a subjectivist ontology on account of its rooting of human behavior in their internal beliefs (O'Reilly, 2009). Consequently, accounting for empirical trends – such as self-reported beliefs – can be developed through trying to understand how experiences, perceptions and beliefs motivate these behaviors. As such, social constructionism is often associated with qualitative research (Alvesson, 2009). However, there is no theoretical commitment to undertaking qualitative research borne out of the ontological or epistemological commitments of a social constructionist framework (Holstein and Gubrium, 2008). As such, this study was designed on the basis of a flexible theoretical framework with respect to research methods.

# 3 Methodology

## 3.1 Research design

The decision to utilize mixed-methods research was influenced by practical, as well as theoretical, considerations. There are a number of advantages to using a mixed-methods approach in this study. For one, they can be useful in terms of triangulating results (Ivankova et al., 2006). Pursuing either qualitative or quantitative methods in isolation may lack comparable rigor (Mertens and Hesse-Biber, 2012). Additionally, factors such as researcher bias in qualitative research may be offset through including quantitative analysis in a study design (Noble and Smith, 2015). In the context of this case study, although we were able to gather a considerable number of valid survey replies, we still decided to conduct more in-depths interviews with individual students as their first-hand experience of their first encounter with English literature *per se* was deemed valuable. This case study is novel due to its focus on a self-financed institution and the first-time offering of a contemporary fiction course to a diverse student body, providing a unique intersection of L2 acquisition and content-based instruction.

There are a number of further benefits to using both qualitative and quantitative approaches. Firstly, quantitative methods are useful for identifying broad trends across a large set of data (Yilmaz, 2013), making them well-suited to understanding how students generally feel about English literature education. However, reducing

data for quantitative analysis can also lose some of the nuance and detail contained in participant perspectives (Carter and Little, 2007). For this reason, qualitative data and analysis may be conducive toward better understanding *why* individuals have responded to take an English literature module in the ways that they report. Therefore, this study utilises a mixed-methods approach to analysis, allowing for the trends observed through quantitative analysis to be expanded upon through qualitative analysis of interview data.

The case study is unique and worth investigation due to the following reason: it was the first time a course on contemporary fiction in English was offered to all undergraduate students at the tertiary institution, with a wide range of disciplines such as tourism, engineering, professional communication and finances. The majority of the students had learned English as a communication instrument that is irrelevant to their academic training. Hence, this literature course might have brought new insight into their language learning experience. Morever, this course posits itself at a unique intersection of L2 acquisition and content-based instruction that is not commonly applied in self-financed institutions in Hong Kong. To investigate its efficacies might be useful for future language education in Hong Kong that is more cultural sensitive and human-centred.

## 3.2 Participants

In designing the research study, it was important to ensure that a sufficient number of participants were studied and that their responses would prove representative of the target group (ESL students in Hong Kong). Students were considered admissible to the study if they had completed recently a module that had incorporated English literature into English language teaching to a sufficient degree. In order to ensure that sufficient experience of this had been gained, it was decided to limit students to those undertaking a new course on fiction in Semester Two, 2022–23. This required using purposive sampling in order to reach out to the limited number of students who had recently completed – or were about to complete – such a module.

All students undertaking the subject intended to fulfil English reading and writing requirements stipulated by the university. The module delivered English language teaching with regards not to subject-specific knowledge but related to the Humanities and Social Sciences, studying human development through the lens of contemporary fiction. Students were exposed to a wide range of perspectives and theories across psychology, philosophy and the social sciences related to human nature, human relationships and personal development. The module's aims in terms of knowledge include literacy, higher-order thinking, and lifelong learning, with intended learning outcomes related to the development of analytical abilities, oral presentation, critical analysis, knowledge of human development, and English reading and writing skills.

The module was designed according to the principles of content-based instruction, and students were encouraged to read set literary texts before participating in close readings of excerpts in class as well as reflection on the content itself. Beyond this, the ELT methodology involved active learning, such as class discussions, computer-mediated activities, and interactive learning. In terms of assessment, the programme used various methods, including continuous assessment, group projects, and individual essays and reflections.

Email addresses for prospective students were collected and then they were presented with a scoping questionnaire to complete to ensure that they were eligible for the study. Once this had been completed, informed consent was obtained before the students were able to complete the online questionnaire. All eligible students were initially approached to participate in the survey, with 114 students successfully completing the survey to a sufficient standard. These participants were 64 per cent male and 36 per cent female, whilst 85 per cent of students were first-years at the university. Among these students, 15 agreed to be contacted ahead of a further interview, with 12 interviews with students eventually being conducted. Students were all Hong Kong locals, aged 19 to 23, and were split evenly in terms of gender.

## 3.3 Research instruments

As mentioned in the introduction, this study uses both questionnaire and interview as its primary data. Surveys are a suitable method for gathering vast amounts of data usable in quantitative analysis (Bielick, 2016). However, whilst useful for gathering data that may be reduced down for statistical analysis, they are comparatively poor at producing information that is sufficient for qualitative analysis (Jansen, 2010), due in part to the lack of nuance involved in short-form responses and numerical data (Bolderston, 2012). Consequently, questionnaires were selected for gathering data for quantitative analysis only. The questionnaire was designed to use closed or scalar responses such as Likert-type scales that could provide easily reducible data for subsequent statistical analysis (see Appendix A).

Interviews were selected as a method of data collection as detailed interviews can yield meaningful findings regarding a participant's experiences and beliefs (Gill et al., 2008). Unlike the survey questions, which used closed, scalar responses, the questions designed for the interview were largely open-ended to encourage more natural responses (Rapley, 2001) (see Appendix B). This was selected due to the comparatively high level of detail that are given in open-ended questions as compared with closed questions (Allen, 2017). Additionally, more open questions allow for the participant to have freedom in terms of the content of their answers, which is not the case with more closed questions. This can potentially remove the potential for questions biasing the response of participants (Clark et al., 2019).

Likewise, a semi-structured interviewing technique was employed in order to ensure that responses were sufficiently detailed without leading participants in the content of their answers (Zhang and Wildemuth, 2017). An overly structured approach to questioning prevents interviewers from prompting respondents for more detail or to elaborate on points of relevance (Magaldi and Berler, 2020), whilst an entirely unstructured approach does not ensure that questions and answers are relevant to the study's research questions (Burgess, 1982). For these reasons, a semi-structured approach to interviewing was decided upon.

## 3.4 Data analysis

The survey data was collated using online surveys, from which digitized responses in an Excel file could be automatically generated. This was then subject to analysis using the Statistical Package for the

Social Sciences (SPSS), from which various quantitative analyses could be undertaken (Salcedo and McCormick, 2020). Descriptive analysis was carried out to report the findings of the survey, as well as using the student's t-test to look for correlations between trends in the data. The findings of this are reported in the chapter below.

Qualitative analysis of the interview data was carried out, utilising a thematic approach to interview data analysis. Thematic analysis is a straightforward way of analysing interview data that uses the inductive generation of codes to track prevalent themes across a set of data (Attride-Stirling, 2001):

> Thematic analysis is a method for analysing qualitative data that entails searching across a data set to identify, analyse, and report repeated patterns. It is a method for describing data, but it also involves interpretation in the processes of selecting codes and constructing themes. A distinguishing feature of thematic analysis is its flexibility to be used within a wide range of theoretical and epistemological frameworks, and to be applied to a wide range of study questions, designs, and sample sizes (Kiger and Varpio, 2020, p. 2).

Thematic analysis thus allows particularly prevalent or emphatic themes to be assigned to selections of primary data, from which a broader set of themes and findings may be derived (Charmaz, 2003).

Following this, manual coding of the interview data saw chunks of data being assigned thematic codes by the researchers, which were then compiled into more representative themes across the interviews as a group (Braun and Clarke, 2006). This was undertaken through utilising an inductive approach to coding so as not to prejudge the content of the responses given (Boyatzis, 1998). These themes were then sorted into themes and subthemes that structure the appropriate section of the findings chapter below.

## 3.5 Ethical considerations

A number of ethical considerations were taken into account when planning this study. First, permissions from the institution were sought and approved. Second, informed consent was sought prior to carrying out any research with participants, in line with the ethical necessity of making participants aware of how their data may be used (Oliver, 2010). Third, provisions were made for the anonymisation of any information identifying participants, such as personal names, the name of the module, and that of the institution (Saunders et al., 2015). Beyond this, the researchers took care to ensure that their own identity and beliefs did not skew their interpretation and analysis of results, assuming as neutral stance a stance as possible with regards to the outcome of research.

## 3.6 Processes

From February to May 2023, questionnaires were dispatched to 310 students who had completed an English Literature course for ESL module at a university in Hong Kong. Students were asked a number of questions about their perceptions of the module and its contributions toward a variety of factors related to their own learning or learning in general (see Appendix). Of all students approached, 114

students responded with sufficiently complete questionnaires. However, the sample size was not large enough to use random sampling given the limited number of students completing this module.

The questionnaire included a question about their amenability to participating in an interview for the study. Interviews took place with 12 students who had participated in the survey, conducted on a face-to-face basis and using audio-recording software to record the interviews. These recordings were stored in password protected files and were transcribed using digital software and then manually corrected by the researcher. After this point, the original recordings were deleted in accordance with data protection (see below). The transcriptions were then prepared for analysis.

Analysis of the transcripts was carried out according to the following protocol. Manual annotation of the transcripts was used to add notes regarding potentially relevant themes before refining these notes into themes representative for that participant. These were then compiled into a broader table of themes (see Table 1), cutting those themes that were outliers or relatively low emphasis in favor of those more prevalent or emphatic. These themes were then used to structure the finding of the section on the study's qualitative findings (5.2).

# 4 Findings

## 4.1 Findings from the questionnaires

The questionnaires presented to the participants included a number of closed questions with 'yes' or 'no' responses to general questions about the course. These responses were broadly positive regarding the perceived enjoyability and educational benefits of the course. For example, 92.1 per cent of respondents stated that they found the course both 'interesting and engaging', indicating that student engagement was high. A further 87.7 per cent indicated that they felt the course was a valuable use of their time also, indicating generally positive evaluations in terms of their investment into it. This is reflected in the perceived educational benefits of the course.

Figures 1–4 indicate that students broadly had positive perceptions of the educational value of the programme. A majority of the students responded positively to all questions regarding the educational value of the programme. Some 82.5 per cent of students felt that the programme had improved their understanding of fiction, whilst a

TABLE 1 Results of thematic analysis of interviews with 12 students undertaking a literature for ESL module at a Hong Kong university.

| | |
|---|---|
| • English Learning<br>• Reading/comprehension<br>• Writing<br>• Communication | • Broader learning<br>• Knowledge of literature<br>• Literary criticism<br>• Essay skills<br>• Critical thinking<br>• Human development |
| • Affective responses<br>• Engagement<br>• Motivation<br>• Interest<br>• Enjoyment<br>• Frustration | • Course features<br>• Challenging<br>• Relevance<br>• More discussion<br>• Secondary sources<br>• Text selection |
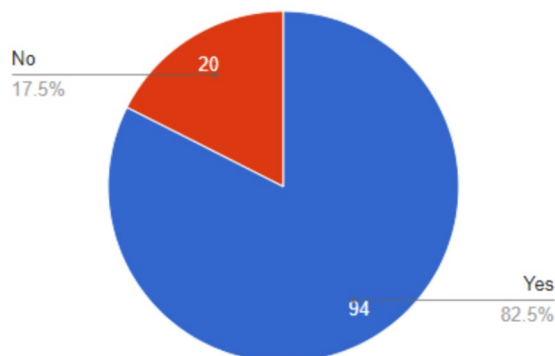
FIGURE 1
Proportion of students who felt programme had improved understanding of fiction.
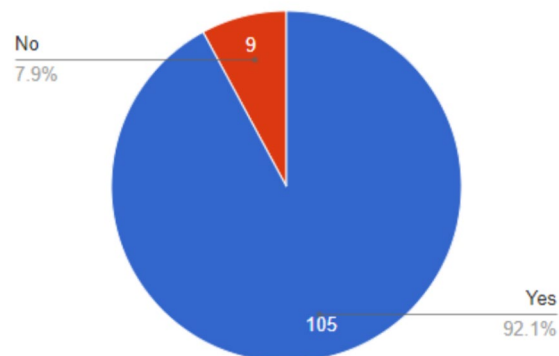


FIGURE 3
Proportion of students who felt programme had helped them develop a more rounded education.
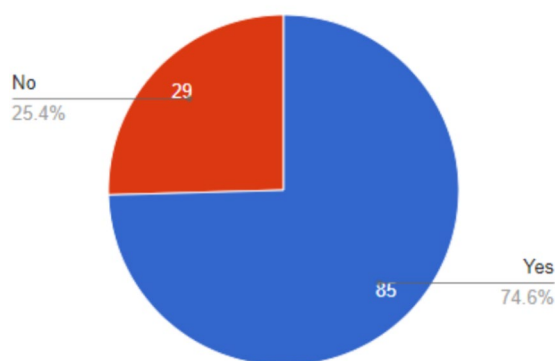


FIGURE 2
Proportion of students who felt programme had helped them develop appreciation for arts and humanities.



FIGURE 4
Proportion of students who felt programme had developed their critical thinking skills for analysing fiction and films.

similar proportion felt that it had helped develop their critical thinking skills for use in analysing fiction and film. Interestingly, whilst only 74.6 per cent of students stated that they felt that the module had improved their appreciation for arts and humanities, 92.1 per cent stated that they felt it had given them a more rounded education. Results were also positive in terms of questions relating to English skills, with 75.4 per cent of students stating that they felt their abilities to converse in English had improved, whilst 95.6 per cent felt that their ability to write in English had improved. This distinction perhaps reflects the weighting of written assessments as compared to group work and class contributions within the study's assessment.

A number of scalar responses were also recorded across the survey data. Figures 5–8 report some of the findings to questions regarding students' perception of the educational benefits of the programme. On a scale of 1 to 5, with 1 representing no improvement and 5 representing great improvements, students gave an average score of
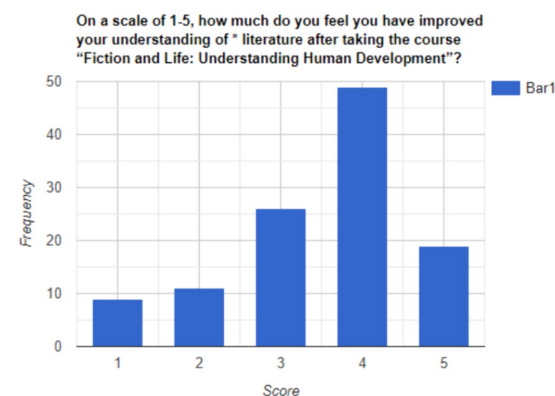


FIGURE 5
Student scores for improved literature comprehension.

**FIGURE 6**
Student scores for improved critical analysis of films and fiction.



**FIGURE 7**
Student scores for improved analytical skills when interpreting texts.



**FIGURE 8**
Student scores for improved English skills.
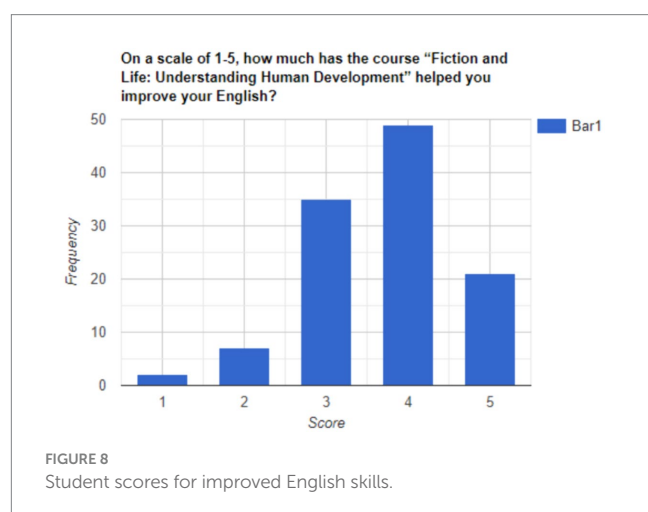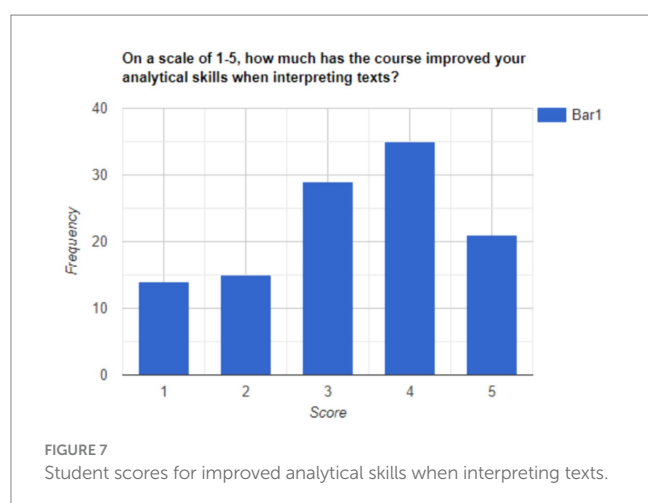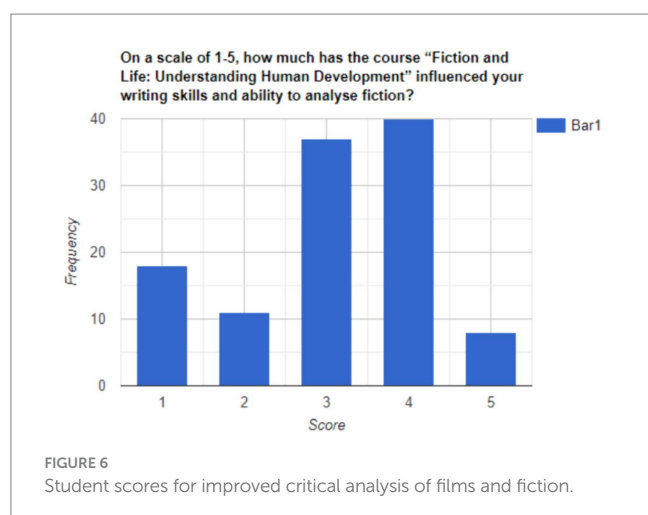
3.5 for how they perceived improvements to their own comprehension of literature. By way of comparison, students reported a mean score of 3.1 when asked about improvements to their ability to critically analyze film and television, with double the number reporting no improvement at all. This was broadly in line with the results to the closed questions asked on the same topics. Comparatively, students

gave a mean score of 3.3 when asked about improvements to their analytical ability to analyze texts. Scores for perceived improvements to English skills were highest, with a mean score of 3.7 reported across the participants.

Using t-tests to compare the scores given for various questions, correlations between various trends could be looked for. For example, students were asked to rank their prior knowledge of English literature prior to taking the course. When conducting two-tailed t-tests against scores for literature comprehension, critical analysis skills, and English skills, no statistically significant correlation in either direction was noted; however, a positive correlation was noted with perceived improvements to analytical skills for interpreting texts ($R^2 = 0.671$). This indicates that prior knowledge of literature was only correlated with skills specifically related to the analysis or interpretation of literature rather than to English skills or textual comprehension.

Students were also asked about their motivation to learn more about literature as a result of the course. Here, the lone correlation that was statistically significant was between improved motivation to learn and improved English skills ($r = 0.705$, $p = 0.043$). This suggests that students who felt more motivated by the course may have seen the greater benefits in improvements to their English. Unfortunately, the study did not take pre-intervention scores, so the extent of these improvements is difficult to judge. In addition to this, there was a correlation also between rating literature as aligning with one's interests and improvements to English skills ($r = 0.657$, $p = 0.039$). This suggests again that engagement may be strongly linked to the benefits to English learning brought about through incorporating literary content into ELT.

## 4.2 Interviews

Interviews with 12 participants in the study were undertaken following the questionnaires and were subjected to thematic analysis. Participants were asked a range of questions regarding their experience of the programme, the answers to which were coded into four themes comprised each of several subthemes (Table 1). These themes structure the subsections of this analysis.

### 4.2.1 English learning

The 12 participants in the interviews described benefits to their learning from their participation in the programme. Improvements in reading and comprehension were described by many of those interviewed. Some attributed this to the sheer volume of reading required, with Participant B stating, 'I had never read an English text half as long as *The Kite Runner* and this really forced me to search the meanings to a lot of words and to understand things like conjugation that I wasn't familiar with'. Others highlighted that it was being asked to engage with literature specifically that was useful. Participant F, for example, pointed out the use of nonstandard English in *To Kill a Mockingbird* and how this had improved their comprehension of colloquial American English. Participant L stated that engaging in close reading with difficult texts helped them to 'read between the lines' when reading English, adding that texts such as *Atonement* prompted deeper understanding through challenging the reader to look for subtext and hidden meanings.

The participants unanimously stated that the course had helped improve their written English. Here, both more exposure to written English as well as being tasked with extended writing assessments were

cited as instrumental to their improvements. Participant H described how their experience of assessments had improved their written English:

> I have obviously written in English much before, but I think the hardest thing is to write an essay that is academic and for it to not sound childish. So, I was having to also read essays, like, how do they word that, and should I word it? [laughs] So it's not really 'oh, you are reading a lot of words', but also, I have now to really think about how I express myself in writing. (Participant H).

Even participants who described their written English as of a very high standard prior to the course felt that the high standards for academic rigor improved their ability to write in English.

In terms of communication, the responses were more mixed from the participants. Some participants felt that communication was not really the focus of the module, interpreting it as more focused on reading and writing. Others such as Participant D stated that they felt their English had improved as a result of 'searching for English words' when participating in class discussions about texts. However, Participant G noted that classmates tended to speak in L2 when conducting group work, suggesting that this assessment was not designed sufficiently to improve communication in English.

### 4.2.2 Broader learning

The participants in the study described their knowledge of the content as having increased significantly as a result of the module. Participant A stated that, 'I do not know if this is the point, but I feel I can better understand literature now' and others felt also that their skills related to comprehending literature had improved. Some students felt that they were more confident in analysing and critiquing literature than before, whilst some students noted that they gained new interests in topics related to Politics and Social Sciences. As above, students also mentioned their increased ability to compose high-level essays in English, and some cited their essay writing skills as generally improved as a result.

When questioned specifically about critical thinking skills, the students gave mixed responses as to how far they felt their skills had been developed through the module. Participant I offered an opinion shared by many of the other participants:

> I do not know how far my critical thinking has improved in general, but my critical thinking in English has definitely improved. I'm able to better sort of… deconstruct sentences, to understand what meanings may be contained other than what is immediately there. (Participant I).

Other participants noted that their engagement with English literary texts were now deeper than before, with Participant B noting that Chinese and English symbolism in literature often followed different patterns: 'I've started reading poetry by Zhai Yongming and I can see that there are big differences between what symbols like 'night' and the colour 'black' mean between Western and Chinese poetry'. However, most participants did not characterize their critical thinking as improving beyond subject-specific knowledge or relating specifically to the English language.

### 4.2.3 Affective responses

The participants discussed their affective responses to the programme. As was revealed by the quantitative analysis, the students generally spoke of their interest in the module's content, describing their engagement with it as related to this interest. Some even linked this to a greater motivation to learn English:

> I know now if I want to enjoy more literature, I have to improve my English because it's not as good in Cantonese or Mandarin. You lose some meaning so it's better to read original. (Participant K).

> One thing is that I'm reading more English books now and I can feel my understanding of English literature is growing. […]I can now understand more complex language than before. (Participant E).

This indicates perhaps a causal mechanism by which a heightened interest in English literature motivates students to improve their English comprehension.

In general, most of the students did indicate that they enjoyed the module, with some even noting their surprise at how much they enjoyed it. However, a couple of participants did note frustration with it. One stated that the 'level of English was too difficult' for them to make much headway with the literature assigned, whilst another stated that they did not see the point to the programme:

> I really think I only want to learn English for my area, so that I can do my job. I do not know how learning about something like racism or sex is meant to help me. I think these are interesting books to some but not to me. (Participant J).

Whilst these were minority views, it is notable that such students noted that a lack of engagement with the material reduced their enjoyment of the module overall, as well as their perception of what they learnt from it.

### 4.2.4 Course features

The participants discussed the course features with regards to what they felt was conducive to their English learning. Most participants stated that the module was challenging, and a majority of those felt that this prompted them to improve their skills in order to keep up with its demands. Some students, however, stated that they felt that they would have benefited from having access to more L1 (first-language) secondary sources with regards to interpreting the texts. One participant stated, for example, that secondary texts on literary criticism in English were 'too dense' for them to engage with meaningfully.

A feature that seemed to heavily impact the degree of enjoyment of a programme or a unit of it was how far the students engaged with the set texts and their themes. Some wished that they had more say in selecting texts that they felt were relevant to them, stating that some of the themes did not carry much relevance to contemporary issues within Hong Kong. One, for instance, stated that they would have liked the opportunity to have more freedom in what text they analyzed for their assessment.

Finally, some students felt like they would have benefited from more discussion and group interaction. Whilst there was a fair amount of technology used in the programme, Participant G, for instance, felt that it could have been more interactive in its implementation: 'Compared with other classes, I just feel that we spent more time

reading and listening than using English'. This view was shared by a sizeable minority of the students interviewed.

# 5 Discussion

The above analyses of survey and interview data reveal some interesting findings, provoking further discussion. For one, the questionnaires and interviews alike indicate that students largely had positive feedback regarding the module and felt that they benefited from the programme. The majority of the students found the course both interesting and engaging. This corroborates research carried out outside of this context that suggests that students broadly welcome the incorporation of literature into ELT (Kumar, 2023).

> RQ1: What are the views of undergraduate students in Hong Kong toward reading fiction in English?

Students expressed generally positive views toward reading fiction in English. As highlighted in the survey data, 92.1% of respondents found the course interesting and engaging, and 87.7% felt it was a valuable use of their time. These findings indicate a positive reception to the integration of fiction in their curriculum. The interviews further revealed that students appreciated the challenge and depth that fiction provided, with many noting improvements in their comprehension and analytical skills. This enthusiasm for the course content directly addresses RQ1 by demonstrating that students view reading fiction in English positively and recognize its educational value.

> RQ2: What do students perceive as the benefits and problems of studying fiction in English as part of their general education?

The perceived benefits of studying fiction in English include improved English skills, particularly in reading comprehension and writing. For instance, 95.6% of students felt that their ability to write in English had improved, and 75.4% noted enhancements in their conversational English skills. These benefits were further elaborated in the interviews, where students discussed how the course helped them engage with complex texts and improved their critical thinking in English. However, some students also identified problems, such as the difficulty level of the texts and a desire for more interactive and discussion-based learning opportunities. These mixed perceptions address RQ2 by outlining both the strengths and challenges students face when engaging with fiction in English as part of their education.

> RQ3: How can curriculum developers better design English modules that use literary texts for the purposes of better English Language Teaching (ELT)?

The findings suggest several ways to improve the design of English modules that incorporate literary texts. One recommendation is to ensure that texts are relevant and engaging for students, potentially allowing them to select texts that interest them to enhance engagement and motivation. Additionally, increasing the amount of interactive group work and discussions in English can help improve conversational skills and deepen comprehension. The students' feedback on the need for more accessible secondary sources in L1 to aid understanding of complex literary criticism texts also highlights

an area for improvement. These insights directly address RQ3 by providing actionable recommendations for curriculum developers to enhance the effectiveness of literary texts in ELT.

Students also felt that they benefited in terms of their English skills, particularly comprehension and writing more so than communication skills. Figures 1–4 above indicate that students had a positive perception of the educational value of the programme, reporting also improvements in their understanding of fiction, their critical thinking skills, and their appreciation for the arts and humanities. These findings align with those of studies into teacher perspectives on the application of literature to ELT carried out in Hong Kong (Cheung and Hennebry-Leung, 2020).

However, it seems also as though there was inadequate opportunity for discussions in class and that group work was largely carried out in L1 rather than English. This suggests that changes could be made to the course design in order to encourage more L2 discussion of texts, such as heavier weighting in favor of class contributions. Previous studies have examined ways in which L1 usage might be reduced and L2 usage increased in ESL classrooms (Davies, 2011), and such strategies may be considered for application here. For example, Chan and Walsh (2024) note that English as a medium of instruction (EMI) ought to be increased in line with interactional competence (IC) over the course of a programme.

Quantitative analysis revealed correlations between motivation and some learning outcomes, particularly related to English language skills. This was corroborated by the interviews with students, which indicated that a desire to read English literature motivated the improvement of English skills. Here, engagement with the texts appears to be important. Students interviewed who engaged less with the texts or their themes also seemed to be less forthcoming about the gains to learning they made across the module. Unfortunately, the survey did not measure level of engagement with set texts, so correlations with motivation here cannot be checked.

However, multiple other studies have explored correlations between motivation and learning outcomes in English language learning (Seven, 2020, pp. 62–71). Studies highlight the importance of fostering motivation among students to ensure good levels of motivation and thus also good learning outcomes (Mirza, 2021; Lo et al., 2024). This is included within studies carried out in China, that highlight also the importance of motivation to improving student learning outcomes in ESL (Meng, 2021). The finding that students enjoyed the literature and felt it was positive with respect to learning outcomes thus is encouraging when it comes to building connections between the approach, motivations and learning outcomes.

With regards to improvements in critical thinking skills, whilst the quantitative analysis revealed that students believed their critical thinking skills to have improved, the thematic analysis demonstrated that this was largely conceived of in terms of skills related to English comprehension and literary interpretation and analysis. Students felt themselves better able to decode complex English text and also better able to offer interpretations of symbolism and meaning in literature, but did not necessarily perceive themselves as undergoing improvements in critical thinking skills generally. Across the interviews, students were generally not forthcoming as to the wider educational benefits of the module, though felt very strongly that they had benefited in their wider education across the survey.

Extant studies in the relationship of literature to critical thinking skills appear to align with these findings. For instance, one study carried out in

India found that English literature was conducive to improving rational thinking, purposive thinking, and effective relation with contexts (Rahman and Manaf, 2017). Such correlations were accounted for according to reader response theory (Qamar, 2016). It may be that the challenging aspects to literature – either in terms of literal interpretation or perhaps *literary* interpretation (i.e., symbolism, imagery, metaphor, etc.) – might play a role in improving critical thinking. It is thus unclear whether this relationship might be induced by the linguistic or literary features of the text and their analysis. A greater focus on methods of implementation and teaching in future studies may prove useful for separating between those two mechanisms and their effects.

The interviews are useful in contextualising why certain trends appear to have arisen in the questionnaires. The most significant finding is perhaps the relationship between engagement with texts and themes, motivation to learn English, and subsequent improved English learning outcomes. Whilst a causal mechanism cannot be established due to the non-experimental design of the study, there is a clear logic here that engaging students with literature seems to encourage English learning at a higher level of linguistic complexity.

In summary, the research questions guided the analysis of the findings, ensuring that each aspect of the students' experiences was thoroughly examined. The positive views toward reading fiction (RQ1), the benefits and problems identified (RQ2), and the recommendations for curriculum design (RQ3) are all clearly supported by the data collected through surveys and interviews. By explicitly linking the discussion points to the research questions, the study provides a comprehensive understanding of the role of fiction in English language education at the tertiary level in Hong Kong.

Theoretically, this might work similar to how teaching English literature has been connected with literacy when learning English as a first language. Although synthetic phonics are now in vogue across many English-speaking education systems (Chew, 2018), studies have repeatedly suggested that exposure to English literature can improve literacy among even very young children (Morrow, 1992). In the same way, it may be theorized that exploration of literature through demanding a higher-level of English competency of the English-language learner might be responsible for gains in English proficiency. This is considered in the recommendations offered below.

## 6 Conclusion

In conclusion, the quantitative analysis of survey data revealed trends in students' attitudes toward content-based instruction in an ESL course on fictional works. Students were generally motivated to engage with literary content, enjoyed the module, and noted improvements in their English learning and literary criticism skills. Thematic analysis of interviews indicated that students are positive about the module's challenges, though they expressed a desire for more group work and texts more relevant to their real lives.

Based on these findings, several recommendations can be made to improve content-based literature programs for ELT:Written assessments involving challenging literature are in fact beneficial for improving English learning outcomes. However, accessible secondary sources in L1 can help students overcome the high-level academic English used in L2 literary criticism texts.Interactive work needs better design to ensure sufficient communication in the classroom. Weighting classroom contributions more heavily in assessments may encourage

more L2 discussions of texts. Engaging students with texts and themes relevant to their lives may motivate them to learn English better. More importantly, allowing students to select their own English literary texts for assessments may enhance engagement and motivation.

The study's contributions suggest how content-based instruction programs using English literature can facilitate ELT. The connections between engagement with texts and motivation to learn English are supported by correlations with greater self-perceived learning outcomes. This suggests that modules should prioritize student engagement and acknowledge individual differences in what engages students. Additionally, the relationship between perceived difficulty, learning improvements, subject-specific learning, and the acquisition of critical thinking skills relating to literary analysis are notable.

However, the study has limitations. The mechanisms proposed are speculative based on observed correlations and student remarks. Without a pre-intervention questionnaire or control group, it is impossible to definitively link student engagement with learning outcomes. Future research should employ experimental designs to test these hypotheses. Additionally, the questions in the questionnaires and interviews were insufficiently specific to pinpoint the exact nature of the educational benefits reported by students. Future research should include more specific questions to test various types of educational benefits beyond motivation and critical thinking.

Despite these limitations, this study is a first step toward understanding the utility of English literature in CBI for ELT in Hong Kong. The research indicates a potential place for incorporating more English literature in the tertiary curriculum to challenge students, improve their comprehension of complex English, and enhance academic English skills among adult learners.

## Data availability statement

The original contributions presented in the study are included in the article/Supplementary material, further inquiries can be directed to the corresponding author/s.

## Ethics statement

The studies involving humans were approved by the PolyU CPCE Ethics Review Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

NL: Writing – review & editing, Writing – original draft. HS: Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2024.1395168/full#supplementary-material

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# Trait emotional intelligence and foreign language performance: associations with academic self-efficacy and foreign language anxiety

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Recent years have witnessed extensive research examining the influences of positive psychological factors in foreign language learning. Building on these endeavors, the current study was specifically designed to examine how positive psychological factors including trait emotional intelligence (TEI), academic self-efficacy, and foreign language anxiety (FLA) exert influences on foreign language performance in college students who are learning a foreign language. To this end, 203 Chinese college students (141 women), recruited through snowball sampling, completed three validated questionnaires to measure their TEI (Trait Emotional Intelligence Questionnaire - Short Form), academic self-efficacy (the Chinese version of the Academic Self-Efficacy Questionnaire), and FLA levels (the Chinese version of Foreign Language Classroom Anxiety Scale). Additionally, an in-house self-rating questionnaire assessed their self-perceived foreign language performance. Mediation analysis was used to determine whether and how academic self-efficacy and FLA levels contribute separately and interactively to the relationship between TEI and foreign language performance. The results showed that: (a) there were moderate to strong associations between TEI, academic self-efficacy, FLA levels, and self-perceived foreign language performance; and (b) academic self-efficacy and FLA levels played separate and sequential mediating roles between TEI and self-perceived foreign language performance. Together, these findings highlight how TEI, academic self-efficacy, and FLA levels contribute to foreign language performance in college students. They also suggest the potential application of these positive psychological factors in mitigating anxiety elicited by learning a foreign language and improving language performance.

KEYWORDS

foreign language anxiety, academic self-efficacy, trait emotional intelligence, foreign language performance, college students

## 1 Introduction

Even in similar learning environments, learners' language skills, psychological states, motivation, and other related factors can significantly impact foreign language learning outcomes (Dornyei and Ryan, 2015). Most foreign language learning research focuses on negative emotions (Yu, 2021), particularly foreign language anxiety (FLA; Onwuegbuzie et al.,

1999; Horwitz, 2001, 2010; Luo, 2013; Teimouri et al., 2019). In recent years, positive psychological factors, including emotional intelligence and self-efficacy, have garnered attention when examining the factors influencing foreign language learning (Dewaele and Alfawzan, 2018; Dewaele et al., 2019; Li, 2020; Jin and Zhang, 2021; Hayasaki and Ryan, 2022). The present study aimed to explore the associations between trait emotional intelligence (TEI) and foreign language performance, and how this association is formed through the influences of academic self-efficacy and FLA.

Emotional intelligence refers to a person's ability to observe, categorize, and differentiate their own and others' feelings and emotions, as well as how this ability might influence their decisions and behaviors (Salovey and Mayer, 1990; Mayer et al., 2008). There are two different constructs of emotional intelligence: ability emotional intelligence and trait emotional intelligence (Petrides and Furnham, 2001; Petrides, 2011). TEI involves people's perceptions of the emotional world and their emotional capabilities. TEI emphasizes stable behavioral tendencies and self-perceived abilities and thus can be properly measured by self-report questionnaires (Perera, 2016). It can also be characterized as "a trait of emotional efficacy" and defined as "a constellation of emotional-related self-perceptions and dispositions located at the lower levels of personality hierarchies" (Petrides et al., 2007, p. 26). It has been found that TEI has modest to moderate effects on learners' academic performance (Perera and DiGiacomo, 2013). TEI is thought to facilitate learners' academic performance through three pathways: cognition, motivation, and interpersonal relationships (Perera, 2016), which suggests that TEI may be a critical variable that indirectly affect students' academic performance. More studies tend to use TEI as a construct in behavioral, health, organizational, and educational sciences. In the field of foreign language learning, early studies have shown that individuals with higher TEI tend to show better emotional management abilities, making them more confident in learning a foreign language (e.g., Shao et al., 2013). A meta-analytic review suggested that people with higher TEI scores report higher subjective and objective foreign language proficiency (Perera and DiGiacomo, 2013).

Self-efficacy refers to a person's belief in their capacity to plan and perform tasks to achieve desired outcomes (Bandura, 1997). Social cognitive theory suggests that self-efficacy is an agentic motivational orientation that motivates people to persevere in the presence of difficulties, set higher and long-term goals, and promote self-regulation (Bandura, 1997). Self-efficacy affects various aspects of human functioning, including performance, where high self-efficacy often correlates with better performance across a range of tasks and domains (e.g., Schunk, 1995; Stajkovic and Luthans, 1998). It has been shown that self-efficacy correlates with academic performance (Bandura, 1993; Lane and Lane, 2001; Lane et al., 2004; Komarraju and Nadler, 2013; Karbakhsh and Ahmadi Safa, 2020). Bandura (1997) previously suggested that self-efficacy is associated with TEI because higher emotional intelligence improves the controllability of emotions and self-awareness, which further leads to heightened self-efficacy. Therefore, the positive relationship between TEI and academic achievement (Perera and DiGiacomo, 2013) may be associated with self-efficacy (Perera, 2016). In school settings, academic self-efficacy primarily concerns learners' beliefs in their ability to complete specific academic tasks and achieve educational goals (Bandura, 1993). Honicke and Broadbent (2016) systematically

summarized 59 studies and found that academic self-efficacy moderately correlated with academic performance. Academic self-efficacy can influence an individual's persistence, self-regulation, task selection, effort level, information processing strategies, and so forth (Bong and Skaalvik, 2003; Graham, 2022). It suggests that the impact of academic self-efficacy on academic performance is more likely to be indirect rather than direct (Graham, 2022). Honicke and Broadbent (2016) identified several factors that mediate or moderate the relationship between academic self-efficacy and academic performance. The control-value theory points out a potential pathway that the assessment of control over academic activities and outcomes as well as the value placed on these activities, are the main sources of academic emotions (Pekrun, 2006). This suggests an intrinsic connection between self-efficacy and academic emotions. A longitudinal study with college students showed that higher levels of academic self-efficacy could lead to lower levels of test anxiety emotion in future learning (Roick and Ringeisen, 2017), demonstrating a causal relationship between them.

Academic emotion refers to emotions directly experienced during learning (Pekrun et al., 2002). Negative academic emotions, including anxiety and fear, can impair foreign language learners' performance by restricting their participation and enthusiasm (Shao et al., 2013). Foreign language learners frequently experience anxiety. A study found that approximately one-third of Chinese college students felt anxious in English class (Liu and Jackson, 2008). Horwitz et al. (1986, p. 128) defined FLA as "a distinct complex of self-perception, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process." Shao et al. (2013) defined FLA as the tension and worry felt in foreign language learning situations, especially in speaking and listening activities. Various factors contributing to FLA have been revealed, such as learning environment (Han et al., 2022; Gu et al., under review), language characteristics (Zhang, 2019), and individual factors (Teimouri et al., 2019). Among these factors, personality traits, including emotional intelligence, are important aspects that affect FLA (Shao et al., 2013). Learners of a foreign language frequently experience language anxiety. The existing research has mostly focused on FLA and performance (Al-Shboul et al., 2013; Teimouri et al., 2019). For example, Teimouri et al. (2019) found a negative correlation between FLA and foreign language performance. However, fewer studies have examined whether and how positive psychological factors and abilities affect this relationship and help improve the student's foreign language performance.

Previous studies including those using longitudinal design and meta-analysis have found a negative relationship between academic anxiety and performance (e.g., Awan et al., 2010; Teimouri et al., 2019; Zhang, 2019) and as well as potential mediating roles of academic emotions between TEI and language performance (e.g., Shao et al., 2013; Perera, 2016; Han et al., 2022). Furthermore, academic self-efficacy as an important component of self-concept, which is closely related to TEI, has been found to be negatively correlated with both anxiety and academic performance (Wang et al., 2021). Although there is increasing evidence for the relationships between two of these variables, we still know little about the complex associations among the three aspects, TEI, academic self-efficacy, and FLA, and also their standalone or combined contributions to foreign language performance. A more specific question to be addressed is about the

possible roles TEI and academic self-efficacy in the relationship between FLA and foreign language performance.

In this study, based on previous theoretical and empirical endeavors, we aimed to shed light on these questions by examining the relationships between TEI, academic self-efficacy, FLA, and foreign language performance. A group of native Chinese college students who speak English as a second language participated in the study and were administered questionnaires to measure these four aspects. Based on the literature above, we hypothesized that TEI would influence foreign language performance through three possible pathways: academic self-efficacy alone, FLA alone, and the combination of academic self-efficacy and FLA. Mediation analysis was used to test these hypotheses. The findings of this study could help researchers and educators gain a better understanding of foreign language learning, particularly how negative emotions and positive protective factors influence students' foreign language performance in educational setting. Educators and school administrators could find these findings useful in helping organize or refine language learning courses or programs.

## 2 Materials and methods

### 2.1 Participants

Participants were 203 university students (141 women) recruited from mainland China by snowball sampling in September and October 2022. Specifically, we used Wenjuanxing[1] to organize our survey and then disseminated the generated QR code to students for filling out who were then asked to disseminate their classmates. Of the participants, 15.76% ($N = 32$) were freshmen, 16.26% ($N = 33$) sophomores, 17.73% ($N = 36$) juniors, 45.81% ($N = 93$) seniors, 4.43% ($N = 9$) year 5 students. This study was reviewed and approved by the Human Research Ethics Committee at BNU-HKBU United International College. All the participants were recruited online and completed several questionnaires (see below). Before participating in the study, each participant read and signed an informed consent form.

### 2.2 Instruments

We used the Chinese version of the Trait Emotional Intelligence Questionnaire - Short Form (Petrides, 2009), which has shown good validity and reliability and been widely used in previous studies (e.g., Li, 2020; Resnik and Dewaele, 2020; Di Fabio and Saklofske, 2021), to estimate participants' TEI. The questionnaire consists of 30 items with 15 items being reverse scoring questions. The questionnaire uses a 7-point Likert scale with 1 indicating strongly disagree and 7 indicating strongly agree. The higher the total score, the higher the TEI. The Cronbach's alpha was 0.91 in the current study.

We used the Chinese version of the Academic Self-Efficacy Questionnaire (Pintrich and DeGroot, 1990; Liang, 2004) to assess participants' academic self-efficacy. The Chinese version has been widely used and conceptually validated in China (e.g., Xu et al., 2015;

Liu and Huang, 2023; Meng and Zhang, 2023). This 22-item questionnaire estimates two dimensions of academic self-efficacy, self-efficacy for learning ability and self-efficacy for learning behavior. This questionnaire uses a 5-point Likert format with 1 representing extremely disagree and 5 representing extremely agree. Four items were reversed items and corrected when scoring. The higher the total score, the greater the academic self-efficacy. The Cronbach's α was 0.90 in the present study.

The Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986) is a widely used tool for estimating FLA levels. In the current study, we used a Chinese version of the scale (Wang, 2003) that has been widely used in studies of FLA [e.g., Gu et al. (under review)]. This 33-item Chinese version uses a 5-point Likert scale with 1 representing strongly disagree and 5 representing strongly agree. Four facets of FLA can be estimated; general worries about learning a foreign language, nervousness, communication anxiety, and fear of classroom questions. The higher the total score, the higher the FLA levels. We only used the overall score in the analysis (see below). The scale's internal consistency (Cronbach's α) was 0.97 in the current study.

In China, some college students take standardized International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL), while others take College English Test (CET). It is difficult to set a unified standard for measuring foreign language performance, thus we used an in-house self-rating questionnaire to measure foreign language performance. Participants were asked to rate their self-perceived overall foreign language ability and four facets (i.e., listening, speaking, reading, and writing) by indicating a number in an 11-point Likert format scale where 0 represents the lowest foreign language performance, while 10 represents the highest foreign language capacity.

### 2.3 Data analyses

Statistical analyses were performed using IBM SPSS 26.0. We first used the normality test and descriptive statistic to display the profile of students' TEI, academic self-efficacy, FLA, and their foreign language ability. Pearson correlation to determine the relationships between the key variables. Then, the Process Macro (Hayes, 2013) implemented in SPSS was used to conduct mediation analysis for determining the mediating effects of academic self-efficacy, FLA, and their combinations in the associations between TEI and foreign language performance. A bootstrapping procedure (5,000 times) was used to determine 95% confidence intervals of these indirect effects. Effect sizes of these indirect effects were also reported.

## 3 Result

### 3.1 Descriptive statistics and correlations

Table 1 displays the mean, standard deviation, range, skewness, and kurtosis of each variable. The skewness and kurtosis values suggest that the distributions of these variables are approximately normal. Table 1 also presents the correlations between these key variables. All the correlation coefficients were statistically significant. Specifically, TEI was positively correlated with self-rated foreign language performance ($r = 0.401$, $p < 0.001$). Academic self-efficacy

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1 https://www.wjx.cn/

TABLE 1 Descriptive statistics and inter-correlations among all the variables.

| Variables | M (±SD) | Range | 95%CI | Skewness | Kurtosis | TEI | ASE | FLA | Self-rated FLP |
|---|---|---|---|---|---|---|---|---|---|
| TEI | 140.23 (±23.584) | [60, 193] | [137, 143.34] | −0.085 | −0.034 | – | | | |
| ASE | 75.18 (±12,902) | [41, 106] | [73.42, 76.91] | −0.367 | 0.046 | 0.663*** [0.566, 0.745] | – | | |
| FLA | 93.83 (±28.524) | [34, 163] | [90.02, 97.74] | 0.001 | −0.642 | −0.483*** [−0.584, −0.372] | −0.472*** [−0.588, −0.338] | - | |
| Self-rated FLP | 7.00 (±1.893) | [1, 11] | [6.73, 7.25] | −0.880 | 1.239 | 0.401*** [0.278, 0.514] | 0.537*** [0.417, 0.638] | −0.598*** [−0.695, −0.483] | - |

TEI, trait emotional intelligence; ASE, academic self-efficacy; FLA, foreign language anxiety; Self-rated FLP, self-rated foreign language performance. 95% confidence intervals were calculated based on 5,000 bootstrap replicates. ***$p < 0.001$.

was positively correlated with TEI ($r = 0.663$, $p < 0.001$) and self-rated foreign language performance ($r = 0.537$, $p < 0.001$), but negatively correlated with FLA ($r = −0.472$, $p < 0.001$). Significant negative correlations were found between FLA and TEI ($r = −0.483$, $p < 0.001$) and between FLA and self-rated foreign language performance ($r = −0.598$, $p < 0.001$).

## 3.2 Mediation analysis

Following correlation analyses, we conducted mediation analyses with a model including academic self-efficacy and FLA as mediators, TEI as the independent variable, and foreign language performance as the dependent variable (Figure 1). The results showed that the total effect of the model was statistically significant ($\beta = 0.0322$, $p < 0.001$, 95% CI = [0.0220, 0.0424]), the total indirect effects was statistically significant ($\beta = 0.4601$, $p < 0.001$, 95% CI = [0.3375, 0.5900]; Table 2). More specifically, the indirect effects of academic self-efficacy alone accounted for 52.08% of the total indirect effects (95% CI = [0.1372, 0.3595]), and FLA alone accounted for 30.15% of the total indirect effects (95% CI = [0.0606, 0.2296]).

These results suggested that both the two mediators could independently play mediating roles in the relationships between TEI and foreign language performance. Furthermore, academic self-efficacy and FLA play complete sequential mediating roles in the mediation model ($\beta = 0.817$, 95% CI = [0.025, 0.1432]), 17.76% of the overall indirect effect, and the direct effects of TEI were not significant ($\beta = −0.0047$, $p > 0.05$, 95% CI = [−0.4193, −0.0163]).

## 4 Discussion

In the current study, we explored the relationships between TEI and foreign language performance by examining the multiple mediating roles of academic self-efficacy and FLA. We found that academic self-efficacy and FLA not only independently mediated the association between TEI and foreign language performance, but also together played a serial mediating role in the association. These

findings contributed to a better understanding of how TEI and other influencing factors interactively affect student's foreign language performance.

Our results showed that TEI had positive associations with academic self-efficacy and foreign language performance and a negative correlation with FLA levels. Students with higher TEI are more likely to manage their study process and emotions (Bandura, 1997), which benefits their foreign language learning. Moreover, they have more confidence and optimism in assessing their foreign language achievement. In addition, we also found a negative relationship between academic self-efficacy and FLA levels. These findings are consistent with previous findings (e.g., Chen and Lin, 2009; Roick and Ringeisen, 2017; Udayar et al., 2020). These findings also can be better understood through the control-value theory. According to the theory, subjective control that could be operationalized as self-efficacy is one of the major sources of academic emotions (Pekrun, 2006). Students with high self-efficacy are better able to manage their emotions while learning a foreign language, resulting in lower levels of anxiety. Previous studies also provided evidence of the association between FLA levels and foreign language achievement from different age groups of students that a high level of anxiety would impair learner's performance (e.g., Al-Shboul et al., 2013; Teimouri et al., 2019).

The mediation results showed that TEI could influence students' foreign language achievement via students' academic self-efficacy. The finding is in line with previous studies (Udayar et al., 2020; Chang and Tsai, 2022) showing that self-efficacy mediates TEI and academic performance, as well as foreign language achievement, in different college student populations in different countries. Students with higher emotional intelligence tend to have higher self-efficacy. A stronger sense of academic self-efficacy may lead learners to set higher goals for themselves and pursue their commitment, which in turn could lead them to higher foreign language achievement (Bandura, 1997). Furthermore, FLA also plays a mediating role between TEI and foreign language performance. It is likely that students with higher emotional intelligence possess higher emotional management skills, reducing academic anxiety and thereby enhancing their foreign language performance (Bastian

et al., 2005; Greven et al., 2008; Pena-Sarrionandia et al., 2015). Another potential explanation for this pathway may be that people with higher TEI are more adept at changing their thinking patterns to prevent negative emotions (Schutte et al., 2009), which could help them reduce their FLA levels and get back into learning faster, and significantly improve their foreign language learning performance (Perera, 2016).

More interestingly, we found that the relationship between TEI and foreign language performance was sequentially mediated by academic self-efficacy and FLA. According to Bandura (1997), self-efficacy may be affected by the ability to regulate emotions, which is conceptually associated with TEI. Moreover, people's causal reasoning processes, which are significantly influenced by TEI, could also affect an individual's academic self-efficacy (Gundlach et al., 2003). For example, a causal reasoning process could affect people's attributions, which in turn affect their self-efficacy levels (Gundlach et al., 2003). Specifically regarding academic anxiety, academic self-efficacy is considered to play a significant role in the affective sensation, wherein low self-efficacy beliefs increase anxiety and reduce achievement (Bandura, 1997). Students' TEI can have a positive influence on their academic self-efficacy by enhancing their self-awareness (Bandura, 1997). Students with lower self-efficacy have more negative expectations about their learning and a sense of control over their learning, leading them to experience more anxiety in the learning processes (Bandura, 1997). In addition, TEI could enhance learners' adaptive coping ability and emotional regulation (Pena-Sarrionandia et al., 2015), which help them face academic stress and achieve academic goals (Arsenio and Loria, 2014). Taken together, students with higher emotional intelligence have better academic self-efficacy, which helps them better control their emotions and reduce their FLA levels, ultimately enhancing their foreign language abilities.

However, the direct effect of TEI on foreign language performance was not significant. This result can be well explained by previous findings that TEI does not directly associate with academic performance (Rode et al., 2007; Perera and DiGiacomo, 2015). The effect sizes of the indirect effects in the mediation analysis suggest a possible explanation for the negligible direct effect of TEI on foreign language performance. That is the effects of academic self-efficacy and FLA are large enough to adequately mediate the effect of TEI on foreign language performance (Udayar et al., 2020). More specifically, the effect of academic self-efficacy

on the relationships between TEI and foreign language performance accounts for more than half of the total effect. Self-efficacy and motivation are closely intertwined concepts (Pajares, 1996). Schunk (1991) illustrated how self-efficacy beliefs influence students' motivation and learning outcomes in academic contexts. Zimmerman (2000) even considered self-efficacy as a crucial motivational factor in the learning process, emphasizing its impact on students' engagement and performance. Therefore, this may explain why self-efficacy mediated more than half of the total effect of TEI. In the current study, students should not only have TEI but also should know how to and be motivated to use their TEI in their foreign language learning. In addition, previous studies also showed heterogeneous results that TEI does not show predictive and correlational relationships with academic achievement across all studies or all subjects (e.g., Ferrando et al., 2011; Chang and Tsai, 2022; Chen and Zhang, 2022). The heterogeneity may indicate that other moderators, such as gender, age, and special learning requirements or situations, may influence the relationship (Zahed-Babelan and Moenikia, 2010; Perera and DiGiacomo, 2013).

Three limitations should be considered for future studies. First, the current data were collected in September and October, coinciding with the start of a new semester. This period, characterized by relatively fewer assignments requiring foreign language use, may have resulted in lower FLA levels among students compared with other periods (e.g., mid-term or end of the semester), which typically involve more foreign language assignments or tasks (e.g., essays or closed-book exams), potentially leading to higher FLA levels (Kruk, 2018). Future studies could compare FLA levels at different time points during the semester and their associations with TEI, academic self-efficacy, and foreign language performance. These endeavors could help us better understand the influence of different time points on foreign language learning and other related questions. Second, the foreign language performance we assessed was based on self-ratings. There are a few common different standard tests and assessments (e.g., IELTS and TOEFL) for measuring college students' foreign language ability, it is therefore hard to establish a unified standard for determining the foreign language performance of students who have taken different tests and assessments. Therefore, the way we measured foreign language performance should be carefully considered when generalizing the current findings. Future studies are needed to examine
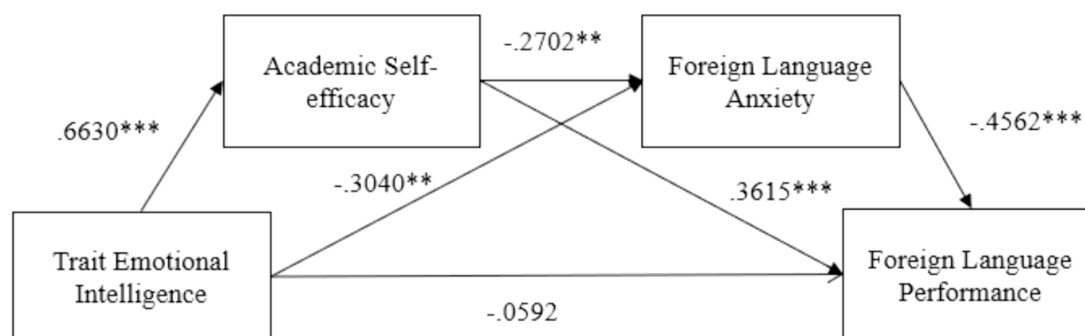


FIGURE 1
The mediation model in the present study. **$p < 0.01$, ***$p < 0.001$.

TABLE 2 Effects in the mediation model.

| Effects | Estimate | 95% CI | Effect size |
|---|---|---|---|
| Total | 0.4601 | [0.3375, 0.59] | 100.00% |
| TEI -> ASE -> self-rated FLP | 0.2396 | [0.1372, 0.3595] | 52.08% |
| TEI -> FLA-> self-rated FLP | 0.1387 | [0.0606, 0.2296] | 30.15% |
| TEI -> ASE-> FLA -> self-rated FLP | 0.0817 | [0.025, 0.1432] | 17.76% |

TEI, trait emotional intelligence; ASE, academic self-efficacy; FLA, foreign language anxiety; Self-rated FLP, self-rated foreign language performance.

whether and how the associations between foreign language performance, FLA, TEI, and academic self-efficacy are modulated by different measurement tools. Third, the data in the current study are cross-sectional. It is encouraged to use a longitudinal design to build causal relationships (Jose, 2016). A longitudinal mediation analysis could provide stronger evidence for the indirect effects observed in the current study (Jose, 2016). Future studies are therefore needed to extend our findings.

Despite these limitations, our research findings have practical implications for educators, foreign language teachers, and school administrators. First, we emphasize the positive, protective influences of TEI in foreign language education. In schools, educators and school administrators could develop emotional intelligence courses or programs to enhance students' emotional intelligence, helping to reduce the anxiety associated with foreign language learning. Second, foreign language teachers should pay attention to cultivating and developing academic self-efficacy among students. Since our mediation analysis revealed that students' TEI could affect their foreign language performance through academic self-efficacy and FLA, it is highly recommended that educators and school administrators integrate emotional intelligence and academic self-efficacy into their foreign language learning courses or programs. In addition, our research findings also encourage researchers to explore the complex relationship between TEI and foreign language learning by taking into account other important variables that may have negative or positive influences on this relationship.

## 5 Conclusion

In this study, we explored the relationships between TEI and foreign language performance by examining the multiple mediating roles of academic self-efficacy and FLA. The results suggest that academic self-efficacy and FLA not only independently mediate the association between TEI and foreign language performance, but also together play a serial mediating role in the association. The current study provides new insights into foreign language learning and its influencing factors among Chinese college students and also highlights how positive psychological factors can be used to enhance language proficiency and reduce the anxiety associated with learning a foreign language in school settings.

## Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: https://osf.io/3xgwn/.

## Ethics statement

The current study was approved by the Human Research Ethics Committee at BNU-HKBU United International College. The current study was conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

FJ: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Validation, Visualization, Writing – original draft, Writing – review & editing. CG: Conceptualization, Data curation, Investigation, Methodology, Visualization, Writing – original draft. YL: Conceptualization, Data curation, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# The effect of foreign language enjoyment on willingness to communicate among Chinese EFL students: conscientiousness as a mediator

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**Introduction:** An increasing body of research has explored the predictive effect of personality traits and affective factors on EFL learners' willingness to communicate (WTC). However, more is needed to know about how the sub-facets of individual personality traits influence WTC in the classroom context. Therefore, drawing on positive psychology, this study aims to bridge this gap by examining these roles in a mediation model of WTC incorporating FLE and conscientiousness.

**Methods:** To this end, 244 Chinese EFL undergraduates from two distinct universities participated in an online survey, completing a composite questionnaire of the three constructs. The bootstrapping technique was employed to test the proposed relationships.

**Results:** The findings indicated a positive correlation between both FLE and conscientiousness with WTC. Additionally, conscientiousness significantly mediated the relationship between FLE and WTC, supporting a partial mediation effect. Also, FLE had a direct influence on conscientiousness. These results may have some notable implications for EFL educators.

**Discussion:** The adoption of a holistic approach that emphasizes affective factors alongside acknowledging individual differences among learners could enhance students' willingness to communicate in English.

KEYWORDS

willingness to communicate, foreign language enjoyment, conscientiousness, personality traits, English as a foreign language

## 1 Introduction

Spoken English is a direct manifestation of language aptitude, and it is also a priority for many Chinese EFL students who face communicative difficulties in a non-English environment. Similarly, according to statistics, the speaking component in the IELTS test is one of the most challenging abilities for Chinese EFL learners to improve within a fixed period, often resulting in a specific negative emotion, namely speaking anxiety. Besides, L2 reticence of Chinese students in English learning has been widely observed in classroom settings (Sang and Hiver, 2021), and the reasons for their reticence varied across different communicative contexts (Zhong, 2013), highlighting the need for more support and attention for these language learners. These phenomena have prompted significant research into oral English communicative competence and spoken performance. Following this, the willingness to communicate (WTC) of L2 learners has become a topic in L2 academic research, defined as "a readiness to enter into discourse at a particular time with a specific

person or persons, using an L2" by MacIntyre et al. (1998, p. 547), which is considered the last essential step before actual communicative behavior. Given the paramount role of WTC in the development of spoken ability, numerous studies have indicated the relationships between WTC and a variety of cognitive and non-cognitive factors (see the literature review). Empirical findings suggest that students with a higher level of WTC tend to achieve better performance in oral English and vice versa. Therefore, it is crucial to explore the antecedents of WTC, and the current study aligns with this focus by examining the predictive role of foreign language enjoyment (FLE) and Conscientiousness on WTC.

Drawing on positive psychology (PP) in recent decades, positive emotions have been found to have a profound and beneficial impact on the language learning process (Dewaele and Dewaele, 2018). Before this, researchers had focused more on negative affective factors, such as foreign language classroom anxiety (FLCA), stress, and burnout, among others. Consequently, FLE, the primary positive emotion in second language acquisition, has been defined as "a positive disposition toward the foreign language learning process, peers, and teachers" (Botes et al., 2020, p. 282). Following the seminal work by Dewaele and MacIntyre (2014), a growing body of research has confirmed that learners who find EFL more enjoyable are more likely to perform better in the learning process (see the literature review). Despite previous findings suggesting a positive relationship between WTC and FLE, based on the theoretical framework that FLE is one of the affective factors that may influence WTC (MacIntyre et al., 1998; see Figure 1), few studies have tested the indirect effect of FLE on WTC. In other words, the potential mediating role of Conscientiousness between FLE and WTC should be further explored.

Another variable, Conscientiousness, is worth investigating in the correlation between WTC and FLE due to a greater focus on individual differences among learners (Xu and Zheng, 2022), representing a research shift from teacher-orientation to student-orientation. As one of the five

basic personality traits, Conscientiousness consists of a range of characteristic qualities, such as competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Costa et al., 1991). These qualities have aroused an increasing interest in the educational field, and there is substantial empirical evidence that Conscientiousness directly or indirectly affects learners' achievement (see the literature review). Moreover, this personality trait is also one of the fundamental variables in the heuristic model of variables influencing WTC (see Figure 1). However, few studies have deeply investigated the influence of specific facets of this trait on WTC and its interplay with the emotional variable. Therefore, a focused study is needed to confirm the relationship between Conscientiousness and WTC alongside the affective factor FLE.

Although previous studies have revealed a variety of factors that may influence WTC, few have incorporated a specific personality trait, FLE, and WTC into a mediation model. This study aims to deepen the understanding of these factors that impact WTC in the context of the English classroom in China. For this purpose, the PROCESS macro, as a powerful analytic tool, has been used to test the role of these variables in predicting WTC.

## 2 Literature review

### 2.1 Willingness to communicate

The concept of WTC was originally from an actual communicative predisposition behavior of first or native-language speakers labeled as unwillingness to communicate, mainly based on personality traits and affective variables (e.g., Burgoon, 1976). After that, McCroskey and Baer (1985) reframed this personality-based construct as WTC, which was fairly consistent across distinct contexts and receivers. To extend the trait-like conceptualization focused on L2 communication,
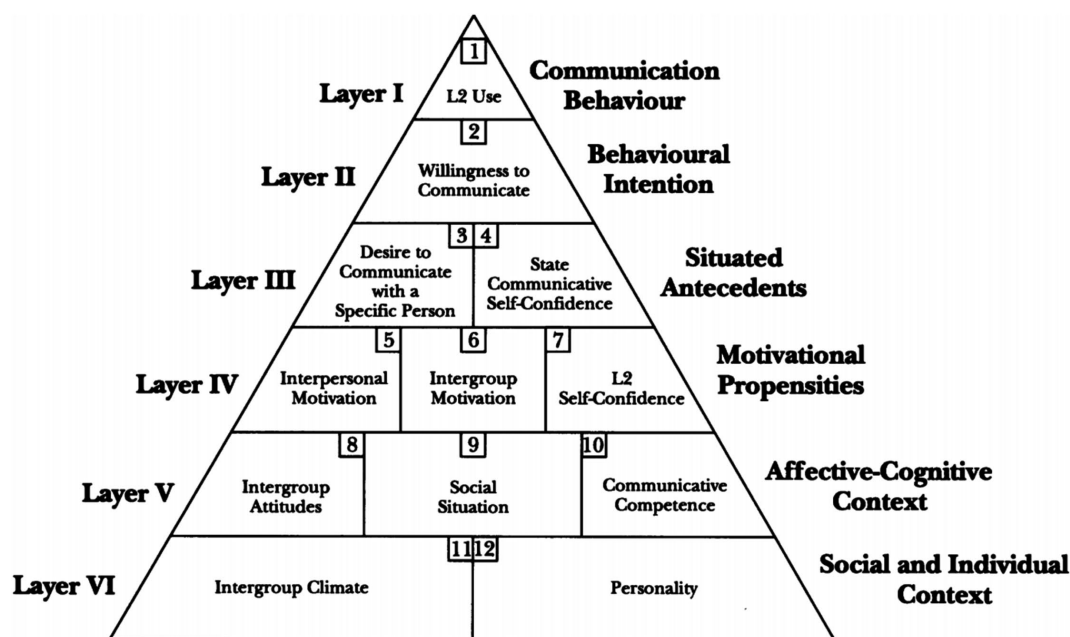


FIGURE 1
The heuristic model of variables influencing WTC (MacIntyre et al., 1998).

MacIntyre et al. (1998) defined WTC as "a readiness to enter into discourse at a particular time with a specific person or persons, using a second language" (p. 547), which clarified the multi-manifested feature of L2 WTC, as compared to WTC in L1. This concept considers factors that can affect WTC, encompassing both situation-specific and enduring influences, which has been tested by numerous studies (e.g., Guo et al., 2023; Peng and Woodrow, 2010). As shown in the pyramid-shape structure (Figure 1) schematized by MacIntyre et al. (1998), there are six layers in top-down order from the most transient communication behavior layer to the most stable social and individual layer, the combinations of which converge on a specific moment in time to affect the language learner's decision making and intention of communicating in L2 or not (MacIntyre et al., 2020). However, in addition to the long-term factors, such as personality traits and intergroup climate, as shown in the bottom layer, the fluctuation of WTC in various settings has been captured and established by many researchers (e.g., Kang, 2005; Pawlak et al., 2016), which turned to a recent shift in the last decades focusing more on the dynamic nature of WTC and its situational variables (e.g., Dewaele and Pavelescu, 2019; MacIntyre, 2020; MacIntyre and Legatto, 2011; Nematizadeh and Wood, 2021), indicating that the complexity of WTC is both dynamic and relatively stable.

Given the important role of WTC in communication skills, many researchers have revealed the direct and indirect influences on WTC, including language learning emotions (Pavelescu, 2023), L2 self (Fathi et al., 2023; Lee and Lee, 2020), feedback (Alavi et al., 2021), self-efficacy (Guo et al., 2023), individual differences, such as gender, major and age (Cheng and Xu, 2022), and foreign language anxiety (Barabadi et al., 2022). Among these, Alrabai's (2022) study in language classrooms highlighted that motivation and anxiety were the most significant direct predictors of WTC, suggesting that situational factors play a crucial role in WTC to varying extents. Despite the growing body of studies on WTC, some questions remain unanswered, particularly about the East Asian EFL learners, who were found by a collection of researchers to be more reticent within the classroom context (Cao, 2011; King and Harumi, 2020; Shao and Gao, 2016). For instance, with a focus on English classes in southern China, Peng (2020) employed the Dynamic Systems Theory (DST) to explore the relationship between Chinese EFL students' WTC and silence in the classroom. The findings from this study revealed that students spoke English primarily within the confines of pair or group interactions, rarely initiating class-wide discussions. Moreover, a frequent inclination toward silence was observed, attributed to a spectrum of psychological factors, such as being capable but unwilling to speak or unprepared to do so. Consequently, this underscores the imperative to explore this situation-specific construct and its other antecedents in the heuristic pyramid model to bolster students' predisposition toward verbal engagement and motivate them to break their silence.

## 2.2 Foreign language enjoyment

Psychology has always significantly influenced second or foreign language learning process particularly concerning negative or aversive emotions, such as foreign language anxiety, boredom, distress, and burnout, among others (Xu et al., 2022). However, an increasing number of SLA researchers have started to concentrate on positive emotions, including joy, interest, contentment, and love, which may

"*broaden* an individual's momentary thought-action repertoire, the consequences of which in turn *build* that individual's personal resources" (Fredrickson, 2004, p. 1367). These positive emotions are one of the three research areas in positive psychology based on the Broaden-and-Build Theory developed by Fredrickson (2001). Although foreign language anxiety is the most widespread negative emotion in the realm of SLA affective studies (Gkonou et al., 2017) and should not be altered by other topics, many language researchers hold that positive-broadening emotions of learners in language learning processes would be a vital additional perspective in SLA research (MacIntyre and Mercer, 2014). Thus, the number of studies on such emotions has considerably surged as they may be beneficial to facilitating L2 learning as well as promoting language learners' well-being (Li et al., 2018).

Studies on FLE have received increasing attention in the field of L2 learning in the past two decades (Li et al., 2024). The recent definition of FLE is "a broad, overarching positive psycho-emotional variable that is designed to encapsulate a positive disposition toward the FL learning process, peers, and teachers" (Botes et al., 2020, p. 282). In sync with descriptions of positive emotions (Csikszentmihalyi and Csikzentmihaly, 1990; Fredrickson, 2001; MacIntyre and Gregersen, 2012), the construct of FLE is two-dimensional, encompassing the social dimension, which manifests as the language learners' satisfaction drawn from a positive FL classroom atmosphere collectively fostered by teachers and students, and the private dimension about the learners' internal sense of accomplishment and pride in the face of challenging (Dewaele and MacIntyre, 2016).

Copious studies have been conducted to examine the relationship between FLE and a range of factors, including motivation (Dewaele et al., 2023), direct or indirect effects on learners' foreign language performance or academic achievement (Liu et al., 2024), affective variables, such as FLA, emotion regulation (Dewaele and Saito, 2024; Zhang et al., 2021), and factors pertaining to the teacher as the most key source of FLE (Dewaele and MacIntyre, 2019). Proietti Ergün and Ersöz Demirdağ (2022) reported that Subjective Well-Being (SWB) was the strongest predictor of FLE, followed by Perceived Stress (PS) with a small but significant effect, and implied that the overall circumstances of the students' life influence the classroom dynamics. In line with most of the preceding investigations, Tsang and Dewaele (2023) examined the effects of three FL emotions, FLE, FLCA, and boredom, on the learners' engagement and skill-specific proficiency within the context of EFL class. Finally, they found that FLE was the leading predictor of engagement and language proficiency. These findings are consistent with the seminal study by Dewaele and MacIntyre (2014), who revealed that FLE as an independent notion, interplaying with FLA instead of the opposition of it, has a direct significant influence on learners' achievement and concluded that "experiencing enjoyment and playfulness in language might be an especially facilitating experience for language learners" (Dewaele and MacIntyre, 2014, p. 261), which highlights the critical role of this construct in EFL acquisition process and academic research.

## 2.3 Conscientiousness

Conscientiousness is a personality trait based on the Five Factor Model (FFM), representing the characteristic qualities of competence,

order, dutifulness, achievement striving, self-discipline, and deliberation, with both proactive and inhibitive aspects (Costa et al., 1991). The multifaceted conceptualization of Conscientiousness allows scholars to focus on the facet as required by research purposes (Roberts et al., 2014; Spielmann et al., 2022). Additionally, it is posited that specific facets are more predictive of educational performance than the broad Big Five traits (Stewart et al., 2022). Due to its recognition as a significantly robust indicator of high levels of academic accomplishments (McAbee and Oswald, 2013), this trait has drawn the attention of educational researchers, including those in the field of SLA.

In light of the effect of Conscientiousness as a personality trait in educational settings, many scholars have investigated this variable to explore its role in facilitating learning, along with the affective variables. For instance, Botes et al. (2023) measured the relationships between personality, FLE, FLA, and boredom using a series of increasingly restrictive statistical models among 246 adult foreign language learners and demonstrated that Conscientiousness played a moderating role in large statistically significant correlations in those three emotion factors. Conscientiousness has also been identified as a potent predictor of examination results, as reported by Minnigh et al. (2024), who proposed a structural equation between grit, conscientiousness, SAT scores, and GPAs, concluding that grit does not substantially enhance the prediction of academic performance, compared with Conscientiousness. Similarly, Friedrich and Schütz (2023) tested whether Conscientiousness compensates for intelligence or enhances the effect of intelligence on performance in a large sample of 3,775 German students and found that there existed a more vital link between intelligence and grades if students are conscientious. Overall, these findings and inferences regarding Conscientiousness have shown significant correlations with emotional variables and their increased effects on academic achievement. Nevertheless, there is a dearth of studies that integrate affective factors and Conscientiousness into learners' WTC, with most researchers placing more emphasis on the effects of other four personality traits, including Extraversion, Openness to Experience, and Neuroticism (Piechurska-Kuciel, 2018). Thus, it becomes necessary to explore the role of Conscientiousness in the SLA context with clarity and profundity.

## 2.4 Relationships between FLE, conscientiousness, and WTC

Given that students with greater enjoyment of learning are inclined to be more willing to communicate within the classroom context (Khajavy et al., 2018), many empirical studies have investigated the relationship between FLE and WTC, finding that FLE has a positive impact on WTC (see reviews by Botes et al., 2022; Cao, 2022). Consistent with these studies, Lee (2020) demonstrated that FLE significantly predicted WTC, along with the perseverance of effort, as one facet of grit. Similarly, the research of Lee et al. (2021) revealed that, in contrast to L2 anxiety, L2 enjoyment served a more significant and positively direct role in WTC among Korean secondary and tertiary students. In a similar vein, Yu and Ma (2024) not only reported the direct impact of FLE on WTC among a substantial sample of 2,426 Chinese undergraduate students but also investigated the mediating effects of FLE on WTC through three distinct pathways involving general language proficiency and grit. In summary, many

researchers have validated that FLE may have a notably positive relationship with WTC.

However, scant studies established the importance of Conscientiousness on L2 WTC, while some researchers examined the predictability of other personality traits on WTC. For instance, an earlier study conducted by Oz (2014) examined the relationship between Big Five personality traits and WTC, and the results showed that Extraversion, Agreeableness, and Openness to Experience significantly predicted the WTC. In line with it partially, Khany and Nejad (2016) and Fatima et al. (2020) found that higher openness to experience and Extraversion predicted higher WTC. In contrast to previous findings, Conscientiousness was found to be positively correlated with WTC in several studies (Katić and Šafranj, 2019; Karadağ and Kaya, 2019; Zhang et al., 2023). This aligns with the argument that students who are more conscientious and better organized may show a more positive attitude toward learning a second or foreign language (Krashen, 1981; Lalonde and Gardner, 1984; MacIntyre and Charos, 2016). Considering the significance of this trait in L2 learning, the divergent results underscore the necessity for further evidence to examine the relationship between Conscientiousness and WTC across various contexts.

Regarding FLE and Conscientiousness, very few researchers have examined the relationship between these two variables. In the study conducted by (Dewaele and MacIntyre, 2019), significant correlations were found between FLE and four personality traits, namely Cultural Empathy, Social Initiative, Open-mindedness, and Emotional Stability, to varying degrees ranging from low to medium. Although these facets do not completely align with the ones in the FFM, the result highlights the important role of personality traits on foreign language learning emotions, and further investigation may be necessary to support the relationship between these two factors.

Therefore, given the theoretical underpinnings of the constructs and the existing empirical findings previously reviewed, this study hypothesized a mediating model of WTC in the link between FLE and Conscientiousness in the classroom context. Along with the path directions, the proposed model was depicted in Figure 2. The subsequent hypotheses were suggested as follows based on the preceding rationale:

> *Hypothesis 1*: FLE positively predicts WTC.
>
> *Hypothesis 2*: Conscientiousness positively predicts WTC.
>
> *Hypothesis 3*: FLE positively predicts Conscientiousness.
>
> *Hypothesis 4*: FLE has a positive influence on WTC through the mediating role of Conscientiousness.

# 3 Methodology

## 3.1 Participants

Employing a convenience sampling approach, this study enrolled 244 first-year to second-year Chinese EFL undergraduate students to explore their WTC, FLE, and Conscientiousness. Of these participants, 180 (74%) were female, and 64 (26%) were male; 176 (72%) were freshmen, and 68 (28%) were sophomores; 140 (57%) were from
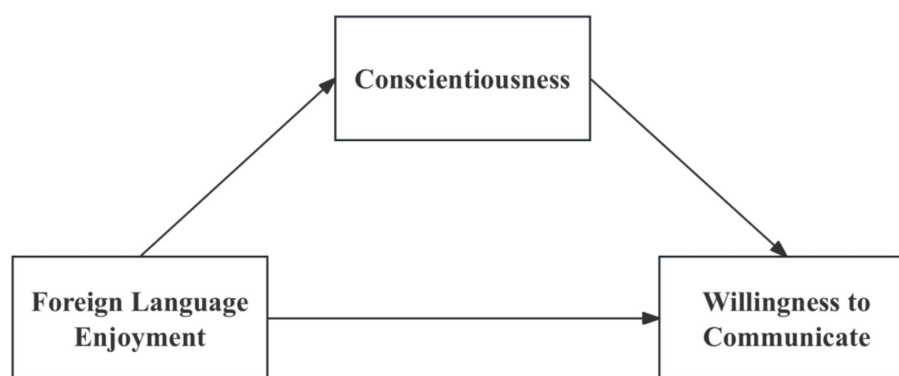
FIGURE 2
The hypothesized model of WTC.

South China Agricultural University in Guangzhou, and 104 (43%) were from Guangdong Ocean University (Yangjiang Campus) in Yangjiang. Undergraduate students from two different stages were targeted to capture both WTC and affective feelings to varying degrees. Along with the fact that South China Agricultural University is recognized as a key university compared with Guangdong Ocean University (Yangjiang Campus), this study also aimed to ensure sample diversity and avoid the potential common method bias that could arise from distributing questionnaires to a specific university.

## 3.2 Instruments

The data were collected by a three-construct composite questionnaire, along with a demographic information section. Since the survey was conducted in a Chinese EFL context, the questionnaire, originally developed in English, was translated into Chinese. This translated version of the three-construct composite questionnaire underwent three rounds of review and revision by both authors and an associate professor with a Ph.D. in applied linguistics, focusing on enhancing the clarity and adaptability of the items for Chinese EFL undergraduate students. The three scales are as follows.

### 3.2.1 WTC in English scale

A 10-item scale from Peng and Woodrow (2010), initially developed by Weaver (2005), was used to measure students' WTC in English. This scale comprises two dimensions: WTC in meaning-focused and form-focused activities. Each item was evaluated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). A higher score on this scale suggests that the student is more willing to communicate in English.

### 3.2.2 Foreign language enjoyment scale

The students' FLE in learning English was gauged by a 10-item scale (Jiang and Dewaele, 2019), originally from Dewaele and MacIntyre (2014). This scale encompasses the social and private enjoyment of learners in the classroom. The participants rated each statement on a scale of 1, representing "strongly disagree," to 5, representing "strongly agree." A higher score reflects a higher level of enjoyment in learning English.

### 3.2.3 Conscientiousness scale

Conscientiousness was tapped using six items from the sub-scales of IPIP-NEO-60 scale (Maples-Keller et al., 2017), which is a representation of 300-item IPIP-NEO (Goldberg et al., 2006) from the International Personality Item Pool, measuring five personality traits: Neuroticism, Extraversion, Openness to experience, Agreeableness, and Conscientiousness. The 6-item scale assesses facets of the participants' Conscientiousness, including Orderliness, Achievement Striving, and Cautiousness. A higher score indicates that the respondent is more conscientious.

## 3.3 Procedure for data collection

Data collection was conducted in May 2024, and it took 21 days to gather all the data. The questionnaire was distributed online via Wenjuanxing[1] an online survey platform with the assistance of two instructors from two universities. Before distribution, all students were informed that participation in the survey was voluntary and were asked to read a separate consent form to ensure that they were fully well-informed about the confidentiality and anonymity of their responses. All questionnaire items were set to the mandatory fill-in mode; thus, this research had no missing data.

## 3.4 Data analysis

This study employed SPSS 29.0, along with the accompanying PROCESS macro version 4.1, to analyze the data. In the first phase, descriptive statistics for all latent constructs were calculated to present an overview of the dataset, including distribution, mean, and standard deviation. Then, the exploratory factor analysis (EFA), with principal component factoring (PCF) analysis and varimax rotation, was conducted to assess the internal structure of each scale. Following this, the convergent and discriminant validity of the variables was verified using the indices of Composite Reliability (CR), Average

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1  https://www.wjx.cn

Variance Extracted (AVE), and the square roots of AVE, which further ensured that all prerequisites for subsequent analyses were met (Hair et al., 2019). To this end, four hypotheses were tested using the PROCESS macro with the Bootstrapping technique, one of the most effective and recently developed programs in testing mediation (Lan et al., 2023; Hayes, 2022). This method, yielding bias-corrected 95% confidence intervals, was used to examine the significance of mediation effects by generating 5,000 Bootstrap samples (Hayes, 2022).

# 4 Results

## 4.1 Descriptive analysis

The skewness (ranging from −0.395 to 0.275) and kurtosis (ranging from −0.603 to 0.657) of all 26 items were computed in the descriptive analysis. For all latent constructs, skewness values lower than ±2 and kurtosis values lower than ±7 suggested the normal distribution of the gathered data in this study (Finney and DiStefano, 2006).

## 4.2 Reliability and validity of the research instruments

At the beginning, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity was performed to ensure that the data were appropriate to the EFA. Bartlett's test of sphericity for all three constructs was significant ($p < 0.001$), and the KMO values ranged from 0.593 to 0.867, indicating the suitability of the data for conducting the EFA to assess the dimensional structure. Given the benchmark that items with eigenvalues greater than 1 and standardized factor loadings above 0.60 were retained (Hair et al., 2019), 22 items were selected from the original composite questionnaire.

Next, as can be seen from Table 1, two dimensions were extracted, and item 5 was eliminated due to its low factor loading. The nine remaining items, with no cross-loading greater than 0.40, explained 73.22% of the total variance, which aligned well with the initial dimensions of the WTC scale. The first factor represented students' WTC in meaning-focused activities within the classroom context (Cronbach's $\alpha = 0.86$), while the second factor reflected the students' WTC in English pertained to form-focused activities (Cronbach's $\alpha = 0.94$).

After that, as shown in Table 2, the EFA yielded a two-dimensional structure for the scale of FLE, which accounted for 63.88% of the total variance. Item 4 and 7 were removed due to their cross-loadings exceeding 0.40, while item 6 was eliminated as a result of its low factor loading. The first factor reflected the students' private enjoyment of English lessons (Cronbach's $\alpha = 0.75$), and the second factor represented their social enjoyment from interactions with classmates and the English teacher (Cronbach's $\alpha = 0.77$).

Then, Table 3 illustrates that a three-factor structure was produced by the EFA for the Conscientiousness scale, accounting for 77.63% of the total variance, which was consistently in line with the initial design of the scale's dimensions. The three facets explained Conscientiousness from distant perspectives, including orderliness (Cronbach's $\alpha = 0.62$),

TABLE 1 Dimensions in the WTC scale.

| Items | Factors | |
|---|---|---|
| | WMA | WFA |
| *I am willing to …* | | |
| WTC2: give a short self-introduction without notes in English to the class | 0.838 | |
| WTC1: do a role-play standing in front of the class in English (e.g., ordering food in a restaurant) | 0.825 | |
| WTC4: translate a spoken utterance from Chinese into English in my group | 0.777 | |
| WTC3: give a short speech in English to the class about my hometown with notes | 0.729 | |
| WTC6: do a role-play in English at my desk, with my peer (e.g., ordering food in a restaurant) | 0.722 | |
| WTC8: ask my group mates in English the meaning of the word I do not know | | 0.926 |
| WTC9: ask my group mates in English how to pronounce a word in English | | 0.922 |
| WTC10: ask my peer sitting next to me in English how to say an English phrase to express the thoughts in my mind | | 0.877 |
| WTC7: ask my peer sitting next to me in English the meaning of an English word | | 0.852 |
| Cronbach's alpha | 0.86 | 0.94 |

WTC, willingness to communicate; WMA, WTC in English in meaning-focused activities; WFA, WTC in English in form-focused activities.

achievement striving (Cronbach's $\alpha = 0.61$), and cautiousness (Cronbach's $\alpha = 0.70$).

Based on the results from the EFA presented in Tables 1–3, the standardized factor loadings and the internal consistency of the items for the WTC, FLE, and Conscientiousness scales all met the acceptable or recommended criterion (Hair et al., 2019). Consequently, the convergent and discriminant validity of the research instruments were evaluated.

As reported in Table 4, the findings indicated solid convergent validity of all constructs, with composite reliability (CR) exceeding

TABLE 2 Dimensions in the FLE scale.

| Items | Factors | |
|---|---|---|
| | PE | SE |
| FLE3: I performed well in this term's English Listening and Speaking class | 0.826 | |
| FLE2: I enjoy this term's English Listening and Speaking class | 0.791 | |
| FLE1: I do not get bored | 0.756 | |
| FLE9: There is a good atmosphere | | 0.838 |
| FLE10: We laugh a lot in class | | 0.784 |
| FLE5: It is a positive environment | | 0.681 |
| FLE8: My peers in the English Listening and Speaking class are nice | | 0.656 |
| Cronbach's alpha | 0.75 | 0.77 |

FLE, foreign language enjoyment; SE, social enjoyment; PE, private enjoyment.

TABLE 3 Dimensions in the conscientiousness scale.

| Items | Factors | | |
|---|---|---|---|
| | OR | AS | CA |
| C1: Like to tidy up | 0.868 | | |
| *C2: Leave a mess in my room | 0.793 | | |
| C3: Work hard | | 0.847 | |
| C4: Set high standards for myself and others | | 0.829 | |
| *C6: Act without thinking | | | 0.898 |
| *C5: Make rash decisions | | | 0.878 |
| Cronbach's alpha | 0.62 | 0.61 | 0.70 |

C, conscientiousness; OR, orderliness; AS, achievement striving; CA, cautiousness; items with an asterisk (*) are reverse coded.

0.70 and average variance extracted (AVE) exceeding 0.50. Additionally, the square roots of the AVE for each variable (see the numerals on the diagonals in Table 4) were greater than their corresponding Pearson correlation coefficients, thus fulfilling the criterion for discriminant validity (Hair et al., 2019).

Furthermore, the correlations among the variables were computed (see Table 4), revealing that all the constructs were significantly inter-correlated. Specifically, the results indicated that students' WTC was positively correlated with their FLE ($r = 0.521$, $p < 0.01$) and Conscientiousness ($r = 0.301$, $p < 0.01$). In the same vein, FLE was also positively correlated with Conscientiousness ($r = 0.337$, $p < 0.01$).

## 4.3 The results of the research hypotheses

After confirming that all prerequisites were fit for the following analyses, the PROCESS macro with the Bootstrapping technique was employed to test all the hypotheses put forward previously. First, as can be seen in Table 5, the results confirmed Hypothesis 3. The path leading from FLE to Conscientiousness was statistically significant ($\beta = 0.354$, $p < 0.001$). This result indicated that the variable FLE was positively correlated with Conscientiousness, thereby supporting Hypothesis 3.

Following this, the path from FLE to WTC ($\beta = 0.603$, $p < 0.001$) and the path from Conscientiousness to WTC ($\beta = 0.171$, $p < 0.05$) were also examined to be statistically significant, substantiating Hypothesis 1 and Hypothesis 2. These findings verified the positive predictability of both FLE and Conscientiousness on WTC.

In addition, based on the rule that a mediation effect was considered significant if zero did not straddle between the lower and upper bounds (Hayes, 2022), the indirect effect in the nexus FLE → C → WTC was statistically significant ($\beta = 0.061$, 95% Boot CI = 0.011 to 0.123), indicating that Conscientiousness mediated the

relationship between FLE and WTC (see Figure 3). This finding provided empirical evidence validating Hypothesis 4. As the direct effect of FLE on WTC was also significant ($\beta = 0.603$, $p < 0.001$), it could be concluded that the mediation effect was partial (see Little et al., 2007, p. 210).

## 5 Discussion

The current study shed light on the associations among FLE, Conscientiousness, and WTC in an EFL context in China. The Bootstrapping method was employed to verify the mediation effect within the three-variable model and to confirm the initial four hypotheses. Regarding Hypothesis 1, a significantly positive link was found between FLE and WTC. This is in line with the findings of a substantial body of research, including studies by Lee et al. (2021), Cao (2022), and Zhang et al. (2024), which found FLE an important positive emotion affecting WTC. EFL students who experience a higher level of enjoyment are more inclined to engage in English language communication (Lan et al., 2023). As a non-cognitive factor, the positive role of FLE in the context of the classroom has been acknowledged by a growing body of studies in academic literature (see reviews by Botes et al., 2022; Dewaele et al., 2023). This also supports the argument by Dewaele and MacIntyre (2014) that enjoyment might be the emotional key to unlocking the language learning potential of foreign language learners. In other words, FLE could potentially be the pivotal element that helps learners move the last step forward before actual communication to communicate.

Then, Conscientiousness was revealed to be a direct and positive predictor of WTC, thus supporting Hypothesis 2. This suggests that L2 learners who possess a more conscientious personality trait are more likely to engage in communicative interactions with their peers and the English teacher. This result partially echoes the findings of the existing studies (e.g., Zhang et al., 2023), confirming the significantly positive relationship between Conscientiousness and WTC, but it contradicts the findings of Oz (2014). According to the multilayered pyramid model (MacIntyre et al., 1998), personality traits are not

TABLE 4 Convergent and discriminant validity of the constructs.

| Variable | Convergent validity | | Discriminant validity | | | Descriptive statistics | | |
|---|---|---|---|---|---|---|---|---|
| | CR | AVE | WTC | FLE | C | Mean | SD | N |
| WTC | 0.953 | 0.694 | **0.833** | | | 3.24 | 0.686 | 240 |
| FLE | 0.907 | 0.584 | 0.521** | **0.764** | | 3.34 | 0.539 | 240 |
| C | 0.941 | 0.727 | 0.301** | 0.337** | **0.853** | 3.37 | 0.566 | 240 |

WTC, willingness to communicate; FLE, foreign language enjoyment; C, conscientiousness; SD, standard deviation; the numerals on the diagonals are square roots of the AVE; the off-diagonal elements are Pearson correlation coefficients of the constructs; **$p < 0.01$. Bold value mean the PROCESS macro version 4.1 with the Bootstrapping technique (Hayes, 2022) was used for the analysis.

TABLE 5 Results of mediation.

| Items | Parametric estimation | | | | 95% Bootstrap | |
|---|---|---|---|---|---|---|
| | B | SE | t | p | LLCI | ULCI |
| **Y = C** | | | | | | |
| Constant | 2.192 | 0.217 | 10.109 | 0.000 | 1.765 | 2.620 |
| X = FLE | 0.354 | 0.064 | 5.521 | 0.000 | 0.228 | 0.480 |
| $R^2$ | 0.114*** | | | | | |
| **Y = WTC** | | | | | | |
| Constant | 0.649 | 0.282 | 2.301 | 0.022 | 0.093 | 1.205 |
| M = C | 0.171 | 0.071 | 2.431 | 0.016 | 0.033 | 0.310 |
| X = FLE | 0.603 | 0.074 | 8.142 | 0.000 | 0.457 | 0.749 |
| $R^2$ | 0.289*** | | | | | |
| **Direct effect of X on Y** | | | | | | |
| FLE → WTC | 0.603 | 0.074 | 8.142 | 0.000 | 0.457 | 0.749 |
| **Indirect effect of X on Y** | **Effect** | **Boot SE** | **Boot LLCI** | **Boot ULCI** | | |
| FLE → C → WTC | 0.061 | 0.029 | 0.011 | 0.123 | | |

Model = 4; N = 240; Bootstrapping samples = 5,000; B = unstandardized regression coefficient; SE, standard error; LLCI, lower limit confidence intervals; ULCI, upper limit confidence interval; WTC, willingness to communicate; FLE, foreign language enjoyment; C, conscientiousness; ***$p < 0.001$.

regarded as absolute determinants of WTC, yet it should be noted that Conscientiousness, along with its sub-facets like Orderliness, Achievement Striving, and Cautiousness, may promote a more positive attitude toward language learning opportunities, potentially enhancing their readiness to engage in L2 communication (Krashen, 1981).

Concerning Hypothesis 3, FLE was indicated to positively predict Conscientiousness, indicating that students who have a higher level of enjoyment in learning a foreign language are more likely to show greater levels of Conscientiousness. While there are scant studies that have delved into this specific relationship, this present finding is partially in agreement with the main arguments of some studies pertaining to the connection between positive emotions and personality traits (e.g., Dewaele and MacIntyre, 2014). However, these studies tend to emphasize the one-sided influence of learners' personality traits on their emotions, such as FLE and FLCA, regardless of the reciprocal influence of emotions on personality traits. This finding also contributes empirical evidence to the Broaden-and-Build Theory developed by Fredrickson (2001). Based on this theory, we can argue that EFL learners who are more enjoyable in the classroom settings, are more likely to be positively influenced in the development of Conscientiousness as a valuable personality trait.

In addition, FLE affected WTC indirectly through the mediating role of Conscientiousness (FLE → C → WTC), supporting Hypothesis 4. This is in line with the theoretical perspective that positive emotions play a role in shaping behavior and personal development (Fredrickson, 2004). As WTC was considered a key variable in enhancing foreign language oral proficiency, we might argue that L2 learners inclined to enjoy the English learning process from both private and social perspectives are likely to develop a more conscientious attitude toward English courses and be more willing to proactively initiate interactions with others in English. Furthermore, the conceptual framework of WTC might explain the results of this study (see Figure 1), which indicates that FLE, as an affective variable in the fifth layer, and Conscientiousness, as a personality trait in the sixth layer, affected WTC in an inter-correlated way.

## 6 Conclusion and implications

The present study examined the positive predictability of FLE and Conscientiousness on WTC in the mediation English language learning model. The findings indicated that Conscientiousness mediated the link between FLE and WTC, which could
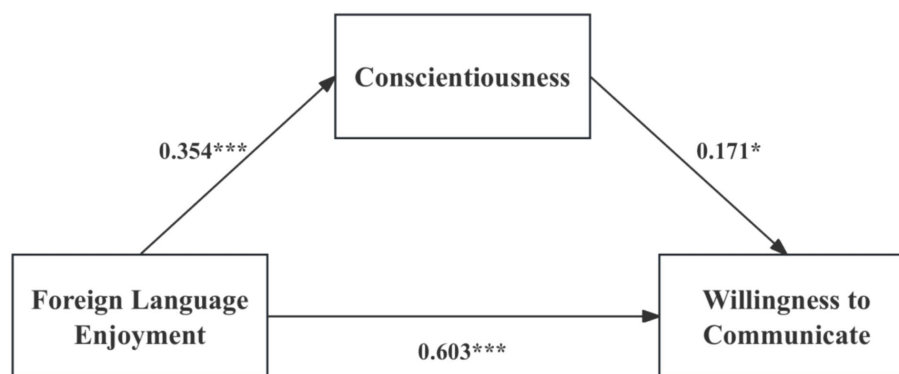
**FIGURE 3**
The final model of WTC. *$p < 0.05$; ***$p < 0.001$.

be elucidated from three perspectives. First, FLE has a significantly positive influence on Conscientious. Second, Conscientiousness was a positive predictor of WTC. Third, FLE also has a direct impact on WTC. Taken together, these results highlighted the critical role of the dynamic interplay of non-cognitive factors, including positive emotions and personality traits, in fostering the willingness to communicate among Chinese EFL learners. These findings not only enriched the existing literature on the relationship among these variables but also provided notable implications for EFL educators. To regard the key predictive effect of FLE in affecting WTC directly, L2 educators are suggestive of concentrating on fostering a playful and delightful classroom environment to stimulate students' willingness to engage in English communication (Fredrickson, 2001). From the social perspective, as part of the two-factor structure of FLE, teachers are recommended to make group work engaging for learners by developing intriguing activities and strategically assigning group members based on their preferences or individual differences. This can enhance EFL participants' enjoyment of interactions with classmates, which in turn increases their WTC. In addition, strengthening the teacher-student relationship through a range of supportive feedback (Rosiek and Beghetto, 2009), such as teacher-written feedback and online peer feedback, might also encourage students to proactively seek assistance from the English teacher and peers using the English language when they face difficulties.

At the individual level, learners' FLE and WTC are primarily related to the relevance of lesson topics. Therefore, curriculum developers can incorporate more practical and current topics into the English learning curriculum. This can be achieved by blending traditional textbooks with online learning resources (Yu et al., 2022) and enhanced through computer-assisted techniques, like QR code scanning for additional information. Following Dewaele and Saito (2024), educators should also focus on students' attitudes toward foreign language learning, guiding them to recognize the usefulness of English as a global *lingua franca* (Wang et al., 2024). This said, students might naturally acquire English in a more relaxed and pleasurable environment, which can lead to a gradual increase in their willingness to get involved in spoken English tasks. This finding contributes to the empirical evidence of positive psychology in education, underlining the pivotal role of emotional factors in second language acquisition (Tsang and Dewaele, 2023).

Regarding the indirect impact of FLE on WTC in English through the mediator of Conscientiousness, teachers are recommended to leverage students' conscientious traits by immersing them in a stress-free and low-anxiety English learning atmosphere to increase their WTC. Accordingly, English language curricula ought to be designed to aid learners in establishing explicit, attainable goals alongside the cultivation of a systematic, regular, and self-regulated learning schedule to improve their English-spoken proficiency. This recommendation aligns with the viewpoint that students whose level of conscientiousness is low may particularly need assistance from their teachers (Przybył and Pawlak, 2023). Furthermore, it should also be noted that additional investigations incorporating the non-cognitive attitude variable are required to explore how Conscientiousness shapes specific behaviors and attitudes toward English learning, ultimately affecting students' WTC.

It is acknowledged that this study also suffers from some limitations. Firstly, the complexity and multifaceted nature of personality traits cannot be fully measured by a single self-report scale, thus potentially undermining the reliability of the gathered data. Consequently, subsequent studies employing a mixed method might be needed to provide a more comprehensive understanding of conscientious behavior and the underlying mechanisms related to personality traits, FEL, and WTC. Secondly, the current study was cross-sectional, failing to assess the long-term stability of the mediation effect. Longitudinal studies are therefore recommended to examine the influence of the relatively stable personality traits (Caspi et al., 2005) on the fluctuations of WTC. In addition, convenience sampling, a nonprobability or nonrandom sampling technique, was used in the study, and only Chinese EFL students in the first and second years were included. While this nonprobability sampling is useful, especially when randomization is impossible, such as in large populations (Etikan et al., 2016), the results may not fully capture the characteristics of EFL learners in China. Thus, future studies might consider a more diverse and representative sample across various academic levels and cultural settings to enhance the generalization of the findings.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the [patients/participants OR patients/participants legal guardian/next of kin] was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## Author contributions

JZ: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Validation, Visualization, Writing – original draft, Writing – review & editing. KG: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. YF: Data curation, Formal analysis, Investigation, Writing – original draft. ZL: Data curation, Formal analysis, Investigation, Writing – original draft.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Understanding instructors' tablet adoption for note-taking in interpreting: insights from the GETAMEL model

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With the rise in popularity of tablets, professional interpreters were among the early adopters who integrated them into their workflow. Tablets have also become an indispensable tool for students, including those studying interpreting, who utilize them in the classroom for various purposes, such as note-taking. However, despite this growing trend, the traditional practice of pen-and-paper note-taking remains prevalent. Additionally, current interpreting textbooks primarily focus on teaching pen-and-paper note-taking skills. As interpreting instructors, it is crucial for us to familiarize ourselves with the use of tablets for note-taking in consecutive interpreting (CI). This will enable us to adapt our teaching methods accordingly and cater to the needs of the "iPad Kids" generation. The purpose of this study is to use quantitative method to examine the factors that contribute to the adoption of tablets for note-taking by instructors in the classroom environment. A questionnaire was developed based on the General Extended Technology Acceptance Model for E-learning (GETAMEL) framework. The questionnaire was distributed to teachers at prominent foreign language universities, foreign language faculties in select comprehensive universities and translation training institutions across Chinese Mainland and Macao Special Administrative Region of China. To provide comprehensive insights into the variables under study, descriptive statistics were generated using both SPSS 25.0 and Excel. These tools facilitated the production of detailed data summaries, offering valuable insights into the research variables. The obtained results provide insights into various aspects, including instructors' knowledge levels and usage of tablet interpreting in university classrooms, their attitudes toward integrating tablet interpreting into teaching, and the key factors that influence their decisions to adopt tablet interpreting in their classroom practices. The findings suggest the existence of additional external factors that could be incorporated into the existing model. The paper concludes with recommendations on how to promote the integration of technology into teaching practices for interpreting instructors.

## 1 Introduction

Under the influence of new information technologies such as big data and generative artificial intelligence (AI) systems represented by ChatGPT, interpreting teaching is experiencing unprecedented changes and challenges. The use of tablets has become more common in recent years, both in university interpreting classes and in the interpreting industry. Early in 2015, the world's largest interpreting service, the European Commission

Directorate-General Interpretation (SCIC) (2015), published technical support on how to use tablets in interpreter training. The increased digital access of the new generation of students must not be overlooked by interpreting teachers and trainers. Instead, it demands careful reflection and response.

Tablets can assist in various aspects of interpreting, such as collecting background information on the topic and the speaker, creating term lists, drafting mock speeches before the interpreting task, providing note-taking tools and prompt terms during the task, and organizing and sorting reference materials afterward. However, this study specifically focuses on note-taking during the interpreting task. Therefore, tablet interpreting note-taking (INT) is defined as the process in which the interpreter uses tablet as a note-taking tool during interpreting.

The main objective of the present study is to understand interpreting instructors' perceptions toward tablet INT. To achieve this goal, we employed a quantitative research approach. A designed questionnaire was distributed to 204 university-based interpreting teachers and interpreting trainers in the field. The analysis focused on the perceptions and attitudes of the respondents, using the GETAMEL as framework.

To further clarify this objective, the study specifically aims to address the following research questions regarding interpreting teachers and trainers:

1) Under the GETAMEL framework, identify the key external factors that influence the instructors' adoption of tablet for INT;
2) Under the GETAMEL framework, identify the key internal factors that influence the instructors' adoption of tablet for INT;
3) Examine the perceived challenges and advantages of using tablets for INT in the classroom context.

## 2 Literature review

### 2.1 Interpreting and technology

In the era of big data and rapid technological advancements, information technology and language services are intricately intertwined, posing new competence requirements for interpreters. The evolving dynamics among interpreters, clients and interpreting technology has emerged as a focus of interpreting research, as scholars seek to understand how these tools reshape the profession. The following sections explore major themes in this research, ranging from the general interplay of interpreting and technology to the specific use of tablets in interpreting.

Early works in this area focus broadly on the intersection of interpreting and technology, investigating how digital tools transform interpreting processes. Fantinuoli (2018) edited the groundbreaking book *Interpreting and Technology*, the first comprehensive work dedicated entirely to the intersection of interpreting and technology. This pioneering volume aims to delve into key issues, approaches, and challenges within a domain that remains relatively underrepresented in the field of Interpreting Studies. Contributions to this book are centered around computer-assisted and remote interpreting, exploring

applications in conference and court settings, and presenting findings from experimental studies. More recently, Pastor and Defrancq (2023) edited *Interpreting Technologies: Current and Future Trends*, which consolidates contributions focusing on interpreting technologies. This book aims to empower interpreters by providing insights and stimulating discussions on the evolving landscape of technology within the interpreting industry, encouraging contemplation on future advancements.

Empirical studies provide further context on the adoption and application of specific technologies in interpreting practice. For example, Wang et al. (2018) examined interpreters' technology competence, identifying three main research areas: introductory overviews of interpreting technology, its use in teaching and learning, and applications in interpreting practice (e.g., telephone/videoconferencing, terminology tools, smartpen technology). Their study revealed a significant gap between technology adoption and promotion; for instance, 76.4% of respondents never used terminology tools, despite 76.8% expressing a willingness to learn new technologies. This highlights a discrepancy between current adoption rates and enthusiasm for technological advancement in interpreting. This gap underscores a broader challenge in promoting technological competence within the field.

Several studies examine the use of technology in specific interpreting contexts, such as healthcare and education. Masland et al. (2010) conducted a thorough examination of published and unpublished literature, exploring the adoption of telephonic and video interpretation methods aimed at enhancing healthcare communication for individuals with limited English proficiency in the United States. Their findings highlighted the potential for significant advancements in these initiatives through increased support from governmental and foundation sources, as well as enhanced collaboration among healthcare providers. In a similar vein, Dahlsten (2020) investigated the user experience of mobile interpretation services among parents with immigrant backgrounds in Finland. His study focused on how these services facilitate home-school collaboration, aiming to strengthen support for children's learning. Specifically, Dahlsten explored how mobile interpretation services can foster effective communication between parents and schools, ultimately benefiting the educational outcomes of the students. These studies emphasize the value of technology in specialized settings, offering parallels to the use of tablets in interpreting.

Research also points to factors influencing the adoption of interpreting technologies in educational environments. Dianati et al. (2022) employed mixed methods to investigate the factors influencing the adoption of translation and interpreting (T&I) technologies among university instructors in Australia. Their qualitative analysis aimed to identify the specific technologies currently utilized in Australian universities, including web-search tools, computer-assisted translation (CAT) software, mobile apps, tablets, and language lab equipment. Despite encountering various challenges, instructors who perceived T&I technologies as beneficial expressed a strong inclination to continue using them in their teaching practices.

The literature about interpreting and technology provides critical insights into the adoption and use of technology in interpreting, which significantly informs the study of understanding instructors' tablet adoption for note-taking in interpreting. While previous studies have highlighted the broader trends and barriers in technology adoption, further research is needed to investigate how and why

instructors adopt tablets for note-taking purposes in interpreting, and how these tools can be leveraged to enhance interpreting pedagogy.

## 2.2 Tablet interpreting

The use of tablets for note-taking in interpreting has attracted growing attention since 2010. As digital technologies continue to evolve, interpreters and researchers have examined both the benefits and challenges of adopting tablets as a tool for consecutive interpreting. This section explores the advantages and limitations of tablets in interpreting practice and education, highlighting studies and practitioner experiences that provide insights into the use of digital devices in the profession.

Professional interpreters have shared their experiences using tablets for note-taking, offering a mix of perspectives on the effectiveness and practicality of these devices. Behl (2013a, 2013b) described her experiences using tablets for note-taking in her professional blog and showed some limitations of using digital devices, for example, worries of apps or devices crashing and losing notes, which could be an extra stress for interpreters.

As technology continues to progress, an increasing number of professional interpreters are sharing positive experiences online about using tablets as an alternative to traditional pen and paper for note-taking. Sbaccanti (2021), for instance, has shared very positive experiences about using tablets for INT. They highlight the advantages of tablets, including the ease of color switching and page turning, as well as the convenience of storing notes in other apps like Dropbox.

One of the most influential voices in the field of tablet interpreting is Goldsmith, a United Nations and European Union-accredited translator and professional interpreter. Through his platform "Techforword," Goldsmith offers practical guidance on selecting and using tablets for consecutive interpreting. His studies (Goldsmith, 2018; Goldsmith and Drechsel, 2016) involve interviews with interpreting practitioners, and provide a comprehensive examination of the software, tools, and technology presently employed by interpreters. Most interpreters interviewed found tablets to be as effective as pen and paper, and one-third even believed that tablets were more effective for note-taking. These findings highlight the growing trust in tablets as a viable tool in professional interpreting settings.

Beyond professional practice, researchers have explored the use of tablets in interpreting education. Napier et al. (2013) implemented an action research project to examine the utilization of iPads among interpreting students. The project conducted regular evaluation cycles to assess the efficacy of utilizing iPads in this educational setting. Suggestions are provided on how iPads can be utilized in a novel and creative manner to help interpreting students across different language combinations.

Wang et al. (2023) also examined interpreting students' perceptions of using tablets for INT. They employed a mixed-method approach, incorporating quantitative methods based on Gile's two-phase effort model of consecutive interpreting to assess respondents' experiences and perceptions. Additionally, they used qualitative methods to explore the differences between professionals and beginners in terms of their preferences and user experiences with note-taking tools. The study found that only a relatively small percentage of users reported benefiting from these features,

underscoring the need to guide beginners or those who may be inexperienced in integrating technology into a new skillset such as interpreting. While students generally preferred using tablets for other tasks, such as general class note-taking, only about one-third favored digital devices over traditional methods specifically for INT purposes.

Arumí and Sánchez-Gijón (2019), in a survey interviewed college teachers about introducing digital device in consecutive note-taking. Based on the evaluation of their experience, teachers are hesitant to embrace the use of digital media due to concerns about restrictions, but they do recognize and articulate some of the educational benefits that the digital media could offer.

The literature on tablet use in interpreting practice and education offers valuable insights into the factors influencing the adoption of this technology. While many professional interpreters and students recognize the advantages of tablets, such as convenience and organization, there remains a degree of reluctance, particularly in educational settings. By understanding the varied experiences of practitioners and students, my study aims to build on this body of research, focusing on the factors that influence interpreting instructors' adoption of tablets for note-taking.

## 2.3 GETAMEL

Extensive research on the theoretical framework of technology adoption and acceptance has been conducted in recent years. These theories aid in systematically understanding and addressing the complexities of adopting new technologies, ultimately resulting in more effective implementation and utilization of technological innovations. Some of the most prominent ones include Technology Acceptance Model (TAM) by Davis (1986, 1989), Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003), Theory of Planned Behavior (TPB) by Ajzen (1991), and Motivational Model (MM) by Davis et al. (1992). These models serve as foundational tools for exploring how users accept and utilize new technologies.

TAM, established by Davis (1986, 1989), is one of the most widely utilized theories for elucidating the factors that drive users to accept specific technologies. The factors can be categorized into two types: factors related to user motivation, which include perceived ease of use (PEU), perceived usefulness (PU), and attitude toward technology (ATT), and factors related to outcome, including behavioral intention (BI) to use the technology and actual usage (AU). Subsequently, the TAM has undergone further expansion to include the Extended Technology Acceptance Model, which considers social and organizational factors and also incorporates the concept of "perceived enjoyment" as a crucial factor (Venkatesh and Davis, 2000; Venkatesh and Bala, 2008).

Based on the TAM Model, Abdullah and Ward (2016) proposed the GETAMEL model, which is an extended version of the TAM model, including two main components: internal constructs and five distinct external influences. The internal constructs are based on the TAM model with factors namely PU, PEU, ATT, BI, AU. After reviewing over 100 studies on the acceptance of digital learning, it was discovered that researchers had proposed 152 external influences, with a focus on the factors affecting university students' willingness to adopt digital learning systems. These were then statistically analyzed to determine the effects of these influences on experience (XP),

subjective norms (SN), enjoyment (ENJ), computer anxiety (CA) and self-efficacy (SE).

Under GETAMEL model, XP is believed to be a significant factor in explaining why people adopt a technology. Those with more experience are more likely to have positive perceptions of the PEU and PU. Studies showed that XP can momentarily lessen anxiety to some extent (Hung et al., 2018). SN relates to the degree to which an individual believes that significant individuals or social environment think they should or should not engage in a specific activity. Abdullah and Ward's (2016) review discovered that SN holds a positive association with PU and PEU. ENJ refers to the degree to which a user finds pleasure in using a technology or digital system. ENJ is an important factor in explaining the adoption and perception of technology because it significantly affects users' PEU and PU, increasing their willingness to adopt a technology. CA refers to apprehension or worry about the consequences of using a device or technology, such as the potential loss of valuable data or making other errors. It is also found that CA has a negative association with PEU. Higher levels of anxiety are linked to avoiding or reducing the use of computers and technology. SE is the degree to which an individual is confident in their ability to utilize skills to accomplish a particular task. A high level of self-efficacy is associated with strong self-motivation and is correlated with the PU and PEU of using learning technologies.

GETAMEL is currently the most effective predictive model for e-learning and digital device acceptance. Jiang et al. (2021) confirmed the validity of the GETAMEL model using survey data collected from an online English as a foreign language class during the lockdown period caused by COVID-19 pandemic. The findings indicated that students' perceived utility of the online learning system was not influenced by their attitude, suggesting that attitude toward technology plays a minimal role in the model. Also, under the GETAMEL framework, Zhang and Yang (2024) examined the factors influencing teachers' adaptation to new learning environments, specifically during the shift to an online format. They identified the key characteristics that influence teachers' utilization of digital technology. The research findings indicate that teachers who possess a higher level of confidence in utilizing online resources and delivering lessons are more likely to observe a swift adaptation by students, without a notable decline in learning efficacy.

Although there is a substantial body of literature focused on student acceptance of technology or digital learning under GETAMEL, there is limited research examining how teachers might effectively implement these strategies. Studying teachers' attitudes toward using technology is particularly important since teachers can significantly influence students' attitudes and their perception of any suggested e-learning technology. If teachers do not encourage students to adapt to a new learning format, it may significantly decrease students' enjoyment of using new technologies in the learning process.

Given the limited research on how interpreting instructors adopt digital tools like tablets, applying the GETAMEL model in this context is particularly relevant. The model's focus on external factors such as experience, enjoyment, and self-efficacy can help explain why some instructors may be hesitant to adopt tablets for note-taking, while others may embrace this technology. By understanding these factors, we can identify ways to better support instructors in integrating digital tools into their teaching practices, ultimately enhancing the learning experience for interpreting students.

We have selected the GETAMEL model as the main theoretical framework for our study because of its established effectiveness in predicting the acceptance of e-learning and digital devices.

# 3 Methodology

This study aimed to explore interpreting instructors' perceptions and attitudes toward using tablets for INT and to examine the factors influencing their adoption of tablet interpreting. A quantitative approach was employed, utilizing a specifically designed questionnaire to collect data relevant to the research questions. The questionnaire, adapted from the GETAMEL model to assess participants' technological acceptance and perceptions, was chosen as the primary data collection instrument due to its efficiency in gathering substantial data from a diverse population.

## 3.1 Participants

This study included 204 participants, all of whom were interpreting teachers in higher education and professional interpreting trainers. They were from 52 different higher education institutions or organizations across Chinese mainland and Macao Special Administrative Region of China. Notable institutions represented include Peking University, Tsinghua University, Nankai University, Tianjin Foreign Studies University, Beijing Language and Culture University, Xi'an International Studies University, Macao Polytechnic University, University of Macau, Legislative Assembly of Macao, as well as freelance interpreting trainers.

Of all participants, 70.6% were female and 29.4% were male. The participants ranged in age from 21 to 61 years old: 33.3% were aged 21–30, 29.4% were 31–40, 29.4% were 41–50, 5.4% were 51–60, and 2.5% were over 60. Most respondents were aged between 21 and 50. Regarding educational qualifications, 22.5% held a bachelor's degree, 49.5% held a master's degree, and 28.0% held a doctorate. Additionally, 78.5% of them target undergraduate students, 29.5% teach postgraduate students, and 13.2% are trainers of non-degree programs. Note that some teachers instruct both undergraduate and master's degree courses, hence the percentages do not total 100% (Table 1).

## 3.2 Questionnaire design

The questionnaire design primarily drew inspiration from the work of Jiang et al. (2021) and Wang et al. (2023), with the former providing the overall framework and the latter contributing interpreting-specific factors. In the first part of the questionnaire, demographic data were collected through six questions, covering age, gender, academic degree, affiliation, teaching years and teaching levels (undergraduate, postgraduate or training course). The purpose of gathering this data is to construct a comprehensive profile of the study participants. The second section is adapted from the GETAMEL model, developed to examine the attitudes and perception of teachers and trainers toward tablet for INT. By using a five-point Likert scale with responses ranging from 1 (strongly disagree) to 5 (strongly agree), we measured internal constructs, including PU, PEU, ATT, AU, and BI. We also measured external constructs, including XP, SN,

TABLE 1 Respondents' demographic profile.

| Demographic characteristic | Frequency | Percentage |
|---|---|---|
| Gender | | |
| Female | 144 | 29.4% |
| Male | 60 | 70.6% |
| Age | | |
| 21–30 | 68 | 33.3% |
| 31–40 | 60 | 29.4% |
| 41–50 | 60 | 29.4% |
| 51–60 | 11 | 5.4% |
| 61 and above | 5 | 2.5% |
| Academic degree | | |
| Bachelor | 46 | 22.5% |
| Master | 101 | 49.5% |
| Doctoral | 57 | 28.0% |
| Teaching level | | |
| Undergraduate | 160 | 78.5% |
| Postgraduate | 60 | 29.5% |
| Non-degree | 27 | 13.2% |

SE, ENJ, CA, and facilitating conditions (FC). To align with our focus on tablets specifically, we will rename computer anxiety as technology anxiety, abbreviated as TA for this study.

Two open-ended questions were included at the end of the questionnaire to explore the perceived challenges and advantages of tablet INT. These questions allow participants to express their views without the constraints of predefined answer choices, providing richer insights into their thoughts, feelings, and experiences, and revealing other possible opinions.

The questionnaire was initially designed in English and then translated into Chinese. Prior to the official implementation of the survey, we sought input from five university interpreting teachers to ensure the questionnaire's reliability. A pilot test was conducted on these teachers, and based on their feedback, along with consultation and pre-test results, certain measurement questions with lower reliability were excluded. The wording of the questions was also modified to produce the final version.

We evaluated the internal reliability of our survey by calculating Cronbach's alpha for the overall scale and each distinct construct using SPSS. The overall survey's Cronbach's alpha was determined to be 0.964, reflecting substantial internal consistency. Following the exclusion of invalid data, the Cronbach's values of the internal constructs, namely PU, PEU, ATT, BI and AU were 0.955, 0.935, 0.964, 0.952 and 0.890, respectively. Following the elimination of invalid data records, the Cronbach's values of the external constructs, namely XP, SN, TA, SE and ENJ were 0.89, 0.658, 0.932, 0.764 and 0.773, respectively. Although the reliability estimates of SN, at 0.658, falls below the commonly accepted threshold of 0.7, as there are no comparable measures available, the current model with a slightly lower reliability might still be valuable for gaining preliminary insights into a construct.

In addition to the aforementioned subscales, as outlined in the study on students' acceptance of tablet note-taking for interpreting (Wang et al., 2023), a new external construct named facilitating conditions (FC) has been incorporated into the model (Figure 1). This subscale comprises three items, yielding a Cronbach's alpha value of 0.840.

The reliability analysis of the model, presented in Table 2, showed $\alpha$ coefficients ranging from 0.658 to 0.964. The highest reliability was noted in ATT, while the lowest was associated with SN. These results suggest that the items within each construct demonstrate effective correlation and precisely gauge the underlying constructs pertinent to interpreting teachers' adoption of tablet interpreting.

In statistical analysis, Confirmatory Factor Analysis (CFA) is a specialized method within factor analysis, predominantly applied in social science studies. Its primary objective is to determine the alignment between the measurements of a particular construct and the researcher's conceptual framework. Essentially, CFA examines whether empirical data conforms to a proposed measurement model, which is based on theoretical foundations or prior empirical findings. In our present investigation, we employed CFA to evaluate the extent to which survey questions accurately capture the intended constructs, or construct validity.

CFA was conducted using SPSS AMOS for this research. Initially, we assessed the validity of six external constructs by calculating their factor loadings using standardized estimates. To clarify further, the values of items within each construct were computed separately. The conclusion of the CFA indicates that factor loadings ranging from 0.5 to 1 are typically deemed acceptable in academic research. The factor loadings demonstrate significant coherence, confirming their statistical significance and the relevance of the items to their respective constructs.

However, the factor loadings associated with the construct SN (item no. 3 of subjective norm), and SE (items no. 1 and no. 4 of self-efficacy) are notably divergent. As these loadings fall out of the acceptable range of 0.5–1, this suggests a potential minimal contribution of the items to their respective constructs, indicating issues that may need further investigation or model adjustment.

SN3 states, "At our university, it is essential for faculty members to adopt new technologies." While SN1 and SN2 are both direct observations about colleagues' or students' behaviors or attitudes within the educational process, SN3 has a broader institutional perspective and more strategic in nature. SE1 states, "I can skillfully use pen and paper for interpreting note-taking." SE2 states, "I am good at reading notes on a tablet." SE1 and SE4 specifically target individual tools, underscoring expertise in utilizing designated mediums for both note-taking and note recognition tasks. On the other hand, SE2 and SE3 focus on mastering technological processes and applications, demonstrating a more extensive engagement with and adaptation to technology. As these items capture different facets of the respective constructs, it leads to divergence in their factor loadings.

Using the same approach, we assessed the validity of five internal constructs: PU, PEU, ATT, BI, and AU. Each construct was analyzed by calculating its factor loadings through standardized estimates. The values for the items within each construct were computed separately for clarity. They show a high degree of consistency among the items within internal constructs, indicating that the factor loadings are statistically significant. This confirms the strong relevance of the items to their corresponding constructs.

FIGURE 1
General Extended Technology Acceptance Model for E-learning (GETAMEL) with FC added.
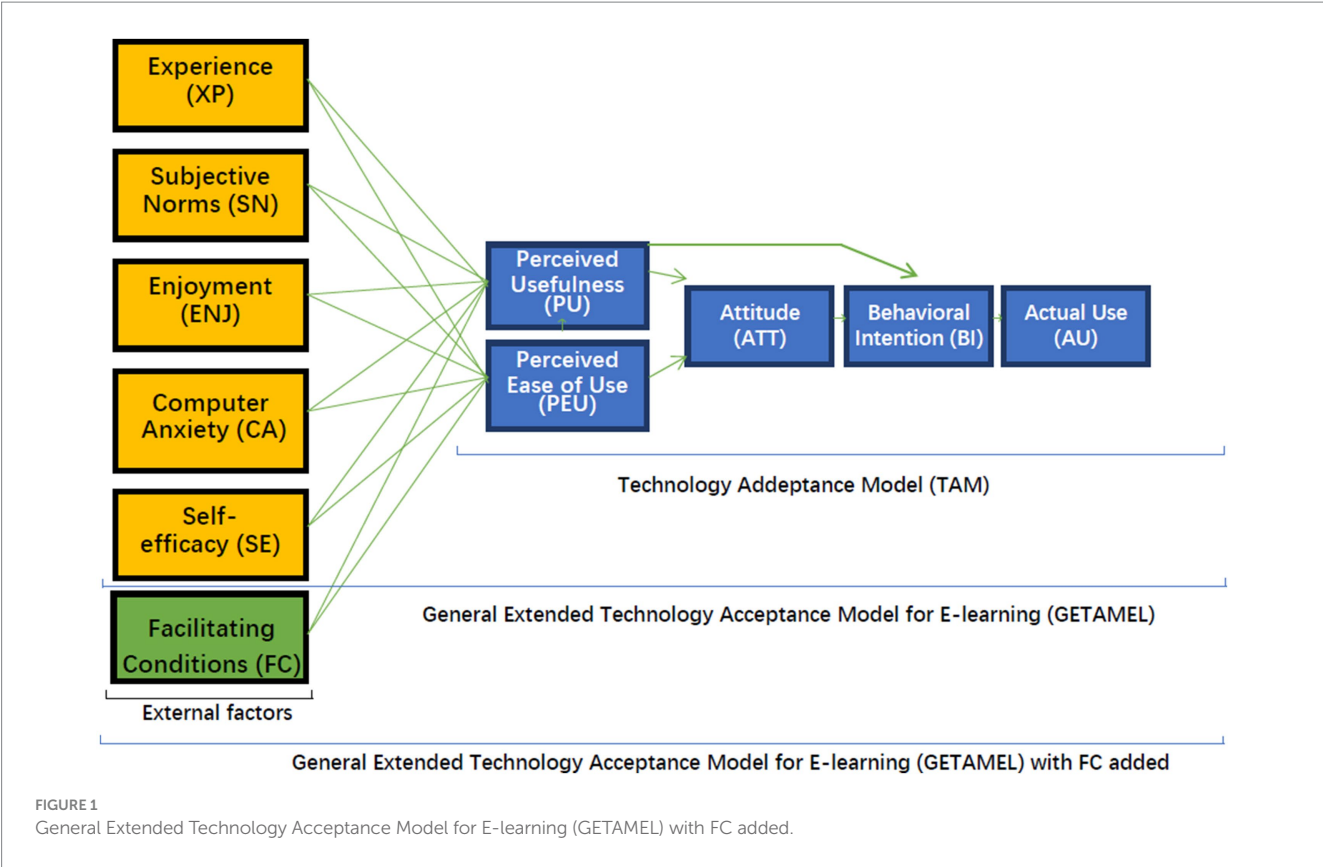
TABLE 2 Cronbach's $\alpha$ values of internal and external constructs.

|  | Constructs | Items included | Cronbach's $\alpha$ |
|---|---|---|---|
| Internal | Perceived usefulness | 5 | 0.955 |
|  | Perceived ease of use | 5 | 0.935 |
|  | Attitude | 3 | 0.964 |
|  | Behavioral intention | 4 | 0.952 |
|  | Actual use | 3 | 0.890 |
| External | Experience | 3 | 0.89 |
|  | Subjective norm | 3 | 0.658 |
|  | Technology anxiety | 3 | 0.932 |
|  | Self-efficacy | 4 | 0.764 |
|  | Enjoyment | 3 | 0.773 |
|  | Facilitating conditions | 3 | 0.840 |
| Overall | — | 39 | 0.964 |

## 3.3 Data collection and analysis

The data collection occurred between March 4, 2024, and April 23, 2024. The questionnaire was created and distributed using "Wenjuanxing," a popular platform for recruiting survey participants in China. Emails were sent to the interpreting instructors in the Chinese mainland and Macao, informing them of the survey with the link and QR code included. Additionally, during the annual conference of the Translators Association of China, the most important gathering of translation and interpreting educators of the year, the QR code for the questionnaire was provided to interested parties to scan individually, ensuring the quality of the data.

The data analysis was conducted using both Excel and SPSS to ensure comprehensive and accurate results. Initially, the data was imported into Excel for preliminary cleaning and organization, which involved removing duplicate entries, handling missing values, and ensuring consistency in data formatting. Once the preliminary analysis was complete, the cleaned dataset was imported into SPSS for more advanced statistical analysis. In SPSS, detailed descriptive statistics were computed to understand the central tendencies and dispersions of the variables, including measures such as mean, median, mode, standard deviation, and variance. Additionally, the reliability of the scales used in the questionnaire was assessed using Cronbach's alpha to ensure internal consistency.

## 4 Results

### 4.1 External factors

To identify the key external factors that influence the instructors' adoption of tablet INT, the following aspects were considered: XP, SN, ENJ, TA, SE and FC.

For XP, we designed questions to assess the usage and experience of tablet for general note-taking and previous experience with preparing interpreting tasks using digital device. According to the survey results (see Figure 2), 8% rated their tablet usage for
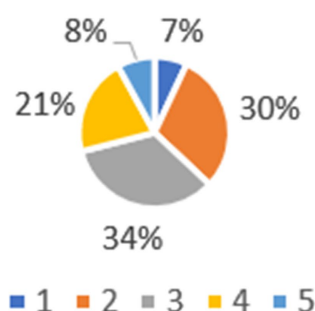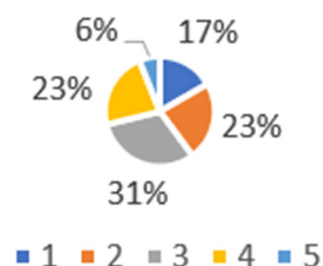
FIGURE 2
Data concerning experience (XP) with tablet INT.
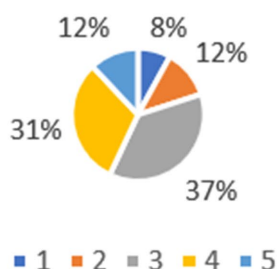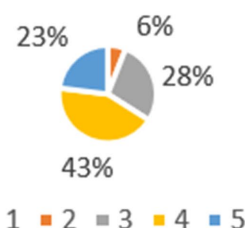


FIGURE 3
Data concerning subject norms (SN) of tablet INT.

note-taking in general as 5, while 21% rated it 4. Thus, a total of 29% of our respondents use tablets frequently for general note-taking. Conversely, 7% rated their usage as 1, and 30% rated as 2, indicating that they never or seldom use tablets for general note-taking. The data suggests that a significant proportion of participants consider tablets to be a valuable asset for notes while a notable segment (37%) does not frequently use tablets for this purpose.

We found a comparable outcome when assessing previous experience of preparing interpreting tasks using digital device. 6% of the interpreting teachers and trainers rated their usage as 5 on the Likert scale, and 23% rated it as 4. So, 29% of our respondents had experience on preparing interpreting with tablets. However, 40% of the respondents rated their experience either 1 or 2, indicating that they barely had experience with preparing interpreting tasks using digital device.

Another factor that can partially impact teachers' attitudes toward integrating tablet INT into teaching is subjective norms, SN (see Figure 3). It was discovered that 43% of the participants reported that their coworkers utilize tablets for INT, rating their usage as either 4 or 5 on the Likert scale. Additionally, when queried about the significance of incorporating modern technology within the academic staff or team, 66% of the participants rated it with a score of 4 or 5. Abdullah and Ward's (2016) extensively examined the impact of Subjective Norm (SN) on learners' acceptance and utilization of e-learning. Their empirical data reveals that 19 out of 22 studies (86%), which explored

the correlation between SN/SI and Perceived Usefulness (PU), identified a notable positive association between these two constructs. So, in our study, we believe that SN plays a role in shaping teachers' perceptions of the importance of integrating tablets in interpreting teaching.

Both peer influence and institutional pressure can be significant drivers of technology adoption among educators, particularly in environments where there is a push toward modernization and the incorporation of digital tools. Peer influence can manifest in several ways. For example, instructors who observe their colleagues successfully using tablets for teaching note-taking in interpreting may feel encouraged to do the same. When coworkers express positive attitudes toward teaching tablet-based interpreting (INT), this can create a sense of professional expectation or motivation to align with evolving practices. On the other hand, institutional pressure can come from both formal and informal sources. For instance, institutions may encourage or mandate the adoption of new technologies as part of their broader efforts to enhance teaching methodologies or improve student outcomes. Program directors and administrative leadership may establish guidelines or policies that favor the integration of tablets. At the same time, this pressure can also create resistance, particularly if instructors feel that the technology does not align with their teaching styles or if they lack sufficient training or support.

However, these influences are not instantaneous and may take time to impact individual instructors. Teachers may need to see

tangible benefits, such as improved student engagement or ease of note-taking, before fully adopting tablets in their own practice.

In the future, it would be beneficial to conduct further studies examining the attitudes of interpreting program directors and institutional leadership. Investigating how top-down policies, funding availability, and institutional culture contribute to shaping educators' decisions to adopt new tools like tablets could provide a more comprehensive view of the external pressures at play.

We also addressed questions about SE (see Figure 4). As previously mentioned, a high level of self-efficacy is associated with strong self-motivation and is correlated with the PU and PEU of technologies. When asked respondents to rank the following statement, "I am familiar with note-taking apps on tablets," 37% of the respondents scored it as 3, while 45% scored either 4 or 5. Regarding the statement, "I am good at searching for information with a tablet," 73% ranked it 4 or 5. These findings suggest that the respondents have a solid foundation in using tablets for note-taking and information search tasks, indicating strong self-efficacy in this specific tablet usage skills.

Regarding ENJ (see Figure 5), respondents were asked to rank the statement, "I like to use tablet for INT." 47% of the respondents ranked 4 or 5, while 23% ranked 1 or 2. When asked if they like to use tablet for interpreting preparation, 50% of them scored it 4, and 21% scored it 5. Thus, 71% of the respondents showed a very positive attitude toward using tablets for interpreting preparation, while 47% enjoy

using tablets for INT, suggesting that our respondents prefer using tablet to prepare interpreting rather than using them for INT. Additionally, while 45% of the respondents enjoy INT with tablets, only 30% actually use them for this purpose, which will be further explained in the following section.

Under the factor of TA (see Figure 6), only 24% of the respondents rated their anxiety levels as 4 or 5 when using tablets to take general notes, whereas 46% rated as 1 or 2. In contrast, when using tablets for INT, 30% reported anxiety levels of 4 or 5, and 39% rated as 1 or 2. These findings suggest that there may be specific factors related to using tablets for INT that are causing more anxiety among respondents compared to general note-taking. Therefore, these possible factors will be explored by analyzing respondents' insights about the challenges of using tablets for INT.

We posit that FC, which is not included in the original GETAMEL model, also plays a role as an external factor influencing instructors' adoption of tablets for INT (Figure 7). In the survey, we asked whether interviewed instructors have sufficient resources to use tablets for interpreting. 47% of our respondents rated sufficiency levels as 4 and 5, which indicates that a notable portion of the instructors believe that they have enough resources. However, when participants were asked if they had received any training for tablet INT, 50% scored 1 or 2. This suggests that a significant portion of interpreting instructors may not have received adequate training. Further investigation into the types
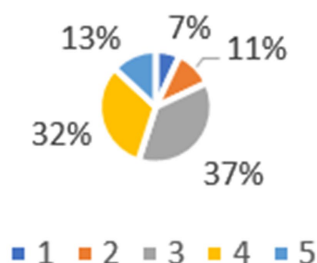


FIGURE 4
Data concerning self-efficacy (SE) of tablet INT.
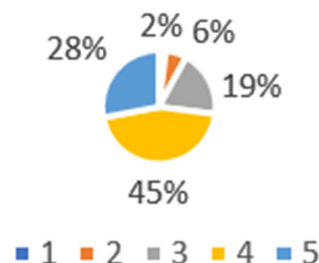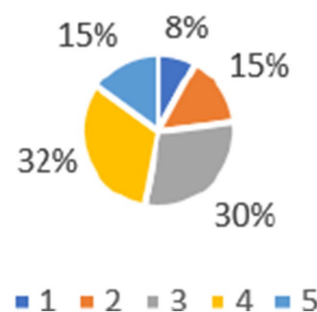


FIGURE 5
Data concerning enjoyment (ENJ) of tablet INT.
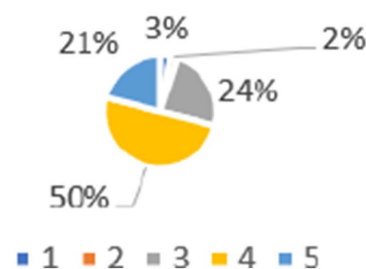
of resources and training available to instructors could provide valuable insights.

## 4.2 Internal factors

To answer Research Question 2, key internal factors that influence instructors' adoption of tablets for INT under the GETAMEL model were explored. These factors include respondents' PU, PEU, ATT, BI as well as AU.

PU is an essential factor for the GETAMEL model because it directly influences the likelihood of technology adoption (Figure 8). When respondents were asked about the convenience of carrying out interpreting teaching tasks with tablets, 44% agreed or strongly agreed. Additionally, 48% of respondents scored 4 or 5 for the statement "tablet note-taking is useful for my interpreting tasks." Conversely, 24% of the participants ranked 1 or 2 for both questions. These results suggest that the majority of the respondents find tablets convenient and useful for interpreting teaching or related tasks.

Regarding the PEU factor, it was critical to assess how instructors perceived the ease of using tablets for INT, both for themselves and for their students (Figure 9). 45% of the respondents scored 4 or 5 on a

Likert scale, agreeing that using tablets for INT is easy for them, while 22% do not agree. Furthermore, 58% believe it's easy for students to use tablets for INT. Notably, no respondent scored 1 on this question, and only 7% scored 2. These findings suggest that overall, teachers and trainers generally find using tablets for INT to be relatively easy, with a majority also believing that it is even easier for students. This indicates a positive perception of the ease of use of tablet INT among respondents.

When examining instructors' attitudes (ATT) toward tablet INT, we found that 58% of the respondents exhibited very positive attitudes toward the benefits of using tablets for INT by themselves (Figure 10). Similarly, 60% of respondents indicated positive perceptions of using tablets for interpreting in classes, as reflected by their choices of 4 or 5. Overall, the majority of teachers and trainers surveyed displayed favorable attitudes toward incorporating tablet interpreting into their teaching practice. These findings suggest a high level of receptiveness to utilizing technology for INT, despite only 30% of them currently using tablets for this purpose.

Under the factor BI, respondents were asked if they intended to recommend students adopt tablet INT in the future or if they would include tablet note-taking skills in interpreting teaching (see Figure 11). 52% of the participants, selecting 4 or 5, agreed with the recommendation that students adopt tablet INT. Additionally, 45% indicated that they
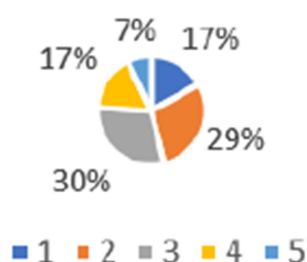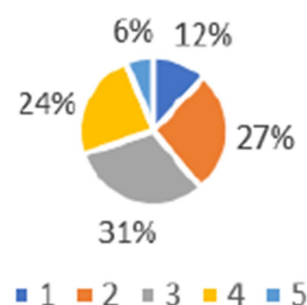


**FIGURE 6**
Data concerning technology anxiety (TA).
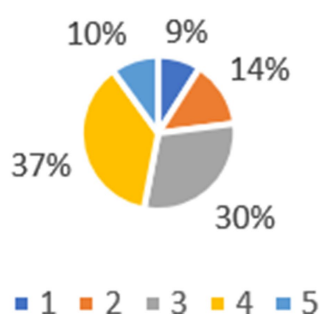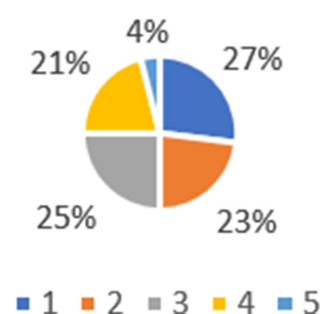


**FIGURE 7**
Data concerning facilitating conditions (FC).
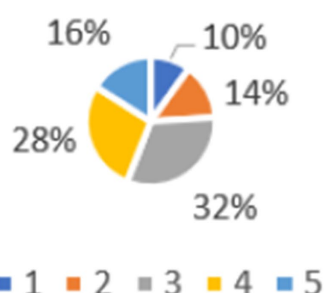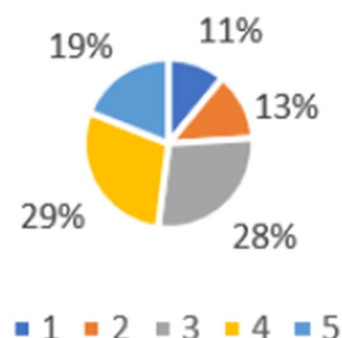
**FIGURE 8**
Data concerning perceived usefulness (PU).
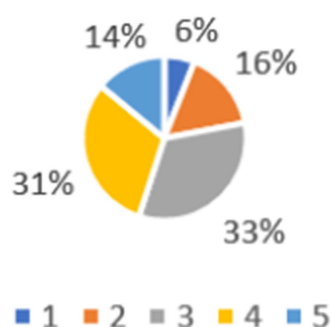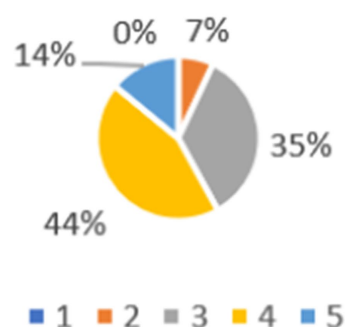


**FIGURE 9**
Data concerning perceived ease of use (PEU).

would incorporate tablet INT skills into their teaching contents. In both questions, around 30% of the respondents remained neutral. These results suggest that a significant portion of interpreting instructors are open to integrating tablet technology into their teaching practices.

As for AU, according to the survey results (see Figure 12), 16% rated their frequency of tablet usage in general work contexts as 5, while 32% rated it 4. Conversely, only 7% rated their usage as 1, indicating that they never use tablets for work-related activities. The data indicates that a substantial number of participants view tablets as valuable tools in their professional activities, while a minority do not see the necessity of using tablets for their professional duties.

When comparing how often they use tablets for INT, only 6% of the interpreting teachers and trainers rated their usage as 5 on the Likert scale, and 24% rated it as 4. However, 42% of the respondents rated their usage either 1 or 2, indicating that almost half of them do not use tablets for INT. As the results show, there are more instructors using tablets for general work than using them for INT. This suggests a discrepancy between the use of tablets for general work and for interpreting note-taking. Further research could explore the reasons behind this disparity.

## 4.3 Perceived challenges and advantages

To address Research Question 3, which aims to understand the perceived challenges and advantages of using tablets for INT, we designed two open-ended questions and collected respondents' answers for analysis.

After conducting a word frequency analysis using Sketch Engine, we categorized the instructors' perceived challenges into two main categories: technical difficulties with the tablet and stylus, and technical problems of applications, with special concerns about distraction during interpreting.

First of all, many instructors raised concerns about tablet's hardware, particularly its battery life. They worry that the device might abruptly drain its power during interpreting, potentially disrupting the process. Additionally, they expressed apprehension about potential system malfunctions that could trigger flashbacks. Another hardware-related issue is the contact problem with the stylus pen. The stylus pen tip's touch may cause poor writing fluency and information loss during speech delivery. Many instructors also mentioned other unpredictable technical problems, such as flashbacks or issues caused by accidental screen touches. Overall, teachers are
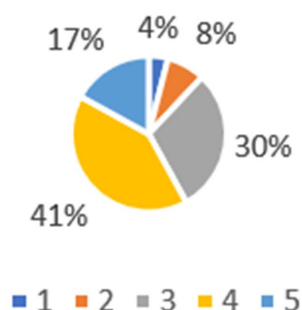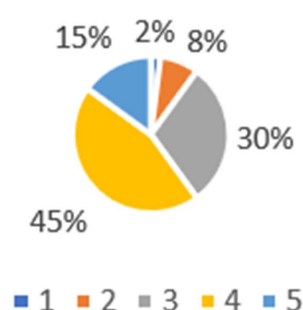
**FIGURE 10**
Data concerning attitudes (ATT) toward tablet INT.

worried about the reliability of the device during interpreting and its impact on the practice.

Several instructors have also emphasized the challenges of using note-taking application. They noted that interpreting itself is already a demanding task, and mastering the application's interface adds an additional layer of complexity compared to traditional paper and pen methods. Consequently, they believed that taking notes on a tablet requires more effort. Moreover, many instructors have also raised concerns about note reading. They highlighted that flipping page on a tablet could hinder interpreters' ability to locate information accurately. Some interpreting teachers observed that rapid page turning might cause eye discomfort and dizziness, problems not encountered with traditional paper note-taking. Instructors also mentioned that the complexity of applications could distract interpreters. The interface, with its numerous buttons for colors options, stylus setting, and page display formats, could result in mistouches and lead to information loss or confusion, ultimately compromising the quality of interpreting.

Despite the challenges outlined earlier, respondents also listed several advantages of tablet INT. Foremost among these is portability, which allows interpreters to record and review notes seamlessly on the move, greatly enhancing flexibility and convenience of work. Additionally, respondents noted that well-optimized note-taking applications facilitate real-time recording and reviewing, catering specifically to interpreters' note-taking requirements. These software programs usually come with a variety of features and tools, such as different thicknesses of strokes, color options, etc., to accommodate diverse note-taking needs. The quality of screen display was also emphasized by respondents. Many mentioned that certain tablets boast large screens with high resolutions, delivering clear and realistic colors. This capability proves invaluable for interpreters when capturing detailed visual notes, especially when dealing with complex charts, images, or presentations (PPTs). Furthermore, respondents highlighted the benefits of content synchronization and sharing. Tablets enable seamless synchronization of content across various devices, including smartphones and computers. This feature facilitates easy review, editing, and sharing of notes post-interpretation with colleagues and clients alike. Looking ahead, some respondents

acknowledged the potential future integration of tablets or PCs with voice recognition technology to aid interpreters. Thus, proficiency in using tablets for interpreting is increasingly recognized as a pivotal trend that cannot be overlooked.

Following the comprehensive exploration of challenges and advantages associated with using tablets for INT, the data also illuminated diverse viewpoints among educators regarding their integration into training practices. Some respondents expressed strong opposition to using tablets for INT. Their concerns were not limited to the reasons previously mentioned, but also included the fact that electronic devices are sometimes prohibited in interpreting practice. They believe the traditional pen and paper method is indispensable for training interpreters. On the contrary, some others indicated significant support for using tablets, claiming that those who did not use them were hesitant to adopt new ideas simply because they had not tried them. Overall, the debate highlighted the importance of considering both perspectives and finding a balance between embracing technology and respecting traditional methods in interpreting training. It also emphasized the need for ongoing discussions and flexibility in adapting to the evolving landscape of interpreting practices.

# 5 Discussion

Tablet INT has become a trend in interpreting classrooms in recent years, driven by the popularization of tablets. However, in the current interpreting teaching practice within universities and training classes in China, very few instructors have adopted different teaching methods or incorporating teaching contents to adapt to this trend. The goal of the current study is to examine the present situation, the reasons behind it and propose measures to improve the status quo.

## 5.1 Discrepancies and explanations

In the analysis of the data collected, there are some discrepancies, the explanations of which will help us gain deeper insights into to the issue.
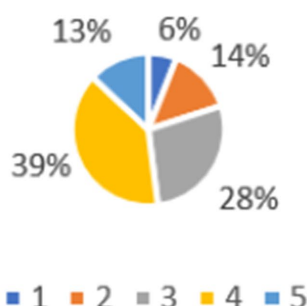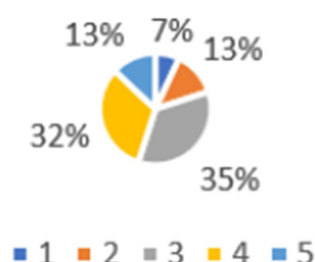
**FIGURE 11**
Data concerning behavioral intention (BI) of adopting tablet INT.
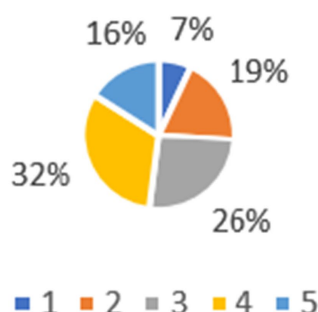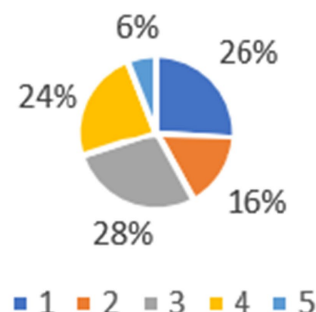


**FIGURE 12**
Data concerning actual use (AU) of adopting tablet INT.

First, there is a discrepancy between the preference for using tablets for general work compared to interpreting, and for the preparation of interpreting tasks compared to INT. Interpreting is more demanding than ordinary office work, requiring greater cognitive effort, concentration, and quick responses. Additionally, delivering interpreting is more stressful than preparation. This issue can be seen as a problem related to the fit between the difficulty level of the task and technology adoption, specifically the adoption of tablet INT. According to the Task-Technology Fit (TTF) Model, the effectiveness of technology depends on how well it fits the task requirements (Goodhue and Thompson, 1995). There is a negative relationship between task complexity and TTF: as task requirements increase, fit decreases. This means that if tasks are too large and complex for the IT to provide adequate support, it will lead to an unwillingness to adopt the technology. Since interpreting is a highly complex and demanding task, it naturally leads to less intention to adopt tablets for INT.

Second, there is a noticeable discrepancy between instructors' perceived usefulness of tablet INT and their actual use of it. Our collected data strongly indicate that 58% of respondents have very positive attitudes toward the benefits of using tablets for INT. However, only about 30% of them frequently use tablets for this purpose. The causes of this gap are complex and involve multiple levels of

consideration in addition to deep-rooted customary factors. On the one hand, although tablets show great potential in terms of functionality and convenience, some instructors may take a wait-and-see attitude toward their application in INT due to unfamiliarity with the new technology or lack of necessary training. More than 60% of the participants are 30 years old or above, meaning that when they were in university studying interpreting, tablets were not as prevalent as they are today, let alone used for interpreting. Consequently, they tend to adhere to their established habits rather than adopt new technology, even if they believe it has significant advantages. Habitual behavior requires minimal attention, weakening the individual's control over both their behavioral intentions and the behavior itself. As long as circumstances remain relatively stable, past behavior patterns can easily influence future choices (Bamberg et al., 2003). In addition, older groups of faculty may be more reliant on their long-established interpreting tools and processes and relatively less receptive to new technologies. We selected respondents over the age of 51 and analyzed their answers to the open-ended questions. Most of them acknowledged the portability of tablets, but mentioned the "solidity" of traditional pen-and-paper note-taking, the cognitive load that tablets can bring, the inconvenience of handling them, and some remain open to the possibility of training for instructors. Others, however, bluntly stated that tablets had no advantages at all and reject

FIGURE 13
Proposed extended model.
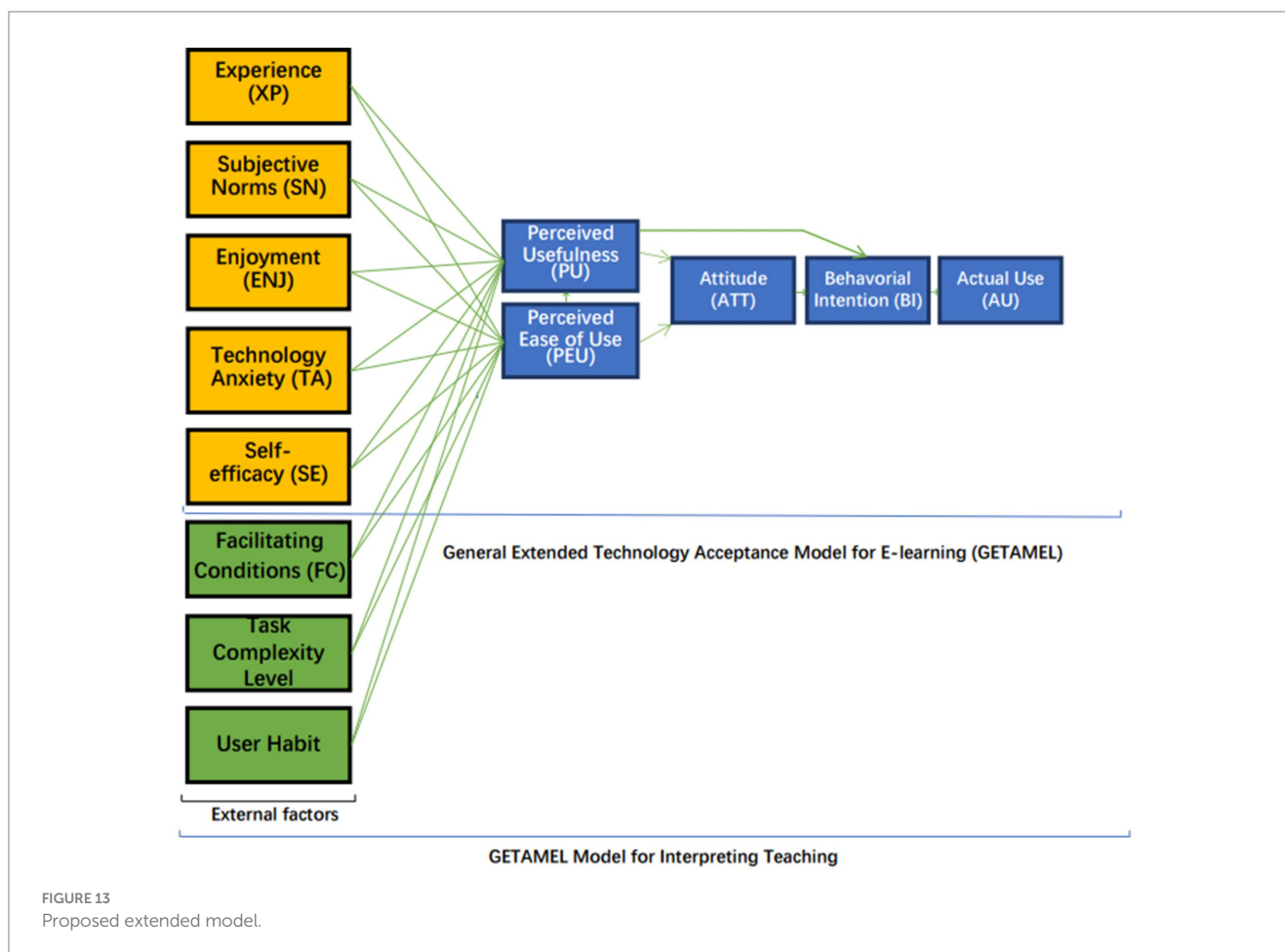
to use them for INT. More than 50% admitted that they barely use tablet for working purpose. Regarding the group of respondents aged 41–50 and above, only about 21% regularly use tablet for INT. Comparing to 30% of average actual use percentage, user habits appears to be an influencing factor.

Third, based on the current research, especially the discrepancies mentioned above, an extended GETAMEL model could be proposed with the addition of two external constructs, namely task complexity level and user habit (Figure 13).

Although the exact relations between these two external constructs and the internal constructs will not be discussed in details here, as it requires a larger body of data to support it, we believe this extended model suits better the explanation of technology adoption for interpreting teaching.

## 5.2 Suggested measures

While entering into the AI era, there have been opinions about the threat of AI to the jobs of the translator and interpreters and the doomed future of the translation and interpreting students. While machine translation and various technologies have been massively incorporated into translation teaching, there seems not much that has been done by interpreting instructors. Based on the above analysis,

some measures are suggested, not only for the adoption of tablet INT, but also for other interpreting-related technologies, such as ChatGPT-assisted interpreting preparation and terminology management system.

First, instructors need to be encouraged to use technology. The faculty can provide comprehensive training, such as workshops and seminars, online courses. For example, workshops could demonstrate how tablets can streamline note-taking by using features like color-coded annotations, digital note organization, and the ability to quickly retrieve notes during interpreting sessions. Additionally, trainers could provide examples of how tablets support terminology management by using apps that allow interpreters to store, retrieve, and organize key terms during consecutive interpreting. Create peer mentoring programs where tech-savvy instructors guide their colleagues could further encourage adoption. Institutions could also establish awards and recognition programs for teachers who effectively use technology to enhance learning.

Second, provide both hardware and technical support. Some instructors refrain from adopting technology simply because they lack the necessary devices. If instructors are provided with both the hardware and software, they will be more willing to try. For example, universities could loan tablets to instructors or create a fund for purchasing devices, ensuring that all educators have equal access to the technology they need. Additionally, it is crucial to ensure that teachers have access to technical support to help troubleshoot issues,

maintain the technology, and receive immediate assistance with any technical problems they encounter.

Third, align with industry and student needs. Interpreting is a rapidly evolving industry due to technological advancements and shifting demands in the post-COVID-19 era. Therefore, interpreting education should be closely connected with industry developments. The trends in the industry today will be the reality students face tomorrow, and these trends should be adequately reflected in classroom teaching. Instructors should also consider students' needs and interests. The younger generation is often more attuned to the latest technological developments than their instructors. Educators should therefore incorporate real-world applications of these tools in their teaching. For instance, teachers could create assignments where students practice tablet-based note-taking in simulated interpreting environments that reflect industry realities, such as virtual conferences or multilingual meetings. Moreover, students could be asked to use tablets during in-class note-taking exercises and subsequently review their notes digitally to assess their performance and share feedback with peers. By integrating students' needs and interests into their studies, teachers can significantly enhance learning efficiency.

# 6 Conclusion, limitations and future research

This study has deepened our understanding of instructors' perceptions and adoption of tablet-based INT. It helps to close a gap in the literature by focusing on instructors' perspectives, recognizing that they are crucial to the effectiveness of information technology in teaching and learning activities. Under the GETAMEL framework, we identified both external and internal factors that influence their choices. Our data analysis revealed that only about 30% of the instructors are actually using tablets for INT, despite the majority acknowledging the importance of adopting new technologies. This discrepancy highlights the need for further research to explore barriers to adoption and develop strategies to promote tablet INT among instructors.

However, this study has limitations. It employed quantitative rather than qualitative approaches. There were open-ended questions but they only dealt with the advantages and challenges of using a tablet for INT. Most of the respondents simply responded with one or two sentences of relatively simple information. A qualitative study of interpreting instructors' use and attitude toward tablet INT would be useful in a future research. The sample size was limited, potentially restricting the generalizability of the results. Further, respondents' self-response data may affect the results of the study because respondents may have a subjective bias about their technical abilities or attitudes, and this self-reporting may not be objective enough. These limitations not only affect the depth and breadth of the study, but also pose an impact on the transparency of the study. Future research should address these limitations by expanding the sample size and incorporating qualitative methodologies to validate the GETAMEL framework. Consideration could also be given to crosswalking data through quantitative and quantitative means to

ensure research transparency and provide a more comprehensive understanding of the factors influencing technology adoption among instructors.

# Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors without undue reservation.

# Ethics statement

The studies involving humans were approved by the Pedagogic and Research Affairs Office, Macao Polytechnic University, Macao Special Administrative Region, China. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

# Author contributions

YT: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. YW: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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# Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Remodeling reading–to–write process: a response writing task for Chinese English learners

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Long recognized as a significant integrated task in major English proficiency tests, reading-to-write tasks have been researched from dimensions mainly concerning its testing validity. A further exploration into the process is essential for a better understanding of the construct and instructions of the integrated task in different cultural and educational contexts. The present study investigated the process of a response writing task by collecting data of interviews and reflective journals from 36 Chinese learners. These data were analyzed qualitatively to identify the main phases and sub-stages occurring in the reading-to-write process. The results disclosed three main phases: pre-reading, reading for writing, and writing from reading. Besides, among a set of sub-stages, planning and rereading recurred and were embedded with each other in the main phases, and therefore, bridged reading and writing. The purposes of the occurrence of the main phases and recurring sub-stages presented the dynamic agency that learners exercise. Accordingly, a new model was constructed to account for the nuanced processes as well as their connection and interaction in a reading-to-write task, providing new insight into the recursive and reciprocal nature of reading-to-write tasks for learners in the Chinese context and furthermore, into the construct of integrated academic tasks. Pedagogical suggestions for L2 learners were provided in the end.

KEYWORDS

reading-to-write, integrated writing, reading-writing connection, learner agency, Chinese context

## 1 Introduction

The integration of reading and writing skills has been universally employed in language proficiency tests of different kinds all over the world, particularly since TOEFL iBT incorporated integrated writing (reading-listening-writing) into its writing section (Ascención, 2004; 2008; Cumming et al., 2005; 2016; Plakans, 2008; Plakans and Gebril, 2012, 2013; Wette, 2018; Xie, 2023). For performing the sourced-based integrated writing, writers need respond to what they have read or listened to. This task type is considered to resemble what test takers will encounter in their future academic settings in addition to the test-oriented purposes (Cumming et al., 2005).

The enquiries concerning the integration of reading and writing in the abovementioned reading-to-write tasks, for example, conceptualization of task construct, validity of test item, and the discourse features of written products (Ascención, 2004, 2008; Cumming et al., 2005; Esmaeili, 2002; Wanatabe, 2001), promoted the attention to probing into its process. In a few attempts at constructing models of reading-to-write tasks in the L2 research, efforts have been made to investigate the main phases, the recurrence of source reading behavior, and potential shared processes covering both reading and writing

(Plakans, 2008; Plakans et al., 2019). Nonetheless, the endeavor mainly focused on the written products or the recurrence of source reading in the writing phase, or reading and writing strategies employed to assist the task performance. A detailed process that could precisely disclose the recursive and reciprocal nature of reading-to-write task has not been caught nor presented.

Most of such studies have been conducted in the countries where the English language resides a dominating position. It is unclear whether learners from different cultural and educational background undergo similar processes and share similar experiences (Cumming et al., 2018). Unsurprisingly, there is a lack of research in the relevant field in the Chinese context (Pan and Lu, 2023), whose learners have long received English instructions separating reading from writing. They tend to write from personal experience, generate ideas from Chinese translation, and organize their essays following the conventional practices in their native language. This is not how English academic writing takes place in real life. As a result, the Chinese learners would encounter great challenges when engaged in English writing tasks for academic purposes. Leki (1993) points out "reading builds knowledge of various kinds to use in writing" (p. 10). Content support plays an important role to assist writers in constructing their own essay writing (Jung, 2020). Exploring what resources Chinese learners will rely on and what assistance instructors can offer in the process of reading-to-write tasks may shed light on future research in this domain.

The research into the process of reading-to-write tasks has undergone the initial concern about roles of reading, attention to the interactions between reading and writing, model construction, and to what extent the two acts shape each other so that the writers are able to accomplish their eventual source-based written products (Ascención, 2004; Plakans, 2009a; Plakans et al., 2019; Wanatabe, 2001).

Since the addition of reading to the writing section of TOFEL iBT, to what extent reading can affect the outcome of reading-based writing has gone under heated discussion. Several studies found out that the roles of reading in writing cannot be underestimated. It is not surprising that writers with better comprehension of source readings produced writings with higher quality not only in terms of conventional criteria for assessing independent writing, like grammatical accuracy and syntactic complexity, but also with respect to integration amount and quality of the source passages (Cumming et al., 2005, 2006). In her doctoral dissertation, Esmaeili (2002) conducted an exploratory study to investigate whether the content knowledge in the source reading had an impact on the processes and products of a reading to writing task and discovered that writers reading thematically relevant passages produced essays of better quality than those who read those not thematically relevant to the written tasks. She concluded that reading and writing processes could not be separated from each other; more importantly, the thematic connection between the reading passages and writing tasks contributed to students' writing performance. Jung (2020) also found that lack of content support significantly increased the task complexity of reading-to-write as writers reported greater task demand and paused longer at the level of sentence writing according to the keystroke logging.

Some other studies found less considerable power of reading in reading-to-write tasks. In an analysis of the writers' performance on a reading-to-write task, Wanatabe (2001) found writing could better predict writers' performance compared to reading; what's more, the impact of reading on writing had better be attributed to writers' overall proficiency level rather than comprehension ability. Ascención (2004) also discovered low correlation between reading ability and the scores of summary and response writing—two different types of reading-to-write tasks.

Reading at different levels for different purposes may also play roles of different kind. Khalifa and Weir (2009) contended that among the four types of reading processes (local vs. global, careful vs. expeditious), expeditious reading best facilitated reading-to-write task performance for its efficient and accurate location of the needed source information. Due to the limited language competence of L2 writers and the needs and demands generated by their cultural and educational settings (Grabe and Zhang, 2013), the presence of reading may pose unique challenges to their performance of a reading-to-write task. Plakans (2009b) reported that those weak at reading comprehension did have difficulty synthesizing the source reading and responding appropriately in their own writing.

Complicated and controversial as the role of reading is in the process of reading-to-write, it cannot be completely ignored for the acts of reading and writing co-occur and reshape each other in an integrated task type.

The connection and interaction between reading and writing have been long acknowledged since the last century. It is believed that both of them are "essentially similar processes of meaning-construction" (Tierney and Pearson, 1983, p. 568). The reading-to-write process has been considered recursive and reciprocal (Flower, 1990) as the social constructive view contends that in such tasks, the boundaries between reading and writing are "permeable" and therefore, blurring (Nelson, 1998). A clearcutting line between reading and writing is almost impossible in reading-to-write tasks.

Following the constructivist view of reading and writing connection (Spivey, 1990), some researchers made careful observations and thorough analysis on how learners read for the purpose of writing. Greene (1992) coined a term "mining" (p. 151), which he interpreted as a metaphor for "understanding how writers read purposefully and intently in order to develop a store of discourse knowledge that they can use to achieve their goals in composing" (p. 155). According to the students' think-aloud data, specific strategies employed in the process of mining the texts included text reconstruction, structural inference and imposition, and language selection. Greene commented that the process of mining suggested, on the one hand, the activeness of writers to take control of their own text construction; on the other, reading sources offered a "mine" or a "bounce off" springboard (Jolliffe, 2007). Writers took the miner-like reading process to prepare for their text construction. Murrey (1991) proposed a similar term "reading writer" and explained that reading writers read everything—from the lexical level to structural level—about the whole text, which was a complicated process involving all the possible elements of writing (p. 142). Hirvela (2004) distinguished miner writers and reading writers in that when the former read with specific purposes serving a subsequent writing task, the latter

would stand in the shoes of the original writer, predicting, thinking, and evaluating as if he or she were producing the same piece. Either type of readers as well as writers underwent both reading and writing as meaning-composing processes; in a word, they were doing "writerly reading" (Hirvela, 2004). An individual engaged in reading-to-write tasks acquires a dual identity, a reader as well as a writer, borrowing meaning from others' writing and contributing meaning to others' writing.

Along the same vein, writing also helps shape reading. McGinley (1992) pointed out in his study investigating the role of reading, writing, and reasoning based on the data of a composing-from-multiple-sources task that essay composing engaged a number of interrelated sub-processes, including formulating and articulating thoughts and arguments, and making decisions on specific ideas. Note-writing was considered very significant because it helped with planning and organizing ideas, building an "intermediate text" in its own as a foundation for the subsequent reshaping or adjusting of ideas and information from the reading sources. He cautioned oversimplistic description of source-based composing process as being linear or non-linear, but argued for a largely recursive process in terms of reading, writing, and reasoning (p. 241).

As the nature of reading-to-write process has been controversial, a number of attempts have been made to explore the process of such task types so that a clearer picture of reading-writing relations could be disclosed. In a case study in which six secondary students were required to write a research report on the basis of several source passages, Lenski and Johns (1997) reported three patterns of reading-to-write processes: sequential, spiral, and recursive. The process pattern was decided by how they understood the task type. Only the student following a recursive pattern produced a report integrating information from the source texts whereas the other two submitted summaries and paraphrases. More recently, Solé et al. (2013) asked 10 last-year secondary students to write a synthesis based on three history texts and also discovered different patterns to undergo the reading-to-write task: linear/reproductive (with the lowest level of integration), linear/elaborative (with some source text integration) and linear/elaborative plus some elements of recursiveness (the most successful type of source integration). What is most notable is that in the pattern that presented recursiveness of reading and writing, rereading was discovered to be frequently employed in the process for various purposes. In addition, planning and revision were also found to be significant to impact both the recursiveness of the process as well as the quality of the ultimate written products. It can be concluded that whether the process of reading-to-write presents the interactive and recursive nature may depend on the competence and experience of the writers.

In the L2 context, the prerequisite that has to be taken into consideration is the limited language proficiency and literacy skills of writers. That is why the process of reading-to-write in L2 has been discussed and explored in terms of challenges rather than support (Grabe and Zhang, 2013).

The empirical studies on the L2 reading-to-write process were rooted in the L1 constructive model of discourse synthesis (Spivey and King, 1989, Spivey, 1990). Following the three major processes in discourse synthesis writing Spivey (1990) elaborated

on, organizing ("organize textual meaning"), selecting ("select the textual content for the representation"), and connecting ("connects content cued by the text with content generated from previously acquired knowledge") (p. 254–257), Plakans (2009b) discovered two additional processes according to the think-aloud data of her L2 student writers in a response essay writing task based on two source texts, monitoring and language difficulties. Monitoring was employed by students to "consider the topic, evaluate own writing, and express affect" while language difficulties emerged when they selected vocabulary, translated from their native language and made decisions on syntactical issues. Apparently, Spivy's discourse synthesis processes are those mostly taking place before writing whereas the newly-discovered L2-specific processes concern the students' need for the written task, their lack of competence with the target language, and their insufficient practice with the task type. It might be true that L2 writers face bigger challenges compared to their L1 counterparts in the academic settings where reading-to-tasks are essential.

When conceptualizing the construct of reading-to-write, Ascención (2008) cautioned the interpretation of the task nature, rather than linear, the process should be viewed as a reciprocal interaction between the two literacy skills. Plakans (2008) partially acknowledged the reciprocity of the process. In her working model of reading-to-write tasks based on the think-aloud data from L2 students, the interaction between source reading and the response writing was only recognized in the "writing phase"; the "preparing to write" phase, where the processes of brainstorming, reading and planning occurred, was depicted to be linear. Due to such a complication, besides reading and writing, there could be other types of competence required for such an integrated task. McCulloch (2013) sharply pointed out that most L2 studies in this field underrepresented the needs of L2 writers for they generally completed such tasks in one sitting, which definitely led them to employ strategies entailed by exam-oriented topic-based writing tasks. The lab-like setting could not show authentic processes the L2 writers have undergone. By employing a structural equation approach, Yang and Plakans (2012) discovered that integrated writing (in their study, a reading-listening-writing task) was demanding in that in addition to discourse synthesis strategies and test-related strategies, students also needed to activate their self-regulatory mechanism for completing the integrated task. The educational, cultural, and contextual factors have to be taken into consideration at the same time.

In a number of processes frequently employed by L2 writers for reading-to-write tasks, monitoring and rereading are the ones thoroughly described and discussed. Monitoring has been reported as an important operational process of reading-to-write tasks in quite a few studies (Ascención, 2004; Plakans, 2009a,b; Yang and Plakans, 2012). It was discovered that monitoring often emerged when writers set up goals, make decisions and generate plans. Rereading, as an essential process preparing writers for further planning of the subsequent writing, cannot be absent if they hope to produce a final product living up to the task requirements (Plakans, 2009a; Plakans et al., 2019; Delgado-Osorio et al., 2023). In the exploration of reading roles in integrated tasks, Plakans (2009a) discovered the two most frequently employed strategies were rereading and metacognitive strategies. Rereading occurred

on both lexical and content level, and spanned the processes of reading, writing and revision. Metacognitive strategies were employed to monitor both comprehension check and the need of "mining" (Greene, 1992). It was also found that during strategic processing of summary and argumentative writing, two different types of reading-to-write tasks, rereading played the role of source selection in the phase of reading and that of information confirmation in the phase of writing; monitoring, recognized as the major metacognitive strategy, mainly served checking the accuracy and relevance of source uses and appropriateness of source citation (Delgado-Osorio et al., 2023). In a qualitative study (Plakans et al., 2019), a newly designed iterative integrated task was employed to investigate which processes might be shared by both reading and writing. Among the five identified shared processes, rereading and monitoring were the only two recurring in all the phases of reading, writing and revision. Explicit instructions on how to fit the two strategies into the process of reading-to-write are essential and critical for L2 writers to achieve better academic performance.

Unfortunately, the above introduced processes and strategies have not been clearly presented in the existent descriptive models of reading-to-write. In the L1 context, Spivey (1990) described the three-step discourse synthesis processes, not giving consideration to the needs of L2 writers, let alone other socio-cultural issues. The L2 model of reading-to-write tasks (Plakans, 2008) laid its emphasis on the differences between topic-based independent writing and integrated writing. The segmentation of the "preparing to write" and "writing" phases as well as its corresponding sub-processes oversimplified the needs, behaviors and process of L2 reading-to-write tasks.

Not much has been explored into the L2 reading-to-write tasks in the Chinese context (Cumming et al., 2016, 2018; Pan and Lu, 2023). Students in China have not enough exposure to and practice in integrated writing tasks in their English classrooms. It is challenging for them to naturally and spontaneously apply what they have learned from reading instructions, linguistically as well as rhetorically, to their written practices. Nevertheless, the ability to produce successful reading-based writing was indispensable for L2 learners in academic settings (Grabe, 2003; Grabe and Zhang, 2013). It is pressing for them to acquire basic processing skills of reading and writing for such a task type. In addition, other factors that may coordinate with their literacy skills should also be taken into consideration.

The present study intends to explore the major phases and the corresponding sub-stages in the process of a response writing task (responding to source reading and eventually, write a response essay), contributing empirical data to the field of L2 integrated writing in the Chinese context; in addition, this study attempts to build a new model of reading-to-write tasks. The following research questions will be addressed:

- What process do Chinese English learners undergo in a reading-to-write task, a response essay writing?
1) What phases do they undergo when writing a response essay?
2) What sub-stages are embedded in the phases when they write a response essay?

TABLE 1 The participants in this study.

| Topic group | Number of participants | Gender | |
| --- | --- | --- | --- |
| | | Female | Male |
| Global warming | 18 | 11 | 7 |
| Rote learning | 18 | 12 | 6 |
| Total | 36 | 23 | 13 |

## 2 Materials and methods

The present study employed a task design that might elicit integration and responsive argumentation, aiming at exploring the processes of a reading-to-write task. The data bank consists of source texts, response essays, reflective journals, and a post-task interview of a few randomly invited participants. The analysis of the data, mainly the interview and reflective journal data, was carried out by the researcher and a co-rater through multiple coding sessions and discussions.

## 2.1 Participants

Thirty-six non-English majors from a key university in China participated in the present study. They were attending an academic writing course taught by the researcher in the second semester of the freshmen year at the time of data collection. The course aimed at helping students acquire and practice basic skills of academic English essay writing. Argumentative essay writing was the central content of the course. Inevitably, the fundamental knowledge about critical thinking was also introduced and practiced. Upon receiving the task in the present study, the participants had already practiced writing multi-drafted argumentative essays after reading about relevant issues over a period of approximately 3 months. They had been learning how to establish a clear position on a selected issue and support the point of view with appropriate and sufficient evidence. Nevertheless, they had not experienced producing response writings with time constraints in a test condition.

In the semester prior to the writing course, all the participants attended a reading and writing course with the focus mainly on reading comprehension practice for students of high intermediate level (decided by a placement test upon entering the university). Over 18 years of age, having received relatively high-quality secondary education, with exposure to a number of readings and practices of a few topic-based college English writing assignments, these participants were believed to be mature and competent enough to generate ideas on the issues selected for the current study. Informed consent was obtained from all participants prior to their participation in the study.

Table 1 provides the basic information of the participants based on the topic groups they were allocated to. They took the reading-to-write task as part of the end-of-the-semester practice.

The participants were evenly divided into two topic groups. Half of them wrote about global warming; the other half, rote

TABLE 2 Sub-groups and source text (ST) distribution.

| Sub-group | Number of ST | ST combination | ST stance |
|---|---|---|---|
| 1 | 2 | ST1+ST3 | Similar[a] (positive[c]) |
| 2 | 2 | ST2+ST4 | Similar[a] (negative[d]) |
| 3 | 2 | ST1+ST4 | Conflicting[b] |

[a]Similar = both source texts adopt a similar view. [b]Conflicting = the two source texts adopt opposite views. [c]Positive = the source text adopts a positive view on the topic under discussion. [d]Negative = the source text adopts a negative view on the topic under discussion.

learning. Within each topic group, the participants were further divided into another three sub-groups according to three different combinations of source reading materials (see Table 2).

## 2.2 Instruments

The instruments employed in the present study include response writing task prompts, 8 source reading passages, questions for an immediate follow-up interview and requirements for a reflective journal after the writing task.

### 2.2.1 The response essay writing task

Before the participants received the source texts, the writing prompts in Chinese (see Appendix A) were handed out so that they could have a separate period of time (5 min) from the actual reading and writing task for concentrating on understanding the task requirements. They were also required to give their own opinions on the topic immediately after reading the prompt (the design here was intended for another study closely related to the present one).

The response essay writing task consisted of two steps: source texts reading and writing a response essay accordingly. The participants from different sub-groups were assigned different combinations of source texts depending on their viewpoints on one of the topics: rote learning and global warming. The task design partially followed the integrated writing section of TOFEL iBT (Bider and Gray, 2013; Cumming et al., 2005, 2006) and those tasks from a set of studies researching different dimensions of integrated writing (Ascención, 2004, 2008; Gebril and Plakans, 2013; Plakans, 2008, 2009a,b; Plakans and Gebril, 2012).

Following the above design, the participants read the source texts on paper, and then, wrote the response essays on www.pigai.org (an online writing platform). Each of them was assigned two source texts on one topic (see Table 2). They were also required to mark the parts on the original source reading sheets that they would use in their own response essays.

### 2.2.2 Source texts

Eight source texts on two topics were employed in this study (see Appendix D), four for each topic, among which two hold positive view and the other two, negative. The source texts were adapted from original English news articles, magazine articles, and

blogs with approximate length (550–800 words each) and difficulty level (Flesh Reading Ease 43.2–55.2).

Both the source texts and the task procedures had been piloted together with another two texts among a different group of participants from the same proficiency level but different writing classes beforehand. Among the four topics, global warming was selected for the students showed concern about it while rote learning was a familiar learning approach to the Chinese students from their experience.

In the context of the present study, in addition to difficulty level, how convincing the source texts were also had an impact on the viewpoint decision of the participants in their own response essays. Hypothetically, the participants might follow the opinions of the better supported arguments in the source texts whereas they would abandon those less sufficiently justified. The assessment of the argument power of the source texts was carried out by two experienced teachers from the same department, following an adapted version of Toulmin model (Qin and Karabarak, 2010; Stapleton and Wu, 2015). They scored these source texts based on 6 frequently employed elements of argumentation to assess the argument power of the source texts: claim, data, counterclaim, counterclaim data, rebuttal claim, and rebuttal data. These elements were taught and practiced in the writing courses taken by the participants. Table 2 presents the combination of the source texts.

### 2.2.3 Interview

A semi-structured follow-up interview (See Appendix B) was administered in Chinese immediately after the participants completed their response writing task. Two participants from each sub-group were invited for the interview, i.e., 12 in total from all 6 groups. Chinese, their native language, was employed in order to reduce their anxiety and hence better idea expression and retrieval. During the interview, the marked source texts and the written texts of the participants were placed aside to help them recall, specify and clarify their writing and thinking. The session for each interviewee lasted for 10 to 15 min, and was completely recorded with their consent.

The semi-structured interview stimulated by open-ended questions was employed for tapping into the participants' memory (both short-term and long-term) and metacognition of their decisions and behaviors in the process (Ruiz-Funes, 1999a). With the presence of the marked source reading passages and written texts of the interviewees, the interview could elicit as much data as possible on the interactive and decision-making processes (Hyland, 2013, 2016). Twelve interview questions were designed centering around the following three aspects: (1) the major phases they underwent as well as the corresponding sub-stages in each phase; (2) metacognitive thinking over how the acts of reading and writing interacted with each other; (3) the specific decisions they made in different phases or sub-stages as well as reasons for such decisions.

### 2.2.4 Reflective journal

In 2 days after the writing task was completed, all the participants were required to submit a reflective journal with guided questions (See Appendix C) as a homework assignment. Reflective journals were employed to collect further data of all the

| Day | Time | Task |
|---|---|---|
| Day1 | 5 mins | Reading instructions |
| | | Giving original positions |
| | 95 mins | Reading and writing |
| | 10–15 mins (for each interviewee) | A retrospective interview |
| Day 2–Day 3 | | A reflective journal |

participants on how they processed and performed the response writing task. Although there could be a loss of memory on what was going on at the time of task performance, retrospection and reflection in written form not a long time afterwards and without intruding into the reading-to-write process, like think-aloud protocol or video taking, may help push a rich and reliable recall of thinking process hard to be accessed by other means (Hyland, 2016). The directions and guided questions (see Appendix C) of the reflective journal were provided on the online writing platform (www.pigai.com) in Chinese. The participants could choose to write the journal either in English or in Chinese. The guided questions of the journal were similar to those examined in the interview. The journal content was going to be triangulated with the interview data and the participants' written texts.

## 2.3 Data collection

The data were collected in 3 days, as shown in Table 3.

In normal class time (100 min altogether) on the 1st day, the participants performed an in-class reading and writing task. Before the source texts were distributed to the participants, they each received a piece of note paper on which they read the task instructions in Chinese and they were required to write down their viewpoint on the relevant topic in a designated place. The note paper was collected in 5 min. Afterwards, each participant was assigned two source texts according to their grouping. During the next 95 min, the participants read their source texts on paper and wrote their response essays on the online writing platform, www.pigai.org. They were also required to mark the parts of the source texts that they planned to use in their own response writing. No other intervention disrupted their reading and writing acts. In order to catch the fresh memory and process of task completion without being obtrusive, an immediate face-to-face retrospective interview was conducted by the researcher herself. Two participants from each sub-group (six sub-groups from two topic groups), thus twelve in total, were randomly invited to receive the interview. With the consent of the interviewees, their talks were recorded. The interview was carried out in Chinese so that the interviewees felt at ease and more comfortable to share what they had thought about, behaved, and experienced during the task. In addition, all participants were required to write a reflective journal based on some guided questions about how they performed the reading-based response writing task in 2 days. The journal instructions and questions were provided in Chinese. They could choose to produce

the journal either in Chinese or in English so that they could better express their ideas.

## 2.4 Data analysis

Data were analyzed following qualitative coding of the participants' reported acts of reading and writing according to their interview and reflective journal content. The researcher and another rater, also an experienced English teacher from the same department, went over all interview transcripts (from 12 randomly invited participants) and reflective journals (of all 36 participants). For the convenience of coding, the terms of phases and sub-stages were borrowed from previous process-oriented studies on writing (Flower and Hayes, 1981; Plakans, 2008), for example, planning, drafting, and revising.

The researcher and the rater did the coding in an Excel file so that each phase, sub-stage as well as the corresponding original text pieces from the interview transcripts or reflective journals could be well organized. Considering the necessity to check back any detail when needed, they also drafted a memo for each participant summarizing the prominent features in the process of task performance.

During the first round of coding, they randomly picked 4 sets of interview data and 6 reflective journals from both topics and worked together to tease out the major phases and sub-stages emerging in the data. The segmentation was carried out according to what the participants reported about their acts and reasons of the acts. Due to the task design, the researcher and the rater quickly agreed upon the segmentation of the main phases and some of the obvious sub-stages.

During the second round of coding, they worked independently on the rest of the interview data and reflective journals following the decided items and notes in the Excel files from the first round. When they discovered a new sub-stage, or one they had difficulty deciding its type, they would take note of it. The inter-rater reliability then was 84%.

In the end, they met with each other for discussing all the unresolved issues, mostly about sub-stages included in a main phase (for example, it was planning or rereading in the reading for writing phase). All puzzles and problems were resolved by such face-to-face discussions.

# 3 Results

The major phases identified include the following three: pre-reading, reading for writing, and writing from reading. Table 4 presents a list of the functions of each phase and their sub-stages.

## 3.1 Pre-reading

Due to the task design, the pre-reading phase was compulsory during which the participants did more than reading the instructions; they were also quested about an opinion on the topic. In the meantime, they spontaneously started brainstorming relevant information and ideas from their memory, did some

TABLE 4 The main phases of a response essay writing.

| Phases | Sub-stages | Functions |
|---|---|---|
| Pre-reading | Brainstorming<br>Initial view decision<br>Initial planning<br>Predicting | Preparing for the reading and writing task |
| Reading for writing | 1st reading<br>Rereading (analytic reading)<br>Planning for writing | Reading source texts<br>Preparing for the writing task |
| Writing from reading | Planning/Outlining<br>Drafting<br>Revising (editing, rereading) | Writing a response essay |

The procedures and strategies the writers followed and employed in different phases were also identified, categorized, and analyzed.

TABLE 5 The sub-stages of pre-reading.

| Sub-stages | Examples |
|---|---|
| **Brainstorming** | *I actually often hear some pieces of news about global warming by the geographic books or the CCTV* [China Central Television] *news report.... I just knew that global warming will bring the higher temperature and the death of fish and people.* |
| **Initial view decision** | 根据自己对背诵学习的态度确立自己文章的观点的,在读文章之前觉得背诵是有益处的。[*I selected my viewpoint based on my attitude toward rote-learning. I believed in its benefits before reading the pieces.*] |
| **Initial planning** | 阅读前，想着先写*introduction*，然后明确观点，然后反驳一下。没有考虑具体内容，但是有个大概的框架。[I was thinking to write the introduction before reading. Then I would give my position. Finally, I should refute some counterarguments. Not much about the specific content, simply a general framework.] |
| **Predicting** | 那个文章，我读之前我猜测它应该是批判【背诵学习】的，我读的时候要去找出它批判的漏洞。[I guessed the readings might criticize rote. So I should find out holes of its criticism.] |

planning for the response essay, and some even predicted the view or content of the source texts. Therefore, the pre-reading phase includes the following sub-stages: brainstorming, initial view decision, initial planning, and predicting (see Table 5 for the examples).

These sub-stages did not necessarily occur following a fixed sequence; they were embedded with one another.

Almost all of the participants reported an immediate and detailed brainstorming process after understanding what they were going to do according to the interview and reflective journals. Topic familiarity played a role in what they brainstormed. With rote learning, a familiar topic for the Chinese participants, they went beyond gathering information; they directly shared experience and presented positions on the controversial learning approach. In contrast, global warming writers, less familiar with the issue, mostly

retrieved information from what they had covered in their native language readings (Wang and Wen, 2002).

At the required stage of initial view decision, 17 out of 18 participants from the rote learning groups chose to support beneficial effects of the learning approach; only one student believed it to have short-term effects on learning outcome, not in the long run. All the 18 participants of the global warming groups unanimously agreed that global warming does exist.

Some writers started planning for their own response essays in the pre-reading phase. Half of them (9) from the rote learning groups explicitly claimed that they set out to plan for their own writing; and one-third (6) from the global warming groups did so, too.

Though not many, some participants from both topic groups made predictions about the source views and content. Four from the rote learning groups predicted about the source texts and 3 from the global warming groups did so. What they predicted was mainly concerned with the view inclination of the source texts, the possibility of their later change of position, and helpful reading and writing strategies they would employ.

## 3.2 Reading for writing

The reading-for-writing phase in this study presented a dynamic picture during which basic comprehension was not the sole purpose; instead, the writers employed more strategic approaches to processing the source texts for accomplishing the ultimate writing task. The sub-stages (see Table 6 for the examples) identified in this phase include: first reading, re-reading, and planning. Re-reading, where the writers dug into and analyzed the source texts, co-occurred with planning.

Most participants claimed at least reading the source texts twice, of which the first time was devoted to basic comprehension and viewpoint identification and the second time was used beyond a reading comprehension purpose. The major purposes of re-reading included searching for valuable information they could use, what ideas or viewpoints they could challenge and refute, and meanwhile further planning accordingly for the response essay.

During the re-reading stage, besides further exploring into the source texts, some writers read the passages analytically, especially those who were exposed to views and ideas unfamiliar to them or conflicting with what they used to believe in. As Group 2 and 3 from both topics were given passages with such texts whereas Group 1 dealt with positive opinions only, more participants from G2 and G3 were engaged in analytical reading than those from G1 (see Table 7).

Reading the opposing views and ideas of the source texts, Group 2 and 3 writers generally underwent a process of confusion and hesitation:

Those two passages, however, confused me to some degree.
I was wavering about the view position during reading.

Their solutions to getting out of the dilemma were to further analyze the source texts, check the specific evidence and logic, assess the argument quality, and compare with their own experience and understanding of the issue. Those involved in analytical

TABLE 6   The sub-stages of reading for writing process.

| Sub-stages | Examples |
|---|---|
| **1st reading** | 我整体地读了两遍文章,第一遍泛读第二遍细读……第一遍追求大致理解文意。……[I read the articles twice, the first time scanning, and the second careful reading…the first reading for general comprehension…] |
| **Re-reading** | 第二遍弄懂个别词句,同时开始寻求作者所论述的事物以及作者的这个论述的过程有没有什么破绽足以让我从反面立论。[I tried to understand new words and difficult lines during rereading, and meanwhile, looking for the major arguments and whether there were holes in his arguments so that I could establish an opposite view.] |
| **(Analytic reading)** | 虽然在阅读文章的过程中产生了一些犹豫和动摇,但是在分析思考后,我还是认为一直以来受到的教育方式本质上是对学习有很大助益的,……其中有一篇文章对背诵学习持反对态度,初看起来颇有说服力,让我对于自己的立场和观点产生了一些动摇,之后细加思考,认为篇章中一些说法是对背诵学习的曲解,最后坚持了立场。……也有分析作者和自己想法的异同之处。[Although I hesitated about my viewpoint when reading, I believed that [rote] education essentially facilitated learning, …one passage objected to rote learning, which seemed reasonable and therefore shook my original position. Afterwards, I carefully thought about it and believed some ideas distorted rote learning. I chose to insist on my position….I also analyzed the similarities and differences between the author's view and mine.] |
| **Planning** | *…during the process of reading, I built the structure of my article at the same time.* |

TABLE 7   The number of participants engaged in analytical reading.

| Group | G1 | G2 | G3 |
|---|---|---|---|
| Rote learning | 3 | 6 | 5 |
| Global warming | 2 | 5 | 6 |
| Total | 5 | 11 | 11 |

reading accounted for their confusion, hesitation, analysis, and final decisions in the interview and reflective journals.

> I thought about the opinions of the writers and compared them with my own opinions, tried to figure out at what point I share the same idea with the two articles and at what point I have different ideas.
>
> I was afraid their views were too radical, so inappropriate. I exercised my critical thinking and checked the quoted research findings and logical analysis. I found they are substantial and convincing.

Apparently serving the ultimate writing, and having thought about and collected the information and ideas, planning was natural for most writers during the phase of reading for writing. Seventeen out of 18 writers from the rote learning groups and 14 out of 18 from the global warming reported that they deliberately

TABLE 8   The sub-stages of writing from reading process.

| Sub-stages | | Examples |
|---|---|---|
| **Planning/outlining** | | 写作前,写了个提纲,中文的,想到可以用的都写下来。[Before writing the essay, I produced an outline in Chinese, putting down everything that might be useful.] |
| **Drafting** | Rereading | *I definitely referred to the passages when I wrote my article. I had to list evidence to prove the phenomenon of global warming does exist. When I talked about how people face to this, I also referred to the passages.* |
| **Revising** | Editing | 完成之后又修改,主要是语言修改,自己改的,不是看批改网建议。[When finished, I did some editing, mainly language editing on my own, not referring to the suggestions on Pigai.org.] |
| | Revising | *With article finished, I tried to polish my expressions and add more practical examples about celebrities who experienced rote-learning.* |
| | Rereading | *After finishing the whole article, I rethought the logic of my opinions, and read the two articles again, I found that creativity is not in fact what I was talking about, thinking is. Therefore, I returned to the article and read them two again.* |

planned for their own essay writing across the sub-stages of reading for writing.

> I mainly looked for the content relevant to my own viewpoint when reading. I read the articles with clear purposes, in other words, I was thinking about my own writing when reading.

## 3.3 Writing from reading

The cutting line between the reading-for-writing phase and writing-from-reading phase was indistinguishable. Not very different from topic-based writing, the following sub-stages were identified: planning/outlining, drafting, and revising (see Table 8 for the examples). The writing act emerged in as early as the pre-reading phase as many participants started conceiving their writing plans before reading the source texts; such planning for writing permeated the task process until they started drafting the response essay. Nonetheless, the thoughts over planning were constantly interrupted during pre-reading and reading, for example, by a need to check a new word in a dictionary, or one to assess the validity of a piece of evidence. Eventually, it was time for the writers to concentrate solely on the essay writing in the current phase.

Planning, or a better term at this moment, outlining, was prevalent among the writers. From both topic groups, almost all reported in the interview and reflective journals that they either produced a written outline or one in their mind.

> Before writing, I planned three paragraphs for my essay. And I prepared evidence for each paragraph.

The outline was right in my mind. But I did not write it up. I knew where to find the evidence from the reading passages.

Not much was reported about how the writers put down each line of their essays; however, rereading was mentioned by almost all of them, mainly for the following four purposes: ensuring that the highlighted information or ideas were not mis-quoted or misrepresented; further mining new information or ideas; rereading some lines to press further thinking; seeking language help.

When I was not sure about the information, I would go back to reading.

When I was stuck in the process of writing, I also rescanned the passages to seek further inspiration.

When I hesitated about the structure [of my essay], I went back to the underlined parts to look for breakthroughs.

Clearly, planning went together with rereading during the sub-stage of drafting. the writers' metacognition about writing functioned at this stage, facilitating the development of the essay writing.

The act of revising was rare as many participants complained about the shortage of time. Most of them reported doing surface-level editing. Among a couple of writers who did find time rethinking about their written work, they reread the source texts, prompted by the need of revision.

I did some content revision, that is, adding something.... When I added the point, I surely went back to reread the passages.

# 4 Discussion

The above exploration of the major phases as well as the corresponding sub-stages led to the disclosure of the following compelling dimensions of source-based writing in the context of the present study. The phases of reading and writing could be hardly separated from each other. The integration skills were mostly present in the sub-stages. The very two sub-stages, rereading and planning in particular, made prominent contributions to revealing the reciprocal interaction between the phases. In addition, the participants exercised their leaner agency in the process of the reading-to-write task. The following discussion of these dimensions in light of the findings may shed light on both the construct and instructions of L2 integrated writing.

## 4.1 The inseparable phases of reading for writing and writing from reading

The inseparability of reading and writing phases permeated the whole process of the reading-to-write task (Chaffee, 1985; Flower and Hayes, 1985; Grabe, 2003; Nelson, 1998; Spivey, 1990). At the very beginning of pre-reading phase, an intentional task design for a detection of the writers' initial view decision, they started away with a set of preparatory acts beyond simply "reading task prompt and instructions" in the "pre-writing" phase according to Plakans (2008)'s working model of reading-to-write tasks; moreover, writers

also brainstormed ideas, predicted about the source reading, and made preliminary plans for the response essay. Brainstorming and planning are typical preparations for writing tasks while predicting about the source reading is a natural step before the reading phase. The skill integration of reading and writing naturally occurred from the very start, which could be attributed to the hybrid nature of the reading-to-write task (Spivey, 1990) as well as the agency of L2 writers activated by their previous knowledge and experience (Fitzgerald and Shanahan, 2000; Flower and Hayes, 1980).

If the pre-reading phase was a prelude to the whole process, the inseparability of the actual reading and writing phases was obvious for the distinct purposes of both phases and hence, the roles and identity of the writers.

The purpose of reading in the present study went beyond comprehension though comprehension was the first step and basis of the latter ones. As source reading was targeted at the ultimate response writing, the reading phase was loaded with writing purposes which turned out to be "writerly reading" (Hirvela, 2004; Smith, 1983; Spivey and King, 1989) during which readers actively mined for support from the source texts (Greene, 1992; Hirvela, 2004) as most of them typically did so in their rereading stage (Solé et al., 2013). When writers "mined" or read to integrate, they interpreted the source texts semantically as well as rhetorically (Trites and McGroarty, 2005) so that they were able to appropriately integrate their understanding of the source texts into the discussion of their own points of view in the response essay. Such a complicated and recursive reading phase was presented as part of a "pre-writing phase" in Plakans (2008)' working model of reading-to-write tasks, which apparently cast the attention on writing only without giving credit to reading as an inherent part of an integrated writing task. The reading-writing interaction was signified by bidirectional arrows. Nonetheless, how the interaction took place was not thoroughly explored nor described in detail.

Unsurprisingly, the phase of writing of the present study was not limited to sub-stages concerning writing acts alone. It proceeded with constant interactions with the source reading. However, the box labeled "using source text" during the writing phase in Plakans (2008)' working model of reading-to-write cannot accurately present what happens. During the drafting and later revising or editing the response essay, rereading and planning also occurred out of different needs and purposes. Source reading performed the role of a "constant companion" (Plakans and Gebril, 2012) and a "springboard" to assist the subsequent writing job (Jolliffe, 2007) as writers referred back to the source texts from time to time in the process of composing the response essay. The interaction between reading and writing was online all along. The inseparability of reading and writing and hence the recursive and reciprocal nature of reading-to-write tasks were manifest in the process.

In such a recursive and reciprocal task process, writers took a dual identity, i.e., they worked as both writers and readers when engaged in the response writing task, which in turn affected their purpose of reading or writing (Spivey, 1990). Conscious or subconscious of their dual identity in the present study, the writers took the initiative to develop plans of different kinds to perform their reading-to-write task at each phase. The active planning, a typical "monitoring" behavior, played a pivotal role leading to

TABLE 9 The number of writers planning in different phases.

| Groups | Pre-reading | Reading for writing | Writing from reading |
|---|---|---|---|
| Rote learning | 9 | 17 | 11 |
| Global warming | 6 | 14 | 15 |
| Total | 15 | 31 | 26 |

TABLE 10 The purpose of planning in each phase.

| Phases | Purposes |
|---|---|
| Pre-reading | A general writing plan |
| Reading for writing | Idea collection and development |
| Writing from reading | Outlining; idea organization and adjustment |

successful integrated writing tasks for writers could better manage their task process (Plakans et al., 2019). The writers of the present study did not aimlessly wander about the reading and writing task; instead, they were aware of what they needed to do at each phase. In some studies, the strong sense of task control or monitoring was attributed to the task design like think-aloud (Plakans et al., 2019); in some others, it was also considered to be elicited by the nature of integrated tasks (Ascención, 2008; Cumming et al., 2006; Plakans, 2009a; Plakans and Gebril, 2013). Under the circumstances of the present study, the latter makes a better sense. The hybrid nature of the reading-to-write task brought about the dual identity of the writers, who instinctively, actively, and deliberately planned for each step in the process.

The data and discussion of the inseparability of reading and writing in the present study contributed evidence from the Chinese context to the complex construct of integrated writing and offered some insight into the roles of the L2 writers.

## 4.2 The embedded sub-stages: planning and rereading

The complex and dynamic nature of reading-to-write tasks and the inseparability of reading and writing phases were especially prominent in the sub-stages of planning and rereading for their embedded occurrence based on the findings of the present study. Both the sub-stages recurred and co-occurred in the main phases of reading and writing.

The sub-stage, planning, in the three phases of this study presented its variety and complication due to the needs of the writers for different purposes. Consistent with the previous studies (Plakans, 2008; Plakans et al., 2019; Solé et al., 2013), planning in this study accompanied the writers from the initial pre-reading phase till the end of the response essay writing phase, showing its effect on the recursiveness of reading-to-write process. Also, the purposes of planning in different phases varied from one another, but not that simple as was accounted for as "Planning and organizing content" in the preparing-write phase and "Planning and rehearsal" in the writing phase in Plakans (2008)'s model. The number of writers (see Table 9) varied from one phase to another together with increasingly elaborate intents (see Table 10) for the accomplishment of the response essay writing.

Its patterns and purposes taken into consideration, planning worked as an important monitoring stage mediating between reading and writing acts. According to Table 9, the writers' need of planning were not very strong in the pre-reading phase, but peaked

in the reading phase, and kept the high level of need till the writing phase. Similar to the three-step planning for a conventional topic-based essay (Kellogg, 1996): a general goal-setting, idea generation following the previously set goals, and ultimately idea organization, it did not indicate a linear process as writers adjusted their plans from time to time during reading and drafting out of online and momentary needs (Flower and Hayes, 1981, p. 373). This is particularly true in an integrated reading-to-write task. Although it is not surprising that experienced writers tend to plan before drafting, the addition of reading gives rise to the need of planning in the process of completing a reading-to-write task (Ascención, 2008; Plakans, 2009a; Plakans et al., 2019). In this study, planning served unveiling the task preliminarily in the pre-reading phase, reached its climax in the reading for writing phase as the writers were busy collecting and developing ideas on the basis of the source content, and continued its functioning in the writing from reading phase for their need to organize, finalize and adjust their ideas. Planning bridged the phases of reading and writing and therefore, belonged to a shared process between reading and writing (Ruiz-Funes, 1999a,b; Plakans et al., 2019).

Also recurring in both reading and writing phases, and in many cases, embedded with planning, was rereading. Almost all writers reported rereading the source texts in the reading for writing phase as well as in the writing from reading phase. Their purposes of rereading went beyond comprehension and seeking language support (Cumming et al., 2016; Grabe and Zhang, 2013; Plakans and Gebril, 2012; Plakans et al., 2019); they reread the source texts out of content and logic construction needs for the subsequent response essay writing because as they further analyzed and contemplated the source ideas, for example, assessing the validity of the major claims and evidence of the source texts, they would work out their own final viewpoint decisions and how they would exploit or refute the claims or evidence in concern. When composing their own response essays, rereading occurred as the writers needed to confirm the selected information, seek new information, push forward their idea development, find inspirations to generate new ideas. All such needs were not limited to basic comprehension or lexical retrieval; they served the logical and textual formulation of the final written product. These purposes of rereading naturally elicited new rounds of planning as the writers would adjust their idea generation and therefore, organization. As a "higher-level reading" (Pan and Lu, 2023, p. 9), pressing further thinking and more elaborate goal-setting, rereading accompanied the ongoing process of planning.

Planning and rereading worked together to bridge reading and writing in the present response writing task though the former is a conventional writing sub-stage, and the latter a typical reading sub-stage. They, too, were hardly separable, for their recurrence in both

phases, which also represented the recursive and reciprocal nature of the integrated task. Planning is considered "the only reflective process" that guides the goal-setting processing and adjustment (Flower and Hayes, 1981; Hayes, 1996). In an integrated reading-to-write task, rereading could be viewed as an additional "process" that elicits reflection on both reading and writing. In the process analysis of previous studies (for example, Plakans, 2008), planning has not been given sufficient attention to while rereading was generally taken as a reading strategy for further comprehension, mostly for the purpose of seeking linguistic support (Plakans, 2009a). Their interactive relationship has not been even mentioned, let alone discussed. The findings of the present study contributed to the discovery and understanding of the two sub-stages.

## 4.3 Learner agency in play in the process of reading-to-write

One dimension that can hardly be ignored in the process of the current reading-to-write task was the roles of the Chinese writers. It has been extensively stressed that in addition to a set of skills required for an integrated writing task (Solé et al., 2013; Yang and Plakans, 2012), the roles and efforts of the writers cannot be ignored. The initiative of learners in a learning activity is termed "learner agency" (van Lier, 2008; Mercer, 2012). The way they exercised their agency contributed to their task performance by capitalizing their cognitive, metacognitive as well as contextual resources.

The cognitive and metacognitive resources facilitated the immediate enactment of learner agency and its later ubiquity in the process. The writers' prior understanding and experience with reading and writing argumentative pieces prompted them to be engaged in a set of sub-stages from the beginning pre-reading phase, through the reading for writing phase and till the eventual writing from reading phase. For instance, the sub-stages during the pre-reading phase—brainstorming what they had already known about the topic, predicting about the source texts, setting up an initial view, and even planning for the ultimate writing task—all took place within 5 min. The instant reaction to the given integrated task clearly came from the learning and training they had received from previous education, including but not limited to the writing course they were attending at the time of the study. The self-initiated actions without been pushed or instructed were typical presence of learner agency in a learning activity (Lin, 2013). Learners did not wait to be instructed to respond to a given task; instead, they actively reacted to the context and even impacted on the context, which supported both the presence of their agency and willingness to exercise their agency (Mercer, 2011, 2012).

The much-discussed metacognitive and self-regulatory elements in learner agentic system were particularly prominent in the sub-stages, planning and rereading, across both reading and writing phases. Indirectly contributing to the ultimate products, the two metacognitive stages (Plakans, 2008; Plakans et al., 2019) suggested the writers' awareness of their capacities of learner agency (Brown, 2009). In the present study, the participants all underwent rereading for their belief in its necessity in order to further analyze the source texts and better prepare for the

subsequent response writing. Such awareness also led a number of writers to plan more than once, with greater elaboration of ideas and details over the process of task performance. Planning and rereading, either during the phase of reading or writing, mostly co-prompted the need of each other, pushing forward the task process or contributing to a better end-product.

Cultural belief and experience constituted significant resources for learners to enact their agency when deciding on view positions. In the present study, this was particular true with the topic, rote learning. The Chinese writers presented a mixed feeling toward the frequently employed learning approach in China, which can be dated back to its ancient times. On the one hand, the writers hated the method for the boredom and tediousness it brought to their learning process; on the other, when facing criticisms against the method, many of them turned to defend it by sharing their own experience to support its effectiveness. The attachment to their cultural tradition of repeated recitation could be part of the reason for their strong reaction to the disapproval of the source texts arguing against rote learning method. In contrast, as for the topic, global warming, a less culturally-loaded one, the writers did not hesitate too much and most chose to follow the idea that the phenomenon does exist. From the socio-cultural perspective, affective factors (Bandura, 2008) definitely have their impacts on whether and how learners exert their agency on an activity. The cultural factors involved in the writing topic entailed the enactment of the Chinese writers' agency, impacting on their evaluation of the source views as well as the final decision on the views of their own response essay writing.

The above-mentioned factors prompting the exercise of learner agency in the present reading-to-write tasks influenced the decisions and emergent sub-stages of the task process. They co-acted, and therefore, should be discussed in a holistic manner, which also provided evidence for why and how the process of a reading-to-write task was dynamic, recursive and reciprocal.

## 4.4 Developing a new model of reading-to-write tasks

In light of the findings about the phases and sub-stages as well as their relationships and interactions, a tentative new model of reading-to-write tasks was proposed as follows (see Figure 1).

The main phases are presented in boldface located in three different boxes connected with arrows of different types. The sub-stages are included in each corresponding phase box. The pre-reading phase is a separate one from the other two. On the one hand, it is part of the special design of the present study; on the other, in any writing task, this phase is a naturally elicited one due to writers' cognitive sequence. It is connected to the phase of reading for writing by a unidirectional arrow for it occurred before the source texts were handed out.

The other two main phases, reading for writing and writing from reading are presented in the other two boxes connected to each other by bi-directional arrows, indicating their inseparable relationship as well as ongoing interactions. The sub-stages, planning and rereading, are positioned to highlight the frequent interactions between the main phases mainly by their bridging

**FIGURE 1**
A new model of reading-to write tasks.
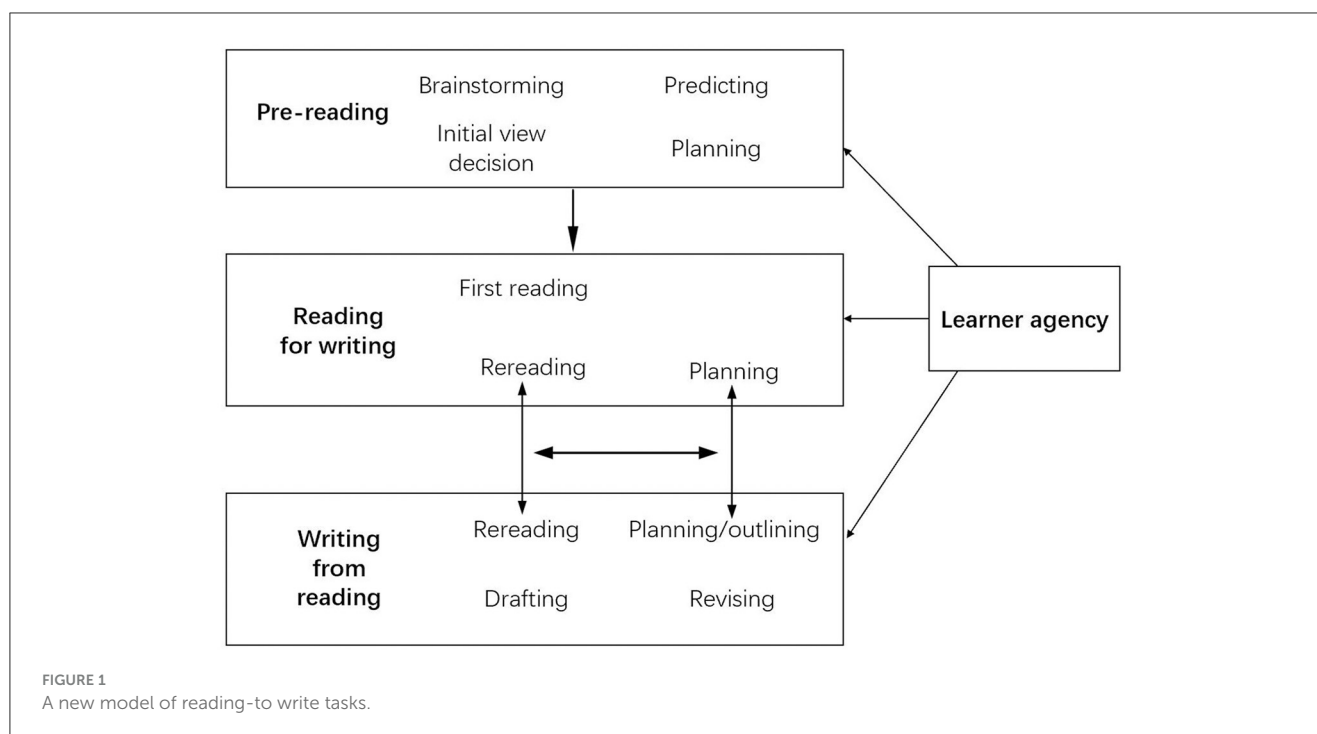
function in between. The bidirectional arrow right between rereading and planning presents their potential co-occurrence and inseparability, that is, some plans might have been generated by rereading the source texts, or new plans could have triggered the need of rereading.

Learner agency is placed beside the three phase boxes, linked to them by unidirectional arrows, signifying its ubiquitous roles in the process.

The new model avoids presenting the process of reading-to-write in a linear manner with unidirectional arrows linking the boxes of the main phases. Except planning and rereading, the positioning of the other sub-stages is not fixed as the sequence of their occurrence cannot be exactly presented as the writers might not undergo all the sub-stages or follow the same route out of individual factors. Planning and rereading are intentionally positioned at the edge of the boxes, bridging the main phases of reading and writing, indicating their function as a channel for free communication between them, disclosing the hybrid, recursive, and reciprocal nature of reading-to-write process. Also, their parallel positioning suggests potential chronological overlapping and equal significance.

Without abandoning the conventional cognitive perspective to interpret writing process in the late 20th century (Bereiter and Scardamalia, 1987; Flower and Hayes, 1980, 1981; Hayes, 1996; Kellogg, 1996), the new model attempts to present the unique procedures and process of reading-to-write tasks. While previous models, for example, Plakans (2008)'s model of reading-to-write tasks, casts the central attention to the writing phase, the new model gives equal weight to the phases of reading and writing. The reciprocal and recursive nature of the process has also been captured and presented by the

constant interaction between reading and writing through a set of sub-stages.

In addition, these phases and sub-stages of reading and writing involve recursive and reciprocal decision-making processes of the writers. For the realization of the dynamic interaction, the learners cannot standby and passively receive the source texts; instead, they actively make decisions under the test conditions in their individual context. "A model is a metaphor for a process…." (Flower and Hayes, 1981, p. 368). In other words, an effective model can represent the key procedures as well as other contextual factors involved in a process. Also, some individual factors might have affected the performing processes of a response essay task in the present study as "there are as many writing processes as there are people who write, things to write, and goals to be served" (Kennedy, 1985, p. 439). The box "learner agency" in this new model is aimed at acknowledging the significant roles learners play in the process of reading-to-write tasks. Complicated yet dynamic as the process is, its recursiveness and reciprocity make an inherent part of integrated writing tasks (Cheong et al., 2019; Grabe and Zhang, 2013; Wette, 2017).

Tapping into the detailed processing of a reading-to-write task, the present study contributed data from the Chinese context to further supporting the non-linearity, yet recursiveness and reciprocity of integrated writing. The role of reading not simply manifested its significance at the level of comprehension and source selections, but was prominent and essential when rereading recurred, where writers further analyzed the source texts and adjusted their writing plans. In particular, the embeddedness of planning and rereading characterized the inseparability and hence the connection and interaction between the phases of reading and writing. In addition, individual roles could not be ignored in this complicated process. The Chinese writers in this study

were found to have actively exercised their learner agency initiated by their previous learning experience as well as the on-the-spot motivation to well accomplish the task. A new model was eventually constructed based on the qualitative findings of this study, giving equal attention to reading and writing and taking learner agency into consideration. Hopefully, the account of the process may inform further understanding of the construct of reading-to-write tasks.

The findings of the study also suggest implications for L2 teaching of reading and writing. First of all, reading and writing instructions should be included in L2 curriculum design in a combined manner (Hirvela, 2004). The inseparable connection between reading and writing in integrated academic tasks requires the inclusion of explicit instructions in the courses for L2 students to acquire fundamental skills (Zhang, 2013). The evidence from the present study shows that in addition to basic comprehension, deep-level reading (for example, analytical reading) can be taught and trained. Systematic planning, with goals more elaborate one after another in the process of reading and writing, can also be important content of course instructions. Also, such instructions should be offered early and iteratively in the L2 teaching as learners need accumulate experience with the task type overtime (Grabe and Zhang, 2013). The findings of the study once again indicate that the cognitive processes are not the only factors impacting the process of reading-to-write tasks (Plakans, 2009b; Solé et al., 2013); learner roles cannot be ignored and await to be further researched. How learners can well enact their agency in the process of integrated writing tasks can be guided according to their specific circumstances. The complication of the academic task entails intentional teaching in L2 context.

Exploratory and qualitative-oriented as it is, the present study incurs several limitations in methodology. First of all, data collection and data analysis came from immediate retrospective interviews and reflective journals shortly after the response writing task was completed. The loss of memory and inaccuracy of reflections were inevitable. Secondly, the average number of participants of each group is relatively small. Caution should surely be urged for generalization of the findings. Thirdly, the topic selection of source texts should also be reconsidered for familiarity with and interest in the topics may also affect the processing of readings and interpretation of the ideas. Fourthly, learner agency has not been clearly categorized in correspondence to the phases and sub-stages. In the end, proficiency threshold has not been taken into consideration. The L2 writers of different proficiency levels may choose different approaches or routes to access and process a reading-to-write task. Future research could try a combination of both online methods (e.g., think-aloud protocol or eye-tracking devices) with retrospective approaches, a larger population of participants from various proficiency levels, new and intriguing topics of readings, and a thorough exploration into the impact of learner agency, so that the model can be further examined and thus improved.

Though having been researched to a great extent over the last few decades, reading-to-write tasks have not caught sufficient attention in second language teaching and learning. The present study revisited the process of reading-to-write tasks in a more detailed manner on a group of Chinese learners, contributing new data to the field of integrated writing, supporting the recursive and reciprocal nature of the hybrid task type, and building a new model by highlighting the significant roles of the sub-stages, rereading and planning. In addition, learner agency was considered to play important roles in the process. Further research could be conducted to verify and improve the model, taking into consideration the educational, cultural, and contextual challenges of L2 learners so as to provide fresher understanding of the construct of integrated tasks.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

The studies involving human participants were reviewed and approved by Science and Technology Research Ethics Committee/Social Science Sub-Committees of Nanjing University. Written informed consent to participate in this study was provided by all the participants.

## Author contributions

LW: Writing – original draft.

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## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Publisher's note

## Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/flang.2024.1422123/full#supplementary-material

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# From local to global: systematically reviewing higher education internationalization in Asia

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With the advancement of globalization, English as a key resource for knowledge, business, and culture has become increasingly important in higher education. This study aims to explore the challenges of English education in the process of internationalization of higher education in Asia, especially in China. This study systematically reviews relevant literature associated with Asian countries, focusing on the impact of English-medium instruction (EMI) courses on student performance in China, Japan, and Central Asia. The findings indicate that while English education provides students with broader international communication opportunities, it also poses challenges in terms of cultural identity and academic performance. Furthermore, changes in policies and practices have had a profound impact on the experiences of teachers and students, especially in the context of international schools and education centers.

KEYWORDS

internationalization, higher education, English education, cultural identity, globalization

## 1 Introduction

English education plays an important role in internationalizing higher education in Asia. Under globalization, policies, and practices of internationalization in higher education generally recognize the significance of English in generating, circulating, and disseminating knowledge (Dimmock and Walker, 2005). At the same time, internationalization in higher education has prompted the growth of English-taught courses and partnerships with overseas universities in most Asian countries. As Asian higher education places increasing emphasis on English, the language is being leveraged more by Asian countries and institutions as a resource for commerce, politics, knowledge, and culture.

However, rapid socioeconomic changes have posed major challenges for 21st century higher education (Shin and Harman, 2009). Issues in Asia-Pacific and globally have drawn research attention (Le Ha, 2013). Previous studies have explored different interpretations and rationales for the role of English in higher education internationalization across Asia.

For example, Shimmi and Yonezawa (2015) examined how cultural identity formation and risks have materialized under internationalization policies and practices in Japan. They also highlighted the challenges faced by top Japanese research universities in retaining global status. Experimental English-medium instruction was found to have initial negative impacts on student outcomes in Central Asian universities. A study by Nurshatayeva and Page (2020) reported lower GPAs, reduced graduation probabilities and more course failures. Factors influencing international students' cultural adaptation were examined in the context of Malaysia by Shafaei et al. (2016). Based on Berry's cultural adaptation framework, they studied the effects of individual characteristics like gender, region of origin, marital status, education level as well as predictors such as English proficiency, media use and post-graduation plans. Scholarship availability, reputation and geographical/cultural proximity emerged as key attractors for Thailand's growing higher education enrollment, according to Snodin (2019). However, the literature tends to privilege native English-speaking country experiences over those from developing countries. Insights can also be drawn from studies in South Korea and Japan (Park et al., 2022; Itoi and Mizukura, 2024). However, existing literature lacks integration across Asian countries and overlooks contributions from China. The current study aims to address this gap by analyzing policies and practices across multiple Asian countries (e.g., China, Japan, South Korea) to understand the role of English in higher education internationalization.

Through reform and opening-up over 40 years, China has achieved outstanding successes in higher education internationalization including strengthened educational cooperation, emerging models like Confucius Institutes and dual degree programs, regional mechanisms, and evolved policies supporting inbound student mobility (Lien and Miao, 2023). China's experience thus provides valuable insights into facilitating Asian higher education internationalization. While studies on foreign language education in Chinese higher education provide insights into challenges facing internationalization in China, literature on the subject lacks systematic reviews. Therefore, this study systematically reviews the development of educational internationalization in China and other Asian countries, and challenges in foreign language education, through a systematic review. With the accelerating process of economic globalization, the tide of higher education internationalization cannot be ignored. Internationalization presents both opportunities and challenges for the development of Chinese higher education. This study aims to explore challenges facing higher education. It further seeks to refine research on challenges in Asian higher education, particularly foreign language teaching. A systematic search of relevant databases was conducted based on predetermined criteria. Studies published in English that evaluated challenges and practices regarding internationalization across Asia, with a focus on China, were included.

The review synthesized findings from 13 empirical studies. Key themes that emerged included insufficient English language proficiency hindering intercultural exchanges, limited experience abroad for students and faculty, lack of targeted programs and policies supporting internationalization, imbalanced inbound-outbound student mobility, insufficient institutional support systems, and perceived cultural risks like loss of identity under expanding English-medium instruction.

Recommendations proposed enhancing English education, diversifying international partnerships, expanding exchange programs, scholarship incentives, cultural training, capacity building for international offices and bilingual instructional resources. Limitations and directions for future research were also discussed. This systematic review offers a consolidated perspective on achievements, persisting issues, and strategies relevant to Asian nations seeking to navigate opportunities and overcome challenges in internationalizing higher education.

# 2 Internationalization of higher education in Asia

## 2.1 The global expansion of higher education

The global expansion of higher education has been marked by a substantial increase in access and enrollment rates worldwide. Some of the previous studies attribute this growth to factors such as rising middle-class populations, government initiatives, and the growing recognition of education's importance in the knowledge economy (Alexander, 2020; Chakraborty, 2021; Cantwell et al., 2023). Internationalization has been a key driver of higher education expansion. However, some argues that despite overall growth, inequalities persist in access to higher education, particularly in low-income countries and among marginalized populations (Reinders et al., 2021; Mello, 2022). Geibel (2020) highlight the increasing mobility of students, faculty, and programs across borders. While traditional destination countries like the United States and United Kingdom remain popular, new regional hubs are emerging, particularly in Asia and the Middle East. Mello et al. (2023) explore the impact of the COVID-19 pandemic on internationalization, noting that while physical mobility was temporarily disrupted, it accelerated the adoption of virtual exchange programs and online international collaborations. The rapid advancement of technology has played a crucial role in the global expansion of higher education. The global expansion of higher education has been facilitated by the proliferation of technologies that have increased access beyond traditional campus boundaries. Yu et al. (2024) examined how Massive Open Online Courses (MOOCs) and other forms of online learning have significantly expanded educational access. However, some studies caution against an over reliance on technology alone. Quaicoe and Pata (2020), Aydin (2021), Afzal et al. (2023), and He et al. (2024) highlighted issues such as the digital divide and need for quality assurance and digital literacy training for both students and faculty in online education models.

As higher education expands globally, ensuring quality standards has become increasingly important. Carvalho et al. (2023) discussed the challenges of quality assurance in cross-border education and the need for international accreditation frameworks. Other studies have focused on issues of sustainability in the context of expansion. Wang et al. (2024), for example, analyzed English teachers' motivation in Macau's higher education post-pandemic while Xu and Sukjairungwattana (2022) examined questions of

funding sustainability. Varghese and Panigrahi (2023) reviewed various models of financing including public funding, private investment and cost-sharing, emphasizing the need for student support initiatives to promote equity and social justice.

The globalization of economies and societies has enabled the global integration of higher education systems. Ng (2012) noted how marketization and internationalization policies have supported the expansion of higher education in emerging Asian giants like India, China, Indonesia and Malaysia. Ardakani et al. (2011) highlighted how international academic networks, conferences, student/faculty exchanges can enhance global visibility and reputations of institutions, attracting more resources and opportunities. Thi Thu Le et al. (2024) discussed the important role of internationalization in promoting cultural understanding, education quality, workforce skills and research in the current Asian context. According to Ng (2012), implementing internationalization is crucial for universities, students and development across Asia.

## 2.2 Impact of foreign language education on internationalization

Dlaska (2012) lays the groundwork for understanding the development of modern foreign language curricula in higher education and their role in supporting internationalization agendas. This provides important context for how language education policies have evolved. Rose and McKinley (2018) analyze Japan's Top Global University Project, which indicates a shift toward more flexible and unique forms of English language education in Japanese universities compared to past approaches. Their results demonstrate how language policies are changing at the national level in response to internationalization. Building on this, Hellmich (2018) emphasizes the importance of foreign language education for developing deeper cultural understanding between countries. This links language learning to broader internationalization outcomes around cultural exchange and competence. Meanwhile, Dang et al.'s (2013) study examines the use of English as a medium of instruction in Vietnamese higher education as a response to internationalization and pressures to boost English proficiency. Their analysis of an EFL teacher training program illustrates how global influences can shape language teaching practices through various factors.

## 2.3 The internationalization of foreign language education in China

Due to its size and connectivity to other economies, China's internationalization efforts have significant implications both domestically and globally. Consequently, China has been selected as a focus country, as it has prioritized expanding its presence and influence in international education in recent decades.

Research on foreign language education in China has examined a variety of areas relevant to internationalization. Studies have focused on language policy, cultural identity, and socioeconomic impacts within the nation's diverse ethnic and regional contexts. Language is closely tied to expressions of cultural identity.

Liu (2023) discusses how language acts as an important constituent in constructing ethnic identity. Foreign language policies in particular have been used to shape understandings of ethnicity under different historical and geopolitical circumstances. Liu's research illustrates how more open language policies may contribute to national prosperity.

Exploring such linkages between language education and cultural dimensions provides insights into internationalization within China. Foreign languages impact socio-cultural understandings as well as economic mobility. Foreign language education in China has not undergone systematic planning but has developed in adapting to constantly changing socio-political circumstances, meaning it is largely determined by political, economic, and educational motivations (Li, 2007). Currently, major defects in English learning in China lie in English teaching curricula, autonomous learning, and the education system. For Chinese foreign language learners, autonomous learning skills and self-regulation are crucially important for effectively applying language in real contexts (Huang X. et al., 2024). Hu et al. (2024) examined the evolving challenges of English education policy. They found that the focus has shifted from developing students' basic and practical skills to now emphasizing deeper research abilities and solving real-world problems through education. The researchers provided policymakers with a more robust and thorough understanding of English education policy issues. This greater insight allows decision-makers to better accommodate educational needs and face challenges in the current globalized context.

## 3 Methods

This systematic review was conducted on the basis of the framework of the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) (Haddaway et al., 2022). By taking advantage of PRISMA flowchart, this systematic review outlined the selection process of literature for inclusion and exclusion. Through selection, high quality articles can provide comprehensive insights into Asia education internalization.

Based on the literature review, the present study addresses the following research questions:

What are the challenges faced different Asian countries, and how can they seek a balance between maintaining local cultural identity and implementing English-medium instruction models, especially in managing the policy, implementation and capacity building challenges of internationalizing higher education?

To gather and analyze all eligible literature, during June 2024 to July 2024, a list of keywords like "Chinese education internalization" or "English education" "higher education internationalization in Asia" were employed to search for related literature.

The inclusion and exclusion criteria used are as follows:

Inclusion Criteria: (1) Studies employ rigorous, well-structured research designs and are written in academic English. (2) Studies provide sufficient information needed to conduct a systematic review, such as details on methods, participants, measures, results, etc.

Exclusion Criteria: (1) Studies not written in English. (2) Studies that fail to provide adequate information to be included

in a systematic review. (3) Studies that cannot be accessed or retrieved in full text.

Any studies meeting the above inclusion criteria and not excluded based on the exclusion criteria will be considered eligible for inclusion in the systematic review. This establishment of clear inclusion/exclusion standards aims to ensure only relevant, high-quality sources are analyzed (Yu et al., 2024). The flowchart (Figure 1) shows the research method employed for article selection.

Based on the exclusion criteria mentioned in the flowchart, a total of 13 relevant studies were selected from the initial pool of 267 articles identified from Scopus. The 13 studies were analyzed in detail to find about the types of language interaction and impacts. By establishing a rigorous methodology, systematic reviews minimize bias in the selection of studies and facilitate rigorous data synthesis and analysis across multiple qualitative and quantitative investigations. This analytical approach allows researchers to uncover patterns and trends within and across studies on a topic. Additionally, systematic reviews play an important role by identifying gaps in the existing research literature, thus guiding opportunities for future study. Given their comprehensive and unbiased analysis of all available high-quality evidence, systematic reviews provide valuable insight for both researchers looking to advance scientific understanding as well as practitioners and policymakers seeking reliable evidence to inform decisions. Their structured methodology yields robust conclusions regarding a research question or issue. For these reasons, systematic reviews have become influential in fields from education to healthcare to public policy (Liu and Xu, 2024).

# 4 Results and discussion

This section presents an analysis of the findings from selected studies on the challenges and opportunities related to higher education internationalization in China and Asia (Table 1). The issues identified across the studies in the first subsection are categorized into policy, implementation, capacity building, sociocultural, and research and assessment challenges. The second subsection offers insights and recommendations for addressing these challenges, focusing on strategies to enhance the effectiveness of internationalization efforts, including balancing global engagement with local needs, enhancing English as a Medium of Instruction (EMI) programs, and cultivating regional cooperation.

## 4.1 Challenges in China and Asia

All the selected studies have discussed the challenges in China and Asia. These challenges are classified into the following categories:

Policy challenges: Managing external influences while maintaining national identity (Henry Osokpo et al., 2021).

Operationalizing SDG connections and global frameworks in national contexts (Jon and Yoo, 2021; Teter and Wang, 2021). Developing coordinated strategies and partnerships (Ryu and Nguyen, 2021).

Implementation challenges: Developing strong talent mobility ecosystems while managing brain drain/gain (Qu and Dai, 2024). Ensuring quality over quantity in EMI programs and content learning (Galloway et al., 2020). Coordinating expansion while ensuring program quality amid massification (Jung, 2020).

Capacity building challenges: Developing globally competitive English language programs and faculty proficiency (Gundsambuu, 2019). Addressing quality, access and institutional capacity issues across diverse systems (Bakhru, 2019). Sustaining participation in regional initiatives and optimizing benefits (Munusamy and Hashim, 2021).

Sociocultural challenges: Overcoming inward-looking tendencies of youth (Yonezawa, 2020). Standardizing qualifications while reducing cross-border mobility barriers (Bakhru, 2019).

Research and assessment challenges:

Understanding phenomenological impacts of policy changes (Poole and Qin, 2024). Measuring diverse functions and developing meaningful outcome indicators (Williams and Bentley, 2021). Establishing effective monitoring mechanisms (Teter and Wang, 2021).

## 4.2 Suggestions for handling the challenges of internationalizing higher education

The review revealed several key challenges to higher education internationalization in Asia, especially in China, particularly related to EMI implementation, balancing global and local needs, and coordination across diverse systems. Based on these findings, several suggestions emerge for addressing the challenges. For example, we can conduct further qualitative research that engages with multiple stakeholders could help develop a richer understanding of the phenomenological impacts of policies on the ground (Poole and Qin, 2024). Strategic frameworks that sensitively integrate local needs and traditions with priorities for global engagement may help balance external influences with national identity (Henry Osokpo et al., 2021). By leveraging university-industry-government partnerships through incentive programs could help strengthen ecosystems conducive to talent mobility while mitigating issues like brain drain across dynamic conditions (Qu and Dai, 2024; Gundsambuu, 2019). Moreover, Qu and Dai (2024) consider adaptation of transnational education models leveraging digital technologies and blended learning may facilitate continued engagement amid changes to the global environment. Implementing coordinated quality assurance frameworks including systematic accreditation and qualifications recognition mechanisms could help surmount barriers to regional student and faculty mobility while enabling comparability (Bakhru, 2019). Flagship programs delivered in English with appropriate linguistic support infrastructures may attract strategic international enrollment and collaboration (Gundsambuu, 2019; Yonezawa, 2020). Forging cooperative regional agreements around key issues such as recognition of qualifications, mobility schemes, and harmonization of cross-border data standards could help address coordination challenges resulting from systemic diversity (Bakhru, 2019; Williams and Bentley, 2021). Capacity building networks and targeted knowledge exchange initiatives may also

TABLE 1 The details of included studies.

| No. | Title | Authors | Objectives | Methods | Key points | Conclusions |
|---|---|---|---|---|---|---|
| 1 | Nationalizing the international in China: A phenomenological study on the purpose of international schooling in an era of regulation. | Poole and Qin (2024). | Addresses the gap in understanding how recent regulation has impacted actors at the phenomenological level beyond just institutional impacts. Gains insights into the impact of regulation on lived experiences by analyzing teachers' understanding of international schooling. | Uses survey and in-depth interview data with teachers from an international school in China that explored their understandings of international schooling. | Explores how recent policy changes in China affect teachers' experiences in international schools, using cosmopolitan nationalism to examine the local-global dynamic. Qualitative data was gathered to understand teachers' views. | Regulation had little impact on teachers' beliefs, possibly due to normalization or delayed internalization. Teachers held two views: 1) international schools as diverse alternatives, and 2) nationalism with peripheral cosmopolitanism. |
| 2 | Education hubs in a globalized world: The emergence of China. | Qu and Dai (2024). | Explores the development of education hubs in China and their role in promoting regional development. Addresses gaps in literature on education hubs in China through comparative case studies. | conduct case studies of three education hubs in China: (i) the International Collaborative Education Exemplary Zone; (ii) the International Higher Education Demonstration Zone; and (iii) the International Education Innovation Pilot Zone. | Discusses education hubs as the third generation of cross-border education initiatives enabled by internationalization. Focuses on gaps in literature on education hubs in China compared to Southeast Asia and Middle East. Conducts case studies of 3 education hubs in China: iZJU, GBA, Hainan FTP to understand their emergence and impact. | Education hubs face challenges to develop ecosystems for attracting education providers and global talent mobility. Opportunities include responding to demand for transnational education and innovation through university-industry-government partnerships. |
| 3 | Global Ambitions: Internationalization and China's Rise as Knowledge Hub | Henry Osokpo et al. (2021) | Analyzes China's higher education reforms and opening up from an international perspective. Places recent reforms in the context of China's longer history of cultural exchange with other regions. | Uses historical and literature review methodologies to analyze the evolution of China's higher education system and its internationalization. It also incorporates document analysis of policies and official reports to support its arguments. | Discusses changes in China's higher education system over the past 4 decades since reform and opening up. Focuses on international dimensions and how this period opened Chinese's mind to the outside world after the Cultural Revolution. Notes China's longer history of relations with outside world through spread of Confucianism and Buddhism in earlier eras. | Reform and opening up represented not just economic/political changes but an opening of Chinese's mind. Ongoing debates within China around incorporating outside ideas while retaining Chinese essence. China has risen as a knowledge and education hub, attracting many international students. |
| 4 | India an emerging higher education hub for South Asian countries: Globalization and internationalization essential keys for growth of South Asia | Bakhru (2019) | Examines current state of higher education in South Asia, particularly India. Discusses trends, internationalization efforts and future possibilities. Explores potential for India to emerge as an educational hub for South Asia. | Synthesizes existing data and reports to examine the current state of higher education in South Asia, with a particular focus on India. | Shows that (1) higher education is key to addressing changes from internationalization in South Asia regarding growth, poverty, competitiveness, jobs; (2) South Asia is growing exponentially but faces challenges of employability and education quality; (3) India, as the largest economy in South Asia, should take a lead role in higher education; (4) India is preferred destination for South Asian students, presenting opportunity to establish educational hub. | India is well positioned due regional demand and policies supporting internationalization. Developing world-class institutions and programs can attract more regional students. Stronger regional cooperation frameworks could facilitate India becoming education hub. |

*(Continued)*

TABLE 1 (Continued)

| No. | Title | Authors | Objectives | Methods | Key points | Conclusions |
|---|---|---|---|---|---|---|
| 5 | Internationalization and English as a Medium of Instruction in Mongolian Higher Education: A New Concept. | Gundsambuu (2019) | Examines internationalization efforts at Mongolian universities. Explores faculty views on rationales for introducing EMI. | Uses a mixed-methods approach, combining qualitative document analysis of policy documents, university reports, and conducts an online survey with faculty members. | Finds out that (1) Internationalization is forcing universities to internationalize to survive growing competition; (2) Mongolian universities plan to offer more English courses/programs to boost competitiveness, visibility in Asia; (3) Mongolia's internationalization process and faculty perceptions of English medium instruction (EMI). | Government plays a key role in internationalization through policies and initiatives. Faculty see EMI aims to improve graduates' English skills for global careers and boost university profile. |
| 6 | Challenges of the Japanese higher education Amidst population decline and internationalization | Yonezawa (2020) | Examines challenges of Japan's higher education transformation amid demographic/economic changes. Analyzes government reforms and policies to promote internationalization. | Reviews historical trends and analyzing publicly available demographic and educational data to examine the impact of population decline on Japan's higher education system. | Discovers that Japan faces demographic decline and pressure to internationalize universities due to internationalization; Points out that Government initiatives to attract international students and send domestic students abroad. Concerns about Japanese youth being inward-looking and less globally competitive. | Brain drain risks lack discussion; country appeals may decline due to aging society issues. Regional collaboration could boost attractiveness but consensus is lacking. |
| 7 | The "internationalization," or "Englishisation," of higher education in East Asia | Galloway et al. (2020) | Provides insights into how EMI policy is operationalized and conceptualized by stakeholders. Highlights constraints to policy implementation. | Combines questionnaires, interviews, and focus groups with students and staff at Chinese and Japanese universities to examine how EMI policy is implemented and conceptualized at institutional and classroom levels. | Examines implementation and conceptualization of English Medium Instruction (EMI) policy in Chinese and Japanese universities. | Identified environmental constraints and need for context-sensitive implementation approaches. Calls for more research on EMI trends, curriculum evaluation, and quality assurance. |
| 8 | Master's Education in Massified, Internationalized, and Marketized East Asian Higher Education Systems. | Jung (2020). | Addresses major issues in current master's education through country-specific case studies. Deepens understanding of master's education trends and challenges in different contexts. | Involve shistorical and empirical approaches to examine the development and current challenges of master's education in East Asia, focusing on issues like employability, massification, internationalization, and marketization. | Focuses on expanding master's education and current challenges in East Asia (China, Hong Kong, Japan, South Korea, Taiwan). Describes historical backgrounds and characteristics of master's education in these systems. Identifies new demands for master's education in terms of employability and labor market outcomes. | Master's education is expanding rapidly but faces issues related to massification, internationalization, and marketization. |

*(Continued)*

TABLE 1 (Continued)

| No. | Title | Authors | Objectives | Methods | Key points | Conclusions |
|---|---|---|---|---|---|---|
| 9 | Measuring what matters? mapping higher education internationalization in the Asia–Pacific | Williams and Bentley (2021) | Analyzes available internationalization indicators and data in the region. Identifies gaps and limitations in existing indicators. | Uses a structured search and review of academic and agency literatures to identify and classify publicly available indicators of internationalization in higher education across the Asia–Pacific region. | Provides snapshot of internationalization indicators in Asia-Pacific higher education. Notes focus on student mobility vs. other functions and lack of outcomes data. Discusses potential reasons for narrow measurement focus. | Current indicators provide an incomplete picture of internationalization. Broader range of indicators needed to capture diverse functions and outcomes. |
| 10 | Internationalization of higher education in Korea: policy trends toward the pursuit of the SDGs | Jon and Yoo (2021) | Analyzes trends in South Korea's policies for internationalization of higher education. Suggests future directions toward stronger pursuit and practice of SDGs. | Uses a case study approach to analysis of relevant literature and policy documents, examines government policy trends and institutional strategies for the internationalization of higher education in Korea. | Discusses internationalization of higher education in South Korea and its relation to Sustainable Development Goals (SDGs). Notes past focus on mobility and need for more systematic/comprehensive involvement in SDGs. Presents case study analyzing government policies and institutional strategies. | Past policies focused on controlling outbound then promoting inbound mobility. Current efforts to link internationalization and SDGs need expanding and systematizing. |
| 11 | Monitoring implementation of the Tokyo Convention on recognition: a multi-stakeholder approach to the internationalization of higher education in the Asia-Pacific | Teter and Wang (2021) | Assesses implementation of the Tokyo Convention throughout Asia-Pacific. Explores approaches for monitoring the convention over time. | Involves a standardized survey sent to recognition authorities in 46 Asia-Pacific countries, with qualitative data from 27 countries analyzed to assess the implementation of the Tokyo Convention and its impact on higher education governance. | Examines the role of the Tokyo Convention for facilitating regional collaboration on international higher education in Asia-Pacific. Analyzes data from a survey of recognition authorities in the region regarding convention implementation. | A multi-stakeholder collaborative governance approach is needed for effective monitoring. Establishment of a baseline with a proposal to extend this to the Global Convention. |
| 12 | Internationalization of higher education in Vietnam: current situations, policies, and challenges | Ryu and Nguyen (2021) | Understands internationalization of higher education in Vietnam. Categorizes internationalization activities using Knight's framework. | Involves a case study approach using detailed analysis of Vietnam's higher education reforms, policy frameworks, and internationalization activities, supported by empirical data collected over time. | Examines internationalization of higher education in Vietnam through a case study. Analyzes reforms, policies, and internationalization activities at national and institutional levels. | Vietnam is promoting internationalization to integrate globally and support development. Challenges remain around cooperation, talent retention, and finances. |
| 13 | Internationalization and the ASEM Education Process: The Malaysian higher education experience | Munusamy and Hashim (2021) | Evaluates relationship between Malaysia's internationalization and participation in AEP. | Uses a Likert-style questionnaire administered to 170 respondents selected through total population sampling to evaluate the relationship between Malaysia's higher education internationalization efforts. | Examines Malaysia's internationalization of higher education and relationship with ASEM Education Process (AEP). | Findings indicate AEP has positively supported and significantly impacted Malaysia's internationalization. Participation in AEP should be encouraged and policies updated. |

FIGURE 1
Flowchart of the literature filtering process.
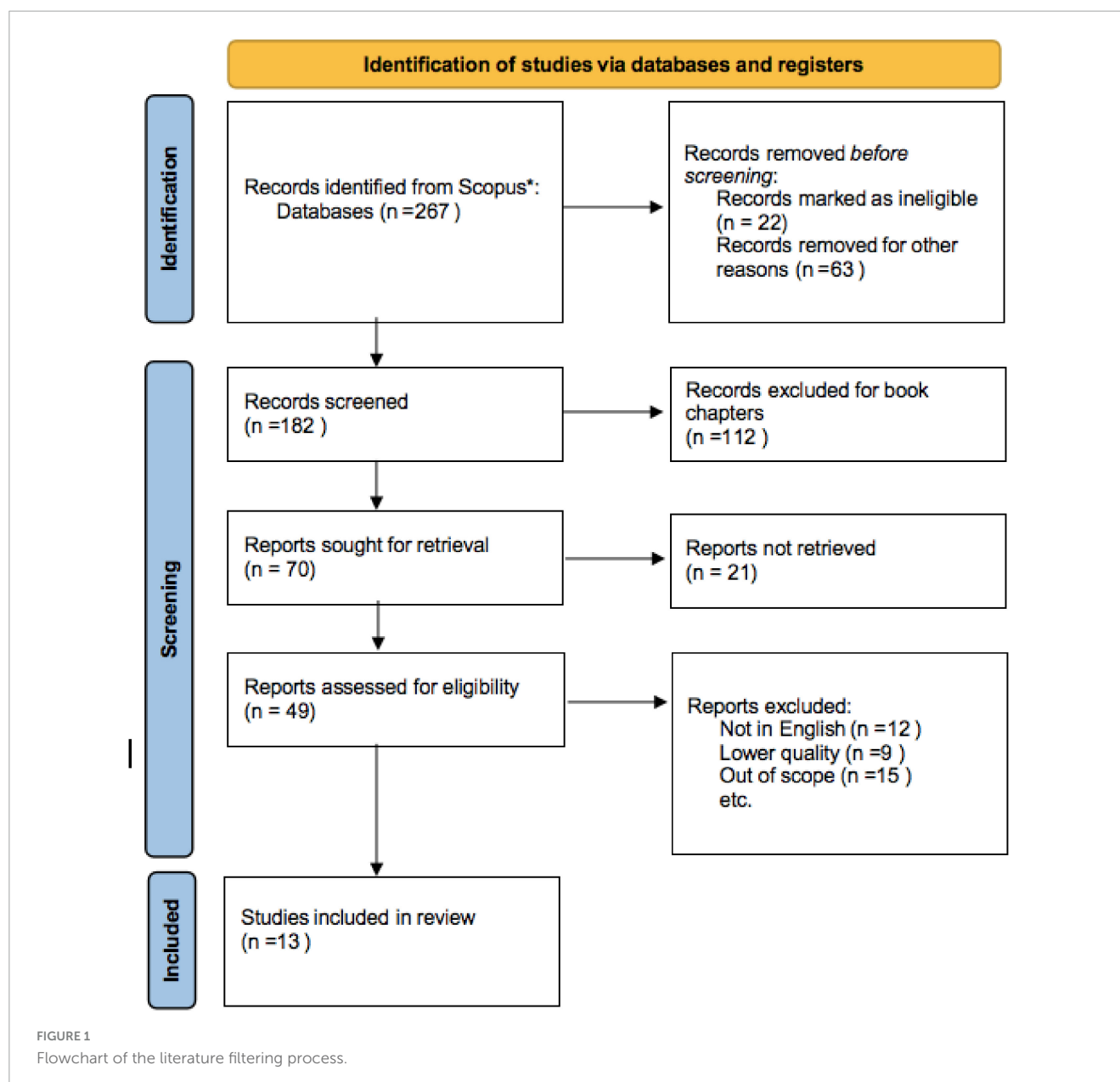
help mitigate variability in institutional quality (Bakhru, 2019; Jon and Yoo, 2021). Coordination of indicator development through multilateral platforms could support more holistic monitoring of internationalization progress overtime (Williams and Bentley, 2021). Sustained financial support paired with evaluation may aid implementation of comprehensive strategies optimized to diverse national and institutional contexts (Munusamy and Hashim, 2021; Jung, 2020). Regional consortia may increase Asia's competitive position through collective strengths (Teter and Wang, 2021).

In addition to the challenges identified, the review reveals a notable trend toward the adoption of English as a Medium of Instruction (EMI) across various Asian countries. EMI programs have been implemented with mixed results due to the desire to enhance global competitiveness and attract international students and faculty. Institutions have increased their international visibility and collaboration opportunities, but they have also faced significant challenges for both students and faculty. Due to insufficient English

proficiency, many students have difficulty comprehending and participating in EMI courses (Huang Y. et al., 2024; Yang et al., 2024), potentially negatively impacting their academic performance and overall learning experience. The quality of education is also compromised when faculty members are unable to deliver content in English effectively. As a result of these findings, it is evident that comprehensive language support systems and professional development programs are essential to the success of EMI programs.

Also, the review indicates that internationalization efforts are closely intertwined with the preservation of cultural identity in a complex manner. There is an increasing concern among Asian higher education institutions about the erosion of local languages, cultural values, and traditional knowledge systems as they strive to internationalize. China and Japan, which have strong cultural traditions, are particularly aware of this

tension. According to the findings of this study, successful internationalization strategies require striking a delicate balance between global engagement and local relevance. For example, developing curricula incorporating international perspectives while preserving local cultural elements, implementing bilingual education models, and developing intercultural competencies among faculty and students could be part of this process. Further, the review stresses the need for contextualizing internationalization initiatives according to the unique needs and characteristics of each country or institution, rather than using a one-size-fits-all approach to internationalization. As policymakers and institutional leaders navigate the complex landscape of higher education internationalization in Asia, this nuanced understanding of internationalization challenges and strategies offers valuable insights.

## 5 Conclusion

The current research emphasizes the dual role of English education in the context of the internationalization of higher education in Asia. While English-medium instruction (EMI) courses provide students with a global perspective and competitive advantage, promoting international exchange and cooperation, they also raise concerns about cultural identity and academic quality. Particularly in some countries, students may face challenges such as insufficient language proficiency and difficulties in cultural adaptation when adjusting to the EMI environment, which can lead to a decline in academic performance and graduation rates.

The discussion section of the research indicates that the current English education policies and practices in many Asian countries still have shortcomings. For example, the professional development and training of teachers often fail to keep up with the pace of internationalization, resulting in uneven teaching quality. Furthermore, many higher education institutions lack effective support systems to provide students with the necessary language and cultural adaptation support. These issues not only affect the learning experiences of students but also have a negative impact on the international reputation of the institutions.

To effectively address these challenges, policymakers and higher education institutions need to focus on the protection and development of local cultures while promoting internationalization. Specifically, it is recommended to take the following measures: First, enhance the quality of English education by providing more language support and cultural training to help students adapt better to the EMI environment; Second, encourage diversified international collaboration and establish a more balanced student mobility mechanism to ensure a reasonable ratio of incoming and outgoing students; Finally, emphasize the maintenance of cultural identity by incorporating local culture into the curriculum and campus activities to promote student understanding and appreciation.

Furthermore, the research also highlights the importance of transnational educational cooperation, especially in the establishment of education centers and international schools. Through these platforms, students can not only access high-quality educational resources but also develop their adaptability and cross-cultural communication skills in a multicultural environment.

Future research should further explore how to strike a balance between internationalization and local culture to promote more inclusive and sustainable educational development. Additionally, the research should focus on the unique challenges and opportunities faced by different countries and regions in the internationalization process, in order to provide more targeted recommendations and solutions for policymakers and educators. Such efforts could significantly enhance the internationalization of higher education in Asia and promote the comprehensive development of students and the sustainable growth of society. True internationalization requires a deep respect for cultural diversity, integrating varied cultural perspectives to cultivate talent equipped for success in a globalized world.

## Data availability statement

The original contributions presented in this study are included in this article/supplementary material, further inquiries can be directed to the corresponding author.

## Author contributions

PS: Conceptualization, Funding acquisition, Methodology, Project administration, Writing – review and editing. HH: Conceptualization, Formal analysis, Methodology, Software, Writing – original draft, Writing – review and editing. RL: Conceptualization, Methodology, Writing – original draft. JH: Writing – review and editing, Validation, Investigation.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Developing and evaluating a translanguaging-multiliteracies learning design (LDTMP) for student agency in a college English course in China

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Set within the context of a college English course in China, this study introduces an educational approach known as Learning Design based on Translanguaging and Multiliteracies Pedagogy (LDTMP), which aims to foster student agency within higher education. "Translanguaging" refers to the integrated use of multiple languages, and "multiliteracies" pertains to the diverse literacy skills required in today's multimodal world. The significance of student agency is emphasized as it enables students to take control of their learning process, aligning with the goals of lifelong learning and active citizenship advocated by policies in China. The research employs Design-Based Research (DBR), a method that involves three phases: (1) preliminary research to establish a theoretical foundation, (2) iterative prototype development and classroom implementation, and (3) the formalization of research and design principles. This approach is particularly suitable for integrating innovative pedagogies such as translanguaging and multiliteracies, which are central to the LDTMP framework. The study reports partial findings from the first and second phases of the complete DBR research. In the first phase, literature review contributed to the design and development of a prototype of LDTMP. In the second phase, the prototype of LDTMP was implemented in a college English course and evaluated quantitatively and qualitatively through a pilot study. Results indicated significant differences in LDTMP on student agency compared to other instructional models across dimensions such as self-efficacy beliefs, teacher support, opportunities to influence, and opportunities to make choices.

KEYWORDS

EFL, student agency, pedagogy, multiliteracies, design-based research, Translanguaging

## 1 Introduction

Student agency, a key component of lifelong learning, significantly impacts both individual and societal progress (Lock et al., 2021; Blaschke, 2021; Exter and Ashby, 2022; Reinhardt, 2022; Warnby, 2024). However, there is a notable absence of student agency in higher education in China, particularly within English as a Foreign Language (EFL henceforth) instruction. In the context of EFL in China, student agency has emerged as a prominent and innovative topic in applied linguistics. Despite the growing interest in this field, empirical research on student agency in China remains scarce (Xu and Long, 2020; Qin et al., 2022). Internationally, scholars have extensively studied the agency of children and adolescents in various linguistic contexts,

considering them as proactive and inventive agents (Sears, 2012; Pellerin, 2018; Said and Zhu, 2017). However, research addressing student agency that intersects with information technology, discourse, and higher education —characterized by innovative and interdisciplinary nature—remains limited and necessitates further exploration. Thus, this study aims to develop and implement LDTMP, a pedagogical framework which integrates translanguaging and multiliteracies pedagogies to enhance student agency in the context of college English in China. In this study, this pedagogical framework is named as a learning design, a blueprint for potential learner activities, distinguishable from its specific implementation with a particular group (Dalziel et al., 2016).

## 1.1 Rationale for developing LDTMP to enhance student agency in China

The China Education Modernisation 2035 report (Ministry of Education of the People's Republic of China, 2019) underscores the imperative to develop a comprehensive lifelong learning system accessible to all citizens. The report states that accelerating the construction of a learning society is an urgent requirement for the modernization of education. It is essential to put the learner at the center, establish a lifelong learning system with more open channels, flexible methods, abundant resources, and convenient learning opportunities. The goal is to form an institutional environment where all people are actively engaged in learning and can do so anytime and anywhere, promoting lifelong learning for all, building a learning nation, and significantly enhancing the quality of the nation.

In the field of applied linguistics, agency in foreign language teaching has emerged as a prominent and innovative topic. In China's EFL context, there is a growing scholarly interest in student agency (Tong, 2014; Qin, 2015; Xu and Long, 2020; Qin et al., 2021, 2022; Zhang, 2023). In terms of research gap in student agency, Xu and Long (2020)'s keyword analysis reveals that student agency research related to dynamism and identity is relatively mature, while research combined with information technology, discourse and higher education, which are more intersectional and innovative, is still relatively scarce and needs to be supplemented (Qin et al., 2021, 2022). As China increasingly integrates information technology with higher education, the study of agency within this context becomes increasingly pertinent for the development of novel teaching and learning paradigms.

Globally, numerous studies have explored the factors influencing student agency in English language learning. For example, Feryok (2012) study revealed that early language learning experiences under an English teacher significantly shaped her sense of agency, influencing her subsequent behaviors as a teacher trainee, English teacher, and teacher trainer. Kang (2017) examination of classroom interactions demonstrated that language games serve as a resource for agency, enabling teachers to assert both pedagogical and collective agency, thereby fostering a more relaxed linguistic environment and increased opportunities for student participation. Additional factors influencing individual agency include teachers' professional wellbeing and responsibility toward students (Phan and Hamid, 2017) and learners' beliefs (Mercer, 2011). Nonetheless, research on the factors affecting student agency in China is limited. For example, Qin et al. (2022)

drawing from mediation theory—a branch of sociocultural theory— investigated changes in learning goals and actions as traditional indicators of student agency. Meanwhile, Qin (2015) investigated the influence of culture, others, and self-regulation on student agency.

Furthermore, there is a dearth of research on the impact of innovative pedagogies on student agency within the Chinese EFL context. To address this gap, we propose a pedagogical framework informed by student-centered theories to enhance student agency. This approach takes advantage of the multimodal, multimedia, and multi-environmental contexts of university foreign language instruction in China, aligning with the demands of the digital age.

## 1.2 Conceptualizing student agency

This study proposes that student agency, as a critical concept in educational research and practice, can be explored from four distinct yet interconnected aspects: its definition, composition, measurement, and realization (Figure 1).

*Firstly, in terms of definition*, student agency is conceptualized as the capacity of students to take purposeful action within their educational context. It is recognized as a complex phenomenon that involves the interplay of individual behaviors, social interactions, and contextual factors. As defined by Jääskelä et al. (2016), student agency in higher education involves access to (and use of) resources for purposeful action in study contexts, which includes personal, relational, and context-specific resources that students engage with to enact intentional and meaningful learning.

*Secondly, in terms of composition,* student agency is multifaceted, comprising personal resources such as self-efficacy, competence beliefs, interest, and utility value (Jääskelä et al., 2016). Relational resources include teacher support, trust, equal treatment, and peer support, which are pivotal for fostering a conducive learning environment. Participatory resources involve opportunities for students to make choices, influence the learning process, and actively participate in their education (Jääskelä et al., 2016).

*Thirdly, in terms of measurement*, quantitatively, student agency is measured using instruments like the Agency of University Students (AUS) Scale (Jääskelä et al., 2021), which provides a multidimensional assessment of student agency resources. Qualitatively, Van Lier (2008) analytical framework, consisting of six aspects, is employed to evaluate the different manifestations of student agency in educational settings. This mixed-methods approach allows for a comprehensive understanding of student agency.

*Lastly, in terms of realization*, the realization of student agency is facilitated through pedagogical strategies and learning designs that empower students. Translanguaging Pedagogy (Jones, 2017) and Multiliteracies Pedagogy (Cope and Kalantzis, 2021) are two such approaches that aim to enhance student agency by leveraging their linguistic and semiotic resources. The Learning Design framework (Dalziel et al., 2016) provides a structured approach to designing educational interventions that can foster student agency. In conclusion, student agency is a nuanced educational construct that requires a multifaceted understanding and approach.

By defining student agency comprehensively, considering its various components, measuring it through qualitative and quantitative means, and realizing it through supportive pedagogies and learning designs, educators can foster an environment where students are
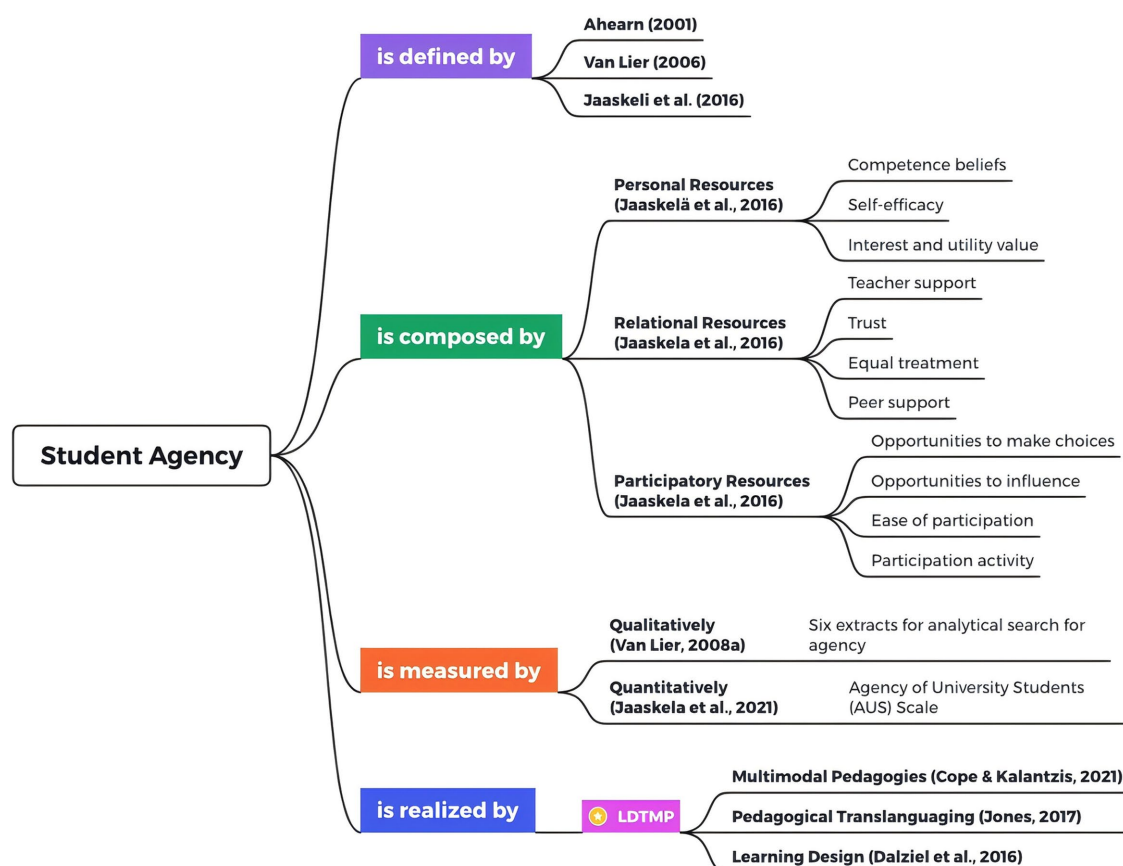
FIGURE 1
Conceptualizing student agency.

active participants in their learning journey. Therefore, the pursuit of lifelong learning is integral to preparing students for the complex challenges of the 21st century. Guided by the vision of lifelong learning, this paper explores how an LDTMP can be designed and implemented in a Chinese College English course to strengthen student agency. The study addresses the need for innovative educational models that not only enhance language proficiency but also encourage students to become active, reflective, and responsible learners.

## 1.3 Research aim and questions

The primary objective of this research is to develop the learning design for translanguaging and multiliteracies pedagogy (LDTMP), an innovative approach aimed at enhancing student agency within the Chinese educational context. As part of a bigger study which contains three phases, this paper reports on partial findings from the first two phases which focused on developing and implementing a prototype of LDTMP, a pedagogical framework which integrates translanguaging and multiliteracies pedagogies. The key research questions which will be addressed are:

1. What are the current challenges and opportunities in fostering student agency within EFL classrooms in China?

2. How can Learning Design based on Translanguaging and Multiliteracies Pedagogy principles be applied to enhance student agency in this context?

3. What are the effects of implementing LDTMP on student agency in EFL settings?

## 2 Methods

The research employs a design-based research (DBR) framework, focusing on the iterative development, testing, and refinement of educational interventions within real-world educational settings. The DBR approach is well-suited for addressing the unique challenges of teaching and learning in an EFL context, where cultural and linguistic diversity are key factors. The integration of design science within educational research has been a relatively recent development, with significant contributions emerging since Allan Collins introduced the concept in 1992. Collins (1992) advocated for the establishment of a design science in education to explore the impact of various learning environment designs on educational variables and to advance a theory of contextualization. This approach was further developed by Ann Brown, who connected laboratory learning studies with complex instructional interventions through design experiments, focusing on classroom settings characterized by their richness, complexity, and dynamism.

DBR, which evolved from design experiments, lacks a unified international definition, with experts offering diverse interpretations. The definition proposed by Wang and Hannafin (2005) encapsulates the essence of DBR as a systematic and flexible methodology. It is predicated on the interaction between researchers and practitioners within real-life contexts, involving iterative processes of analysis, design, development, and application. This methodology aims to produce contextualized design principles and theories that enhance educational practice.

The current study employs DBR to evaluate the application of Learning Design in practice, focusing on enhancing student agency through an iterative design-based research process. It seeks to address the need for interventions that not only describe current educational practices or confirm effective strategies but also design more effective strategies, particularly in areas with limited prior research. In comparison with conventional research methods such as experimental research which is typically conducted in controlled settings, DBR is conducted in real-world contexts with an aim to solve practical problems and develop theories. Furthermore, experimental research often employs hypothesis testing and comparative experiments while DBR relies on iterative design improvements based on practical feedback.

This study employs a Design-Based Research (DBR) methodology, a systematic and iterative approach that bridges theory and practice to develop and refine educational interventions. The DBR process consists of three phases, each aligned with specific outcomes, to explore and enhance student agency through the Learning Design for Translanguaging and Multiliteracies Pedagogy (LDTMP) framework. The complete research employed a Design-Based Research (DBR) approach which is structured into three distinct yet interconnected phases (Figure 2).

## 2.1 Phase 1: Preliminary research

In Phase 1, the preliminary study involved a comprehensive literature review and context analysis to establish a robust theoretical foundation. This phase set the stage for understanding the current state of student agency, including the opportunities and the challenges faced in EFL classrooms, which aligns with the first research question. The key outcomes of this phase included: a detailed understanding of student agency as a multidimensional construct involving personal, relational, and participatory resources and the conceptualization of LDTMP principles drawn from multiliteracies and translanguaging theories to inform the framework.

## 2.2 Phase 2: Prototype development and implementation

The second phase was dedicated to prototype development, which included the creation of the prototype of LDTMP. The integration of translanguaging and multiliteracies pedagogies in LDTMP was iteratively refined through classroom implementation and mixed-methods analysis. Formative evaluation played a pivotal role in this phase, guiding the iterative refinement of the educational intervention to better meet the learning needs and enhance student agency. Research questions 2 and 3 align with the first iteration of LDTMP in Phase 2. Outcomes of this iteration included: a refined prototype of LDTMP tailored to the needs of Chinese EFL learners or other students at tertiary level, and quantitative and qualitative evidence of the framework's impact on enhancing student agency. Outcome of the other iterations will be reported in the future study.



FIGURE 2
DBR process (SA, student agency).
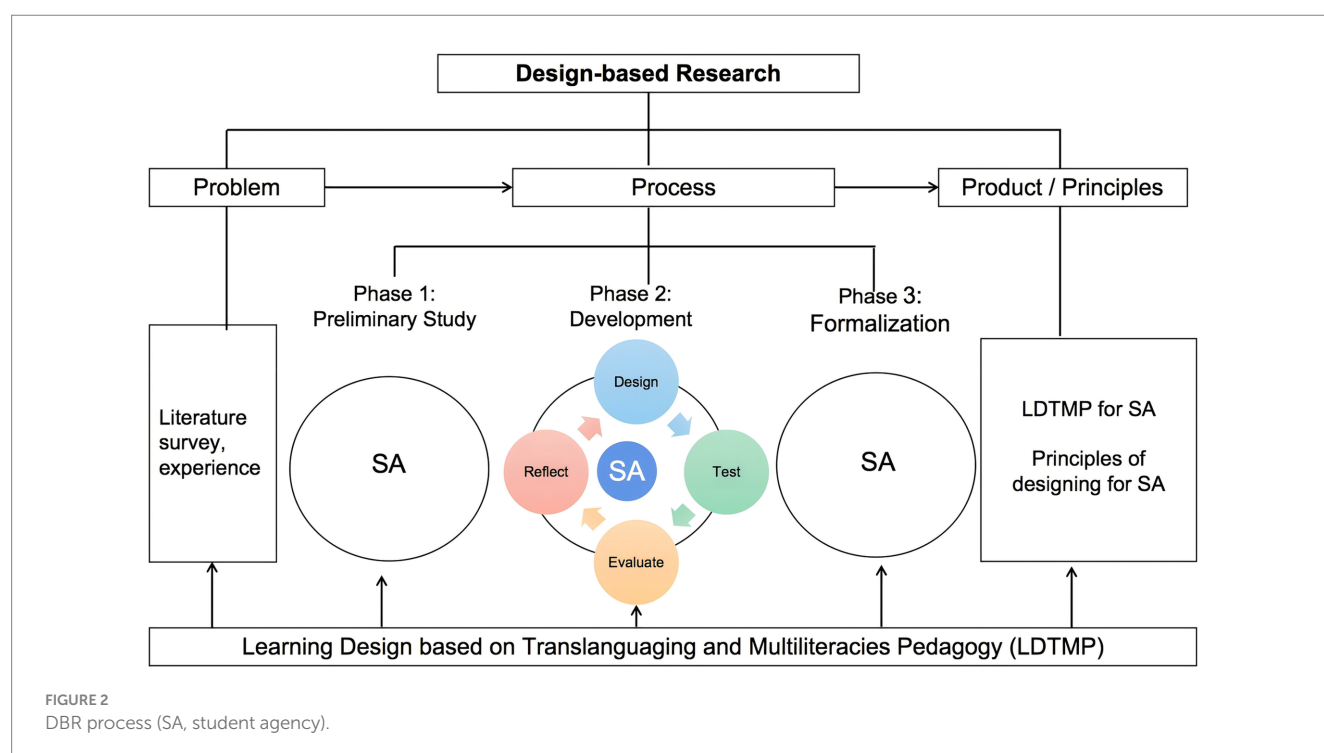
## 2.3 Phase 3: Formalization of principles

Phase 3 which is the final phase focused on the formalization of research and design principles. This involved a systematic analysis of the data collected from the second phase, leading to the development of a comprehensive thesis that presented the findings and the resulting end product. Phase 3 aimed to contribute to the body of knowledge in educational research by providing a detailed account of the process and outcomes of implementing the LDTMP model. The outcome of this phase will be reported in the future study.

Through this three-phase DBR process, the complete research aimed to address the specific challenges and opportunities in fostering student agency within EFL classrooms in China, and measure the impacts of implementing such a design on student agency in EFL settings. As part of the bigger study, this paper presents the research findings of the first phase and the first iteration of the prototype development in the second phase.

## 3 Results

This section describes results from two phases of the complete research: Phase 1 (Preliminary Research) and Phase 2 (Prototype Development and Classroom Implementation). Specifically, results from Phase 1 justify a theoretical foundation for LDTMP through literature review while results from one iteration of prototype development and classroom implementation in Phase 2 are used to evaluate LDTMP's effectiveness to inform the modifications needed for future iterations.

## 3.1 Results of Phase 1: Preliminary study based on literature

The preliminary research phase established a theoretical foundation for student agency as a component of lifelong learning and student agency in EFL contexts, drawing from the works of Van Lier (2008), Jääskelä et al. (2016) and Lim and Nguyen (2022). The study defines student agency as the capacity for students to access and utilize resources for purposeful action in learning contexts. Multiliteracies and translanguaging were also identified as complementary pedagogical approaches which can inform any pedagogical design which address student agency.

### 3.1.1 Agency in the EFL context

Agency, defined as the capacity for choice, control, and self-regulation in the pursuit of personal goals, is a concept that reflects the potential for self or social transformation (Duff, 2012). Research in the fields of foreign and second language teaching and learning has recognized the positive role of agency (Swain, 2006; Van Lier, 2008; Tao and Gao, 2021). It is considered crucial to an individual's language development, with the ultimate performance in language learning being dependent on the individual's agency (Pavlenko and Lantolf, 2000).

Cheng and Wei (2019)'s study on tertiary-level English language teaching in China noted that the experiences and perspectives of Chinese university students, who represent the largest population of

English learners globally, have been largely overlooked. A similar issue has been identified in the United States, where Schornack and Karlsson (2020) discuss how language development specialists can influence policy and challenge inequitable practices that marginalize English learners.

Within the structured learning environments of higher education, the expression of student agency is contingent upon various elements that are intertwined with the design of learning experiences. Jääskelä et al. (2016) describe student agency as the capacity to access and utilize resources for purposeful action within academic settings. This includes personal, relational (interactional), and context-specific resources that students employ to engage in intentional and meaningful actions and learning processes. The current study adopts Jääskelä et al.'s (2016) definition, framing student agency in EFL classrooms as the ability to leverage resources within EFL contexts to enact intentional and significant learning experiences.

The choice of Jääskelä et al.'s (2016) definition is supported by two primary reasons: first, the multidimensional nature of student agency presented by the authors aligns well with the design activities of the Learning Design for Multiliteracies and Translanguaging Pedagogies (LDTMP); second, the emphasis on resources is essential, as they are the fundamental elements that translanguaging pedagogy and multiliteracies pedagogy contribute to enhancing student agency, encompassing semiotic, conceptual, and technical resources.

### 3.1.2 Multiliteracies-translanguaging as pedagogical foundation

In the context of globalization, EFL education faces new challenges and opportunities. To adapt to this trend, educators have begun to explore new teaching strategies, among those which are grounded in multiliteracies and translanguaging due to foreseen potential in promoting students' language abilities and cognitive development (Canagarajah and Gao, 2019; García and Kleifgen, 2020).

Multiliteracies pedagogy, as introduced by the New London Group (1996), extends the concept of literacy beyond traditional reading and writing skills to include a variety of literacies that are essential in a multimodal and multicultural world. This pedagogy recognizes the significance of various symbolic systems, such as visual, audio, and digital media, in the learning process. Multimodality is a significant feature of multiliteracies pedagogy which emphasizes the integration of language, images, sound, and other semiotic resources in the teaching process to promote students' comprehensive language ability (Jewitt, 2019). This pedagogy aligns with student agency by scaffolding learning and encouraging active design. Teachers use overt instruction to support students in navigating multimodal texts, enhancing relational resources such as teacher support and trust. Students are positioned as active designers of meaning, with opportunities to create multimodal texts fostering participatory resources (Hepple et al., 2014).

Pedagogical translanguaging, a concept developed by scholars like García and Li (2014), is an instructional strategy that encourages the use of students' full linguistic repertoire in the classroom. This approach values the linguistic diversity of students and facilitates more effective language learning by acknowledging and utilizing the multiple languages that students command. Its theoretical underpinnings include sociocultural and multilingual perspectives, which view language as fluid and transcending traditional boundaries.

Translanguaging contributes to student agency by promoting active participation and empowering identity construction. Students leverage their multilingual resources to engage meaningfully in classroom interactions, expanding their participatory resources. The flexible use of linguistic and semiotic resources helps students assert their identities, making learning a personalized experience (Cenoz and Gorter, 2021).

Both multiliteracies and translanguaging can be justified by earlier theorizations in sociocultural theory and multimodal communication theory. Sociocultural theory emphasizes that learning occurs in social interaction, and language is a tool for learners to interact with others and construct knowledge (Vygotsky, 1978). Multimodal communication theory focuses on how language and other semiotic resources work together in the construction of meaning (Kress, 2010). These theories provide a solid theoretical support for complementing multiliteracies with translanguaging.

Empirical research in recent years has supported the effectiveness of combining multiliteracies with translanguaging in EFL education. For example, a study on Chinese college students found that the use of Multiliteracies-Translanguaging teaching strategies can significantly improve students' oral English expression ability and cross-cultural communication skills (Zhang and Li, 2021). Another study indicated that by integrating multilingual resources in the EFL classroom, students' language awareness and language use ability have been significantly enhanced (Li and Zhang, 2020). The integration of translanguaging and multiliteracies pedagogy within the Learning Design for Translanguaging and Multiliteracies Pedagogy (LDTMP) framework is grounded in their complementary theoretical affordances, as summarized in Zhou et al. (2024). These pedagogies collectively aim to enhance student agency by providing participatory and relational resources, fostering active engagement, and expanding students' linguistic and multimodal capabilities. Table 1 summarizes how multiliteracies and translanguaging offer theoretical foundations for pedagogical strategies aimed at fostering student agency.

The LDTMP framework synthesizes these pedagogical theories, using their strengths to create a comprehensive learning design. By combining translanguaging with multiliteracies, the framework ensures that students can integrate linguistic and multimodal resources to navigate complex learning environments. Teachers are envisioned as designers who tailor learning experiences to facilitate agency through collaborative, multimodal, and multilingual practices. The integration respects and utilizes students' cultural

and linguistic backgrounds, reinforcing inclusivity and equity in education. Through these theoretical underpinnings, LDTMP provides a robust foundation for fostering student agency in diverse educational settings.

This preliminary research in Phase 1 lays the groundwork for the subsequent phases of the study, setting the stage for the development and implementation of LDTMP in a College English course within a Chinese university setting. The preliminary study in Phase 1 identified and defined student agency as a core dimension in language learning processes which requires pedagogical intervention. Literature review also indicated that engaging principles from both multiliteracies and translanguaging have positive potential for student agency. The next section will explain how multiliteracies and translanguaging can be adopted to provide principles for LDTMP.

## 3.2 Results of Phase 2: Developing, implementing and evaluating LDTMP

### 3.2.1 Developing LDTMP

Based on insights from Phase 1, a prototype of a Learning Design grounded in Translanguaging and Multiliteracies Pedagogies was developed. This prototype, referred to as LDTMP (Learning Design based on Translanguaging and Multiliteracies Pedagogies; Figure 3), is specifically designed to enhance student agency within the context of EFL (English as a Foreign Language) for Chinese university students. It is conceptualized through three distinct yet interrelated theories: Learning Design, Multiliteracies Pedagogies and Translanguaging. Learning Design functions as a blueprint for potential learner activities, distinguishable from its specific implementation with a particular group (Dalziel et al., 2016). Multiliteracies Pedagogies, as proposed by the New London Group, is a classroom design which encompasses four knowledge processes: experiencing, conceptualizing, analyzing, and applying. Translanguaging, on the other hand, refers to instructional strategies that incorporate the use of two or more languages. LDTMP is not merely an instructional design or a modular unit but a technology-enhanced plan for potential activities with learners, distinct from a learning design that has been actualized with a specific cohort of learners.

The development of LDTMP is underpinned by learning design principles within the SP&M framework (Thomson, 2022). "S" denotes the subject, focusing on the identification of knowledge

TABLE 1 Relating multiliteracies and translanguaging to student agency (Zhou et al., 2024).

| Theoretical underpinnings | Affordances of theory | Guidelines for teacher classroom practices | Student agency dimensions (Jaaskela et al., 2017) |
|---|---|---|---|
| Multiliteracies (or multimodal pedagogies) | Multimodal meaning-making | Scaffolding through overt instruction | Relational resources such as teacher support |
| | Active participation and expanding linguistic repertoire | Developing opportunities for students to analyze and create multimodal texts | Participatory resources |
| Translanguaging | | Providing opportunities to students to exercise or expand their linguistic repertoire | Participatory resources |

FIGURE 3
A learning design based on translanguaging and multiliteracies pedagogies (LDTMP).
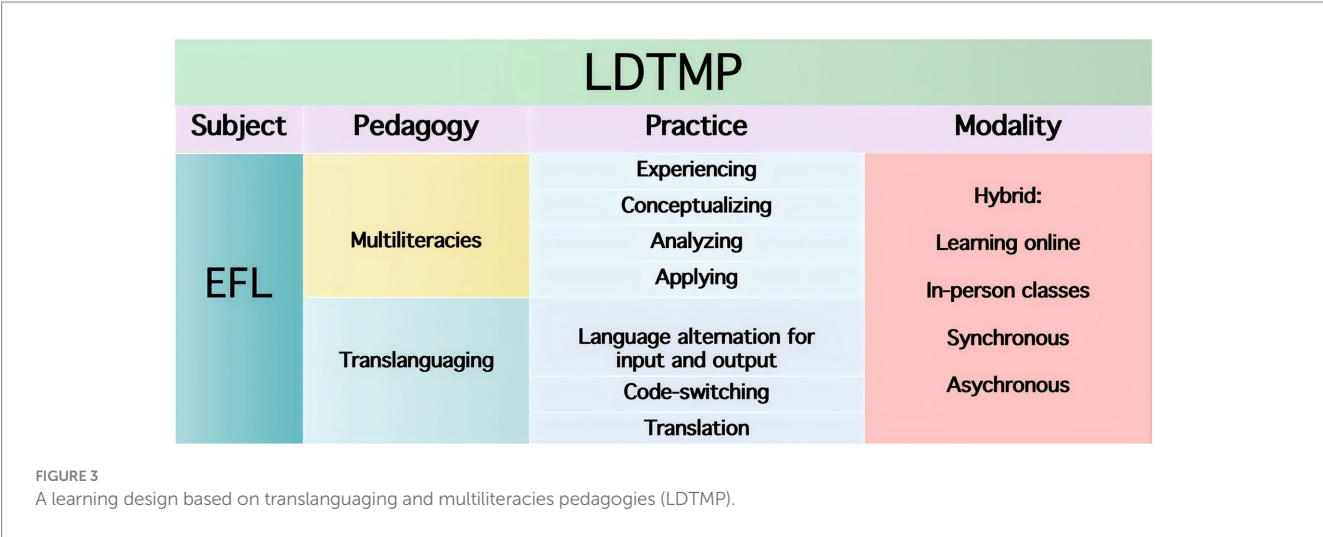
domains for learner acquisition. "M" signifies modality, which involves determining the most appropriate avenues for learner access to knowledge. "P" represents pedagogy, emphasizing the selection of the most effective teaching strategies to facilitate learner engagement and knowledge acquisition. LDTMP integrates the principles of SP&M with the pedagogical insights from classroom translanguaging as proposed by Jones (2017) and multiliteracies pedagogy as articulated by Cope and Kalantzis (2021). The learning design of LDTMP is thus constructed (Table 1), with learning design principles forming a foundation which is supported by the two pedagogical approaches. The selection of SP&M from numerous learning design models is deliberate, as it places a significant emphasis on pedagogy, which is central to the LDTMP framework.

The LDTMP learning design comprises four elements: the subject matter, which is EFL, and the two pedagogical approaches, multiliteracies and translanguaging. Multiliteracies encompasses experiencing, conceptualizing, analyzing, and applying, while translanguaging involves language alteration for input and output, code-switching, and translation. The final element is modality, offering a choice between online learning, in-person classes, synchronous, and asynchronous formats. This learning design contributes to the principles of Learning Design that are based on Translanguaging and Multiliteracies Pedagogy, as sought by Research Question 2.

The next section will discuss the implementation of LDTMP in a College English course and its evaluation through quantitative and qualitative methods.

### 3.2.2 Implementing of LDTMP in a college English course

LDTMP which integrates translanguaging and multiliteracies pedagogies was implemented in a College English course at a Chinese science and technology university. The participants consisted of university students majoring in science and technology, with English proficiency levels categorized as intermediate and below. The class composition typically ranged from 27 to 35 students, with each session lasting 45 min. A critical observation was that the students generally struggled to comprehend English-medium instruction, thus

underscoring the necessity for the integration of translanguaging to facilitate comprehension and participation.

LDTMP was designed to be technology-enhanced, flexible, and adaptable to various learning modalities, including in-person and asynchronous learning. The implementation involved a series of classroom activities, such as voting, group discussions, presentations, and digital composing tasks, all aimed at promoting student engagement and critical thinking. The use of Chaoxing app facilitated peer interaction and feedback, enhancing the participatory and relational resources available to students.

LDTMP was strategically implemented to foster student agency through a series of structured learning activities which were designed to activate the knowledge processes of multiliteracies and the linguistic flexibility of translanguaging. The activities were carefully planned to align with the cognitive and linguistic capabilities of the students, ensuring a conducive learning environment (Table 2).

The initial learning activity involved a voting exercise, which served as an experiential learning opportunity. Students were invited to express their agreement or disagreement on a specific question, followed by a reflective discussion where they shared their perspectives and experiences. This bilingual activity, conducted primarily during the first 5 min of each class, promoted active participation and resource sharing among students.

The second activity utilized the Chaoxing app to facilitate group discussions, allowing students to engage with the course material in English while expressing their thoughts in either English or Chinese. This translanguaging approach supported students in understanding and contributing to class discussions, enhancing their communicative competence.

Subsequent activities included group presentations, where students read and analyzed paragraphs, and translated them to deepen their understanding of the text. This task not only honed their language skills but also fostered critical thinking and collaborative learning.

The final activity involved asynchronous digital composing, where students created multimodal content with subtitles in both English and Chinese. This task required students to apply their knowledge and linguistic skills in a creative and autonomous manner, promoting the development of multiliteracies.

TABLE 2  Implementing LDTMP in a college English course in China.

| Learning activities | What does the teacher do? | Knowledge process of multiliteracies | Classroom translanguaging | Technology used | Modality | Duaration | SA dimensions (Jaaskela et al., 2017) |
|---|---|---|---|---|---|---|---|
| 1.Voting on a question: agree or disgree | The teacher initiates a voting activity and asks why choosing agree or disagree. | Experiencing | Code-switching | Chaoxing App | In-person classes | 5 min | Participatory Resources |
| 2.Dicussion in groups on a question | The teacher initiates a discussion activity on Chaoxing App. | Experiencing | Language alternation for input and output | Chaoxing App | In-person classes | 5 min | Participatory Resources |
| 3.Presenting in groups: reading the paragraphs | The teacher walks around to offer help. | Experiencing | -- | -- | In-person classes | 10 min | Participatory and Relational Resources |
| 4.Presenting in groups: translating the paragraphs | The teacher initiates a discussion activity on Chaoxing App. | Conceptualizing | Translation | Chaoxing App | In-person classes | 10 min | Participatory and Relational Resources |
| 5.Presenting in groups: critical thinking (e.g., facts or opinions) | The teacher gives feedback to the students' work. | Analyzing | Language alternation for input and output | Chaoxing App | In-person classes | 10 min | Participatory and Relational Resources |
| 6.Group homework: multimodal digital composing | The teacher assigns a group assignment of digital composing | Applying | Language alternation for input and output | Digital composing tools | Asynchronous | 5 min + 2 days | Personal and Relational Resources |

## 3.2.3 Evaluating LDTMP: effects on student agency

This section details the effects of implementing one iteration of LDTMP in the context of study (Research question 3). The effects were assessed through quantitative analysis and qualitative analysis.

### 3.2.3.1 Quantitative analysis

This section presents the results from one iteration of the study conducted during Phase 2 by analyzing the quantitative effects of LDTMP on student agency. A total of 306 university students were involved as participants. Among them, 112 participants received instruction under LDTMP, while the remaining 194 participants received instruction under other approaches. All participants were undergraduate students from medical, humanities, or STEM disciplines in three universities in China, ranging from freshmen to seniors, ensuring the representativeness and diversity of the study results.

To assess students' agency, a questionnaire which was based on the Student Agency Scale, a seven-point scale developed by Jääskelä et al. (2016), was adopted to measure students' agency in their course learning. The scale encompasses 11 dimensions (Figure 4; Table 3) such as personal efficacy beliefs, self-efficacy, equity, teacher support, trust, and engagement, with multiple items under each dimension rated on a Likert scale.

Questionnaires were distributed in paper form to all participants and collected uniformly after the conclusion of the courses. To ensure data authenticity and validity, detailed instructions were provided to participants prior to questionnaire distribution to ensure accurate comprehension and independent



FIGURE 4
The dimensions of the agency of university student (AUS) scale (Jaaskela et al., 2017).
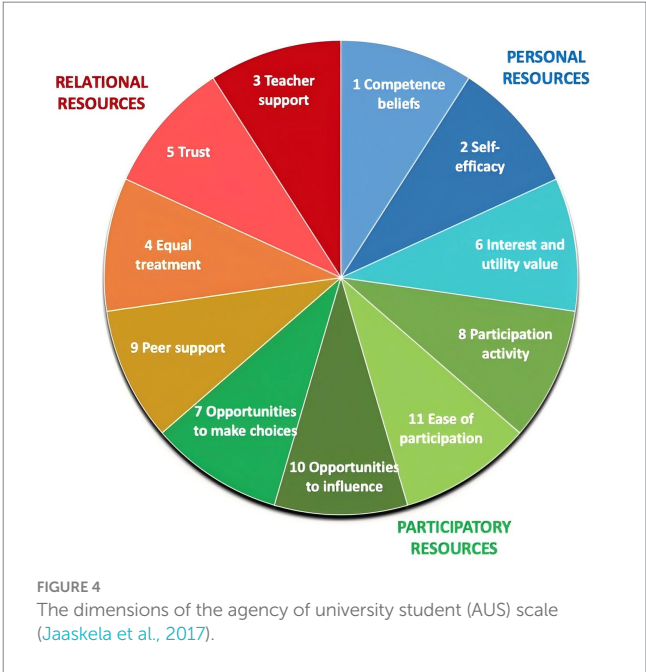
completion of the surveys. Additionally, participant anonymity was guaranteed to minimize ethical issues.

The collected questionnaire data underwent initial cleaning to remove incomplete or logically inconsistent responses. Subsequently, SPSS 22.0 software was used to perform the following analyses:

TABLE 3 Dimension codes of student agency in university English learning.

| Code | Dimension | Description |
|---|---|---|
| D1 | Competence beliefs | Beliefs about personal ability in learning. |
| D2 | Self-efficacy | Confidence in achieving success in learning tasks. |
| D3 | Equal treatment | Perceptions of fairness and equality in the learning environment. |
| D4 | Teacher support | Perceptions of support and attitude of the teacher toward students. |
| D5 | Trust | Sense of trust and safety in the learning environment. |
| D6 | Participation activity | Level of active involvement in course activities. |
| D7 | Ease of participation | Perceived ease or difficulty in participating in discussions and activities. |
| D8 | Opportunities to influence | Ability to influence course goals, methods, and assessments. |
| D9 | Opportunities to make choices | Ability to choose content and methods aligned with learning goals. |
| D10 | Interest and utility value | Perception of the course's relevance, interest, and motivational value. |
| D11 | Peer support | Support received from and given to peers in the learning process. |



FIGURE 5
Descriptive analysis.
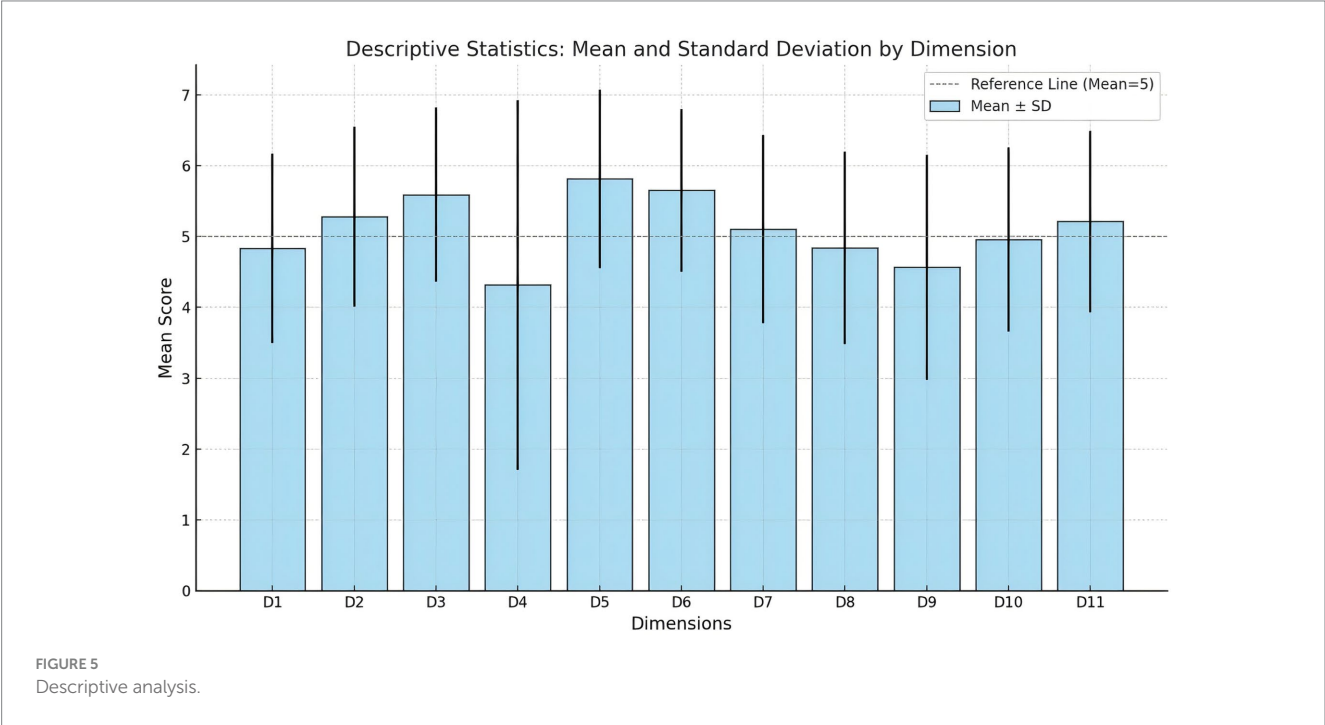
1. Descriptive statistical analysis: Calculation of means, standard deviations, and other descriptive statistics to understand the overall performance and distribution of student agency.
2. Reliability analysis: Assessment of internal consistency reliability using Cronbach's Alpha coefficient. A Cronbach's Alpha value above 0.7 is generally considered indicative of good internal consistency.
3. Validity analysis: Construct validity was evaluated through exploratory factor analysis (EFA) to ensure that scale items accurately reflected the intended construct of student agency.
4. Independent samples $t$-test: comparison of student agency between LDTMP and other instructional modes.

A significance level of 0.05 was set for all statistical tests to ensure the statistical significance of the research findings. The following paragraphs delve into descriptive statistical analysis, reliability analysis, validity analysis, and independent samples $t$-test.

The descriptive statistics (mean and standard deviation) were calculated for each of the 11 dimensions of the scale to assess the distribution of scores across dimensions. Figure 5 indicates that the mean scores for the dimensions ranged from 4.568 to 6.199, with Dimension 4 (D4) showing the lowest average score (4.568) and Dimension 5 (D5) showing the highest average score (6.199). Standard deviations ranged from 1.072 to 2.056, indicating varying levels of variability across dimensions. Dimensions with higher standard deviations, such as D10 (SD = 2.056), suggest greater variability in responses. Dimensions with lower means (e.g., D4 and D9) may require further investigation to understand why respondents rate them lower and whether the items in these dimensions need to be revised.

From Figure 6 and Table 4, it is evident that the reliability coefficient is 0.943, exceeding 0.9, indicating high reliability of the research data and its suitability for further analysis.

Validity analysis was conducted to assess the rationality and meaningfulness of research items. Factor analysis was employed for

**FIGURE 6**
Cronbach alpha changes when deleting items.
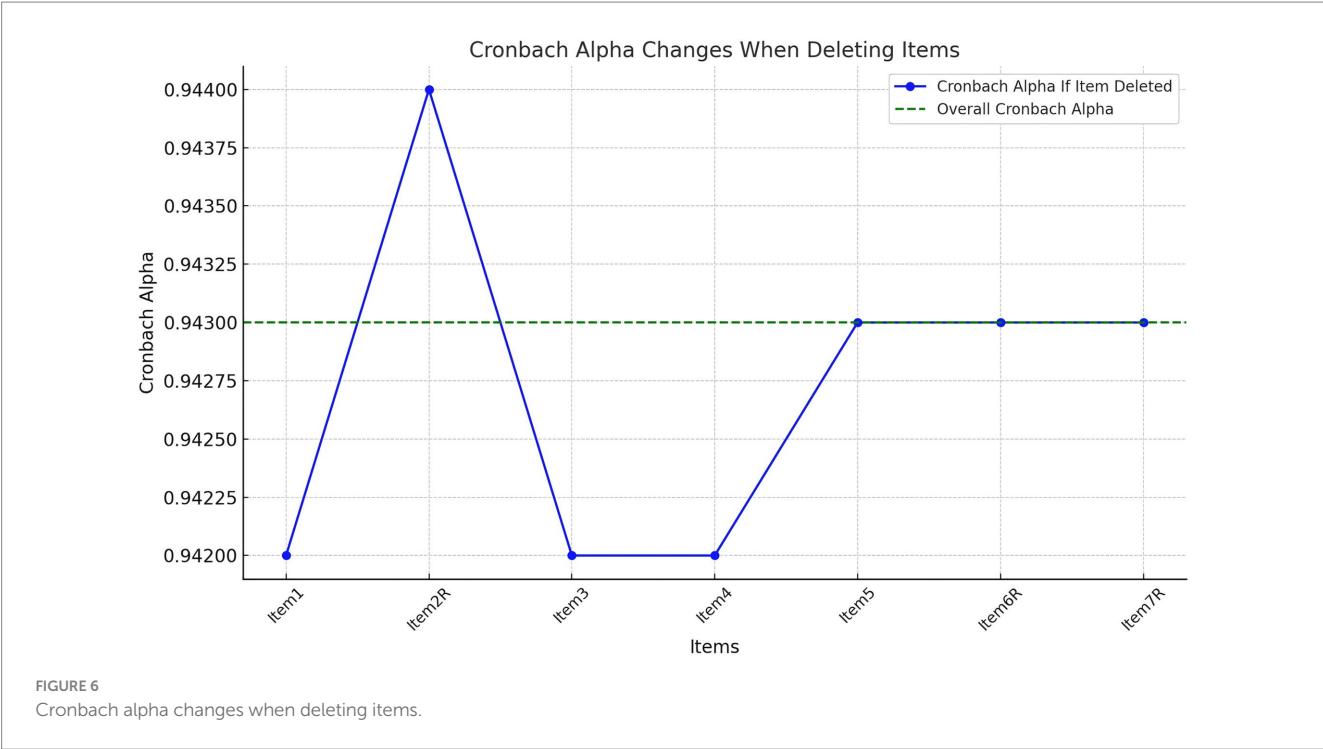
**TABLE 4** Reliability statistics (Cronbach alpha).

| N of Items | n | Cronbach α |
|---|---|---|
| 58 | 306 | 0.943 |

validity analysis, utilizing indicators such as Kaiser-Meyer-Olkin (KMO) measure, communalities, variance explained, and factor loading coefficients to comprehensively analyze the validity level of the data. Table 5 show that all communalities for the research items exceed 0.4, indicating effective information extraction from the research items. Moreover, the KMO value of 0.940, >0.6 (see Table 6), confirms the adequacy of information extraction from the data. Additionally, the variance explained by the 10 factors is 19.926, 12.164, 9.821, 7.768, 7.477, 6.271, 5.599, 4.584, 4.323, and 3.525% respectively, with a cumulative variance of 81.458% after rotation, exceeding the threshold of 50%, indicating effective extraction of information from the research items.

Exploratory factor analysis was employed for validity analysis, where the 58 items of the scale were categorized into 11 dimensions. During the initial analysis, items 2R, 6R, 7R, 15R, 34R, and 57 had factor loading coefficients below 0.4, which should have corresponded to their respective dimensions with coefficients above 0.4, indicating misalignment. These items were subsequently removed, followed by a second analysis where items 37–40, 45, 47R, 48R, and 53 were excluded. A third analysis removed items 31 and 32, resulting in 42 remaining items that aligned well with the dimensions and met professional expectations. Table 6 further demonstrate a KMO value of 0.940 (>0.6), and Bartlett's test of sphericity was significant. The cumulative variance explained was 78.213%, confirming that most of the information from the 11 dimensions could be extracted. Thus, the research data exhibits a good level of structural validity.

Using independent samples $t$-tests, the study examined differences in student agency in English learning between the LDTMP instructional model and other instructional models. Figure 7 indicates

that compared to other instructional models, the LDTMP instructional mode shows significant differences ($p < 0.05$) in four dimensions: Competence beliefs (D1), Teacher support (D4), Opportunities to influence (D8), and Opportunities to make choices (D9). This suggests that the instructional models differ significantly in terms of Competence beliefs (Personal resources), Teacher support (Relational resources), Opportunities to influence (Participatory resources), and Opportunities to make choices (Participatory resources). However, there were no significant differences ($p > 0.05$) observed in the other seven dimensions, indicating consistency between these instructional models across those dimensions.

#### 3.2.3.2 Qualitative analysis

Qualitative analysis of LDTMP after one iteration in Phase 2 demonstrated its adaptability as a template for designing learning experiences. This is realized by the smart teaching assistant tool, Chaoxing APP. Through the Chaoxing APP, students can receive teaching task links sent by teachers on their mobile phones instantly. At the same time, teachers can also synchronize the links and submissions of students to the multimedia electronic big screen in the classroom in real time (as shown in Figure 8).

For the 112 participants who received instruction under LDTMP, the voting and discussion activities provided empirical evidence of its effectiveness. Voting outcomes were represented using a pie chart, illustrating the distribution of student opinions, while a word cloud was used to visualize the range of ideas contributed by students during discussions.

In the context of classroom teaching, engaging students in voting and discussion activities was an effective pedagogical strategy to encourage participation and foster a sense of inclusion. For instance, in a voting exercise (Figure 9), students were presented with options such as "yes," "no," "it depends," or "I do not know." This approach allowed for a diversity of responses and acknowledges the complexity of certain issues that may not have a straightforward

TABLE 5 Validity analysis.

| Items | Factor loadings | | | | | | | | | | Communalities |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | F1 | F 2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | F10 | |
| 1 | | | | | | 0.64 | | | | | 0.753 |
| 3 | | | | | | 0.733 | | | | | 0.811 |
| 4 | | | | | | 0.787 | | | | | 0.879 |
| 5 | | | | | | 0.577 | | | | | 0.587 |
| 8 | | 0.782 | | | | | | | | | 0.841 |
| 9 | | 0.829 | | | | | | | | | 0.879 |
| 10 | | 0.818 | | | | | | | | | 0.905 |
| 11 | | 0.828 | | | | | | | | | 0.89 |
| 12 | | 0.817 | | | | | | | | | 0.866 |
| 13 | | | | | | | 0.737 | | | | 0.839 |
| 14 | | | | | | | 0.732 | | | | 0.872 |
| 16 | | | | | | | 0.662 | | | | 0.778 |
| 17R | | | 0.962 | | | | | | | | 0.944 |
| 18R | | | 0.956 | | | | | | | | 0.942 |
| 19R | | | 0.948 | | | | | | | | 0.928 |
| 20R | | | 0.966 | | | | | | | | 0.953 |
| 21 | 0.757 | | | | | | | | | | 0.722 |
| 22 | 0.701 | | | | | | | | | | 0.748 |
| 23 | 0.812 | | | | | | | | | | 0.889 |
| 24 | 0.807 | | | | | | | | | | 0.86 |
| 25 | 0.762 | | | | | | | | | | 0.796 |
| 26 | 0.802 | | | | | | | | | | 0.824 |
| 27 | 0.715 | | | | | | | | | | 0.779 |
| 28 | | | | | | | | | | 0.42 | 0.834 |
| 29 | | | | | | | | | | 0.56 | 0.835 |
| 30 | | | | | | | | | | 0.562 | 0.776 |
| 33 | 0.49 | | | | | | | | | | 0.649 |
| 35 | 0.658 | | | | | | | | | | 0.663 |
| 36 | 0.578 | | | | | | | | | | 0.737 |

*(Continued)*

**TABLE 5 (Continued)**

| Items | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | F10 | Communalities |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | | | | | | | | 0.879 | | | 0.851 |
| 42 | | | | | | | | 0.871 | | | 0.844 |
| 43R | | | | | | | | | 0.77 | | 0.712 |
| 44R | | | | | | | | | 0.735 | | 0.771 |
| 46R | | | | | | | | | 0.734 | | 0.756 |
| 49 | | | | 0.712 | | | | | | | 0.848 |
| 50 | | | | 0.742 | | | | | | | 0.872 |
| 51 | | | | 0.739 | | | | | | | 0.876 |
| 52 | | | | 0.707 | | | | | | | 0.828 |
| 54 | | | | | 0.73 | | | | | | 0.813 |
| 55 | | | | | 0.785 | | | | | | 0.878 |
| 56 | | | | | 0.696 | | | | | | 0.818 |
| 58 | | | | | 0.459 | | | | | | 0.564 |

**TABLE 6 KMO and Bartlett's test.**

| KMO | | 0.94 |
|---|---|---|
| Bartlett's test of sphericity | Chi-square | 13801.957 |
| | *df* | 861 |
| | *p* | 0 |

answer. Figure 9 illustrates the distribution of responses among a group of 27 students, with five students voting "yes," 10 voting "no," eight indicating "it depends," and four selecting "I do not know." It is important to note that even students who choose "I do not know" may not necessarily be disinterested; rather, they might be expressing a need for further information or clarification.

To enhance engagement, the instructor invited students from the minority group to articulate their viewpoints. This not only provided an opportunity for those students to express themselves but also promoted a classroom environment where every voice is valued and heard. By asking targeted questions, the instructor could encourage these students to elaborate on their choice, which can lead to a deeper understanding of the topic at hand.

Furthermore, the instructor selected representatives from the majority groups to share their opinions as well, ensuring a balanced and comprehensive discussion. This exchange of ideas was facilitated in various languages, including English, Chinese, or a combination of both, to accommodate the linguistic preferences and abilities of the students.

In addition to voting activities, discussion activities such as brainstorming on "How to make an informative video more interesting" (Figure 10) stimulated creative thinking and collaboration among students. These activities can be particularly beneficial in a multilingual or multicultural classroom setting, as they allow students to draw from diverse perspectives and experiences.

Another example within the LDTMP framework is to ask students to evaluate their favorite advertisements in Chinese, English or any dialect they know (Figure 11). This task requires students to use not only translanguaging skills but also multiliteracies knowledge to analyse and evaluate the multimodal nature of advertisements. For example, students were asked to create a bilingual subtitled video evaluating an all-English advert. The purpose of this task was to enhance the students' linguistic competence as well as their critical thinking and creative expression. Students' performance showed that they were able to analyse the advertisement in depth from multiple perspectives, including visual effects, language use, and emotional appeal, which demonstrated a significant increase in students' competence in cross-cultural understanding, language expression as well as critical thinking.

Another discussion activity was multimodal digital composition (Figure 12), in which students were required to combine multimodal resources such as text, images, audio, and video to create a project about a social issue. This task aimed to develop students' information integration skills and creative thinking. Students' work demonstrated their proficiency in using multimodal resources and their deep understanding of social issues. Through this task, students' self-expression and self-presentation skills were strengthened, which directly reflected their progress in enhancing their agency.

Overall, the integration of voting and discussion activities in the classroom enhanced student engagement, promoted critical thinking, and created an inclusive learning environment where every student felt valued and encouraged to contribute.

FIGURE 7
Independent *T*-test: LDTMP vs. non-LDTMP.



FIGURE 8
Synchronization between the mobile phone and the classroom screen.
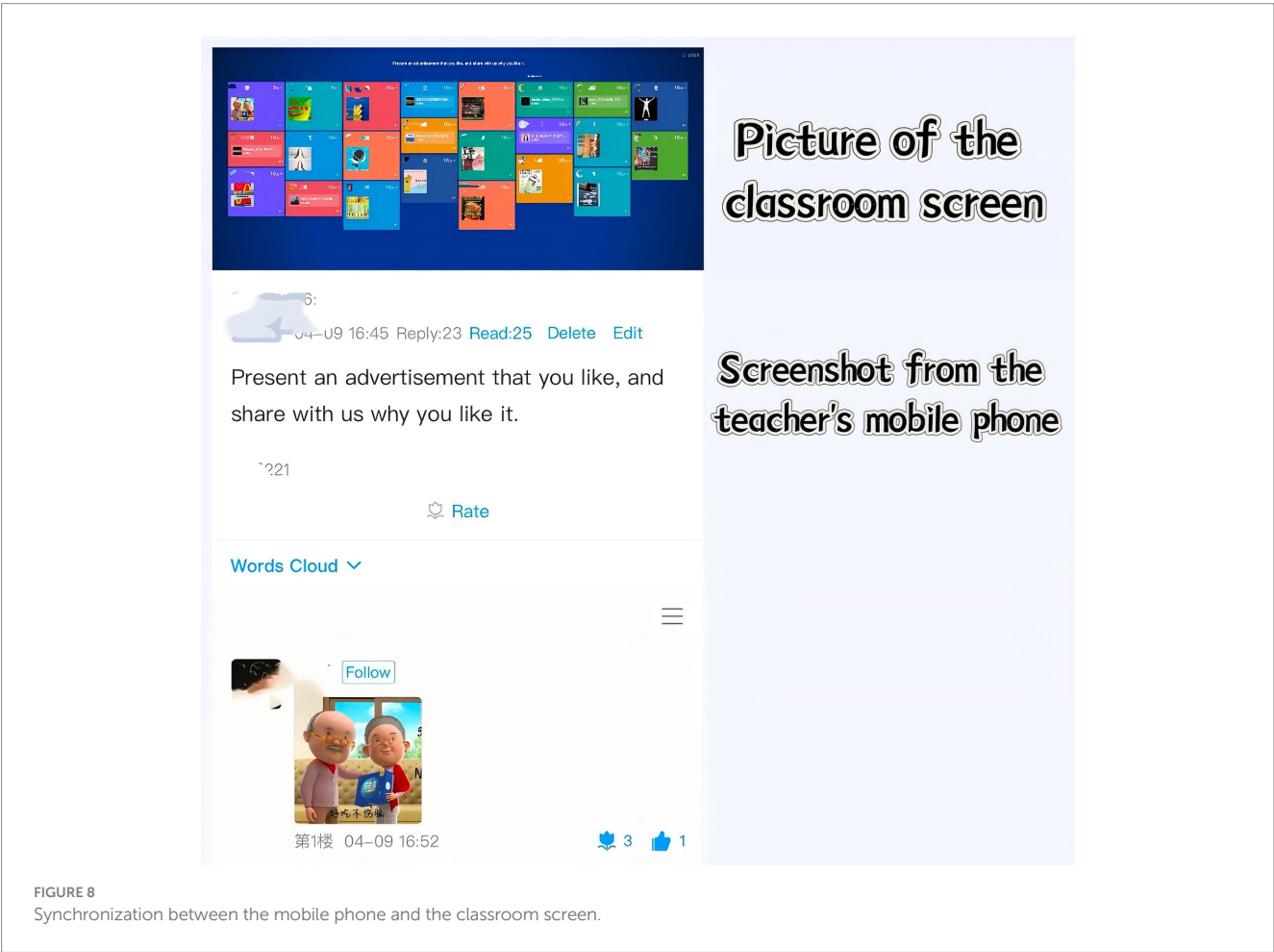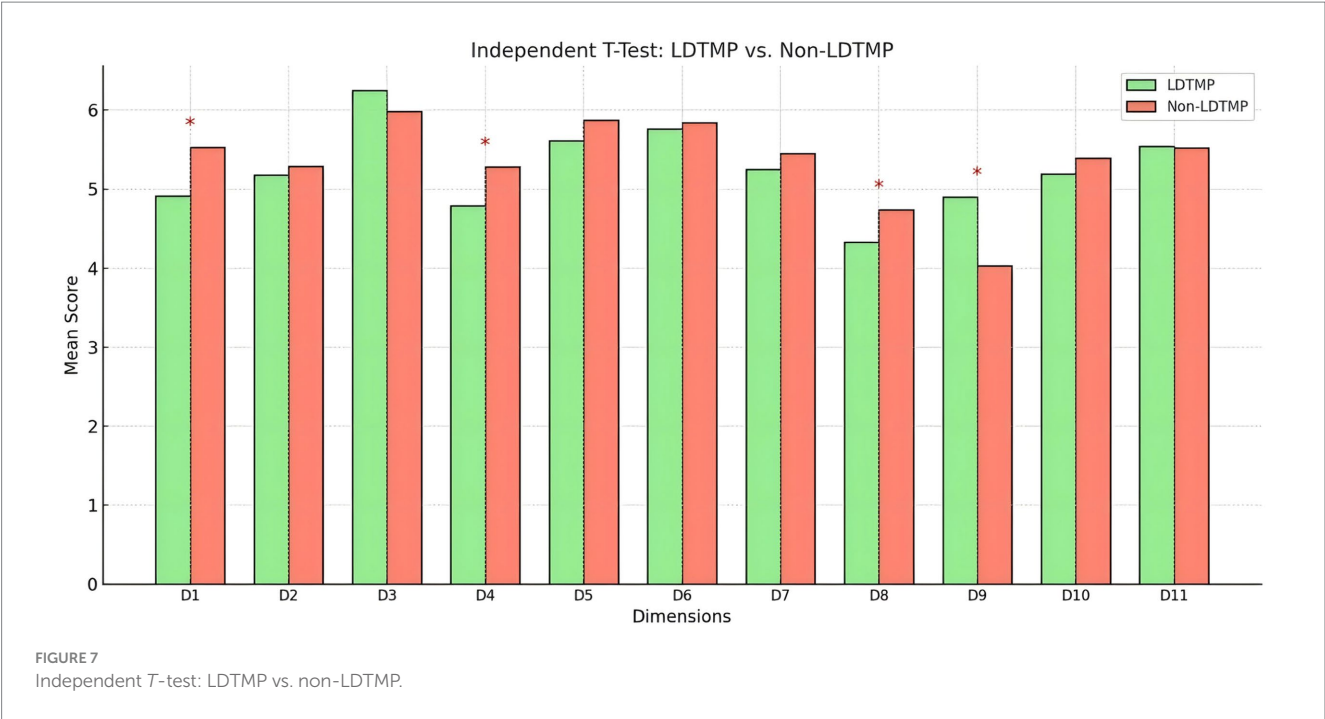
In summary, a promising approach for creating learning experiences is provided by the LDTMP framework, which integrates translanguaging and multiliteracies while highlighting student agency.

Because of its adaptability and reproducibility, this model can be used in a range of educational contexts. Educators can leverage this framework to create learning environments that are inclusive,

FIGURE 9
An example of student participation.



FIGURE 10
An example of discussion activities.



FIGURE 11
An example of discussion activities—evaluation of English adverts.
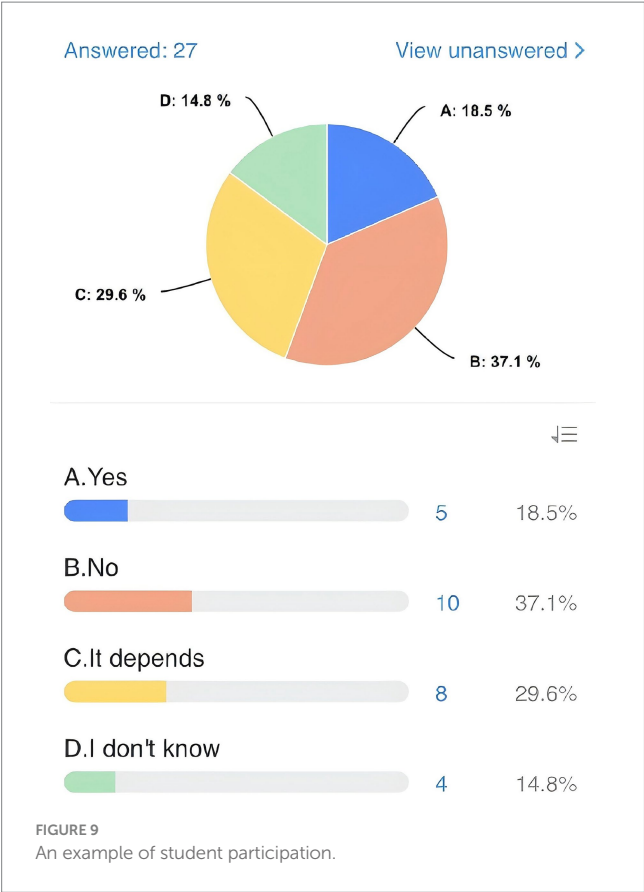
dynamic, and conducive to the development of lifelong learning skills. The detailed implementation of LDTMP in this study serves as a robust example for educators seeking to enhance student engagement and promote academic success in diverse educational contexts.

# 4 Discussion and implications

This study showed the development and implementation of LDTMP as a Learning Design based on Translanguaging and Multiliteracies Pedagogy (LDTMP) aiming to enhance student agency within a College English course in China using DBR as a methodology. The following discusses the implications of LDTMP and compares it with existing EFL instructional models to highlight its unique advantages.
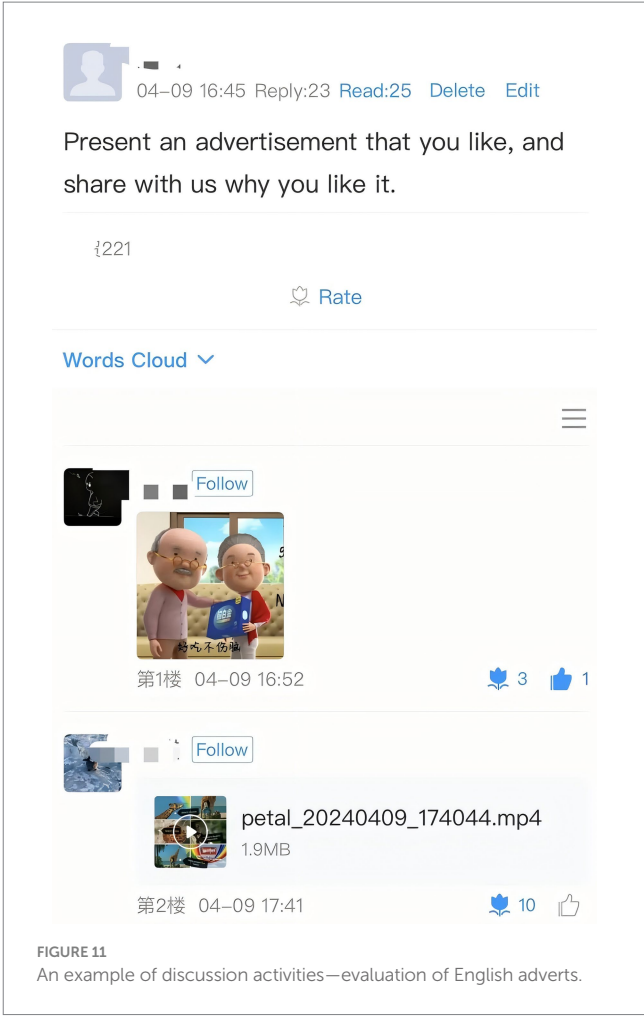
## 4.1 Overcoming challenges of promoting student agency with LDTMP

The LDTMP framework is the result of the application of learning design ideas, especially those drawn from translanguaging and multiliteracies teaching. In a multilingual or multicultural classroom, this approach is especially helpful since it acknowledges the variety of language practices and expands the linguistic resources accessible to students. The LDTMP fosters a more dynamic and inclusive learning environment by enabling students to benefit from a range of viewpoints and experiences.

A number of opportunities and difficulties pertaining to student agency in the context of EFL were discovered during the preliminary research phase (Section 3.1). The literature review, for example, made clear that agency depends on a number of factors that are entwined with how learning experiences are designed.

The literature review underscores that agency is contingent upon various elements intricately connected to the design of learning experiences. Jääskelä et al. (2016) conceptualized student agency as
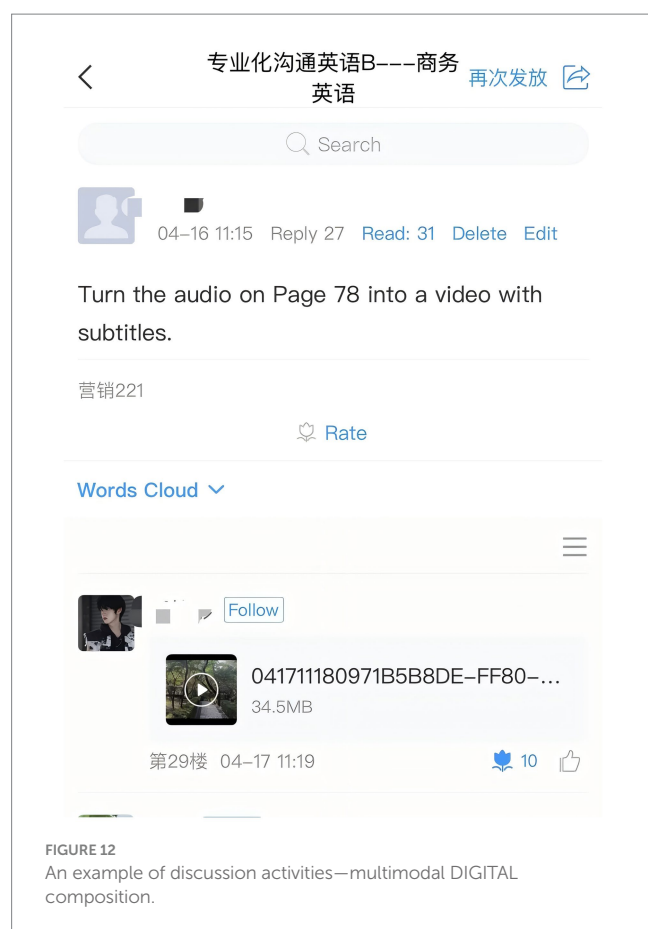
An example of discussion activities—multimodal DIGITAL composition.

the capacity to access and utilize personal, relational, and context-specific resources in academic settings. These resources enable students to engage in intentional and meaningful actions and learning processes, highlighting the critical role of well-designed learning environments.

In the context of Chinese university English instruction, Cheng and Wei (2019) emphasized the lack of attention given to student experiences and perspectives, identifying a gap in fostering student agency within educational practices. This aligns with Swain (2006) and van Lier (2008), who recognized agency as a pivotal factor in foreign and second language learning, noting that language development and performance heavily depend on the learner's agency.

Further exploring the dynamic relationship between agency and learning design, Pavlenko and Lantolf (2000) argued that second language learning involves participation and the (re)construction of self, directly linking the process to the development of agency. Kang (2017) demonstrated how classroom interactions, particularly language games, serve as agency resources that empower teachers to foster both pedagogical and collective agency, thereby creating a relaxed learning atmosphere and expanding opportunities for student participation.

Additionally, student agency is greatly influenced by educators' sense of responsibility and professional wellbeing (Phan and Hamid, 2017). Further reinforcing the idea that agency is molded by a combination of internal and external influences, Mercer (2011) emphasized how learners' beliefs affect their capacity to exercise agency. Qin et al. (2022) used mediation theory to examine changes in learning objectives and behaviors

while taking sociocultural viewpoints into account. They found that these changes were conventional markers of student agency. The importance of multilingual resources in improving learners' language awareness and proficiency was reaffirmed by research by Zhang and Li (2021) and Li and Zhang (2020), which also showed how effectively planned learning experiences that make use of these resources can greatly increase agency.

Together, these research show that learning experience design shapes and mediates agency, which does not arise in a vacuum. Teachers may build environments that encourage meaningful engagement and give students the power to take charge of their educational journeys by incorporating contextual, relational, and personal components.

In conclusion, even if encouraging student agency in an EFL setting presents certain difficulties, the knowledge gathered during the preliminary research stage offers a strong basis for the LDTMP framework. LDTMP seeks to establish a more stimulating and encouraging learning environment that enables students to take an active role in their academic journeys by filling in the gaps that have been identified and utilizing the chances offered by cutting-edge pedagogical approaches.

## 4.2 Comparing LDTMP with other approaches

Comparing the LDTMP approach to other instructional methods, the results highlight its strengths in fostering student autonomy and decision-making flexibility. Students in the LDTMP group reported greater freedom to make choices (D9) in their learning process, suggesting that the approach empowers learners to tailor their educational experiences to better suit their needs. While perceptions of competence (D1), teacher support (D4), and influence over course activities (D8) were lower compared to the Non-LDTMP group, this may indicate a shift toward a more student-centered learning where learners take greater responsibility for their own progress. Unlike traditional, teacher-centered approaches where students might be more passive recipients of knowledge (Taras, 2016), LDTMP encourages active participation and self-direction. This stands in contrast to some other models where the focus may be more on rote memorization and less on critical thinking and application. For example, the grammar-translation method often involves the translation of texts from the target language into the student's native language and vice versa, with a heavy focus on grammatical rules and vocabulary memorization (Richards and Rodgers, 2001), rather than preparing students for real-world language use. In comparison, traditional lecture-based instruction and textbook-centered learning may lead to a focus on end-of-chapter assessments rather than on ongoing, interactive learning experiences that support student agency (Au, 2007). Moreover, LDTMP integration of diverse teaching approaches stands out compared to more homogeneous instructional strategies that may not accommodate the varied needs and preferences of students, potentially leading to a less engaging and less equitable learning experience.

Despite the strengths of LDTMP for student agency, its effectiveness can be undermined by factors such as teacher's acceptance, the school's educational environment and students' individual characteristics. For instance, some studies have shown

that teachers' acceptance and effectiveness of new learning design models vary, which may be related to their educational concepts and levels of professional development (Geitz and de Geus, 2019). Moreover, the implementation of LDTMP also requires schools to provide corresponding support, including teaching resources, technological facilities, and professional training. Students' individual characteristics, such as self-efficacy, learning motivation, and learning styles, also affect the effectiveness of any type of teaching model (Tao and Gao, 2021). Therefore, when implementing LDTMP, it is necessary to consider these factors comprehensively and adopt teaching strategies to meet the needs of different students.

## 4.3 Practical implications for educators beyond China and in non-EFL disciplines

The Learning Design based on Translanguaging and Multiliteracies Pedagogy (LDTMP) presents a framework that has broad applications beyond the context of China and can be adapted to various educational settings and disciplines. Here are some practical implications for educators considering the adoption of LDTMP:

### 4.3.1 Enhancing student-centered learning

LDTMP can be used by educators in a variety of settings to shift from teacher-centered education to student-centered learning. Studies by Jaiswal and Al-Hattami (2020) and Khoury (2022) provide thorough insights into the theoretical underpinnings and real-world application of student-centered teaching methodologies. These studies demonstrate how well these strategies work to raise academic achievement, motivation, and student engagement. Teachers can promote a culture of active engagement and self-direction, which is essential for the development of lifelong learning skills, by giving students the freedom to take charge of their own education.

### 4.3.2 Developing critical thinking and problem-solving skills

Teachers can use LDTMP to develop assignments that ask students to use multimodal resources for analysis, evaluation, and creation. In the complicated world of today, this method develops critical thinking, problem-solving abilities, and the capacity to work with a variety of information sources.

### 4.3.3 Promoting inclusivity and diversity

LDTMP is an inclusive strategy since it acknowledges the diversity of language practices and encourages linguistic diversity. By valuing and incorporating students' original languages and cultural backgrounds, educators may create a more inclusive and representative learning environment.

### 4.3.4 Cross-disciplinary application

LDTMP can be used in a variety of fields and is not just for language acquisition. Students can improve their comprehension and communication of complicated concepts by, for example, conducting research in different languages, presenting their findings, and

engaging with multimodal literature in science or social studies classrooms.

### 4.3.5 Preparing for global citizenship

LDTMP equips students for global citizenship by strengthening their capacity to function in a variety of linguistic and cultural contexts. This method can be used by educators to promote intercultural competency and an international viewpoint, both of which are essential in our globalized society.

### 4.3.6 Professional development for educators

Teachers may need professional development in order to adopt LDTMP, giving them the skills they need in educational technology, multiliteracies, and translanguaging pedagogy. By funding this kind of training, educators are guaranteed to be able to lead the learning activities created using the LDTMP framework.

# 5 Conclusion

The findings of this study demonstrate how LDTMP has a great deal of potential to promote a more student-centered learning environment that is in line with upcoming trends in education and the goals of policymaking. A culture of lifelong learning and active citizenship can be fostered by educators by giving students the tools and support they need to take charge of their education. LDTMP offers educators practical strategies to enhance student agency and diversify instructional approaches as a framework that is reproducible and flexible, aligning with global educational trends.

The use of LDTMP in a Chinese college English course highlights how student agency may be transformative in fostering dynamic and inclusive learning environments. In addition to improving students' language skills, the creation and implementation of this educational model through DBR promoted responsible, reflective, and active learning habits. Global educational trends that emphasize self-directed, lifelong learning are directly supported by this method. Furthermore, the LDTMP's relevance to national education reforms and its capacity to influence novel policy orientations are demonstrated by the way its principles coincide with Chinese policies that support a learning society.

The core tenets of LDTMP—translanguaging and multiliteracies pedagogy—offer broad applicability across cultural and disciplinary barriers, despite the fact that the current study is based in the Chinese EFL environment. The LDTMP can be modified to accommodate the needs of various educational environments by utilizing the language and semiotic resources of learners, encouraging multimodal communication, and encouraging student agency. These characteristics make it a useful paradigm for educators and politicians who want to get children ready for a world that is changing and becoming more linked.

In order to meet the increasing demand for inclusive, adaptable, and creative teaching methods, future educational policies ought to take into account including models such as LDTMP. By connecting pedagogical innovation with global educational goals, this study adds to a larger conversation about reinventing education for the 21st century.

# 6 Limitations and future recommendations

The study's contribution of the LDTMP (Learning Design for Translanguaging and Multiliteracies Pedagogy) model for enhancing student agency within EFL contexts in China is subject to several limitations. Firstly, the generalizability of the findings is constrained by the cultural and educational specificity of the study, as its focus is limited to the Chinese EFL context. This raises questions about the broader applicability of LDTMP in other linguistic, cultural, or disciplinary settings. Secondly, the model's implementation has been primarily examined at the tertiary education level. Its adaptability to lower educational levels, where constraints such as limited digital device usage prevail, remains underexplored. Nevertheless, the underlying principles of LDTMP—flexible design, resource leveraging, and fostering student agency—have the potential to thrive in low-tech environments through alternative practices like Total Physical Response or translation using paper or blackboards.

Another limitation lies in the lack of exploration regarding teacher preparation and professional development necessary for implementing LDTMP effectively. The role of teachers as facilitators in integrating translanguaging and multiliteracies practices is pivotal, and this study provides limited insight into how teachers can be adequately equipped to apply the model. Additionally, the scope of technological tools and platforms used in the study is restricted. Broader applications of LDTMP could benefit from a more diverse and detailed incorporation of technological resources, especially given the increasing integration of digital tools in education.

Future research should address these limitations by exploring the potential of LDTMP in diverse cultural, linguistic, and disciplinary contexts. Investigating its applicability to resource-constrained settings and across different educational levels, including primary and secondary education, is essential. Further studies should also focus on teacher preparation and professional development, examining how training programs can support educators in implementing LDTMP effectively. Expanding the range of technological tools and platforms within the framework will also be critical to enhance its scalability and relevance. Finally, longitudinal studies are recommended to evaluate the sustained impact of LDTMP on academic achievement, cognitive development, and lifelong learning, ensuring a more comprehensive understanding of its efficacy across diverse educational landscapes.

## Data availability statement

The datasets presented in this article are not readily available because restricted to student agency research only. Requests to access the datasets should be directed to zhoujie1199@gmail.com.

## Ethics statement

The studies involving humans were approved by the China Jiliang Univeristy Institutional Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

## Author contributions

JZ: Writing – original draft. SL: Writing – review & editing. SK: Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

The author(s) declare that no Generative AI was used in the creation of this manuscript.

## Publisher's note

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# The current state of Italian language and culture teaching in higher education in China

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In the growing context of economic globalization, trade and exchanges between countries around the world are more and more frequent. This brings about an increasing demands of experts in foreign languages. It has been already 71 years since the University of International Business and Economics (UIBE) in Beijing launched the first Italian language program in 1954. Currently, there are 24 universities and institutes across the country (including Hong Kong and Macao) offer the academic degree related to Italian language and culture. Furthermore, many other universities and higher education institutions provide Italian language courses. This paper briefly reviews the history of teaching Italian language and culture in China. The aim of this study is to provide a comprehensive overview regarding the current state of teaching Italian language and culture within Chinese higher education system. This paper also covers the relevant teachers' educational background, their academic titles and the use of teaching material, etc. In particular, this study sheds some light on the state of teaching the aforementioned subjects in Chinese institutions (universities, institutes, vocational and technical institutes) that provide Italian language and culture as elective, compulsory or minor courses, and the teaching situation to graduate students, which was not thoroughly explored in previous studies. Furthermore, this paper shows the various types of course program, the number of students enrolled and some peculiar difficulties of providing these kinds of courses to Chinese learners.

## 1 Introduction

Italian teaching in Higher Education in China has developed from a zero level to a significant one, and has improved along with the constant development of Sino-Italian bilateral relations. A recent noteworthy event occurred in November 2024 (from 7 November to 12 November), when the Italian President of the Republic, Sergio Mattarella, visited China. This was his second visit after 7 years.

On the occasion of State Visit, the "China-Italy University Presidents' Dialogue"("Dialogo dei Rettori tra le Università cinesi e italiane") took place on 9 November at Peking University, organized by the Ministry of Education of the PRC in collaboration with the Ministry of University and Research of the Italian Republic (MUR—Ministro dell'Università e della Ricerca della Repubblica Italiana) and the CRUI—Conference of Rectors of Italian Universities (Conferenza dei Rettori delle Università italiane). In this conference, six agreements have been signed between Chinese and Italian institutions for the creation of research centers, bilateral high-level training initiatives, and the construction of an international campus. The minister of the Ministry of Education of the PRC, Jinpeng Huai怀进鹏, subsequently expressed the

hope that Chinese and Italian universities will deepen their scientific collaboration, especially in basic research and in emerging and interdisciplinary sectors.[1]

That afternoon Italian President Sergio Mattarella led a delegation to visit Peking University and delivered a Lectio Magistralis at Peking University. Mattarella pointed out that universities are important places for cultivating critical thinking and play an indispensable role in the contemporary education system. Mattarella was pleased that the "China-Italy University Presidents' Dialogue" has been held and said that this dialog was not only an opportunity for academic discussion, but also an occasion for the exchange of ideas between the people of the two countries, and an occasion for joint growth. He hoped that through this dialog, the cooperation between China and Italy in higher education could reach a new level.[2]

Therefore, it is important to analyze the challenges and opportunities of Italian language and culture teaching in higher education in China. In the last part, the future prospects are examined.

## 2 Literature review

The Italian language, as a non-generally foreign language, and its cultural teaching started relatively late in China. Due to the limited number of Chinese students learning Italian, there is relatively little literature about the state of teaching in China.

Zhi (2011) conducted a thorough study on the history, the situation, and the development of Italian Language Teaching in China. She divided the development process of Italian teaching in China into four stages: (1) the preparatory stage (1949–1955), (2) the initial stage (1955–1966), (3) the recovery stage after the Cultural Revolution (1970–1978), and (4) the rapid development stage after the Chinese economic reform (1978–2011, the year of publication).[3] She analyzed the current situation of Italian language teaching, pointed out the achievements and shortcomings, and gave suggestions for the development of Italian language teaching in China, such as strengthening the training for young teachers and improving teachers'

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1 See the official website of the Ministry of Education of the People's Republic of China at http://www.moe.gov.cn/jyb_zzjg/huodong/202411/t20241109_1161420.html.

2 See the official website of Quirinale at https://www.quirinale.it/elementi/122871.

3 The preparatory stage (1949–1954): after the foundation of the PRC in 1949, the country sent a group of young students to study languages abroad with the objective of understanding and communicating with the world, among them were students studying Italian. (2) The initial stage (1954–1966): in 1954, the then-Foreign Trade Institute (the predecessor of UIBE) launched the first Italian language major in China. Before the Cultural Revolution, there were only three universities and institutions offering Italian majors. (3) The recovery stage after the Cultural Revolution (1970–1978): After 1970, the universities and institutions gradually resumed enrolling Italian language students which was interrupted by the Cultural Revolution, and new schools began to offer Italian majors. (4) The rapid development stage after the Chinese economic reform (1978–2011): After the Chinese economic reform, the scale of Italian language teaching began to expand. As of 2011, 14 universities and institutions have opened Italian majors and provided elective, compulsory, or minor courses.

scientific research capabilities, etc. This was the first attempt to investigate the situation of Italian language teaching in China.

Liu (2017) published a paper titled "The Mutual Promotion and Influence of Foreign Language Teaching and International Relationships—Taking Italian Language Teaching in China and Sino-Italian Relations as an example." In this thesis, the author divided the development of Sino-Italian relations into six stages: (1) before the fall of the Qing Dynasty (before 1912), (2) from the fall of the Qing Dynasty to the foundation of the PRC (from 1913 to 1949), (3) from the foundation of the PRC to the formal establishment of diplomatic relations between Italy and China (from 1950 to 1970), (4) the initial period of Sino-Italian diplomatic relations (from 1971 to 1985), (5) The period of rapid development of Sino-Italian relations (from 1995 to 2000), and (6) The period of in-depth development of Sino-Italian relations (from 2001 to 2017, the year of publication), the development of Italian language teaching in China has shown different characteristics in different periods, which was directly relative to the closeness of the relationship between the two countries. The author concluded that international relations had a huge impact on language teaching, and under the Belt and Road Initiative, Italian language teaching will have further developments in China.

Li et al. (2019) analyzed the characteristics, challenges, and countermeasures of the China-Italy higher education cooperation and exchange under the background of the Belt and Road Initiative. They stated that the cooperation and exchange of higher education between China and Italy demonstrated the following characteristics: expanding and deepening the cooperation in other fields on the basis of language mutual learning and interoperability; promoting the educational communication between China and Italy through the characteristic projects; taking Confucius Institutes as the platform to promote holistic exchanges and cooperation between the co-organizers. They also pointed out some challenges when deepening development and proposed to carry out some effective strategies such as innovating the course system of comprehensive personnel cultivation according to the requirement of the Belt and Road Initiative, promoting the exchange of college and university students between the two countries, etc.

Liu (2021) published a paper titled "Sino-Italian Language and Education Exchanges: Past and Present." The author reviewed the history of Sino-Italian exchanges in language and education, particularly the developments in the 21st century, including language teaching, student exchanges, academic exchanges, and new models of exchange. This article finally provided an outlook on Sino-Italian educational cooperation.

In addition, many scholars discussed one aspect of Italian language teaching (such as teaching materials, teaching methods, formation of talents, etc.) For example, Zhang (2018) in her thesis of master degree analyzed the development and characteristics of the didactic textbooks compiled in China for teaching the Italian language and culture; Lu (2019) discussed the cultural introduction to Italian language teaching; Zhang (2019) conducted a study on the Italian language teaching in the framework of cross-cultural communication in the New Media Era; Qin (2019) explored the education model of the qualified Italian language speakers in business context; etc.

The aforementioned literature about the Italian language and culture teaching in higher education in China highlights critical insights into the research in this field. However, until now, no one has conducted a survey on the Italian language and culture teaching

according to different types of higher education institutions. In the presented research, the author will classify the "higher education institutions" into three parts: (1) universities and institutes offering Italian language majors; (2) universities and institutes providing Italian language and culture as elective, compulsory, or minor courses; (3) vocational and technical institutes offering Italian language majors or elective courses. The author will study their teaching situation and existing problems, in order to address comprehensive information about the current state of Italian language and culture teaching in higher education in China.

# 3 Methodology

This study aims to provide a detailed overview of the current state of Italian language and culture teaching in higher education in China, involving teachers, students, and course curricula, etc. It also discusses teachers' difficulties in teaching the Italian language and culture, and tries to provide some useful solutions to help solve these challenges. This study combines qualitative and quantitative approaches, utilizing specifically designed questionnaires and interviews to collect data relevant to the research questions, which allows for the efficient collection of data, ensuring the reliability of the conclusions of the paper.

## 3.1 Inspiration

This study draws inspiration from the work of Wang and her team members (2023) from the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing and Zhang and her team members (2023) from Guangdong University of Foreign Studies. The former provided two tables: (1) Table of Chinese universities and institutes offering Italian language majors; (2) Table of Chinese institutions providing other types of Italian language courses. The latter contributed one table which is titled "Survey on the Situation of Italian Language Majors in China," providing information on the total number of students, the Chinese teachers' educational background, their academic titles, and their age at 26 universities and institutes.

Among these 26 universities and institutes are 22 universities and institutes offering Italian language majors (except Hebei International Studies University and Hong Kong University), three universities and institutes offering Italian language and culture as elective, compulsory or minor courses, and one vocational and technical institute. From this data, we know that the information related to universities and institutes offering Italian language majors is quite sufficient (22 of 24), but the data about universities and institutes providing Italian language and culture as elective, compulsory, or minor courses (3 of 28) and vocational and technical institutes (1 of 4) are not quite sufficient.

## 3.2 Interviews and questionnaire design and participants

Since in China, there are only four vocational and technical institutes, the author interviewed four Italian language and culture teachers who worked in these schools (one teacher from each school) via phone and WeChat to investigate their teaching situation, including their educational background, academic titles, their teaching materials, and the course curricula, etc. As for the teaching situation of universities and institutes providing Italian language and culture as elective, compulsory, or minor courses, the author designed a questionnaire to collect the data. For the universities and institutes offering Italian language majors, there is plenty of information on undergraduate teaching, but less information on graduate teaching from previous studies, so the author designed another questionnaire to collect the data on graduate teaching.

Accordingly, two questionnaires were designed. The first questionnaire is titled "Questionnaire for Universities and Institutes Providing Italian Language and Culture as Elective, Compulsory or Minor Courses" with 19 questions in total. Seventeen questions collected basic information, including the name of the university or institute, the total number of teachers, their educational background and academic titles, the total number of students, teaching materials, etc. The purpose of gathering this data is to construct a comprehensive profile of the teaching situation. Two open-ended questions were included at the end of the questionnaire to explore the challenges encountered by teachers in the process of teaching and research, and to present any ideas that they may wish to add. The second questionnaire is titled "Questionnaire for Universities Nationwide Recruiting Italian-speaking Graduate Students" with 15 questions in total. Eleven questions collected basic information, including the name of the university or institute, specializations for masters' degrees, peculiarities and qualities of the program, core courses, teaching materials, etc. The objective of collecting this data is to provide an overview regarding the teaching situation. Four open-ended questions at the end of the questionnaire study the difference between teaching undergraduate students and graduate students.

The data collection occurred between 27 May 2024, and 31 July, two questionnaires were created and distributed using "Wenjuanxing," a popular platform for recruiting survey participants in China. Emails were sent to the Chinese Italian language teachers in the Chinese mainland and Hong Kong, informing them of the survey with the link and QR code included.

24 participants filled out the questionnaire, all of whom were Italian language and culture teachers in higher education universities and institutes. They were from 23 different higher education universities and institutes, notably, Tsinghua University, Nankai University, Beijing Foreign Studies University, Beijing Language and Culture University, etc.

For the universities and institutes that did not fill out the questionnaire, the author obtained the data through telephone interviews and WeChat interviews from the Italian language teachers, heads, or secretaries of associated departments and searched for information on the official websites of universities and institutes, and finally collected the data needed for the research.

## 3.3 Data collection and analysis

Since the two questionnaires were designed and answered in Chinese, the author classified the data and translated it into English. The questionnaires' data was presented in a descriptive way. The

author drew some figures and tables to analyze the data and illustrate the results in a coherent way.

## 3.4 Limitations

Although this research meets the purpose of the study by presenting the current situation of Italian language and culture teaching in higher education in China with survey and statistical results, it lacks depth in analysis and theoretical grounding. This article primarily presents descriptive data without exploring broader implications or offering critical insights.

## 4 Historical review of Italian language and culture teaching in China

Modern Italian language and culture teaching in China has occurred for more than 70 years. After the foundation of the PRC in 1949, our country began to establish diplomatic relations with some western countries. There were not only relations in the political area, but also cultural and economic exchanges. Indeed, back then, there was an urgent need for a significant number of foreign language translators and interpreters.

In the 1950s, the Chinese Government sent a group of students to the Soviet Union, Italy, and Switzerland to study Italian. Among them were several people who later famous diplomats, such as Mr. Baoshun Chen陈宝顺(1936–2023) and Mrs. Yiyuan Shen沈亦缘 (1937-). Other students later became prominent Italian teachers such as Mrs. Huiru Fei费慧茹(1932-) and Mr. Huanbao Wang王焕宝(1939-). Some of these teachers also became important translators like Mr. Tongliu Lü吕同六(1938–2005) and e Mr. Tianyou Xiao肖天佑 (1937-), etc.[4] These pioneers in the study of Italian language and culture laid down a solid foundation for the future development of this field.

In 1954, with the recommendation and help of the then-Ministry of Foreign Trade (nowadays Ministry of Commerce of PRC), the then-Foreign Trade Institute (nowadays University of International Business and Economics—UIBE) launched the first Italian language major in Chinese academia. In charge of the teaching there was Yantang Li李砚棠(1939-) who previously studied engineering at Yale University. His Italian language knowledge was mainly due to the language lessons provided by an Italian friend that Prof. Li met at Yale. The first class consisted of only nine students.[5]

Subsequently, in 1960, the then-Beijing Radio Station (nowadays Beijing Radio and Television Station) decided to broadcast radio

programs in Italian. Consequently, a special Italian language major was established at then-affiliated Beijing Radio Institute (nowadays Communication University of China—CUC). In 1962, aiming at the formation of Italian interpreters and translators, another new Italian major was established at the Beijing Institute of Foreign Studies (nowadays Beijing Foreign Studies University—BFSU), affiliated to the Ministry of Foreign Affairs of RPC.

During the Cultural Revolution, the Italian language and culture teaching in the aforementioned institutes were discontinued, and it was not until the later years of this period that this kind of programs were gradually resumed. Furthermore, in 1970, Italy and China formally established diplomatic relations. Under the support of Chinese Government, in 1971 BFSU and in 1972 UIBE resumed the enrollment of students in Italian language majors.[6] In 1972, the Shanghai Institute of Foreign Studies (nowadays Shanghai International Studies University—SISU) also established its own Italian language major.

Since the Chinese economic reform (also known domestically as "Reform and Opening-up Policy") in 1978, our country has cooperated with European countries (including Italy) in many fields such as economy, trade, science and technology, culture, art, education, tourism. With the strengthen of multilateral exchanges, the demand of foreign language education in our country has increased rapidly. In 1979 or 1980,[7] Xi'an Conservatory of Music (XACM) launched an Italian Phonetics Course for undergraduate students in the vocal music department as a compulsory course. This was the first time in which a higher education body provided such kind of course in China. In the Beijing Language Institute (nowadays Beijing Language and Culture University—BLCU) from 1983, for many years, prof. Xiuying Zhao 赵秀英(1945-), taught Italian language to Chinese students who were sent and sponsored by the Chinese government to study in Italy at the MOE Training Center For Overseas Study, a center affiliated to the Ministry of Education of the PRC.[8] In 1995, the Xi'an Institute of Foreign Studies (nowadays Xi'an International Studies University—XISU) had established the Italian language major within the Department of Tourism, for the purpose of cultivating

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4   Lili Zhi, *The History, Current Situation and Development of Italian Language Teaching in China* (our translation), Journal of Hubei TV University [J], December 2011, pp. 115–116. (职莉莉，中国意大利语教学的历史、现状与发展，《湖北广播电视大学学报》，2011年12月，115至116页。).

5   Qian Zhang, *Analisi dello sviluppo e delle caratteristiche dei manuali redatti in Cina per l'insegnamento dell'italiano*, Thesis of Master Degree of Beijing Foreign Studies University, May 2018, pp. 25–26. (张倩，中国高校意大利语专业本土基础教材的演进与特点，北京外国语大学硕士学位论文，        2018年5月，25至26页。).

6   It was not until 2001, another institute, the CUC resumed the enrollment of students in Italian major until 2001.

7   Professor Ling Zhou 周玲, currently teaching Italian phonetics course at Xi'an Conservatory of Music, suggested this period of time. She is unable to pinpoint a more specific date.

8   Professor Xiuying Zhao 赵秀英 (1945-) after graduation from the Foreign Trade Institute (nowadays UIBE), worked in Beijing Language Institute from 1972. Since 1972 to 1983, she was responsible for teaching Chinese language to Italian bursary students who were sent to China by the Italian government. From 1983, she began to teach Italian language to Chinese students who were sent and sponsored by the Chinese government to study in Italy. The latter students studied at MOE Training Center for Overseas Study (part of the Beijing Language Institute), a center affiliated to the Ministry of Education of the PRC. Only in 2009 BLCU offered the first bachelor's degree in Italian language study. The following year, considering the success of the undergraduate program, an analogous master degree was established. In 2014, thanks to the efforts of Professor Xiuying Zhao, BLCU and the University of Modena (Italy) began a cooperation related to the doctoral students. This program consists in sending outstanding Chinese students to pursue a PhD at the University of Modena and Reggio Emilia.

Italian-speaking tourist guides to meet the requirements of the local vacation industry, because Xi'an attracts many Italian visitors every year. To sum up, although, during the second half of the 20th century, Italian language and culture teaching started with great difficulty, it was able to obtained also some significant results, laying a foundation of a new generation of teachers and experts.

In the 21st century, China and Italy kept improving their relations. A turning point is 2004, when China and Italy established a comprehensive strategic partnership relationship. After that, more and more Chinese higher education institutions added Italian language and culture in their curricula. In particular, some established Italian language majors; others provided Italian language and cultural courses as elective, minor or compulsory ones.

# 5 Survey and statistical results about the current state of the Italian language and culture teaching in higher education in China

To provide accurate data, higher education institutions were surveyed. In particular, for the purpose of this enquiry, "higher education institutions" were divided into three parts: (1) universities and institutes offering Italian language majors (both undergraduate and graduate level); (2) universities and institutes providing Italian language and culture as elective, compulsory or minor courses; (3) Vocational and technical institutes (the so-called "da zhuan") offering Italian language majors or elective courses.[9]

The content of the survey are as follows: (1) a comprehensive list of higher education institutions with Italian language majors (both undergraduate and graduate) and courses of other types (elective, minor or compulsory courses); (2) Analysis of the current teaching situation (including 1. teachers' ranking, academic degree and titles [requirements to be qualified as such]; 2. the type of course program and the teaching materials; 3. the number of students; 4. Types of problems encountered by teachers, etc.).

Through this research, the author tries to present the current situation of Italian language and culture teaching in higher education in China in a comprehensive and objective manner, pointing out the achievements, analyzing the existing problems, and, in the end, providing some suggestions.

## 5.1 List of higher education institutions offering Italian language majors and Italian courses of different type

### 5.1.1 List of universities and institutes offering Italian majors (both undergraduate and graduate level)

According to the figures provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in

Beijing, in China there are currently 24 universities and institutes with Italian language major (bachelor degree), among them only 12 universities and institutes provide a master's degree program (details in Table 1). Moreover, among the latter group, only one university offers an *ad hoc* PhD program.

According to the data, there are currently 24 universities and institutes providing Italian language majors in China. In particular, 15 are universities and 9 are institutes.[10] Among them, the first institute that launched the Italian language Major was the Foreign Trade Institute (nowadays UIBE) in 1954. In 2017, Nankai University (NKU) launched its own Italian language bachelor degree program, becoming the first comprehensive national university that launched the Italian language major. In 2018, Hong Kong University (HKU) started to provide the Italian language major. Since 2021, also Peking University (PKU) has provided the Italian language major. These data show the tendency that Italian language majors became increasingly appealing for high quality comprehensive university.

In addition to this, regarding the master degrees, the situation is a bit more complex due to the presence of different types of programs:

(1) Regarding the three-year master program in Italian language and literature, the among the first universities that offered one of these was Shanghai Foreign Studies University (SISU) in 1998. After that, UIBE established an *ad hoc* master degree in 2000, Nanjing Normal University (NNU) in 2005, and BFSU in 2007.

(2) As regards the two-year Italian MTI degree (Master of Translation and Interpreting), Jilin International Studies University (JISU) was the first university that offered one in 2019. After that, UIBE launched its own MTI in 2021, BFSU launched an analogous program during the same year, while the following year Tianjin Foreign Studies University (TFSU) began to recruit MTI students.

(3) The most recent type of program is related to "Area Studies, some universities (including NKU since 2022, CUC since 2024) began to recruit some master students, who research on some aspects of Italy (such as economy, politics).

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9 "da zhuan" institutes 大专院校, refers to a type of institution that provides vocational and technical education. The duration of study is usually 3 years, after graduation the students can obtain a "da zhuan" diploma.

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10 It is important to note that under the English name 'university' [in Chinese '大学' "da xue"] you can find several '学院' "xue yuan," which means "institute" or 'college'. Although the official English name is 'university' they retain a different Chinese name. Chongqing Institute of Foreign Studies (重庆外语外事学院) is the only one to retain the Chinese name in the translation. The other 8 institutes which are officially called universities in English are: Beijing International Studies University (北京第二外国语学院), Hebei Normal University of Science and Technology (河北科技师范学院), Zhejiang Yuexiu University (浙江越秀外国语学院), Chengdu International Studies University (成都外国语学院), Zhejiang International Studies University (浙江外国语学院), Hebei International Studies University (河北外国语学院), Heilongjiang International University (黑龙江外国语学院) and Guangzhou Maritime University (广州航海学院).

TABLE 1 Chinese universities and institutes offering some type of Italian language majors (as of 07/2024).

| | Provinces / autonomous cities | University or institute | Foundation year of the bachelor's degree program | Foundation year of the master's degree program | Foundation year of the PhD program |
|---|---|---|---|---|---|
| 1 | Beijing | 对外经济贸易大学<br>University of International Business and Economics | 1954/1972 (resumed) | 2000/2021 (MTI) | — |
| 2 | Beijing | 中国传媒大学<br>Communication University of China | 1960/2001 (resumed) | 2024<br>Area studies | — |
| 3 | Beijing | 北京外国语大学<br>Beijing Foreign Studies University | 1962/1971 | 2007<br>/2021 (MTI) | 2012–2015 |
| 4 | Shanghai | 上海外国语大学<br>Shanghai Foreign Studies University | 1972 | 1998 | — |
| 5 | Xi'an (Shaanxi) | 西安外国语大学<br>Xi'an International Studies University | 1995 | 2009 | — |
| 6 | Nanjing (Jiangsu) | 南京师范大学<br>Nanjing Normal University | 2001 | 2005 | — |
| 7 | Guangzhou (Guangdong) | 广东外语外贸大学<br>Guangdong University of Foreign Studies | 2002 | 2020 | — |
| 8 | Tianjin | 天津外国语大学<br>Tianjin Foreign Studies University | 2005 | 2012/2022 (MTI) | — |
| 9 | Beijing | 北京第二外国语学院<br>Beijing International Studies University | 2006 | — | — |
| 10 | Dalian (Liaoning) | 大连外国语大学<br>Dalian University of Foreign Languages | 2006 | — | — |
| 11 | Chongqing | 四川外国语大学<br>Sichuan International Studies University | 2007 | 2016 | 2024 |
| 12 | Qinhuangdao (Hebei) | 河北科技师范学院<br>Hebei Normal University of Science and Technology | 2007 | — | — |
| 13 | Changchun (Jilin) | 吉林外国语大学<br>Jilin International Studies University | 2008 | 2019 (MTI) | — |
| 14 | Beijing | 北京语言大学<br>Beijing Language and Culture University | 2009 | 2010 | — |
| 15 | Shaoxing (Zhejiang) | 浙江越秀外国语学院<br>Zhejiang Yuexiu University | 2010 | — | — |
| 16 | Chongqing | 重庆外语外事学院<br>Chongqing Institute of Foriegn Studies | 2011 | — | — |
| 17 | Chengdu (Sichuan) | 成都外国语学院<br>Chengdu International Studies University | 2011 | — | — |

*(Continued)*

TABLE 1 (Continued)

| | Provinces / autonomous cities | University or institute | Foundation year of the bachelor's degree program | Foundation year of the master's degree program | Foundation year of the PhD program |
|---|---|---|---|---|---|
| 18 | Hangzhou (Zhejiang) | 浙江外国语学院 Zhejiang International Studies University | 2012 | — | — |
| 19 | Shijiazhuang (Hebei) | 河北外国语学院 Hebei International Studies University | 2014 | — | — |
| 20 | Harbin (Heilongjiang) | 黑龙江外国语学院 Heilongjiang International University | 2016 | — | — |
| 21 | Tianjin | 南开大学 Nankai University | 2017 | 2022 Area Studies | — |
| 22 | Hongkong | 香港大学 Hong Kong University | 2018 | — | — |
| 23 | Guangzhou (Guangdong) | 广州航海学院 Guangzhou Maritime University | 2021 | — | — |
| 24 | Beijing | 北京大学 Peking University | 2021 | — | — |

These figures were provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing (covering till June 2023). Some data were updated by the author in July 2024.

In summary, until July 2024, 12 universities and institutes of those which founded a relevant bachelor's degree program launched master's degree program related to Italian language.[11]

Regarding doctoral programs, the first university in China to recruit doctoral students in Italian language and literature was BFSU, Professor Jun Wang 王军 (1952-) [then-director of the Italian Department] was the doctoral supervisor. However, this Ph.D. program only lasted 4 years (2012–2015), there were only four cohorts of candidates for a total of 6 students.[12] This project gave some young scholars the opportunity to improve their academic qualifications.

After 2014, young scholars in China who wanted to pursue a PhD degree can only study abroad. Most of them chose to study in Italian universities, while a few of them pursued their doctoral degree in the United States. In this period, due to the lack of an *ad hoc* PhD

11   Within these 12 higher education institutions:

◎ 3 institutions offer both an MTI and a 3 year master program in Italian language and culture (UIBE, BFSU, TFSU).

◎ 6 institutions offer only a 3 year master program in Italian language and culture (BLCU, XISU, SISU, NNU, SISU, GDUFS).

◎ JISU only provides an MTI.

To this group of 10 universities and institutes, we should also mention 2 universities (NKU and CUC) which, although do not have an Italian language and culture *ad hoc* program, launched their master's degree within "Area Studies" which also covers, among other things, some aspects of Italian language and culture.

12   Among these six students, the two students who received their doctoral degrees the latest passed their thesis discussion in 2020.

programs available in China, several scholars also made efforts to help Chinese students to start a doctoral degree abroad. For example, the professor Xiuying Zhao赵秀英 (1945-) from the BLCU, established an informal partnership with the Italian University of Modena and Reggio Emilia, and selected outstanding Chinese students to pursue a PhD in Italy.

On the other hand, commencing in September 2024, Sichuan International Studies University (SISU), under the guidance of Professor Ying Chen陈英 (the current director of the Italian Language and Culture Department), began to recruit doctoral students, therefore, Italian language students would have again the possibility to pursue this kind of PhD in our country.

Based on the data in the table, two analysis figures were drawn.

Considering the data shown in the Figure 1, most universities and institutes founded the bachelor degree program after 2000, before 2000, only 5 academic institutions provided a relevant bachelor degree program and, within them, only one launched a three-year master degree program.

It is interesting to notice that, according to Figure 1, there were two small peaks in the time periods of 2005–2009 (when 7 higher education institutions founded an *ad hoc* bachelor degree program and 2 launched a three-year master degree program) and 2010–2014 (when 5 among the universities and institutes founded a relevant bachelor degree program and 3 launched a three-year master degree program).

As shown in Figure 2, we can see the provinces and autonomous cities where most higher education institutions providing Italian studies are located in Beijing (6 among universities and institutes offer an *ad hoc* bachelor degree program while 4 of them have master degree program). The second autonomous city with the highest number of relevant programs is Tianjin (2 bachelor degree program and 2 master

**FIGURE 1**
Number of Chinese universities and institutes that have been providing bachelor and master degree programs.



**FIGURE 2**
Distribution of Chinese universities and institutes that provide bachelor, master and PhD programs.

degree program). This is followed by Guangdong (where you can find 2 bachelor degree program and one master degree program).

In other words, according the data, Beijing houses 1/4 of all Chinese universities and institutes that provide the bachelor degree program, and 1/3 that have various types of master degree programs. In terms of quantity, Beijing plays a pivotal role in the Italian language and culture teaching in Chinese higher education. Moreover, it is worth mentioning that after Beijing Foreign Studies University stopped its PhD program, since 2024, Sichuan has become the only Chinese province offering an *ad hoc* PhD program.

## 5.1.2 List of universities and institutes that have been providing Italian language and culture as elective, compulsory or minor courses (including discontinued ones)

According to the statistics provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in

Beijing, supplemented by our own survey,[13] in China there are 28 universities and institutes that have been offering or used to offer Italian language and culture as elective, compulsory or minor courses (see Table 2).

According to the data, there are a total of 28 universities and institutes in China (including Hong Kong and Macao) that have been offering, or used to offer, Italian elective, compulsory or minor courses. In particular, those which have a discontinued program are Southwest University (SWU 2018–2019) and East China University of Political Science and Law (ECUPL 2019–2020). Among the 26 universities and institutes in China that are currently offering some

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13  These figures were provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing (covering till June 2023). The author supplemented the data of "Year that opened the Italian language and culture as an elective, minor or compulsory courses" and updated some data in July 2024.

TABLE 2 Chinese universities and institutes that have been providing Italian language and culture as elective, compulsory or minor courses (as of 07/2024, including discontinued ones).

| | Provinces/autonomous cities | University or institute | Year when these kinds of courses were opened | Course type (School/department/college/institute/center offering the course) |
|---|---|---|---|---|
| 1 | Xi'an (Shaanxi) | 西安音乐学院<br>Xi'an Conservatory | Late 1970s and early 1980s (about 1979, 1980) | Compulsory (Department of Vocal Music) |
| | | | 2011 | (Postgraduate Department) |
| 2 | Hongkong | 香港大学<br>University of Hong Kong | 1998 | Elective (School of Modern Languages and cultures) |
| 3 | Hongkong | 香港中文大学<br>The Chinese University of Hong Kong | 2004 | Elective (Department of Linguistics and Modern Languages) |
| 4 | Beijing | 中国政法大学<br>China University of Political Science and Law | 2005 | Elective (School of Foreign Studies) |
| 5 | Beijing | 清华大学<br>Tsinghua University | 2005 | Elective (Language center) |
| 6 | Shanghai | 同济大学<br>Tongji University | 2006–2021 (discontinued) | Compulsory for the students in the Double Degree Porject with the Politecnico of Turin and University of Bologna (Sino-Italian Campus) |
| | | | 2022 | Elective (School of Foreign Studies) |
| 7 | Hongkong | 香港恒生大学<br>The Hang Seng University of Hong Kong | 2010 | Elective (School of Translation and Foreign Languages) |
| 8 | Zhengzhou (Henan) | 河南农业大学<br>Henan Agricultural University | 2011 | Elective (School of International education) |
| 9 | Xiamen (Fujian) | 厦门大学<br>Xiamen University | 2015 | Elective (College of Foreign Languages and Cultures) |
| 10 | Chengdu (Sichuan) | 四川师范大学<br>Sichuan Normal University | 2015 | Compulsory for the students in the Double Master's Degree Porject with IED on Fashion Design (Fashion and Arts Design Institute) |
| 11 | Chengdu (Sichuan) | 电子科技大学<br>University of Electronic Science and Technology of China | 2016 | Elective (School of Foreign Languages) |
| 12 | Tianjin | 南开大学<br>Nankai University | 2016 | Elective (College of foreign languages) |
| 13 | Chongqing | 西南大学<br>Southwest University | 2018–2019 (discontinued) | Elective (College of International Studies) |
| 14 | Xi'an (Shaanxi) | 西安石油大学<br>Xi'an Shiyou University | 2019 | Elective (School of Foreign Languages) |
| 15 | Wenzhou (Zhejiang) | 温州大学<br>Wenzhou University | 2019 | Elective (College of International Education) |
| 16 | Chongqing | 重庆医科大学<br>Chongqing Medical University | 2019 | Elective (School of Foreign Languages) |
| 17 | Guangzhou (Guangdong) | 广州大学<br>Guangzhou University | 2019 | Elective (College of International Education) |
| 18 | Shanghai | 华东政法大学<br>East China University of Political Science and Law | 2019–2020 (discontinued) | Elective (Law School) |

*(Continued)*

TABLE 2 (Continued)

| | Provinces/autonomous cities | University or institute | Year when these kinds of courses were opened | Course type (School/ department/college/institute/ center offering the course) |
|---|---|---|---|---|
| 19 | Wuhan (Hubei) | 中南财经政法大学<br>Zhongnan University of Economics and Law | 2019 | Compulsory for the students in the Double Master's Degree Porject with the Sapienza University of Rome/ students with only one master's degree of Sapienza University of Rome (ZUEL-SUR School of Law and Economics) |
| | | | 2023 | Elective (School of Foreign Studies) |
| 20 | Beijing | 北京化工大学<br>Beijing University of Chemical Technology | 2020 | Compulsory for the students in the Double Degree Porject with the University of Genoa on Industrial Design (School of International education) |
| 21 | Guangzhou (Guangdong) | 华南师范大学<br>South China Normal University | 2020 | Elective (International Business College) |
| 22 | Shanghai | 华东师范大学<br>East China Normal University | 2021 | Elective (Department of History) |
| 23 | Weifang (Shandong) | 潍坊理工学院<br>Weifang Institute of Technology | 2021 | Elective (School of Foreign Languages) |
| 24 | Guangzhou (Guangdong) | 广东外语外贸大学南国商学院<br>South China Business College Guangdong University of Foreign Studies | 2021 | Minor (School of Western Languages and Cultures) |
| 25 | Beijing | 中央音乐学院<br>Central Conservatory of Music | 2022 | Elective (School of Basic education) |
| 26 | Xi'an (Shaanxi) | 西北大学<br>Northwest University | 2023 | Compulsory for the students in the Double Degree Porject with the University of Salento on cultural heritage (NWU-Salento School of Cultural Heritage and Arts) |
| 27 | Zhengzhou/Kaifeng (Henan) | 河南大学<br>Henan University | 2023 | Elective (School of Foreign Languages) |
| 28 | Wuhan (Hubei) | 华中师范大学<br>Central China Normal University | from September 2025 | Elective (cooperation between universities) |

These figures were provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing.

courses, it is worthy to note that both the University of Hong Kong (HKU) and NKU offer Italian language undergraduate majors as well as some Italian language elective or minor courses. As of July 2024, there are currently 24 universities and institutes that only offer Italian elective, compulsory or minor courses.

Among these 26 universities and institutes, there are 4 that are offering compulsory courses, which are generally schools that have dual degree programs with Italian universities: (1)Sichuan Normal University (SICNU), (2) Zhongnan University of Economics and Law (ZUEL), (3)Beijing University of Chemical Technology (BUCT), e (4) Northwest University (NWU).[14] In addition to this, South China

Business College Guangdong University of Foreign Studies offer just minor courses, which do not count as academic credit. Moreover, this college is currently preparing to open an Italian language and Culture major.

Based on the data in the table, the author also lists the following three analysis figures (Figure 3).

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**FIGURE 3**
Number of Chinese universities and institutes that have been providing Italian language and culture as elective, compulsory or minor courses (including discontinued ones).

Regarding the course establishing timing, in 1979 or 1980, XACM launched an Italian Phonetics Course for undergraduate students in the vocal music department as a compulsory course. After that, HKU (which has been offering an Italian minor course since 1998) and the Chinese University of Hong Kong (CUHK, which opened the Italian minor course in 2004) started their respective courses.

Among the 28 universities and institutes that opened the Italian language and culture as an elective, compulsory or minor courses, 20 launched their courses and programs after 2015 (11 between 2015 and 2019 and the remaining 9 between 2020 and 2024). From these data, it is easy to observe that since 2015, the number of Chinese universities and institutes that opened some kind of Italian language and culture course has sharply increased. It is likely that in the near future more and more Chinese universities and institutes will follow this trend.

As can be seen from Figure 4, the universities and institutes that are offering different kinds of Italian language and culture courses are distributed in 12 provinces and autonomous cities. In particular, the highest number is in Beijing where 4 academic institutions provide different types of courses. On the other hand, Shaanxi, Guangdong and Hong Kong have each 3 higher education institutions providing these types of courses. In conclusion, the number of universities and institutions is more uniformly distributed across China, this is the main difference between the distribution of whole degree programs and courses in the country. Indeed, bachelor and master programs are mainly located in Beijing.

As shown in Figure 5, nearly a half of the universities and institutes that are currently offering various Italian language and culture courses are mainly comprehensive universities (11/26). The other universities which also offer these courses cover many specializations such as normal universities, music conservatories and institutes of technology. This does not necessary mean that the Italian courses provided are strictly related with each university specialization.

In addition, the five universities that offer compulsory Italian language courses have their own specific and, sometimes, unique programs, as shown in Table 3.

Four of these five programs are jointly provided with Italian academic institutions, which have a solid reputation in their respective fields.

## 5.1.3 List of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses

According to the figures provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing,[15] in China besides Hebei International Studies University (HISU),[16] there are 4 institutions that provide a three-year Italian language short majors or offer Italian language elective courses (details in Table 4).

It should be noted that HISU has begun to recruit "da zhuan" students in Italian language since 2008. In 2014, 2 years after the aforementioned transformation, it began to recruit Italian-language undergraduate students. Since then, this institute accepts both "da zhuan" students and undergraduate students. Moreover, Hunan College of Foreign Studies (Huwai) has begun to recruit "da zhuan" students in Italian language since 2015. In 2023, it was opened an elective Italian language course for students with "Music Communicology" major. In addition to this, since 2019, Shunde Polytechnic (SDPT) opened an elective Italian language course.

Considering these data, it is clear that an increasing number of Chinese vocational and technical institutes launched their own Italian language majors or opened Italian elective courses. Consequently, we can say that the number of students learning Italian language has been increasing.

To sum up, since the launch of the first Italian language major by the then-Foreign Trade Institute (nowadays UIBE) in Chinese academia in 1954, Italian language and culture teaching has achieved a great development in Chinese higher education system. Nowadays in China there are currently 24 universities and institutes that provide Italian language majors (24 bachelor degrees, among them 12 master degrees and 1 PhD program); there are 26 between universities and institutes that

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15 These figures were provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing (covering till June 2023). Some data were updated by the author in July 2024.

16 In March 2012, the Ministry of Education "upgraded" this institute from the level of "a zhuan" to a regular Institute (see note 6) qualified to confer undergraduate degrees.

**FIGURE 4**
Distribution of Chinese universities and institutes that provide Italian language and culture as elective, compulsory or minor courses.



**FIGURE 5**
Types of universities and institutes that offer Italian language and culture as elective, compulsory or minor courses.
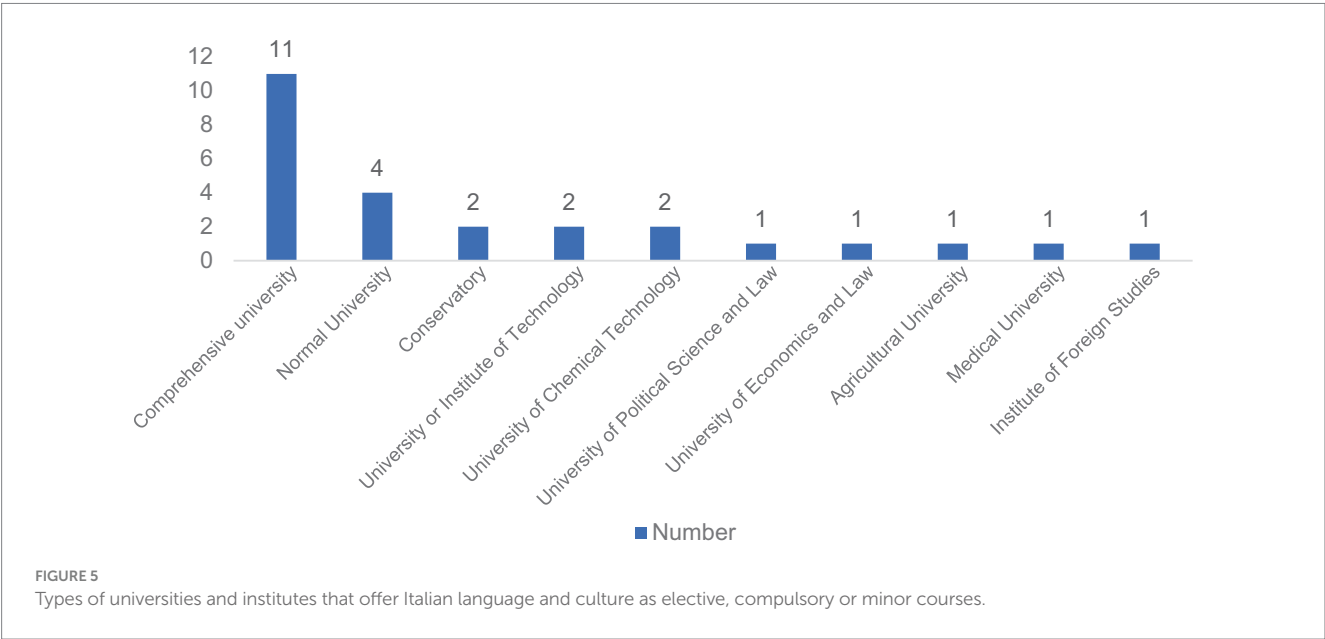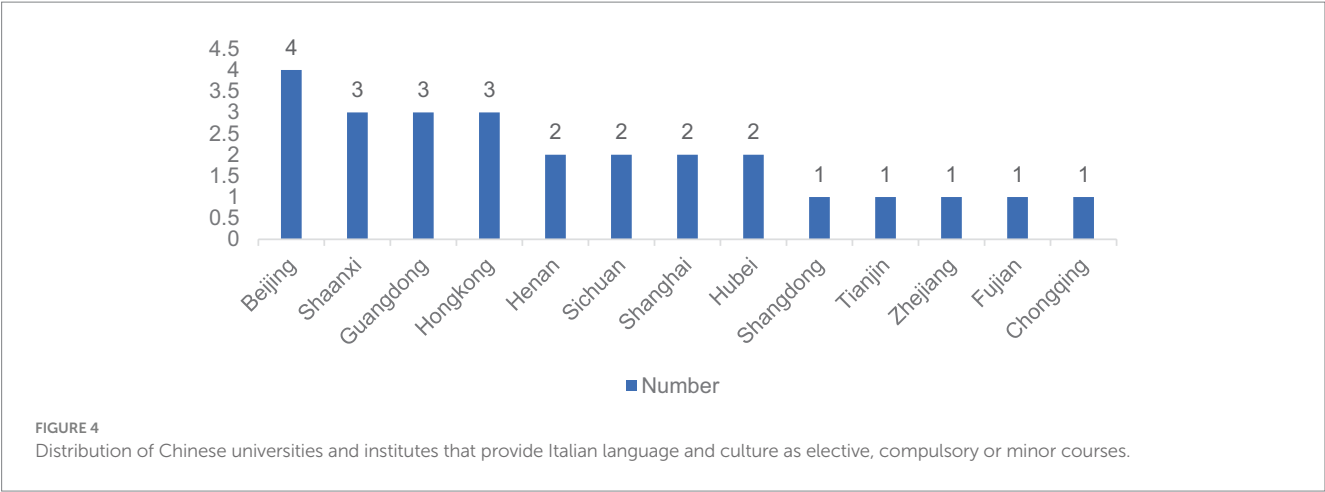
**TABLE 3** The programs of the universities that offer compulsory Italian language courses.

| Chinese university | Cooperative Italian university | Specialization |
|---|---|---|
| 西安音乐学院 XACM | None | Vocal music |
| 四川师范大学 SICNU | IED on Fashion Design | Product Design |
| 中南财经政法大学 ZUEL | Sapienza University of Rome | Comparative and European Law |
| | | Cognitive Forensic Sciences |
| | | Law and Economics |
| | | Digital Economics and Law |
| 北京化工大学 BUCT | University of Genoa | Industrial Design |
| 西北大学 NWU | University of Salento | Conservation and restoration of historical and cultural heritage |

offer Italian language and culture as elective, mandatory or minor courses (among these universities, HKU and NKU have both Italian language major and elective Italian language courses); there are 4 vocational and technical institutes ("da zhuan") that offer Italian language and culture major and Italian language elective courses, furthermore, HISU recruits both undergraduate students and "da zhuan" stduents.

Apart from the three above-mentioned arrangements in the Chinese higher education system, some universities offer Italian language courses to students through other means. For example, Hubei University of Technology (HBUT, 湖北工业大学) in 2012 established an Italian language Center (in 2014 this center was renamed Hubei Italian language Test Center), this center hired Chinese and Italian teachers outside the university to provide Italian language courses for high school students and undergraduate students who wanted to study in Italy. In 2019 The College of Music of Chongqing Normal University (CNU,重庆师范大学) cooperated with the private institution Yu Hang Education语航教育 (this training center is also an Italian language Test Center) to teach Italian language to high school students and undergraduate students, laying a language foundation that can help them to study in Italy.

TABLE 4 Chinese vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses.

| | Provinces/autonomous cities | Institution | Opening year of the course | Note |
|---|---|---|---|---|
| | Shijiazhuang (Hebei) | 河北外国语学院 Hebei International Studies University | 2008 | Three-year program in Italian language |
| 1 | Nanchang (Jiangxi) | 江西外语外贸职业学院 Jiangxi College of Foreign Studies | 2014 | Three-year program in Italian language |
| 2 | Changsha Liuyang (Hunan) | 湖南外国语职业学院 Hunan College of Foreign Studies | 2015 | Three-year program in Italian language |
| | | | 2023 | Elective course in Italian language:this course is for students with "Music Communicology" major |
| 3 | Wenchang (Hainan) | 海南外国语职业学院 Hainan College of Foreign Studies | 2018 | Three-year program in Italian language |
| 4 | Shunde (Guangdong) | 顺德职业技术学院 Shunde Polytechnic | 2019 | Elective course in Italian language |

These figures were provided by the Italian Institute of Culture & Cultural Office of the Embassy of the Republic of Italy in Beijing.

## 5.2 Analysis of the current situation of Italian language and culture teaching in China

### 5.2.1 Teachers' situation

In the current situation, most of the teachers in the field of Italian language and culture teaching in higher education system are middle-aged or younger teachers, mainly between 30 and 45 years old,[17] who possess higher education background.[18]

In fact, according to the data, there are 164 Chinese teachers who teach Italian language and culture in the universities and institutes (including vocational and technical institutes): those above 45 years old are 16 (9.75%); those in the range of 35–45 years old are 74 (45.12%); those who are 30–35 years old are 59 (35.98%); those who are younger than 30 years old are 15 (9.15%). The teachers aged 30–45 account for more than 81% of the total.[19]

#### 5.2.1.1 Teachers of universities and institutes offering Italian language majors (both undergraduate and graduate level)

Professor Haihong Zhang and her team members (张海虹)—from the Italian language Department of Guangdong University of Foreign Studies (GDUFS)—conducted a survey on the educational background and academic titles of the relevant Chinese teachers of universities and institutes offering Italian majors (both undergraduate and graduate level) in 2023. The figures are summarized in Table 5.[20]

According to the data, among the 131 teachers of universities and institutes offering Italian majors (both undergraduate and graduate level): 9 full professors,[21] 28 associate professors, 75 lecturers, and 19 assistant professors or other (助教及以下). Among the various types of teachers, professors account for 6.92%, associate professors account for 20.76% ("senior academic title"—professors and associate professors account for 27.69% of the total number), and lecturers 57.69% (which means that "intermediate academic title" accounts for 57.69% of the total number).

Regarding geographical distribution, professors and associate professors are mainly concentrated in Beijing, with 4 professors (accounting for 44.44% of the total number),[22] and 15 associate professors (accounting for 53.57% of the total). Again, it is clear that

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17 According to statistics, there are 164 Chinese teachers who teach Italian language and culture in the universities and institutes (including vocational and technical institutes): 45+ years old are 16 (9.75%); 35–45 years old are 74 (45.12%); 30–35 years old are 59 (35.98%); 30 years old are 15 (9.15%). Most of the teachers are middle-aged and young teachers, the teachers aged 30–45 account for more than 81% of the total.

18 It is important to bear in mind that language teachers' academic requirements can vary a lot depending on the course, the host institution and the pursuing of a tenure-track position. A detailed explanation of this situation is beyond the purpose of this paper. As a rule of thumb, the reader should consider that nowadays, at least the new teachers working in a university need to hold a relevant PhD. Older university professors might not hold a doctoral degree.

19 These figures were partially extracted from the table provided by Professor Zhang Haihong's team.

20 These figures were provided by Prof. Zhang Haihong's team (张海虹) from the Italian language Department of Guangdong University of Foreign Studies in 2023. Some figures were provided by Hebei International Studies University (河北外国语学院) and were updated for this paper in July 2024.

21 In particular, as the data we found show, they are Professor Yujing Zhang 张宇靖 (UIBE); Professor Wen Zheng文铮and Professor Jingjing Li李婧敬(BFSU); Professor Xiuying Zhao赵秀英(BLCU)—re-employed after retirement—; Professor Lin Yang杨琳(NKU); Professor Ying Chen 陈英(SISU); Professor Haihong Zhang 张海虹(GDUFS); Professor Mi Zhang 张密 (JISU)—re-employed after retirement and Professor Hongbo Luo罗红波 (HIU)—re-employed after retirement.

22 In particular, Professor Mi Zhang 张密now works at JISU, she is now retired from UIBE (Beijing); Professor Hongbo Luo罗红波 currently serves as the director of the Institute of Italian Studies and the director of Italian Department at HIU, she retired from Chinese Academy of Social Sciences (Beijing).

TABLE 5 Teachers' educational background and professional titles of universities and institutes offering Italian language majors (as of 07/2024).

| | University or institute | Number of Chinese teachers | Educational background | | | | Academic title | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Post Doc | Ph.D | Master | Bachelor | Professor | Associate Professor | Lecture | AP or other |
| 1 | 对外经济贸易大学 UIBE | 6 | 0 | 5 | 1 | 0 | 1 | 3 | 2 | 0 |
| 2 | 北京外国语大学 BFSU | 8 | 0 | 6 | 2 | 0 | 2 | 4 | 2 | 0 |
| 3 | 北京语言大学 BLCU | 6 | 0 | 4 | 1 | 1 | 1 | 3 | 2 | 0 |
| 4 | 中国传媒大学 CUC | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| 5 | 北京第二外国语学院 BISU | 5 | 0 | 2 | 3 | 0 | 0 | 0 | 5 | 0 |
| 6 | 北京大学 PKU | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 7 | 天津外国语大学 TFSU | 6 | 0 | 3 | 3 | 0 | 0 | 1 | 5 | 0 |
| 8 | 南开大学 NKU | 6 | 1 | 5 | 0 | 0 | 1 | 1 | 4 | 0 |
| 9 | 西安外国语大学 XISU | 8 | 0 | 3 | 5 | 0 | 0 | 1 | 7 | 0 |
| 10 | 河北科技师范学院 HNUST | 6 | 0 | 1 | 5 | 0 | 0 | 1 | 5 | 0 |
| 11 | 河北外国语学院 HISU | 6 | 0 | 0 | 5 | 1 | 0 | 1 | 3 | 2 |
| 12 | 黑龙江外国语学院 HIU | 4 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 2 |
| 13 | 大连外国语大学 DUFL | 6 | 0 | 3 | 3 | 0 | 0 | 2 | 3 | 1 |
| 14 | 吉林外国语大学 JISU | 6 | 0 | 1 | 4 | 1 | 1 | 1 | 4 | 0 |
| 15 | 上海外国语大学 SISU | 6 | 0 | 0 | 6 | 0 | 0 | 1 | 5 | 0 |
| 16 | 南京师范大学 NNU | 5 | 0 | 3 | 2 | 0 | 0 | 1 | 4 | 0 |
| 17 | 浙江外国语学院 ZISU | 5 | 0 | 2 | 3 | 0 | 0 | 1 | 4 | 0 |
| 18 | 浙江越秀外语学院 ZYU | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 3 | 6 |
| 19 | 四川外国语大学 SISU | 6 | 0 | 2 | 4 | 0 | 1 | 0 | 5 | 0 |
| 20 | 成都外国语学院 CISU | 9 | 0 | 0 | 6 | 3 | 0 | 0 | 6 | 3 |
| 21 | 重庆外语外事学院 CIFS | 3 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 2 |

*(Continued)*

TABLE 5 (Continued)

| | University or institute | Number of Chinese teachers | Educational background | | | | Academic title | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Post Doc | Ph.D | Master | Bachelor | Professor | Associate Professor | Lecture | AP or other |
| 22 | 广东外语外贸大学 GDUFS | 5 | 0 | 3 | 2 | 0 | 1 | 1 | 2 | 1 |
| 23 | 广州航海学院 GZMTU | 4 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 2 |
| 24 | 香港大学 HKU | 0 | There are no Chinese teachers, all the relevant teachers are Italian native speakers | | | | | | | |
| | Total | 130 | 3 | 47 | 71 | 9 | 9 | 27 | 75 | 19 |

AP stands for Assistant Professor. "Other" refers to junior positions, adjunct faculty, instructors, etc. These figures were provided by the Prof. Haihong Zhang's team from GDUFS.

Beijing plays a very important role in Italian language and culture teaching in the country. The reasons for this phenomenon are inevitably related to the large number of relevant universities and institutes (6 in total) located in Beijing, most of which have a long history and a solid reputation in this field.

From the perspective of development through time, compared the most recent data to those of the survey results conducted by Prof. Lili from TFSU in 2010,[23] at the time of the Zhi's work, in the universities and institutes offering Italian majors (both undergraduate and graduate level), there were in total 73 teachers, of whom 10 were professors (13.7%), 15 associate professors (20.5%), 23 lectures (31.5%), 25 assistant professors or others (34.2%).

In general, after 14 years of development, the number of teachers in the universities and institutes offering Italian majors has expanded a lot, the number of associate professors and lecturers has increased significantly (associate professors from 15 to 27, the lecturers from 23 to 75). On the other hand, the number of assistant professors and other types of teachers has decreased (from 25 to 19).[24] Moreover, the percentage of lectures has increased a lot (from 31.5 to 57.69%) and the percentage of assistant professors and other teachers has decreased a lot (from 34.2 to 14.6%). All things considered, the overall quality of the teachers has been improved during these years.

However, there is an occurrence that deserves attention, that is, the decreased number of full professors from 10 to 9 (of whom 3 are retirees) and the consequent decrease in the proportion (from 13.7 to 6.9%). There are two reasons behind this situation: on the one hand, many old professors with rich experience in teaching and research have retired one after another in these years due to age limits; on the other hand, the younger teachers who were able to become full professors are relatively few. Nevertheless, considering that the Italian language teachers are mainly middle-aged and young (about 80% is

between 30 and 45 years old), there is still great potential for promotions in the future.

Regarding teachers' educational background, there are 3 postdoctoral fellows, 47 doctors, 71 master holders (some of them are currently enrolled in a PhD program), and 9 bachelor holders. The statement that more and more teachers will obtain doctoral degrees in the future is an educated guess, and one that we believe in.

### 5.2.1.2 Teachers of universities and institutes providing Italian language and culture as elective, compulsory or minor courses

In July 2024, a comprehensive survey was conducted on the academic titles and educational background of Chinese teachers of universities and institutes offering elective, compulsory or minor Italian courses, the figures are as follows in Table 6.

According to the data, among the 26 teachers of universities and institutes that provide elective, compulsory or minor Italian courses: there are only 2 full professors,[25] 4 associate professors, 12 lecturers, and 8 assistant professors or other kinds of teachers. Among the teachers, professors account for 7.69%, associate professors account for 15.38% ("senior academic title")—professors and associate professors account for 23.07% of the total number—, and lecturers 46.15% (i.e., "intermediate academic title") account for 46.15% of the total. From these data, we can see that the proportion of teachers with senior and intermediate academic titles who teach Italian language as a mere subject is slightly lower than that those who teach Italian in institutions offering Italian majors ("senior professional titles" account for 27.69% of the total number of teachers; "intermediate professional titles" account for 57.69% of the total). Nonetheless, this difference is relatively marginal. In terms of the teachers' educational background, there is 1 holding a postdoc, 8 doctors, 17 master holders (some of them currently perusing a PhD). It is an educated guess to state that more and more teachers will hold doctoral degrees in the future.

In addition to this, during the investigation, the author also noticed a phenomenon: unlike the institutions that offer Italian majors

23  Lili Zhi, currently serves as the director of the Institute of Italian Studies and the director of Italian Department at HIU, she retired from Chinese Academy of Social Sciences (Beijing).

24  Although an overall picture of the Chinese academia is beyond the purpose of this paper, it is well known that the decreased number of assistant professors and other kinds of teachers, which usually do not hold a PhD, is decreasing in every university.

25  They are Professor LingZhou周玲(XACM)—re-employed after retirement— and Professor LuoJianli Wu吴剑丽(SCNU).

TABLE 6 Chinese universities and institutes offering Italian language and culture an elective, compulsory or minor courses (as of 07/2024).

| | University or institute | Number of Chinese teachers | Educational background | | | | Academic title | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Post Doc | Ph.D | Master | Bachelor | Professor | Associate Professor | Lecture | AP or other |
| 1 | 清华大学 THU | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 2 | 中国政法大学 CUPL | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | 北京化工大学 BUCT | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| 4 | 中央音乐学院 CCOM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 5 | 西安音乐学院 XACM | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 6 | 西安石油大学 XSYU | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 7 | 西北大学 NWU | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 8 | 潍坊理工学院 WFIT | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 9 | 河南农业大学 HAU | 0 | There are no Chinese teachers, all the relevant teachers are Italian native speakers | | | | | | | |
| 10 | 河南大学 HENU | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 11 | 中南财经政法大学ZUEL / 华中师范大学 CCNU | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 12 | 四川师范大学 SICNU | 5 | 0 | 1 | 4 | 0 | 0 | 0 | 1 | 4 |
| 13 | 电子科技大学 UESTC | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 14 | 重庆医科大学 CQMU | 0 | There are no Chinese teachers, all the relevant teachers are Italian native speakers | | | | | | | |
| 15 | 同济大学 TJU | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 16 | 华东师范大学 ECNU | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 17 | 温州大学 WZU | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 18 | 厦门大学 XMU | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 19 | 广州大学 GU | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 20 | 华南师范大学 SCNU | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 21 | 广东外语外贸大学南国商学院 South China Business College GDUFS | 3 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 2 |

*(Continued)*

**TABLE 6 (Continued)**

| | University or institute | Number of Chinese teachers | Educational background | | | | Academic title | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Post Doc | Ph.D | Master | Bachelor | Professor | Associate Professor | Lecture | AP or other |
| 22 | 香港中文大学 CUHK | 0 | There are no Chinese teachers, all the relevant teachers are Italian native speakers | | | | | | | |
| 23 | 香港恒生大学 HSUHK | 0 | There are no Chinese teachers, all the relevant teachers are Italian native speakers | | | | | | | |
| | Total | 26 | 1 | 8 | 17 | 0 | 2 | 4 | 11 | 9 |

usually have a complete team of teachers,[26] institutions that only provide different kinds of courses usually hire few teachers. In particular, 11 of these universities have only one Chinese teacher and no Italian teacher such as Tsinghua University (THU), Tongji University (TJU);[27] 4 of these universities have only Italian teachers without any Chinese teacher (HAU, CQMU, CUHK, and HSUHK). Only 8 institutions are equipped with both Chinese and Italian teachers,[28] among them the Chinese teacher and Italian teacher from XACM and ZUEL are responsible for different types of courses.[29]

The lack of Italian teachers means that students in these institutions cannot get good oral training, which will deeply affect their speaking level, daily communication and listening skills. On the other hand, the lack of Chinese teachers means that students may not be able to be guided properly into understanding Italian grammar.[30] Anyway, it is suggested that institutions lacking of a complete teaching team are partially understaffed and this has a slightly negative impact on teaching.

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26  Ideally, here, a complete team of Italian teachers include both more than one Chinese and Italian native speakers.

27  The 11 universities that have only one Chinese teacher without any Italian teacher are: THU 清华大学, CCOM 中央音乐学院, XSYU 西安石油大学, NWU 西北大学, WFIT 潍坊理工学院, HENU 河南大学, UESTC 电子科技大学, TJU 同济大学, ECNU 华东师范大学, XMU 厦门大学 and GU 广州大学.

28  The 8 universities that have both Chinese teacher and Italian teacher are: CUPL 中国政法大学, BUCT 北京化工大学, XACM西安音乐学院, ZUEL中南财经政法大学, SICNU四川师范大学, WZU温州大学, SCNU华南师范大学 and South China Business College GDUFS 广东外语外贸大学南国商学院.

29  Xi'an Conservatory of Music—The Chinese teacher is responsible for the compulsory course "Italian Phonetics" for the undergraduate students in the Vocal Music Department, the Italian teacher is responsible for the elective course "Italian language" for all graduate students; Zhongnan University of Economics and Law—the Chinese teacher is responsible for the elective courses "Italian language and Culture" and "Italian language" for all students, and the Italian teacher is responsible for the compulsory "Italian language" course for graduate studentes in the ZUEL-SUR School of Law and Economics.

30  It is beyond the purpose of this analysis to explain the differences about teaching Italian language and other foreign languages such as English. In any event, it is important to bear in mind that Italian grammar is more complex and articulated than English one. The lack of a Mandarin native speaker, and the consequent lack of Chinese explanation of the grammar especially to beginners, makes harder and slows down the learning pace.

### 5.2.1.3 Teachers of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses

In July 2024, a survey on the educational background and academic titles of Chinese teachers of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses was conducted, the figures are as follows in Table 7.

According to the data, among the 8 teachers of vocational and technical institutes ("da zhuan"): there are 3 lecturers[31] and 5 assistant professors and other types of teachers. Teachers with "intermediate academic title" account for 37.5% of the total number. In terms of the teachers' educational background, there are 5 who hold a master degree and 3who only hold a bachelor degree.

The results of the survey show that there is no professor or associate professor among the teachers of vocational and technical institutes, and no teacher holds a doctoral degree. Therefore, it is evident that these teachers' academic qualifications are below the average. It is worth mentioning that except for Shunde Polytechnic (SDPT, that has no fixed teachers),[32] the other three institutions all have a complete teaching team, including both Chinese and Italian teachers.

In conclusion, the group of Italian teachers in China is constantly expanding, more and more young teachers have obtained or are pursuing doctoral degrees to improve their academic qualifications and research capabilities. It is fair to assume that the teaching level will keep improving in the near future.

### 5.2.2 Course curricula and teaching materials

To recapitulate, for the purpose of this research, we considered three kinds of "higher education institutions": (1) universities and institutes offering Italian language Majors (both undergraduate and graduate level); (2) universities and institutes offering Italian language and culture as elective, compulsory or minor courses; (3) vocational and technical institutes ("da zhuan") offering various types of programs.

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31  In 2025, three teachers in Jiangxi College of Foreign Studies will all become lecturers.

32  Shunde Polytechnic hires undergraduate students from GDUFS to teach the elective Italian language course, this course is not offered every year.

TABLE 7  Chinese vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses (as of 07/2024).

| | Institution | Number of Chinese teachers | Educational background | | | | Academic titles | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Post Doc | Ph.D | Master | Bachelor | Professor | Associate Professor | Lecture | AP or other |
| 1 | 江西外语外贸职业学院 JUFLIT | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 2 | 湖南外国语职业学院HUWAI | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 |
| 3 | 海南外国语职业学院 HNCFS | 3 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 |
| 4 | 顺德职业技术学院 SDPT | 0 | Only temporary teacher | | | | | | | |
| | Total | 8 | 0 | 0 | 5 | 3 | 0 | 0 | 3 | 5 |

## 5.2.2.1 Course curricula and teaching materials of universities and institutes offering Italian language majors (both undergraduate and graduate level)

### 5.2.2.1.1 Course curricula and teaching materials for undergraduate students

These are the programs with a longest tradition in China, consequently they follow a kind of relatively well-established pattern. These courses can ensure that students master the basic skills of Italian language listening, speaking, reading and writing abilities.

As a way of example, we can refer to the core courses of the Italian language undergraduate program of NKU formulated in September 2022 (Table 8).

As we can see from the table above, these courses can be divided into two categories: core courses and complementary courses:

(1)  Core courses:

First year: "Italian language basics (elementary level)" series of courses (grammar, listening, speaking and comprehensive courses, etc.);

Second year: "Italian language basics (intermediate level)" series of courses (grammar, listening, speaking, reading, writing and comprehensive courses, etc.);

Third and fourth years: "Advanced Italian language" series of courses (grammar, writing, translation, interpretation and comprehensive courses, etc.).

(2)  Complementary courses:

A Brief Introduction of Italy, A brief introduction of Italian literature, Business Italian language, Italian for Tourism, etc.

The core courses focus on cultivating students' foreign language skills (listening, speaking, reading, writing, translation, etc.), which weight for the majority of the program. The complementary courses focus on increasing students' knowledge of Italian culture and in other uses of language for specific purposes such like economics, business, tourism, academic research, etc.

Different universities and institutes also have slightly different curricula for their equivalent respective programs: for example, the

UIBE also provides subjects such as international business negotiations in Italian, Italian business correspondence, etc.

Considering that undergraduate freshmen in China have, usually, no previous Italian knowledge,[33] all universities and institutes put their emphasis on grammar teaching and basic foundation of the language skills.

Teaching materials

At present, there are many Italian textbooks available in China depending on the course type. Consequently, teachers can flexibly choose teaching materials.

Regarding basic courses of language skills: the most frequently used textbooks are *Studiamo l'italiano all'università* (We study Italian at the University [our translation] 大学意大利语教程) and *Nuovissimo Progetto Italiano* (Brand New Italian Project [our translation] 新视线意大利语). Other popular alternatives are, as a way of example, *Corso intensivo d'italiano* (Intensive Italian course 速成意大利语) and *Ciao!* (Hello! 你好!意大利语). Some of these textbooks are directly written by Chinese scholars, while others are popular overseas textbooks translated and edited by Chinese professors.

In addition, there are many textbooks that can be used for teaching Italian for specific purposes such as: (1) business and economics teaching materials,[34] (2) Italian literature teaching

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33   Differently from English language learning, students learn Italian directly during thier higher education studies for the very first time.

34   *Laboratorio dell'Italiano Commerciale* (Italian Commercial Laboratories 经贸意大利语口语), *Articoli di economia e commercio in italiano* (Articles on economics and commerce in Italian 意大利语经贸文章选读), *Discorsi economico-commerciali italiano-cinese, cinese-italiano* (Italian-Chinese, Chinese-Italian economic-commercial discourses 意大利语经贸口译), *Corrispondenza Commerciale e Testi Autentici* (Commercial Correspondence and Authentic Texts 意大利语经贸应用文), etc.

TABLE 8 Core courses of Italian language undergraduate program.

| Semester | Course name | Credits |
| --- | --- | --- |
| First year: First Semester | 基础意大利语4-1 (Italian language basics 4–1) | 8 |
| | 意大利语视听说3-1 (Multimedia-based Italian listening and speaking course 3–1) | 1 |
| | 意大利国家概况2-1 (A brief introduction of Italy 2–1) | 2 |
| | 意大利文学概论 (A brief introduction of Italian literature) | 2 |
| First year: Second Semester | 基础意大利语4-2 (Italian language basics 4–2) | 8 |
| | 意大利语视听说3-2 (Multimedia-based Italian listening and speaking course 3–2) | 1 |
| | 意大利语口语3-1 (Italian conversation 3–1) | 1 |
| | 意大利国家概况2-2 (A brief introduction of Italy 2–2) | 2 |
| Second year: Third Semester | 基础意大利语4-3 (Italian language basics 4–3) | 8 |
| | 意大利语视听说3-3 (Multimedia-based Italian listening and speaking course 3–3) | 1 |
| | 意大利语口语3-2 (Italian conversation 3–2) | 1 |
| | 意大利语阅读4-1 (Italian Reading 4–1) | 1 |
| | 意大利语基础语法 (Basic Italian Grammar) | 2 |
| Second year: Forth Semester | 基础意大利语4-4 (Italian language basics 4–4) | 8 |
| | 意大利语口语3-3 (Italian conversation 3–3) | 1 |
| | 意大利语阅读4-2 (Italian Reading 4–2) | 1 |
| | 意大利研究 (Italian Studies) | 2 |
| Third year: Fifth Semester | 高级意大利语3-1 (Advanced Italian language 4–3) | 6 |
| | 意大利语阅读4-3 (Italian Reading 4–3) | 1 |
| | 意大利语写作2-1 (Italian Writing 2–1) | 1 |
| | 意汉笔译 (Italian-Chinese for written translations) | 2 |
| | 经贸意大利语 (Business Italian language) | 2 |
| | 意大利语报刊选读 (Selected readings from Italian press and periodicals) | 2 |
| | 旅游意大利语 (Italian for Tourism) | 1 |
| Third year: Sixth Semester | 高级意大利语3-2 (Advanced Italian language 3–2) | 6 |
| | 意大利语阅读4-4 (Italian Reading 4–4) | 1 |
| | 意大利语写作2-2 (Italian Writing 2–2) | 1 |
| | 汉意笔译 (Chinese-Italian for written translations) | 2 |
| | 意汉口译 (Italian-Chinese for interpreters) | 1 |
| | 意大利语测试 (Italian language test) | 1 |
| | 对外意大利语教学 (Teaching Italian as a Foreign Language) | 2 |
| | 中国文化(意语)(Chinese Culture in Italian language) | 2 |
| Fourth year: Seventh Semester | 高级意大利语3-3 (Advanced Italian language 3–3) | 6 |
| | 汉意口译 (Chinese-Italian for interpreters) | 1 |
| | 中国与意语国家关系 (Relations between China and Italian-speaking countries) | 1 |
| Fourth year: Eighth Semester | 意大利语电影欣赏 (Introductions to Italian movies) | 1 |
| | 毕业论文 (Dissertation) | 4 |

Major: Italian language; Subject: Literature; Duration: 4 years; Academic Degree: Bachelor of Literature. Italian language undergraduate program study plan of Nankai University as formulated in 2022 (2022南开大学意大利语专业培养方案): https://sfs.nankai.edu.cn/2022/0901/c7260a471035/page.htm.

TABLE 9 Course curricula of universities and institutes that offer graduate courses.

| | University or institute | Specializations | Peculiarities and qualities of the program | Core courses |
|---|---|---|---|---|
| 1 | 对外经济贸易大学 (UIBE) | European Language and Literature | Business Italian language and area studies | 高级意大利语 Italian language in the advanced level, 中意关系Sino-Italian relations, 意大利经济研究Italian Economic Studies, 政治研究Political Studies, etc. |
| | | MTI Interpretation | Interpreting | 同声传译基础和应用Fundamentals and applications of simultaneous interpretation, 交替传译基础和应用Fundamentals and applications of consecutive interpretation, 中意语言文化对比研究 Comparative study of Chinese and Italian languages and cultures, etc. |
| 2 | 北京外国语大学 (BFSU) | European Language and Literature | Culture and literature and area studies | 中世纪与文艺复兴名家名著研读Study of famous works and authors of medieval and Renaissance Period，意大利十八、十九世纪名家名著研读，Study of famous Italian works and authors from the 18th and 19th centuries, 意大利当代文学Contemporary Italian Literature, 翻译与跨文化研究 Translation and Intercultural Studies, 中意文化交流史History of Cultural Exchange between China and Italy, 意大利语语言学 Italian Linguistics, 意大利语高级写作与修辞 Advanced Italian Writing and Rhetoric, 社会学概论Introduction to Sociology, 中国文学意大利语翻译Translation about Chinese literary works, etc. |
| | | MTI Interpretation | Interpreting | 翻译理论与实践Translation Theory and Practice, 双向口译基础Basics of Chinese-Italian and Italian-Chinese Interpretation, Italian Rhetoric and Writing, 交替传译 Consecutive Interpretation, 同声传译 Simultaneous Interpretation, etc. |
| 3 | 北京语言大学 (BLCU) | European Language and Literature | Translation, literature, history and Italian culture | 翻译理论与实践Translation theory and practice, 意大利文化简史A brief history of Italian culture, 意大利现当代文学Modern and Contemporary Italian literature, 中意文化交流史A history of cultural exchanges between China and Italy, 拉丁语 Latin,中世纪与文艺复兴时期文学研读 Study of famous works and authors of medieval and Renaissance Period，etc. |
| 4 | 天津外国语大学 (TFSU) | European Language and Literature | Applied linguistics | 意大利社会语言学Italian sociolinguistics, 现代意大利语音系学Modern Italian phonology Study, 现代意大利语语言学 Modern Italian linguistics, 意大利语言简史 A brief history of the Italian language, etc. |
| | | MTI Translation | Translation Practice | 商务笔译Business translation, 汉意文化对比 Chinese-Italian cultural comparison, etc. |

*(Continued)*

TABLE 9 (Continued)

| | University or institute | Specializations | Peculiarities and qualities of the program | Core courses |
|---|---|---|---|---|
| 5 | 西安外国语大学 (XISU) | European Language and Literature | Literature, translation, Socialism. | 意大利社会与国情 Italian society and national conditions, 意大利文学作品翻译 Translation of Italian literary works, 现当代意大利文学 Modern and Contemporary Italian Literature, 中国文学在意大利的发展 The Study of Chinese literature in Italy, 中国特色社会主义翻译研究Research of translation about Socialism with Chinese characteristics, 意大利文化遗产修复与保存 Restoration and preservation of Italian cultural heritage, 意大利文学概论及批评方法Introduction to Italian Literature and Critical Methods, etc. |
| 6 | 吉林外国语大学 (JISU) | MTI Interpretation | Double degree, Interpretation and translation. | 交传和同传Consecutive and Simultaneous Interpretation, 高级阅读与翻译Advanced Reading and Translation, 笔译和口译理论与实践 Theory and Practice of Translation and Interpretation, 法律翻译Legal Translation, 语言学Linguistics, 战后经济Italian Post-war economy, etc. |
| 7 | 上海外国语大学 (SISU) | European Language and Literature | Translation, writing | 意大利语翻译理论与实践Italian Translation Theory and Practice, 意大利语写作Italian writing, 意大利文化 Italian culture, etc. |
| 8 | 南京师范大学 (NNU) | European Language and Literature | Linguistics | 意大利文学Italian Literature, 意大利语语言学导论Introduction to Italian Linguistics, etc. |
| 9 | 四川外国语大学 (SISU) | European Language and Literature | Literary translation | 意汉笔译Italian-Chinese translation, 意大利现当代文学 Italian modern and contemporary literature, etc. |
| 10 | 广东外语外贸大学 (GDUFS) | European Language and Literature | Multiple specializations | 意大利文学导论Introduction to Italian Literature, 意大利社会与文化 Italian Society and Culture, 欧洲移民研究European Immigration Studies, etc. |
| 11 | 中国传媒大学 (CUC) | Area studies | Area studies | 跨文化交际Intercultural Communication, 意大利媒体产业Italian Media Industry, etc. |
| 12 | 南开大学 (NKU) | Area studies | Area studies | 国别和区域研究导论Introduction to Area Studies, 中意跨文化交际Sino-Italian Intercultural Communication, 意大利语文献导读 Introduction to Professional Italian Literature,中国文化在意大利 Chinese Culture in Italy,意大利政治政党Italian Politics and Political parties,战后意大利经济 Post-war Italian Economy, etc. |

TABLE 10 Course curricula of universities and institutes providing Italian language and culture as elective, compulsory or minor courses.

| | University or institute | Courses | Course duration: number of semesters | Course hours / each semester | Credit | CEFRLevel |
|---|---|---|---|---|---|---|
| 1 | 清华大学<br>THU | 意大利语1<br>Italian language 1 | 1/each semester x 1 (Semester Autumn-Winter) | 64/each semester | 4 | A1 |
| | | | 1/each semester x1 (Semester Spring–Summer) | 64/each semester | 4 | A1 |
| | | 意大利语2<br>Italian language 2 | 1/each semester x 1 (Autumn-Winter) | 64/each semester | 4 | A2 |
| | | | 1/each semester x1 (Spring–Summer) | 64/each semester | 4 | A2 |
| | | 意大利语3<br>Italian language 3 | 1/each semester x1 (Autumn-Winter) | 32/each semester | 2 | B1 |
| | | 意大利语4<br>Italian language 4 | — | — | — | — |
| 2 | 中国政法大学<br>CUPL | 大学意大利语<br>Italian language at university | 1/each semester x 4 | 192 (48/each semester x4) | 12 | B1 |
| | | 初级意大利语<br>Elementary Italian language | 1/each semester x2 | 96 (48/each semester x2) | 6 | A2 |
| | | 意大利语<br>Italian language | 1/each semester x2 | 96 (48/each semester x2) | 6 | A2 |
| | | 研究生意大利语<br>Italian language for graduate students | 1/each semester x3 | 96 (48/each semester x2) | 6 | A2 |
| | | 法律意大利语<br>Legal Italian | 1/each semester x1 | 48 (48/each semester) | 3 | A2-B1 |
| 3 | 中央音乐学院<br>CCOM | 初级意大利语<br>Italian language (elementary level) | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | below A1 |
| | | 意大利语基础<br>Italian language basics | 1/each semester x2 | 64 (32/each semester x2) | 4 | A1-A2 |
| | | 意大利语精读<br>Comprehensive Italian | 1/each semester x2 | 64 (32/each semester x2) | 4 | A1-A2 |
| | | 意大利语<br>Italian language | 1/each semester x2 | 64 (32/each semester x2) | 4 | A1-A2 |
| | | 意大利语第二外语<br>Italian as a second foreign language | 1/each semester x2 | 64 (32/each semester x2) | 4 | A1-A2 |
| 4 | 南开大学<br>NKU | 二外意大利语<br>Italian as a second foreign language | 1/each semester x 1 (Autumn-Winter)<br>1/each semester x 1 (Spring–Summer) | 64 (32/each semester x2) | 4 | A1-A2 |
| | | 初级意大利(上)<br>Italian language (elementary level) 1 | 1/each semester x1 (Autumn-Winter) | 32 | 2 | below A1 |
| | | 初级意大利语(下)<br>Italian language (elementary level) 2 | 1/each semester x1 (Spring–Summer) | 32 | 2 | A1-A2 |

*(Continued)*

TABLE 10 (Continued)

| | University or institute | Courses | Course duration: number of semesters | Course hours / each semester | Credit | CEFRLevel |
|---|---|---|---|---|---|---|
| 5 | 西安音乐学院 XACM | 意大利语语音 Italian Phonetics | 1/each semester x2 | 64 | 4 | A1 |
| | | 意大利语 Italian language | 1/each semester x2 | 64 | 4 | A1-A2 |
| 6 | 西安石油大学 XSYU | 分方向第二外语意大利语 Italian as a second foreign language | 1/each semester x1 (Spring–Summer) | 64/each semester | 2 | below A1 |
| | | 英语专业第二外语 Italian as a second foreign language for English major students | 1/each semester x4 | 128 (32/each semester x4) | 8 | A1-A2 |
| 7 | 西北大学 NWU | 第二外语 (意大利语) Italian as a second foreign language | 1/each semester x3 | 108 (36/each semester x3) | 6 | A2-B1 |
| | | 意大利语实践 Italian language Practice | 1/each semester x3 | 108 (36/each semester x3) | 6 | A2-B1 |
| 8 | 河南大学 HAU | 意大利文化 Italian Culture | 1/each semester x1 (Autumn-Winter) | 32/each semester | 2 | below A1 |
| | | | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | below A1 |
| 9 | 中南财经政法大学 ZUEL | 意大利语语言与文化(上) Italian Language and Culture (1) | 1/each semester x1 (Autumn-Winter) | 32/each semester | 2 | below A1 |
| | | 意大利语语言与文化(下) Italian Language and Culture (2) | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | A1-A2 |
| | | 意大利语二外(研究生)(上) Italian as a second foreign language (for graduate students) (1) | 1/each semester x1 (Autumn-Winter) | 32/each semester | 2 | below A1 |
| | | 意大利语二外(研究生)(下) Italian as a second foreign language (for graduate students) (2) | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | A1-A2 |
| | | 意大利语(单证班) Italian language (for single-degree program students) | 1/each semester x2 | 96 (48/each semester x2) | 6 | A1-A2 |
| | | 意大利语(双学位) Italian language (for double-degree program students) | 1/each semester x3 | 96 (32/each semester x3) | 6 | A1-A2 |
| 10 | 电子科技大学 UESTC | 意大利语言与文化 Italian Language and Culture | 1/each semester x1 (Autumn-Winter) | 32/each semester | 2 | below A1 |
| | | | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | below A1 |
| | | 基础意大利语 Italian language basics | 1/each semester x1 (Spring–Summer) | 32/each semester | 2 | below A1 |

*(Continued)*

TABLE 10 (Continued)

| | University or institute | Courses | Course duration: number of semesters | Course hours / each semester | Credit | CEFRLevel |
|---|---|---|---|---|---|---|
| 11 | 同济大学 TJU | 意大利语(上) Italian language (1) | 1/each semester x1 (Autumn–Winter) | 68/each semester | 4 | A1 |
| | | | 1/each semester x1 (Spring–Summer) | 68/each semester | 4 | |
| | | 意大利语(下) Italian language (2) | 1/each semester x1 (Spring–Summer) | 68/each semester | 4 | A2 |
| 12 | 华东师范大学 ECNU | 意大利语言文化入门 Introduction to Italian Language and Culture | 1/each semester x1 (Autumn–Winter) | 36/each semester | 2 | below A1 |
| | | 意大利语言文化 Italian Language and Culture | 1/each semester x1 (Autumn–Winter) | 36/each semester | 2 | below A1 |
| 13 | 温州大学 WZU | 意大利语 Italian Language | 1/each semester x1 (Autumn–Winter) | 32/each semester | 2 | below A1 |
| 14 | 厦门大学 XMU | 基础意大利语 Italian language basics | 1/each semester x1 (Autumn–Winter) | 32/each semester | 2 | below A1 |
| | | | 1/each semester x1 (Spring–Summer) | | | |
| | | 意大利国家概况 A brief introduction of Italy | 1/each semester x1 (Autumn–Winter) | 32/each semester | 2 | below A1 |
| | | | 1/each semester x1 (Spring–Summer) | | | |
| | | 意大利语第二外国语 Italian as a second foreign language | 1/each semester x1 (Autumn–Winter) | 32/each semester | 2 | below A1 |
| | | | 1/each semester x1 (Spring–Summer) | | | |
| 15 | 广东外语外贸大学 南国商学院 South China Business College GDUFS | 基础意大利语 Italian language basics | 1/each semester x3 | 128/each semester | — | A2 |
| | | 意大利语视听说 Multimedia-based Italian listening and speaking course | 1/each semester x3 | 32/each semester | — | A2 |

materials;[35] (3) Italian history teaching materials;[36] (4) Italian cultural teaching materials.[37] In addition to this, there are also a corpus of *ad hoc* teaching material compiled by various teachers for their respective courses that, although is available to the student and the relevant staff, is largely unpublished.

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[35] *Antologia Italiana* (Italian anthology 意大利文学选集), *Pagine di scrittori italiani contemporanei* (Pages of contemporary Italian writers 意大利当代文学选读), *I lineamenti della lettura italiana e la lettura delle pagine dei celebri scrittori italiani* (The features of Italian reading and the reading of the pages of famous Italian writers意大利文学简史及名著选读), etc.

[36] For example, although only in Chinese: *A Concise History of Italy* [our translation] (意大利文化简史).

[37] For example, although only in Chinese: *A Brief Introduction to Italian Culture* [our translation] (意大利文化概况).

In general, there is plenty of undergraduate textbooks, and students can use these textbooks by themselves to improve their Italian language skills and expand their relevant knowledge.

### 5.2.2.1.2 Course curricula and teaching materials for graduate students

The 12 universities and institutes that offer graduate courses have four different specializations: (1) European Language and Literature 欧洲语言文学 (three-year program), (2) Italian-Chinese and Chinese-Italian Interpretation 意大利语口译 (MTI, two-year program), (3) Italian-Chinese and Chinese-Italian Translation 意大利语笔译 (MTI, two-year program), and (4) Area studies (three-year program). Each university and institute has its own teaching peculiarities and qualities, so their core courses are partially different, as summarized in Table 9.

Teaching materials

Since the courses and the peculiarities of each program are different, teachers, apart from material compiled by themselves,

TABLE 11 Course changes of universities and institutes providing Italian language and culture as elective, compulsory or minor courses.

| 1 | 清华大学 THU | In 2019, the elective courses Italian language 1 and Italian language 2 changed from 2 credits to 4 credits. |
|---|---|---|
| 2 | 中国政法大学 CUPL | In 2019, the course "Italian language at university" was added to the original courses. |
| 3 | 南开大学 NKU | After opening "Italian as a second foreign language" to all undergraduate students in the College of Foreign Languages in 2016, the "Italian language (elementary level)" course was opened to the all undergraduate students in 2023. |
| 4 | 西安音乐学院XACM | Since the "Italian language" elective course was launched in the graduate school in 2011, at a certain point a compulsory course was added. The latter is now discontinued. |
| 5 | 西安石油大学 XSYU | After the "Italian as second foreign language" elective course was launched in School of Foreign languages in 2019, in 2020 it was added another elective course for English major students. |
| 6 | 中南财经政法大学ZUEL | Elective courses: the School of Foreign Studies has offered an "Italian language and culture (1)" course to all the undergraduate students in 2023. In 2024 it was added a second course of "Italian language and culture (2)." "Italian language" compulsory courses of the School of Economics and Law within the curricula of the following programs: <br>● "Comparative and European Law" (established in 2019) <br>● "Cognitive Forensic Sciences" (established in 2019) <br>● "Law and Economics" (established in 2023) — Double degree <br>● "Digital Economics and Law" (established in 2024) —Double degree |
| 7 | 电子科技大学UESTC | After the elective course "Italian language and culture" was launched in 2016, in 2022 was added another elective course "Italian language (elementary level)" for students not in the School of Foreign languages. |
| 8 | 西南大学 SWU | An elective course about Italian language was offered during 2018–2019, but the course was later discontinued. |
| 9 | 同济大学 TJU | From 2006–2021, Sino-Italian Campus offered a compulsory course related to Italian language to students enrolled in the double degree programs with the Università di Bologna and the Politecnico di Torino, these programs were discontinued in 2021. Since 2022 School of Foreign Studies launched an Italian language elective course available to all the undergraduate students of TJU. |
| 10 | 华东政法大学ECUPL | An elective course regarding to Italian language was offered during 2019–2020, but the course was later discontinued. |
| 11 | 华东师范大学 ECNU | After the elective course "A brief introduction of Italian language and culture" was launched to the undergraduate students in 2016, in 2022 was added another elective course "Italian language and culture" for graduate students. |
| 12 | 温州大学 WZU | "Italian language" was an elective course from 2019 to 2020; and it became a compulsory course from 2020 to 2022; then it has returned back into an elective course since 2023. |
| 13 | 厦门大学 XMU | Two elective courses "Italian language (elementary level)" and "A brief introduction of Italy" were launched to undergraduate students in 2015, in 2016 a new elective course entitled "Italian as second foreign language" was added. |

usually choose domestic and foreign textbooks according to the content of their own courses and their preferences.[38]

In the questionnaire, many teachers also highlighted that some graduate-student courses lack *ad hoc* textbooks. These subjects include: "Italian Art History," "Italian Modern and Contemporary Literature," "Business Translation," "Comparison of Chinese and Italian Culture," "Italian-Chinese and Chinese-Italian Translation Practice," "Writing," etc.

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38 Examples of textbooks include: "Capire la Cina contemporanea" Series ("Understanding Contemporary China"理解当代中国), *Prima lezione di sociolinguistica* (Berruto, Gaetano. Laterza Editore, 2004), *Manuale di fonetica* (Leoni F. A. & Maturi, P. Carocci Editore, 2018), *Elementi di linguistica italiana* (Gallo, Daniele. Gruppo Editoriale Viator, 2020), *Breve storia della lingua italiana* (Morgana, Silvia. Carocci Editore, 2009), *La comunicazione interculturale nell'era digitale* (Giaccardi, Chiara. Il Mulino Editore, 2012), etc.

## 5.2.2.2 Course curricula and teaching materials of universities and institutes providing Italian language and culture as elective, compulsory or minor courses

For universities and institutes that provide Italian elective, compulsory or minor courses, each school has its own tailored program, which varies greatly. Thanks to a questionnaire results, information about 15 universities and institutes were collected. The relevant data are reported in Table 10.

Compared with universities and institutes that offer Italian majors, those that offer other types of courses have shorter ones (most courses last only 1 semester, and the longest one lasts for 4 semesters). After completing these courses, most students can only reach the elementary level (from very beginner to A2). However, a part of students cannot reach even A1 level due to the limited study time. On the other hand, a limited number of students who take some relevant elective courses (such as THU-Italian language 3, CUPL-Italian language at university) can reach the intermediate level B1 and, in few cases (attending

TABLE 12  Students' number of universities and institutes offering Italian majors (both undergraduate and graduate level).

| | University or institute | Undergraduate students' number | | Graduate students' number | |
|---|---|---|---|---|---|
| | | Number of classes | Students' number per class | Number of subjects | Students' number per subject |
| 1 | 对外经济贸易大学 UIBE | 1/each year | 20–25 | 2/each year | Master 3 |
| | | | | | MTI 5 |
| 2 | 北京外国语大学 BFSU | 1/each year | about 25 | 2/each year | Master 2–5 |
| | | | | | MTI 6–10 |
| 3 | 北京语言大学 BLCU | 1/each year | about 20 | 1/each year | 3–4 |
| 4 | 中国传媒大学 CUC | 1/each year | 16 | 1/each year | 1 |
| 5 | 北京第二外国语学院 BISU | 1/each year | 24 | — | |
| 6 | 北京大学 PKU | 1 student cohort enrolled every four years | 15 | — | |
| 7 | 天津外国语大学 TFSU | 1/each year | 22 | 2/each year | Master about 3 |
| | | | | | MTI about 3 |
| 8 | 南开大学 NKU | 1/each year | 15 | 1/each year | 1 |
| 9 | 西安外国语大学 XISU | 1/each year | about 25 | 1/each year | 1–4 |
| 10 | 河北科技师范学院 HNUST | 1/each year | 35 | — | |
| 11 | 河北外国语学院 HISU | 1/each year | about 30 | — | |
| 12 | 黑龙江外国语学院 HIU | 1/each year | 20–25 | — | |
| 13 | 大连外国语大学 DUFL | 1/each year | 28 | — | |
| 14 | 吉林外国语大学 JISU | 1/each year | about 30 | 1/each year | about 4 |
| 15 | 上海外国语大学 SISU | 1/each year | about 18 | 1/each year | 1–2 |
| 16 | 南京师范大学 NNU | 1/each year | 15–25 | 1/each year | 1–4 |
| 17 | 浙江外国语学院 ZISU | 3/each year | 20 | — | |
| | | | 20 (international cooperation program) | | |
| | | | 20 (international cooperation program) | | |
| 18 | 浙江越秀外语学院 ZYU | 2/each year | about 20 | — | |
| | | | about 20 | | |
| 19 | 四川外国语大学 SISU | 1/each year | about 25 | 1/each year | about 3 |
| 20 | 成都外国语学院 CISU | 1-2/each year | about 30–60 | — | |
| 21 | 重庆外语外事学院 CIFS | 1/each year | 24 | — | |

*(Continued)*

TABLE 12 (Continued)

| | University or institute | Undergraduate students' number | | Graduate students' number | |
|---|---|---|---|---|---|
| | | Number of classes | Students' number per class | Number of subjects | Students' number per subject |
| 22 | 广东外语外贸大学 GDUFS | 1/each year | 28 | 1/each year | 2–5 |
| 23 | 广州航海学院 GZMTU | 1/each year | 25 | — | |
| 24 | 香港大学 UKU | Unspecified | | | |

These figures were provided by Professor Haihong Zhang's team from GDUFS.

courses such as SICNU-Italian language about product design), even B2.[39]

In addition to this, unlike the Italian language majors, which have basically stable curricula, the elective, compulsory or minor courses were often amended. For example, the following universities have experienced curricula changes (Table 11).

As can be seen from the table above, for universities and institutes that offer Italian elective, compulsory and minor courses, there are often some changes, such as canceling courses, adding new courses for different groups of students (undergraduate or graduate students), transforming the type of courses (from elective to compulsory, or vice versa), increasing or decreasing course hours (credit change), etc.

Teaching materials

Compared with the rich and diverse teaching materials for Italian majors, institutions offering different kinds of Italian language and culture courses face the challenge of the lack of suitable teaching material.

Most teachers use the textbooks *Studiamo l'italiano all'università* and *Nuovissimo Progetto Italiano* that are designed for Italian major students. However, these two textbooks are not suitable for the students of elective, compulsory and minor courses because they are tailored for longer courses.

Moreover, at the very beginning of Italian courses, teachers have to spend a lot of time to explain the pronunciation rules, so some teachers also use the textbooks such as *Guida alla lingua italiana* (Guide to the Italian language [our translation] 意大利语入门) and *Fonetica italiana* (Italian phonetics[our translation] 意大利语语音快速突破).

Besides, teachers will also choose other teaching textbooks, such as *Il corso in italiano* (The course in Italian [our translation]走遍意大利), *Corso intensivo d'italiano* (Intensive Italian course [our translation] 速成意大利语), *Italian language from zero* [our translation] (零起点意大利语), etc. Furthermore, as usual, teachers also prepare and arrange *ad hoc* teaching material by themselves.

It is worth mentioning that Professor Ling Zhou周玲of HACM,— when she taught the compulsory course "Italian Phonetics" for

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39    Cheng Si, *Project-oriented Reform and Practice of Italian Teaching in Design*, The Science Education Article Collects[J], October 2021, p. 191. (程思，课题导向的设计学类意大利语教学改革与实践，《科教文化》，2021年10月，第191页。).

undergraduate students of the vocal music department—used her musical knowledge and wrote the textbook *La pronuncia italiana* (Italian Pronunciation [our translation] 意大利语语音). To sum up, it is an urgent issue to publish suitable textbooks for elective, compulsory and minor courses of Italian.

### 5.2.2.3 Course curricula and teaching materials of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses

The Italian language major in vocational and technical institutes belongs to the "applied foreign language major" (应用外语专业), compared with the Italian language major in the universities and institutes, the teaching methodology and curricula setting are different.

Regarding the program duration, the vocational and technical institutes are all "three-year programs," so they are 1 year shorter than the traditional "four-year programs" of universities and institutes. Regarding to programs' content, the vocational and technical institutes are more practical and business oriented. Taking the Italian language major in the Hunan College of Foreign Studies (Huwai) as an example, the professional training goal is to "cultivate cross-border e-commerce Italian language speakers." The course program is "Basics of Italian language plus professional knowledge of cross-border e-commerce."

The main courses are as follows: Italian language basics (基础意大利语), Multimedia-based Italian listening and speaking course (意大利语视听说), Multimedia-based Business Italian listening and speaking course (商务意大利语视听说), Spoken Italian in the workplace (职场意大利语口语), Business Italian language (商务意大利语), Business Correspondence in Italian (商务意大利语函电), Business Italian Translation Practice (商务意大利语翻译实务), International Business Management (Bilingual) (国际商务管理—双语), Cross-border E-Commerce practice (跨境电子商务实务), Cross-border e-commerce operation and marketing (跨境电商运营与推广), etc. In short, from the name of the subjects, it is clear that this kind of programs pays more attention to the "practicality" and rules out courses about Italian literature, history, etc.

Teaching materials:

Regarding the textbooks, teachers also use *Studiamo l'italiano all'università*, *Nuovissimo Progetto Italiano* and *Il corso in italiano*; in other courses teachers use textbooks such as *Corrispondenza Commerciale e Testi Autentici* (Commercial Correspondence and Authentic Texts [our translation]意大利语经贸应用文), *Affare fatto! Corso d'italiano aziendale* (Deal! Business Italian course [our

TABLE 13 Students' number of universities and institutes providing Italian language and culture as elective, compulsory or minor courses.

| | University or Institute | Courses | Students choosing elective, compulsory or minor courses | Course duration: number of semesters | Students' number / per classes | Number of classes | Students' number |
|---|---|---|---|---|---|---|---|
| 1 | 清华大学 THU | Italian language 1 | all students (undergraduate plus graduate) | 1/each semester x 1 (Semester Autumn-Winter) | about 35 | 2 | about 70 |
| | | | | 1/each semester x1 (Semester Spring–Summer) | about 35 | 2 | about 70 |
| | | Italian language 2 | | 1/each semester x 1 (Autumn-Winter) | about 15 | 1 | about15 |
| | | | | 1/each semester x1 (Spring–Summer) | about 15 | 1 | about15 |
| | | Italian language 3 | | 1/each semester x1 (Autumn-Winter) | 15–20 | 1 | 15–20 |
| | | Italian language 4 | | — | — | | |
| 2 | 中国政法大学 CUPL | Italian language at university | only undergraduate students | 1/each semester x 4 | about 20 | 1 | about 20 |
| | | Elementary Italian language | only undergraduate students | 1/each semester x2 | about 20 | 1 | about 20 |
| | | Italian language | only undergraduate students of School of Foreign Studies | 1/each semester x2 | about 20 | 1 | about 20 |
| | | Italian language for graduate students | only graduate students | 1/each semester x3 | about 20 | 1 | about 20 |
| | | Legal Italian | graduate students of Law | 1/each semester x1 | about 20 | 1 | about 20 |
| 3 | 中央音乐学院 CCOM | Italian language (elementary level) | only undergraduate students | 1/each semester x1 (Spring–Summer) | 20 | 1 | 20 |
| | | Italian language basics | | 1/each semester x2 | 20 | 1 | 20 |
| | | Comprehensive Italian | | 1/each semester x2 | 20 | 1 | 20 |
| | | Italian language | | 1/each semester x2 | 20 | 1 | 20 |
| | | Italian as a second foreign language | | 1/each semester x2 | 20 | 1 | 20 |
| 4 | 南开大学 NKU | Italian as a second foreign language | only undergraduate students of School of Foreign Studies | 1/each semester x2 | 20–30 | 1–2 | 40–60 |
| | | Italian language (elementary level) 1 | only undergraduate students | 1/each semester x1 (Autumn-Winter) | 10–30 | 2 | 20–60 |
| | | Italian language (elementary level) 2 | only undergraduate students | 1/each semester x1 (Spring–Summer) | 10–30 | 2 | 20–60 |
| 5 | 西安音乐学院 XACM | Italian Phonetics | only undergraduate students of Department of Vocal Music | 1/each semester x2 | about 50 | 1 | about 50 |
| | | Italian language | only graduate students | 1/each semester x2 | about 80 | 1 | about 50 |

*(Continued)*

**TABLE 13** (Continued)

| | University or Institute | Courses | Students choosing elective, compulsory or minor courses | Course duration: number of semesters | Students' number / per classes | Number of classes | Students' number |
|---|---|---|---|---|---|---|---|
| 6 | 西安石油大学 XSYU | Italian as a second foreign language | only undergraduate students of School of Foreign Languages | 1/each semester x1 (Spring–Summer) | about 25 | 1 | about 25 |
| | | Italian as a second foreign language for English major students | only graduate students of English major | 1/each semester x4 | about 20 | 1 | about 20 |
| 7 | 西北大学 NWU | Italian as a second foreign language | only undergraduate students of School of Foreign Studies | 1/each semester x3 | 1 | 1 | 1 |
| | | Italian language Practice | | 1/each semester x3 | | | |
| 8 | 河南大学 HENU | Italian Culture | only undergraduate students | 1/each semester x1 (Autumn-Winter) | about 20 | 2 | about 40 |
| | | | | 1/each semester x1 (Spring–Summer) | about 20 | 2 | about 40 |
| 9 | 中南财经政法大学 ZUEL | Italian Language and Culture (1) | only undergraduate students | 1/each semester x 1 (Autumn-Winter) | 100 | 2 | 200 |
| | | Italian Language and Culture (2) | | 1/each semester x1 (Spring–Summer) | 100 | 2 | 200 |
| | | Italian as a second foreign language (for graduate students) (1) | only graduate students | 1/each semester x1 (Autumn-Winter) | 3–10 | 1 | 3–10 |
| | | Italian as a second foreign language (for graduate students) (2) | | 1/each semester x1 (Spring–Summer) | 2–3 | 1 | 2–3 |
| | | Italian language (for single-degree program students) | Zuel-Sur School of Law and Economics: students of Comparative and European Law and of Cognitive Forensic Scinces | 1/each semester x2 | 30–40 | 2 | 60–80 |
| | | Italian language (for double-degree program students) | Zuel-Sur School of Law and Economics: students of Law and Economics | 1/each semester x3 | 20–30 | 1 | 20–30 |
| 10 | 电子科技大学 UESTC | Italian Language and Culture | only undergraduate students | 1/each semester x1 (Autumn-Winter) | 30 | 1 | 30 |
| | | | | 1/each semester x1 (Spring–Summer) | 30 | 1 | 30 |
| | | Italian language basics | only undergraduate students not in the School of Foreign Languages | 1/each semester x1 (Spring–Summer) | 40 | 3 | 120 |

*(Continued)*

**TABLE 13 (Continued)**

| | University or Institute | Courses | Students choosing elective, compulsory or minor courses | Course duration: number of semesters | Students' number / per classes | Number of classes | Students' number |
|---|---|---|---|---|---|---|---|
| 11 | 同济大学 TJU | Italian language (1) | only undergraduate students | 1/each semester x1 (Autumn-Winter) | 20–30 | 1 | 20–30 |
| | | | | 1/each semester x1 (Spring–Summer) | 20–30 | 1 | 20–30 |
| | | Italian language (2) | | 1/each semester x1 (Spring–Summer) | 10 | 1 | 10 |
| 12 | 华东师范大学 ECNU | Introduction to Italian Language and Culture | only undergraduate students | 1/each semester x1 (Autumn-Winter) | about 10 | 1 | about 10 |
| | | Italian Language and Culture | only graduate students | 1/each semester x1 (Autumn-Winter) | —(from September 2025) | | |
| 13 | 温州大学 WZU | Italian Language | only graduate students of College of International Education | 1/each semester x1 | 1 | 19 | 19 |
| 14 | 厦门大学 XMU | Italian language basics | only undergraduate students | 1/each semester x1 (Autumn-Winter) | 30 | 4 | 120 |
| | | | | 1/each semester x1 (Spring–Summer) | 30 | 4 | 120 |
| | | A brief introduction of Italy | | 1/each semester x1 (Autumn-Winter) | 30 | 2 | 60 |
| | | | | 1/each semester x1 (Spring–Summer) | 30 | 2 | 60 |
| | | Italian as a second foreign language | only graduate students | 1/each semester x1 (Autumn-Winter) | about 20 | 1–2 | about 20–40 |
| | | | | 1/each semester x1 (Spring–Summer) | about 20 | 1–2 | about 20–40 |
| 15 | 广东外语外贸大学南国商学院 South China Business College GDUFS | Italian language basics | only undergraduate students | 1/each semester x3 | | 1 | 10 |
| | | Multimedia-based Italian listening and speaking course | | 1/each semester x3 | | | |

translation]新视线商务意大利语初级教程) as teaching materials, as well as some teaching material collected by the teachers themselves.[40]

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[40] It is worthy to mention that those textbooks were not written for students from vocational education. Consequently, the content is often unsuitable and the teachers have to select the parts that can be somehow adapted to their courses.

## 5.2.3 Students' number

### 5.2.3.1 Students' number of universities and institutes offering Italian majors (both undergraduate and graduate level)

According to the figures provided by Professor Haihong Zhang's team from GDUFS in 2023, the student numbers of universities and institutes offering Italian majors are as follows (Table 12).

According to the data, there are about 600 undergraduate and 50 graduate students of Italian related majors graduate each year. In general, these students have a solid foundation of Italian language and are

TABLE 14 Students' number of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses.

| | Institution | Students' number | | Note |
|---|---|---|---|---|
| | | Number of classes | Students' number per class | |
| | 河北外国语学院<br>HFSU | 1/each year | about 20 | three-year program in Italian language |
| 1 | 江西外语外贸职业学院<br>JUFLIT | 1/each year | about 20 | three-year program in Italian language |
| 2 | 湖南外国语职业学院<br>HUWAI | 1/each year | 4–14 | three-year program in Italian language |
| | | 4/each year | elective course 40–45 (all 160–180) | Music-Communication major students' elective course |
| 3 | 海南外国语职业学院<br>HNCFS | 1/each year | 10 | three-year program in Italian language |
| 4 | 顺德职业技术学院<br>SDPT | 1/each year | elective course about 40 | English major students' elective course [Course not offered every year] |

considered reaching B2 or C1 of Italian CEFR level.[41] Thanks to the hard work of several generations of Italian teachers, now there are a large number of Italian speakers that work in many fields in our country, such as government, foreign trade, education, tourism, media, etc. In recent years, with the increasing demand of the society for qualified experts such as "foreign language plus another major," more and more Italian language graduates choose to go abroad or to other universities to continue to broaden their horizons, enrich their knowledge in other fields such as law, economy, music, etc. and strive to become an employee with a better overall preparation. In conclusion, these students can use their language advantages in various fields to make their own contribution to further develop of our country.

### 5.2.3.2 Students' number of universities and institutes providing Italian language and culture as elective, compulsory or minor courses

Different institutions have different programs for elective, compulsory or minor courses that tend to change (such as adding classes, canceling courses, etc.) quite often. Furthermore, the number of students taking the same course fluctuates each year consequently it is difficult to interpret the data and find consistent patterns through time.

The data collected through a questionnaire from a sample of 15 universities or institutes are reported in Table 13.

According to the data of 15 universities and institutes that completed the aforementioned questionnaire, there are about 2,000 students who choose the Italian language as elective, compulsory or minor course each year. Therefore, we can infer that in the 26 institutions in China, the students should reach the average number of 3,500 unit (the range is between 3,000–4,000 students).

Students who take these kinds of courses are in the so-called "major plus foreign language." This means that their major may virtually be any of those available (from physics to music, from law to medicine, etc.). In fact, the underlying principle is that learning

Italian language can equip them with other skills outside of the domain of their chosen profession.

However, since the course hours are usually very few, students cannot reach a high proficiency level. The realistic expectation is that the majority of them can only reach the elementary level (A1, A2), and only a few can achieve the intermediate level (B1, B2). In the later stage, if students want to go to Italy to continue their studies, they often need to study by themselves Italian language independently from the university courses that are provided.

In any case, there is no doubt that the opening of these kind of courses is somehow beneficial. Indeed, the aforementioned courses have greatly increased the number of students that learn Italian language and are interested in Italian culture.

### 5.2.3.3 Students' number of vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses

According to the data collected for this paper, the number of students in vocational and technical institutes are as follows (Table 14).

According to the data, each year, there are about 60 students graduating in an Italian language major and around 200 students choosing elective courses in this kind of institutes. The students' number is relatively lower than those choosing more traditional academic education in the equivalent field. On the one hand, the number of alumni of "da zhuan" institutions amounts to the vast majority of the Italian-speaking employees in the e-commerce field. On the other hand, the elective courses offered by these institutions can give students the opportunity to learn Italian language and culture.

### 5.2.4 Difficulties encountered by teachers and some of their solutions

Teachers usually encounter various difficulties in the process of teaching and research. Some problems are normally solved through their own efforts, but some problems are not directly related to their teaching skills. It goes without saying, that different groups of teachers encounter different problems. The following sections will explore in detail the kind of issues faced according to the kind of higher-learning institution type.

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41  Undergraduate students are assumed to reach B2 level of Italian and graduate students are assumed to reach the C1 level.

TABLE 15 Typical difficulties (and their solutions) related to universities and institutes offering Italian majors (both undergraduate and graduate level).

| | Difficulties | Solutions |
|---|---|---|
| **(1) Teaching to undergraduate students** | | |
| 1 | The teaching at the same time Italian language basic knowledge and subjects using Italian as a medium. | Teachers should first explain the language rules and then teach more advanced courses that involve other types of knowledge such as literature, applied linguistic, etc. |
| 2 | There are large differences in language ability among senior students (third-year students and fourth-year students). | Teachers need to consider the different abilities of students and grade the language according to the actual level of the students. |
| 3 | Due to the limitations in language skills, the undergraduate students are unable to carry out many research tasks. | No solution suggested. |
| 4 | Students are uncertain about their future employment after studying the Italian language, and this brings about a lack of study motivation toward some students. | Provide courses unrelated to their majors to increase the prospective graduates employability within the "language plus major" training model. |
| 5 | Lack of a Chinese unified examination process of Italian language skills such as French, Japanese, etc. | Establishing some form of unified and authoritative level examination. |
| **(2) Teaching to graduate students** | | |
| 1 | The courses requires more theoretical and abstract knowledge. | Teachers, independently from their academic qualifications, should have a solid and comprehensive knowledge or have conducted a significant research in a relevant area. Furthermore, teachers should spend an adequate time in class preparation to make the topics more palatable to students. |
| 2 | In some cases, the course content is "fossilized." For example, teachers simply base their courses on what they learned during their master and PhD with little or no modification. Consequently, some content is unsuitable to equip students with the necessary skills required by the job market. | No solution suggested. |
| 3 | Each teacher has his or her own teaching styles and specialization, and they may lack of cooperation. | Cooperation should be encouraged and improved. |
| 4 | Lack of appropriate textbooks for some courses, such as "Italian Writing" and "Italian-Chinese and Chinese-Italian Translation and Interpretation." Teachers should also pay attention to the date of publication of the textbook, sometimes the content is outdated or obsolete. | Teachers collect the relevant material by themselves and/or write their own teaching textbooks. |
| 5 | Some universities or institutes lack of master supervisors, in some cases only 1–2 supervisors for the whole student cohort. | No solution suggested. |
| 6 | The language level of students may vary a lot, and some graduate students do not have a proper foundation in Italian language. | Try to help students in need after classes, providing mentoring or other kinds of activities. |
| 7 | Most students are fluent in Italian, but they have insufficient knowledge about other relevant subjects (such as sociology, linguistics, etc.). | Teachers provides beforehand, or whenever deemed necessary, extra-reading materials to students in need to help them to catch up with their lack of knowledge. |
| 8 | Graduate students have different research interests, and it is difficult to satisfy everyone during the teaching. | Increase the number of courses and the staff diverse specializations to help the students choose what they prefer. |
| 9 | Graduate students are researcher neophytes, and their independent research capabilities need improvement. | Teachers need to focus on cultivating students' research skills. |
| 10 | Many universities and institutes are facing the problem of a lower number of graduate students. This may be due to the lack of attractiveness of Italian graduate majors and the future job prospectives. | No solution suggested. |
| **(3) Italian scholars' research issues** | | |
| 1 | It is difficult for teachers to balance teaching and research: the number of teaching hours may be too high, the ancillary administrative tasks are time-consuming, leaving little or no time for research. Teachers often catch up with research during holidays, or tend to work overtime during weekdays. | No solution suggested. |

*(Continued)*

**TABLE 15 (Continued)**

| | Difficulties | Solutions |
|---|---|---|
| 2 | Teachers have difficulty in publishing articles: the relevant target journals are very few, and the competition for publication in well-respected journals is fierce. Consequently, teachers keep trying to submit articles. | Some scholar can cooperate with other organizations to improve the number of relevant journals |
| 3 | It is difficult for teachers to apply for provincial and national research project grants. Therefore, teachers keep trying to apply projects. | No solution suggested. |
| 4 | Some teachers do not know much about the research methods due to lack of professional training and learning. | No solution suggested. |
| 5 | Some teachers think that their research is not advanced and not deep enough. | Teachers should keep try to find more suitable topics. |
| 6 | Teachers do not have enough research funding. | No solution suggested. |
| 7 | Limited availability of electronic academic materials in Italian than in other languages such as English or French. | No solution suggested. |
| 8 | Teachers need to face problems such as poor information channels, difficult communication with the administrative staff, and unfair resource distribution, etc. | No solution suggested. |

**TABLE 16** Typical difficulties (and their solutions) related to universities and institutes providing Italian language and culture as elective, compulsory or minor courses.

| | Difficulties | Solutions |
|---|---|---|
| 1 | Lack of appropriate textbooks for elective, compulsory, and minor courses. | Teachers should be encouraged to write and publish ad hoc textbooks for such courses. |
| 2 | In many cases there is only one teacher, who is not part of a teaching team, consequently, he has little or no possibility to discuss some peculiar issues with scholars teaching similar subjects in that institution. | No solution suggested. |
| 3 | Many universities and institutes do not have any Italian native as a teacher, the consequence is that students' oral proficiency is lower than how it could be. | No solution suggested. |
| 4 | The workload of teachers is too heavy, and one teacher has to be responsible for all relevant matters. | No solution suggested. |
| 5 | Some courses are difficult to teach: teachers need to combine Italian language with students' majors such as music or industrial design. | (1) The universities and institutes could hire teachers who graduated from this major and can speak Italian language; (2) Teachers who graduated from the Italian language major should gain some professional vocabulary and knowledge to teach the students. |
| 6 | It is not always possible for a university to start a new course according to the wishes of the Italian teachers. This may also be due to their professional titles and years of work experience. | No solution suggested. |
| 7 | The course hours are insufficient preventing students from reaching a sufficient language level. | No solution suggested. |
| 8 | Some students have little or no interest about learning Italian language. Indeed, some of them underestimate the importance of the course and are reluctant to devote their time and energy to study it. | Teachers should provide more engaging classes, and increase the quality of the course. |
| 9 | Italian grammar is relatively complex and students have some difficulties related to remember grammar rules. | (1) The teacher should simplify the grammar rules and other contents; (2) The teacher should teach at a suitable slow pace and avoid concentrating too much contents in one single class. |
| 10 | Students can hardly speak, and they have poor oral and communication skills. | Teachers should communicate with students in every class helping them to consolidate their grammar through simple dialogs. |
| 11 | Students rarely review the content and practice the language after class, and some of them even refuse to do the relevant homework. | Teachers should recapitulate the content of the previous lessons in every class. |
| 12 | Some teachers have too few students enrolled in their courses. This brings about the risk of course cancelation. Furthermore, this can also cause problems with some in-class activities like group activities. | No solution suggested. |
| 13 | Some teachers have too many students in their classes, in some cases even more than 100. Consequently, the teacher-students interaction is severely limited. | Dividing the course into two or more classes |

TABLE 17 Typical difficulties (and their solutions) related to vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses.

| | Difficulties | Solutions |
|---|---|---|
| 1 | Lack of teaching material: most of the Italian textbooks on the market are tailored for students enrolled in Italian majors provided by universities and institutes. However, since students in vocational and technical institutes have different kind of interests and abilities, some of the content of traditional textbooks is too academic and theoretical for them. | (1) Teachers need to select some content from the textbooks which are appropriate for the students' level and needs. (2) Teachers could write and publish textbooks suitable for these students. |
| 2 | Students who choose Italian language as an elective course may be reluctant to cope with huge workload, and may be very passive learners. | Teachers could add some interactive activities during the lessons such as dictation, question-and-answer sessions which can make classes more palatable. |
| 3 | It is difficult to improve the professional title of the teachers. | Teachers can hardly publish papers or obtain some projects above the provincial level, so they have to achieve results through other means, such as participating in teaching competitions, or guiding students to participate in some ad hoc competitions. |
| 4 | Teachers, especially because they do not hold doctoral degrees, have not received a solid education related research and do not know how to improve their research abilities. | Teachers can only try their best to apply for some school-level projects, through which they can exercise and improve their research capabilities. |

### 5.2.4.1 Typical difficulties (and their solutions) related to universities and institutes offering Italian majors (both undergraduate and graduate level)

One of the questionnaires submitted for our research dealt with problems and some solutions provided by the staff teaching in universities and institutes offering Italian majors (both undergraduate and graduate level), the results are shown in Table 15.

Teachers themselves should work hard to improve their teaching and research abilities, but many of these problems cannot be solved by teachers alone. Indeed, some problems—such as "insufficient enrollment of graduate students," "poor information channels, difficult communication with the administrative staff, unfair resource distribution," etc.,— need to be solved from the university level or even the social level.

### 5.2.4.2 Typical difficulties (and solutions) related to universities and institutes providing Italian language and culture as elective, compulsory or minor courses

In terms of teaching, the difficulties and problems encountered by teachers of these kinds of courses are different from those of teachers of Italian language majors. Problems and solutions can be summarized as follows in Table 16.

Regarding academic research questions, the problems faced by teachers of this kind of courses are almost identical to those faced by teachers of Italian language major.

### 5.2.4.3 Typical difficulties (and their solutions) related to vocational and technical institutes ("da zhuan") offering Italian language majors or elective courses

Teachers in vocational and technical institutes face their own peculiar problems and try to provide *ad hoc* solutions. The questionnaire's results are shown in Table 17.

To sum up, in terms of research, both teachers from universities or institutes, and teachers from vocational and technical institutes are faced with the problems of difficulty in publishing articles, difficulty in applying for research projects, and the urgent need to improve their own research abilities.

## 6 Conclusion

In general, over the past 70 years, Italian language and culture teaching has gone through a great process of development. Thanks to the support of the Chinese Government, of the Italian Embassy in China[42] and the efforts of generations of Italianists and scholars remarkable results have been achieved. Among the 24 universities and institutes that are offering Italian majors, 11 are listed as "national first-class majors": BFSU, BLCU, UIBE, XISU, SISU, TFSU, SISU, GDUFS, NKU, DUFL, PKU; four are listed as "provincial first-class majors": CUC, HNUST, JISU, BISU; and 2 are listed as "school first-class majors": CISU, ZISU. Furthermore, an increasing number of universities and institutes are offering Italian language as elective, compulsory and minor courses, and more and more vocational and technical institutes are offering Italian language majors or elective courses.

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42   The Italian Embassy in China has organized a variety of activities, including various forms of teacher training programs, a variety of language and cultural activities, and the supply of abroad information and consulting services.

## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2025.1466508/full#supplementary-material

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# The influence of learning anxiety and involution on motivation among undergraduate English majors in Beijing and Macau

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The aim of this study is to examine how learning anxiety and involution influence students' learning motivation, the interrelationships among anxiety, involution, and the four language skills (listening, speaking, reading, and writing), as well as the potential variations in these relationships among English major students in different educational backgrounds, specifically in Beijing and Macau. This study employed quantitative research methods to collect data on learning anxiety, involution, and motivation levels from university students in both cities. The results indicate that both groups exhibited motivation levels higher than the average, moderate levels of anxiety and involution, and significant effects of anxiety and involution on motivation. Furthermore, interconnections were observed among the four language skills. Moreover, variations in the results were found across different cultural backgrounds. This study holds important theoretical significance in understanding the impact of affect and positive psychology on English learning, as well as exploring the differences in English learning within diverse cultural contexts.

KEYWORDS

English as a foreign language, anxiety, involution, motivation, Beijing and Macau

## 1 Introduction

Socio-emotional factors such as anxiety and motivation have a significant bearing on educational contexts and extend beyond the classroom since they are key factors influencing individual growth and development. These factors play an important role in students' learning as well as their emotional well-being (Pollack et al., 2021). However, little is known about the interrelationship between anxiety, evolution, and motivation when it comes to foreign language learning. However, by utilizing this knowledge, barriers to learning can be minimized and potential mechanisms of affective factors investigated. Researchers and educators can enhance the learning experience of a language by acknowledging and examining the unique and multifaceted roles of emotional factors. Therefore, a comprehensive study to measure the influences of learning anxiety and involution on motivation among college students, as well as the relationship between the four domains of learning anxiety and involution is in need, as this provides researchers with the opportunity to collect quantitative data on a variety of psychological variables.

Macau, a special administrative region of China, has a significantly different educational system and language of instruction than mainland China (Lee et al., 2020). A number of important national education organizations and many top universities are located in Beijing, the capital of China. Although Macau and Beijing have considerable sociocultural distances,

there have been very few studies examining the affective factors of Macau and Beijing students. The purpose of this study is to explore these factors among undergraduate students majoring in English in Beijing and Macau. In addition to comparing findings across different cultural contexts, researchers can also develop a more comprehensive understanding of how to motivate students.

# 2 Literature review

## 2.1 Emotion and positive psychology

Although emotional factors play a crucial role in language learning and instruction, their significance has not been adequately acknowledged in applied linguistics research over the past few decades. Emotions, which can be considered central to language education, function as fundamental processes that influence a wide range of aspects of language development. They are inextricably linked to both language acquisition and proficiency, shaping how learners engage with and internalize new languages (MacIntyre and Vincze, 2017). Traditionally, research in language learning has concentrated predominantly on the negative emotion of anxiety in foreign language classroom settings (Li et al., 2021; Dewaele, 2007; Horwitz et al., 1986; MacIntyre, 1999), often overlooking the complex interplay between various emotional states that can either hinder or foster language development. However, reducing positive emotions to mere opposites of negative ones fails to capture their unique contributions, highlighting the necessity of adopting a more comprehensive perspective on emotions in language education. In response to this limitation, Imai (2010) advocates for a more nuanced approach that recognizes the synergistic effects of both positive and negative emotions on promoting foreign language acquisition. By acknowledging and understanding the distinctive and interactive roles that diverse emotional states play, educators and researchers are better equipped to create a holistic and effective learning environment.

The concept of "positive psychology" was first introduced by Maslow (1954) in his publication, laying the foundation for a new field that emphasizes the importance of focusing on positive human qualities and resources (Schui and Krampen, 2010). The emergence of positive psychology as a legitimate field of study has significantly increased attention and research on the distinctions between positive and negative emotions (MacIntyre and Vincze, 2017). Psychiatrists have studied the factors that make life worthwhile and the human strengths that enable individuals to cope with challenges, respect others, and perceive daily experiences as meaningful (Dunn and Dougherty, 2005). For instance, Shafiee Rad and Jafarpour (2022) suggested implementing positive emotion interventions has the potential to yield benefits: not only can these interventions enhance emotional well-being, but they may also enhance academic performance among learners. Positive emotions are not only capable of expanding individuals' perspectives and enhancing their personal strengths, according to Alrabai (2022), but they are also capable of mitigating the residual effects of negative emotions. Classroom social climate and foreign language enjoyment significantly predict student engagement, with the latter emerging as the more influential factor (Mohammad Hosseini et al., 2022). In addition, these results demonstrate the value of positive psychology in second language (L2) pedagogy, emphasizing the importance of fostering positive emotional experiences as well as developing a conducive learning environment for students.

## 2.2 Involution in education

Goldenweiser (1936) first used the term "involution," and was used by Geertz (1963) to describe the adaptation of Javanese peasant society to a colonial system in which land, labor, produce, and money taxes were extracted from the village economy. Geertz argues that many centuries of increasing wet-rice cultivation in Indonesia had produced greater social complexity without significant technological or political change, a process he refers to as involution. He describes in particular the process of "agricultural involution" in Java, where both the external economic pressures of the Dutch rulers and internal pressures due to population growth led to intensification rather than change (White, 1983).

As applied to education, it refers to the competition among peers to devote more effort to compete for limited resources, resulting in a decrease in the individual's benefit-effort ratio. The translated Chinese term "neijuan (内卷)" has become popular among contemporary Chinese tertiary educational contexts, with individuals employing it to represent their present emotional state of anxiety and competition among Chinese college students (Wang et al., 2023). It is typically perceived as an unproductive and unreasonable struggle for superior resources. However, most of the relevant discussions have been based on social review articles, which lack the powerful support of specific data analyses, and their definitions of involution remain in conformity with the definition of "neijuan" in the network context (Yi et al., 2022). Many researchers have dedicated their efforts to examining the intricate structure of competitive psychology, as well as the various factors that influence it (Liu et al., 2022). For example, Wang et al. (2023) developed a reliable and valid measurement scale, that is, the Academic Involution Scale for College Students in China (AISCSC), to assess Chinese college students' competitive psychology. The Competition Psychology Scale for College Students (CPS-CS) was developed (Liu et al., 2022), which consists of a reliable and valid 6-item scale encompassing four dimensions: hypercompetitive attitude, competitive motivation, personal development, and competitive interpersonal relationships. In terms of the relationship between involution and anxiety, Yi et al. (2022) indicated that the involution behavior exhibited by Chinese college students can be categorized into three types: passive involution, reward-oriented involution, and achievement-motivated involution. Among these, college students' passive involution displayed a significant and positive predictive effect on their anxiety, while achievement-motivated involution was found to have a substantial and negative predictive effect. Involution in education appears to have been studied since 2022, and it suggests that insufficient efforts have been made to analyze the impact of involution on motivation and how involution is related to anxiety.

## 2.3 Foreign language anxiety and affective filter

Foreign Language Anxiety (FLA) has been a focus of research within foreign language education since the early 1970s. High-anxious

learners frequently underperform their low-anxious counterparts, and they tend to speak more concisely or even inaudibly (Liu and Huang, 2011). FLA can be characterized as "the apprehension and adverse emotional response elicited during the learning or utilization of a second language" (MacIntyre, 1999). The inaugural definition of Foreign Language Classroom Anxiety (FLCA) illuminates the multifaceted nature of the construct: "a unique configuration of self-perceptions, beliefs, emotions, and behaviors associated with classroom learning that stems from the distinctive nature of the language learning process" (Horwitz et al., 1986). The first set of language-specific anxiety measures were integrated within Gardner's Attitude-Motivation Test Battery (AMTB) (Gardner, 1985; Gardner, 2010), which comprised assessments of French classroom and French use anxiety.

Krashen (1982) proposed the existence of an "affective filter" in language learners that modulates "the degree to which the acquirer is "open" (p. 9). Negative emotional states, as asserted by Krashen, prompt learners to elevate their filters, consequently hindering their comprehension and processing of language input. It is recommended that educators adopt strategies to stimulate learners' interest, establish low-anxiety environments, and enhance self-esteem as a means of reducing the affective filter and facilitating a smoother language acquisition process.

Several scholars have examined foreign language anxiety from different perspectives, for example, Alberth (2022) demonstrated that women were more anxious than men. However, Rasool et al. (2023) concluded that learners' writing anxiety exhibits no significant relationship with their gender, but rather is influenced by a diverse array of factors, including linguistic challenges, apprehension of negative evaluation, diminished self-confidence, and adverse experiences in the past. Furthermore, anxiety not only affects writing, but also speaking and even brain activity. For example, Xu et al. (2023) report that foreign language speaking anxiety adversely impacts brain regions associated with language and theory of mind. The findings provide further insight into the neural synchronization that contributes to foreign language anxiety and verbal interaction, as well as a theoretical basis for alleviating foreign language speaking anxiety and enhancing foreign language communication quality. Aside from that, empirical evidence suggests that anxiety also adversely affects reading processes. In Chan et al. (2024), the influence of foreign language anxiety on English word reading was examined and cognitive-linguistic abilities were assessed as mediating factors in this relationship. Students' reading comprehension in a second or foreign language is significantly influenced by anxiety, according to Liu and Dong (2022). As for speaking, it is confirmed that the categorization of foreign language listening anxiety definitions into psychological, social, and situation-specific categories (Ji et al., 2022). Li et al. (2023) have contributed to the understanding of foreign language listening anxiety (FLLA) by distinguishing between general listening anxiety and listening test anxiety. By distinguishing between FLLA types, we have been able to better comprehend the unique effects of FLLA types on self-perceived listening performance and the intensity variations in listening anxieties experienced by English and non-English majors.

## 2.4 Motivation

According to extensive research, motivation has been established as a crucial affective factor influencing second language (SL) and foreign language (FL) learning significantly (Gardner, 1985; Dörnyei, 2005; Gong et al., 2020). This suggests that researchers should explore the interconnectedness of motivation and emotions to gain a deeper understanding of the way they influence SL/FL learning.

The central tenets of motivation-focused theories posit that motivation is significantly shaped by students' attitudes towards a foreign language, and motivation, particularly integrative or intrinsic motivation, bolsters SL/FL learning and sustains learners' efforts to master the language. In addition, motivation is dynamically intertwined with self-confidence, language anxiety, self-efficacy, SL competence, and a wide array of other factors (Ehrman, 1996).

From previous reviews, it is evident that many scholars have investigated the relationship between positive psychology and foreign language anxiety and motivation. However, there is a scarcity of research on the relationship between anxiety and involution, as well as the relationship between learning anxiety and involution. While some studies have explored the impact of anxiety and involution on the skills of listening, speaking, reading, and writing, few have examined the interplay among these four skills. Furthermore, there is limited research comparing differences in English learning among students from diverse cultural backgrounds.

In light of this, this study proposes three hypotheses to address the aforementioned research gaps:

*Hypothesis H1*: Both involution and anxiety significantly influence English learning motivation.

*Hypothesis H2*: The four domains of English learning, namely listening, speaking, reading, and writing, mutually influence each other in terms of involution and anxiety.

*Hypothesis H3*: Different cultural and educational backgrounds impact the results of H1 and H2.

# 3 Materials and methods

## 3.1 Participants

This study was conducted among adult undergraduate students majoring English at a university in Beijing and Macau, respectively. In May 2022, online questionnaires were distributed to students from these two universities, with a total of 187 questionnaires returned, including 87 from Beijing and 100 from Macau. They will read the questionnaire consent before answering the questions. After removing invalid questionnaires, the final number of valid questionnaires were 84 from Beijing (average age = 19.71; 11 males, 73 females) and 99 from Macau (average age = 18.79; 20 males, 79 females). It was obvious that in these two universities, there is an imbalance in the ratio of male and female, which is also common in other foreign languages schools where there are more female students (Xu et al., 2022). To avoid the influence of gender, the analyses employed $T$ test and it turned out that gender did not significantly influence learning anxiety [Beijing ($t(82) = 1.435$, $p = 0.155$, Cohen's d = 0.86)], [Macau ($t(97) = 1.350$, $p = 0.180$, Cohen's d = 0.92)]; motivation [Beijing ($t(82) = -1.325$, $p = 0.190$, Cohen's d = 0.65)], [Macau ($t(97) = -0.170$, $p = 0.865$, Cohen's d = 0.63)]; and involution [Beijing ($t(82) = -1.114$,

$p = 0.269$, Cohen's d $= 0.76$)], [Macau $(t(97) = 0.672$, $p = 0.503$, Cohen's d $= 0.66$)].

## 3.2 Instruments

Three questionnaires were designed to collect data on learning anxiety, motivation, and involution among students at universities in Beijing, and Macau, respectively.

Anxiety Scale: To figure out students' anxiety, this study employed a Chinese language learning anxiety scale from Xu et al. (2022), originally from Luo (2015), and made some modifications because this study aimed to investigate the influence of learning anxiety on English majors' motivation, the contents of the questionnaires were adjusted accordingly, such as changing "Chinese learning" into "English learning." (See Appendix 1). A total of 16 items were modified to assess participants' English learning anxiety. It has a good reliability ($\alpha = 0.945$, KMO $= 0.912$). In addition, this paper further divided the scale into four domains of anxiety: speaking anxiety, listening anxiety, reading anxiety, and writing anxiety, which aimed to further explore the relationship between different domains of anxiety and involution.

Involution Scale: This questionnaire aimed to explore the influence of involution on motivation among English majors at universities in Beijing and Macau. A 16-item survey questionnaire was designed ($\alpha = 0.904$, KMO $= 0.850$) to assess participants' involution, with one example item being "I will use my spare time to practice speaking and gradually surpass my classmates." (See Appendix 2). In addition, this paper further divided the scale into four domains, that is, speaking involution, listening involution, reading involution and writing involution. These four domains were designed to explore the relationship between learning anxiety and different domains of involution. The questionnaires contain English learning anxiety, motivation, and involution and participants were required to answer the questionnaires using a 5-point Likert scale from "1, strongly disagree" to "5, strongly agree." Scoring of the questionnaires underwent double checks by authors and experts, with any questionable responses reviewed by authors.

Motivation Scale: The scale developed by Vallerand et al. (1992) and Noels et al. (2003) was used to investigate the motivation of undergraduate English majors in Beijing and Macau universities. Similarly, the contexts of the questionnaires were adjusted accordingly to better fit for this study, such as changing "Chinese learning" to "English learning." For example, "I study English because I feel happy when learning a second language" (See Appendix 3). To eliminate language barriers that will hinder the understanding of the

questionnaire, the questionnaire was translated into Chinese and back translation was employed to ensure the correctness. A total of 18 items were modified to assess participants' motivation ($\alpha = 0.880$, KMO $= 0.779$).

## 4 Results

### 4.1 Descriptive results

Table 1 presents the scores of participants from Beijing in terms of learning anxiety, motivation, and involution. The motivation scores of participants from Beijing were observed to be above the mid-scale threshold (3) (Mean $= 3.0437$, SD $= 0.65155$), reflecting a generally positive motivation level. Similarly, involution scores were above the mid-scale point (Mean $= 3.0603$, SD $= 0.75957$). In terms of anxiety, participants in Beijing displayed scores slightly above the mid-scale point (Mean $= 3.1652$, SD $= 0.85727$), indicating a moderate level of anxiety. Table 2 presents the scores of Macau participants' learning anxiety, motivation, and involution. The motivation scores of participants from Macau were found to be above the mid-scale threshold (3) (Mean $= 3.638$, SD $= 0.6265$), indicating a generally positive motivation level. Additionally, involution scores were also above the mid-scale point (Mean $= 3.2689$, SD $= 0.70215$). However, anxiety scores for Macau participants were slightly below the mid-scale point (Mean $= 2.8207$, SD $= 0.92352$), suggesting a moderate level of anxiety.

### 4.2 Results of regression analysis

In order to test the aforementioned hypotheses (H1, H2, and H3), a series of research steps were conducted. The first set of research employed linear regression analysis with motivation as the dependent variable and involution and anxiety as independent variables. Table 2 presents the results of the linear regression analysis conducted in both Beijing and Macau.

In the second set of experiments, matrix scatter plots were generated to examine the relationships among anxiety and involution in the four subdomains of English learning: listening, speaking, reading, and writing, specifically for English major students in Beijing and Macau. Additionally, correlation matrices were computed to assess the relationships between speaking anxiety, listening anxiety, reading anxiety, writing anxiety, as well as speaking involution, listening involution, reading involution, and writing involution.

**TABLE 1** Anxiety, motivation, and involution scores of Beijing and Macau participants.

| Region | Measured variable | Min | Max | Mean | SD | Skewness | Kurtosis |
|--------|-------------------|-----|-----|------|-----|----------|----------|
| Beijing | Anxiety | 1 | 5 | 3.1652 | 0.85727 | −0.089 | 0.299 |
| | Motivation | 0.89 | 4.44 | 3.0437 | 0.65155 | −0.484 | 1.589 |
| | Involution | 1 | 5 | 3.0603 | 0.75957 | 0.041 | 0.635 |
| Macau | Anxiety | 1 | 4.81 | 2.8207 | 0.92352 | −0.339 | −0.41 |
| | Motivation | 1.28 | 5 | 3.638 | 0.6265 | −0.427 | 1.536 |
| | Involution | 1.31 | 5 | 3.2689 | 0.70215 | −0.118 | 0.527 |

TABLE 2 Linear regression analysis of motivation.

| Region | Model | B | Std. Error | Beta | t | p |
|---|---|---|---|---|---|---|
| Beijing | (Constant) | 1.74 | 0.291 | – | 5.974 | <0.001 |
| | Anxiety | −0.128 | 0.064 | −0.169 | −2.019 | 0.047 |
| | Involution | 0.559 | 0.072 | 0.652 | 7.784 | <0.001 |
| Macau | (Constant) | 2.504 | 0.280 | – | 8.931 | <0.001 |
| | Anxiety | −0.182 | 0.054 | −0.269 | −3.346 | 0.001 |
| | Involution | 0.504 | 0.072 | 0.565 | 7.037 | <0.001 |

Dependent variable: motivation.

Tables 3, 4 provide the correlation matrix results for anxiety and involution subdomains in Beijing and Macau, respectively.

Regarding the first hypothesis, the influence of anxiety and involution on motivation, the results showed that anxiety had a negative impact on motivation for both Beijing and Macau undergraduate English majors, as evidenced by Beijing participants' learning anxiety ($\beta = -0.169$, $p = 0.047$) and Macau students' learning anxiety ($\beta = -0.269$, $p = 0.001$). That is, increased anxiety levels led to lowered learning motivation. Additionally, involution had a significant positive impact on motivation for both Beijing and Macau undergraduate English majors, as evidenced by Beijing students' involution ($\beta = 0.652$, $p < 0.001$) and Macau students' involution ($\beta = 0.565$, $p < 0.001$). That is, increased involution levels led to enhanced motivation. What's more, the influence of anxiety is less when compared with involution. MacIntyre and Vincze (2017) found out that a consistent and strong positive correlation can be observed between positive emotions and motivation-related factors, whereas the relationships between negative emotions and motivation-related variables are less robust and less uniform.

The linear regression equations for the models are:

$$Beijing: motivation = 1.74 - 0.128\, learning\ anxiety + 0.559\, involution$$

$$Macau: motivation = 2.504 - 0.182\, learning\ anxiety + 0.504\, involution$$

According to the scatter plots depicted in Figures 1, 2, both Beijing English majors and Macau English majors exhibit a normal distribution in terms of anxiety and involution across listening, speaking, reading, and writing. Overall, the normal distribution of involution in the four language skills is significantly more obvious than that of anxiety for students in both regions. On a specific level, regarding anxiety, among Beijing English majors, significant strong normal distributions are observed for listening anxiety and speaking anxiety, writing anxiety and speaking anxiety, while significant moderate normal distributions are observed for reading anxiety and speaking anxiety, reading anxiety and listening anxiety, and writing anxiety and reading anxiety. A weak significant normal distribution is found for

writing anxiety and listening anxiety. On the other hand, for Macau English majors, apart from the strong significant normal distribution between listening anxiety and speaking anxiety, the remaining distributions are relatively weak in significance. In terms of involution, both Beijing English majors and Macau English majors exhibit a strong significant normal distribution across listening, speaking, reading, and writing.

According to the results of the correlation matrix presented in Table 3, significant positive correlations ($p < 0.01$) are observed among speaking anxiety, listening anxiety, reading anxiety, and writing anxiety for English majors in both Beijing and Macau. Specifically, for Beijing English majors, significant positive correlations are found between speaking anxiety and listening anxiety ($r = 0.549$, $p < 0.01$), speaking anxiety and reading anxiety ($r = 0.744$, $p < 0.01$), speaking anxiety and writing anxiety ($r = 0.666$, $p < 0.01$), listening anxiety and reading anxiety ($r = 0.686$, $p < 0.01$), listening anxiety and writing anxiety ($r = 0.447$, $p < 0.01$), and reading anxiety and writing anxiety ($r = 0.714$, $p < 0.01$). In terms of Macau English majors, significant positive correlations are observed between speaking anxiety and listening anxiety ($r = 0.671$, $p < 0.01$), speaking anxiety and reading anxiety ($r = 0.562$, $p < 0.01$), speaking anxiety and writing anxiety ($r = 0.675$, $p < 0.01$), listening anxiety and reading anxiety ($r = 0.679$, $p < 0.01$), listening anxiety and writing anxiety ($r = 0.713$, $p < 0.01$), and reading anxiety and writing anxiety ($r = 0.724$, $p < 0.01$).

Based on the results from Tables 3, 4, as well as the correlations between involution in listening, speaking, reading, and writing, and anxiety in listening, speaking, reading, and writing, the following path diagram is constructed (see Figure 3).

Based on the results of the correlation matrix for involution in listening, speaking, reading, and writing, both Beijing and Macau English majors demonstrate significant positive correlations ($p < 0.01$). Specifically, for Beijing English majors, significant positive correlations were found between speaking involution and listening involution ($r = 0.817$, $p < 0.01$), speaking involution and reading involution ($r = 0.792$, $p < 0.01$), speaking involution and writing involution ($r = 0.736$, $p < 0.01$), listening involution and reading involution ($r = 0.871$, $p < 0.01$), listening involution and writing involution ($r = 0.735$, $p < 0.01$), and reading involution and writing involution ($r = 0.805$, $p < 0.01$). For Macau English majors, the significant positive correlations were as follows: speaking involution and listening involution ($r = 0.703$, $p < 0.01$), speaking involution and reading involution ($r = 0.596$, $p < 0.01$), speaking involution and writing involution ($r = 0.626$, $p < 0.01$), listening involution and reading involution ($r = 0.753$, $p < 0.01$), listening involution and writing involution ($r = 0.745$, $p < 0.01$), and reading involution and writing involution ($r = 0.821$, $p < 0.01$).

Regarding the relationships between English learning anxiety and English learning involution, the results showed that for Beijing undergraduate English majors, speaking anxiety and listening involution were significantly positively correlated ($r = 0.236$, $p < 0.05$), while writing anxiety was significantly negatively correlated with speaking involution ($r = -0.246$, $p < 0.05$) and writing involution ($r = -0.223$, $p < 0.05$). For Macau undergraduate English majors, only listening anxiety and listening involution showed a significant positive correlation ($r = 0.187$, $p < 0.05$), and other relationships were not significant.

TABLE 3 Matrix of anxiety correlations.

| City | Anxiety domain | Speaking anxiety | Listening anxiety | Reading anxiety | Writing anxiety |
|------|----------------|------------------|-------------------|-----------------|-----------------|
| Beijing | Speaking anxiety | – | | | |
| | Listening anxiety | 0.549** | – | | |
| | Reading anxiety | 0.744** | 0.686** | – | |
| | Writing anxiety | 0.666** | 0.447** | 0.714** | – |
| Macau | Speaking anxiety | – | | | |
| | Listening anxiety | 0.671** | – | | |
| | Reading anxiety | 0.562** | 0.679** | – | |
| | Writing anxiety | 0.675** | 0.713** | 0.724** | – |

**$p < 0.01$.

TABLE 4 Matrix of involution correlations.

| City | Involution domain | Speaking involution | Listening involution | Reading involution | Writing involution |
|------|-------------------|---------------------|----------------------|--------------------|--------------------|
| Beijing | Speaking involution | – | | | |
| | Listening involution | 0.817** | – | | |
| | Reading involution | 0.792** | 0.871** | – | |
| | Writing involution | 0.736** | 0.735** | 0.805** | - |
| Macau | Speaking involution | – | | | |
| | Listening involution | 0.703** | – | | |
| | Reading involution | 0.596** | 0.753** | – | |
| | Writing involution | 0.626** | 0.745** | 0.821** | – |

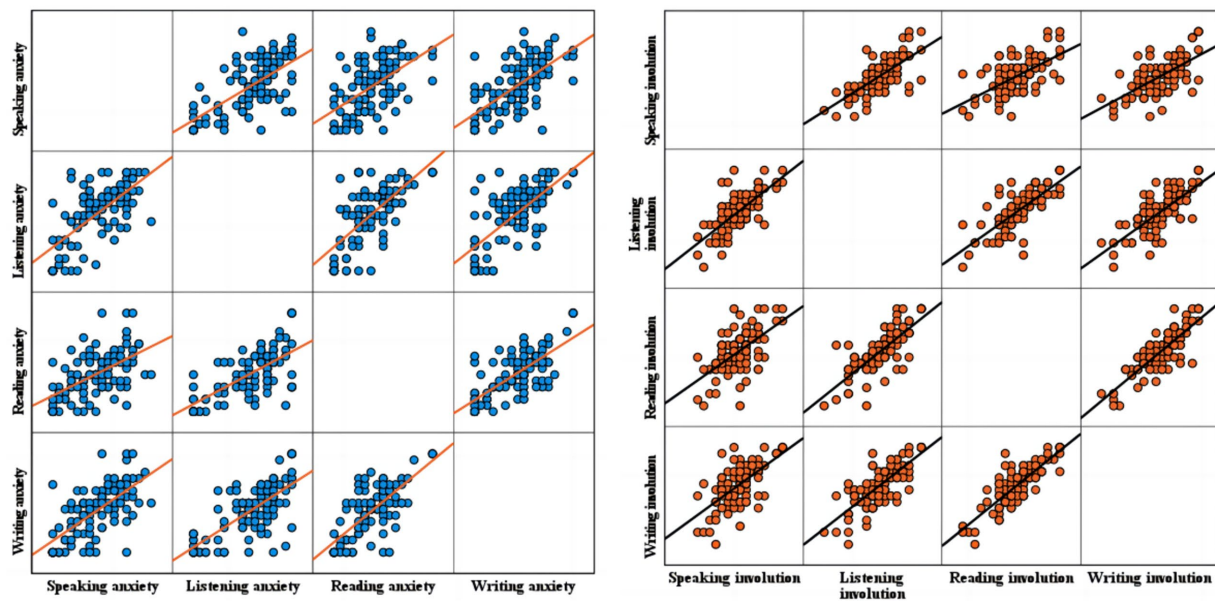**$p < 0.01$.



FIGURE 1
Scatter plot of Beijing matrix.
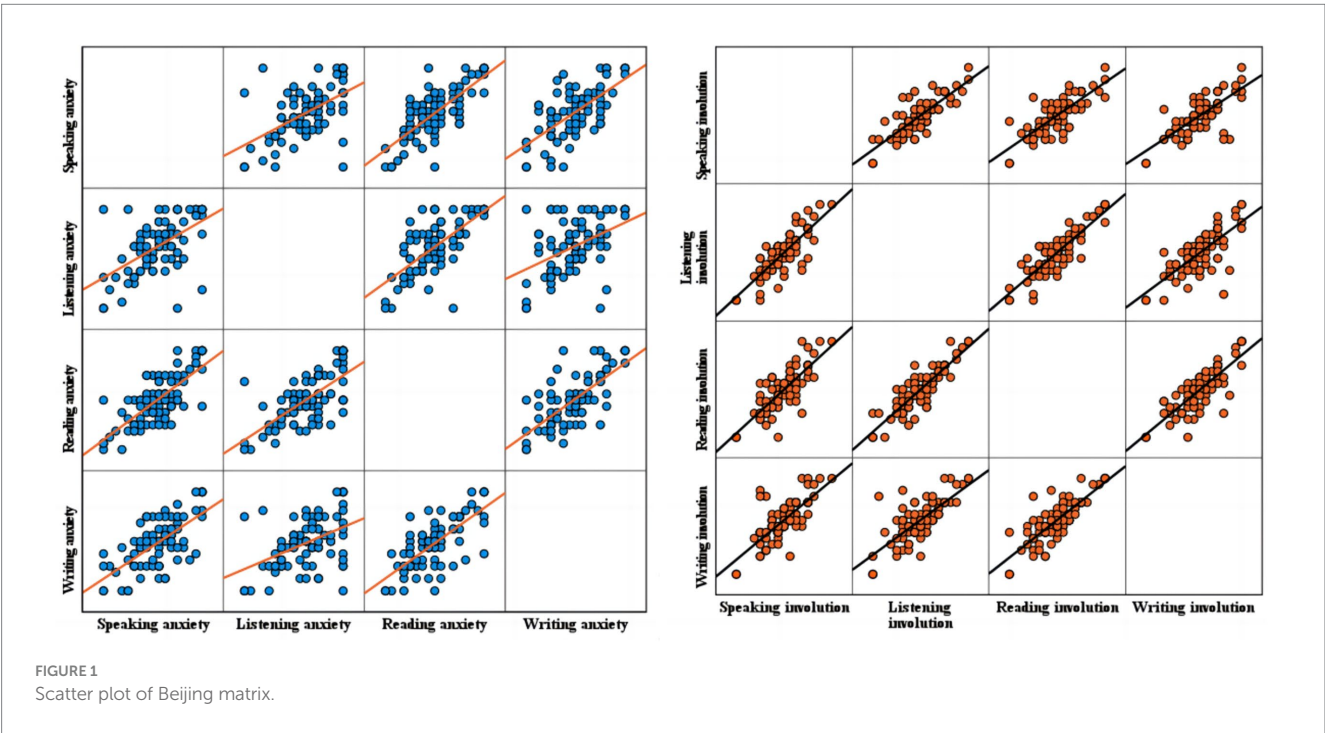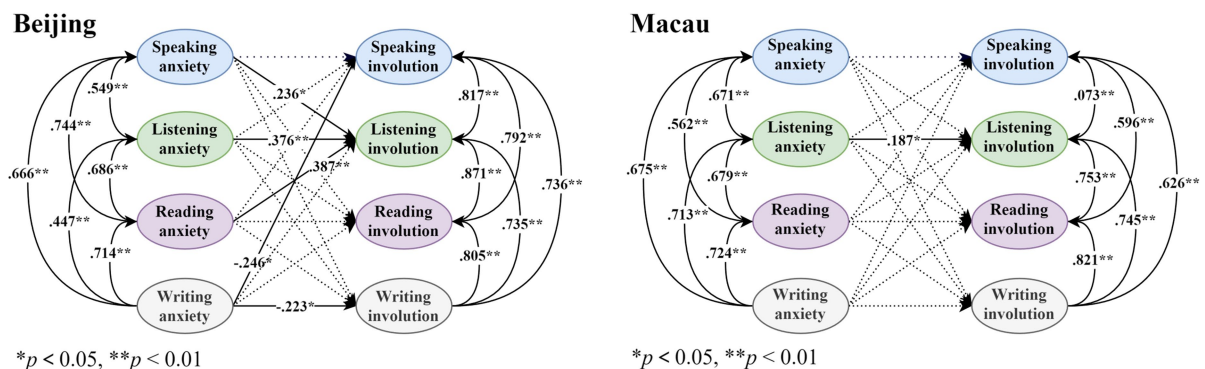
FIGURE 2
Scatter plot of Macau matrix.



FIGURE 3
Path diagram.

# 5 Discussion

## 5.1 The influence of learning anxiety and involution on motivation intrinsic, altruistic, and extrinsic motivations

While some studies have observed positive effects of anxiety on English learning (Liu and Huang, 2011; Chan et al., 2024; Li et al., 2023), learning anxiety was significantly detrimental to motivation in this study. In their English learning activities, participants from both Beijing and Macau generally demonstrated moderate levels of anxiety (Table 1). This is consistent with other scholars' findings regarding writing anxiety among English majors (Zhang and Lai, 2023; Qashoa, 2014; Arindra and Ardi, 2020), reading anxiety (Miao and Vibulphol, 2021), speaking anxiety (Vural, 2019) and listening anxiety (Liu and Xu, 2021), or combined (Zhang et al., 2020). This is also significantly

consistent with past research regarding English learners, including Chinese students (Liu and Huang, 2011), European students (Ahmetović et al., 2020) and Korean students (Basco and Han, 2016). In order to reduce students' anxiety and improve their motivation, teachers may consider incorporating a number of strategies, including expanding cultural investigations, promoting peer-to-peer communication in the target language, and implementing engaging activities (Li et al., 2018).

On the other hand, participants generally exhibited moderate involution levels (Table 1) in their English learning. This phenomenon can be explained by China's socio-cultural context (Gan, 2023). While multiple studies (Li, 2021; Jiang, 2022) have mentioned the negative impacts of involution, Liu and Dong (2022) discussed the inextricable links between involution and competition. Additionally, Burguillo (2010) and Zhou (2023) explored the positive impacts of competition on motivation. This is consistent with the conclusion of this paper,

which finds a significant positive correlationship between involution and motivation. According to the findings of this study, H1 posits that involution and anxiety significantly influence English learning motivation. Further evidence supports H1, indicating that both involution and anxiety are significantly associated with English learning motivation.

According to the regression analysis, both learning anxiety and involution significantly influence the motivation of English major students in Beijing and Macau, but the relationships between these factors differ between the two educational contexts. Among Beijing students with higher levels of learning anxiety, there was a lower level of motivation, which aligns with Krashen's (1982) affective filter hypothesis regarding anxiety as a debilitating factor in language learning. On the other hand, higher levels of involution were associated with higher levels of motivation. This can be explained by understanding that involution in Beijing may be seen as a driving force to strive harder to outcompete rivals, thus boosting learning motivation. For Macau students, however, higher learning anxiety was also associated with lower motivation, while higher involution was associated with lower motivation. This points to a different relationship between involution and motivation in Macau, where involution may be perceived as an ineffective competition, leading to stress and diminished motivation. This study further validates H3, which indicates that different cultural and educational backgrounds have an influence on the results of H1 and H2.

The findings of this study provide additional support for H3, indicating that cultural and educational backgrounds have an impact on the results of H1 and H2. These findings highlight the differences in how emotional factors such as anxiety and involution affect learning motivation across different cultural and educational contexts. Additionally, it challenges the existing view that anxiety, involution, and motivation have a simple relationship. Education must take into consideration these differences in order to improve student motivation.

## 5.2 Interrelationships among language skills in English learning

While previous studies have examined the impact of anxiety on listening, speaking, reading, and writing (Xu et al., 2023; Liu and Dong, 2022; Ji et al., 2022), few have systematically explored the interrelationship between anxiety and involution. Additionally, it has been established that there are associations among listening, speaking, reading, and writing (Chauvin et al., 2020). To address this gap, this study conducted a comprehensive analysis by examining the relationship between anxiety and involution in the following four domains, that is, listening, speaking, reading, and writing. The findings demonstrated that among undergraduate English majors in Beijing, speaking anxiety exhibited a significant positive correlation with listening involution ($r = 0.236$, $p < 0.05$). Furthermore, writing anxiety displayed significant negative correlations with both speaking involution and writing involution ($r = -0.246$, $p < 0.05$; $r = -0.223$, $p < 0.05$). In contrast, among undergraduate English majors in Macau, only listening anxiety exhibited a significant positive correlation with listening involution ($r = 0.187$, $p < 0.05$), while the relationships with other factors were not significant. These findings align with the conclusion of Yi et al. (2022) that involution does not necessarily correlate positively with anxiety.

Moreover, significant positive correlations were observed among involution in listening, speaking, reading, and writing for English majors in both Macau and Beijing. Similarly, significant positive correlations were found among anxiety in listening, speaking, reading, and writing. These results validate H2 of this study, which suggests that the four aspects of listening, speaking, reading, and writing in English learning mutually influence each other. Using the correlation matrix, we provide insight into the interrelationship between specific domains of learning anxiety and involution. In Beijing, speaking anxiety positively correlated with listening and reading involution, suggesting students who were anxious about speaking skills were more likely to practice listening and reading in order to improve their overall language proficiency. Additionally, reading anxiety was positively correlated with listening and reading involution, indicating that students who were anxious about reading practiced listening and reading more extensively. Macau, however, did not display this pattern. It was found that speaking and writing involution was negatively correlated with writing anxiety, implying that students who actively engaged in speaking and writing were less likely to experience writing anxiety. As a result of differences in how students in the two contexts perceive and cope with different emotional states, other domains of anxiety and involution in Macau do not appear to be closely related. These results demonstrate the complexity of the relationships between different forms of anxiety and involution. They also emphasize the importance of taking specific emotional variables into account instead of focusing solely on overall constructs. Therefore, this further validates H3 of this study.

## 5.3 Participants from Beijing and Macau

There is a significant difference between the social and cultural environments in Beijing and Macau, which is reflected in the contrasting relationships between involution and motivation. Beijing represents mainland China's most traditional and examination-oriented education system, in which academic competition and involution are perceived as necessary drivers of success as a result of its capital status. Consequently, involution could motivate students to work harder, thereby enhancing their motivational levels. In comparison, Macau, which was once a Portuguese colony and is now a Special Administrative Region of China, has a unique multicultural heritage. Macau is a multifaceted and evolving region, characterized by significant impact and rapid transformation (Li et al., 2014). In order to foster a more internationalized and diverse learning environment, its educational system blends Eastern and Western influences. As a result of excessive involution and peer competition, students may be viewed as unproductive and detrimental to holistic development, negatively impacting their motivation.

The dynamic interplay of local, national, and global influences is evident in the sociolinguistic milieu of Macau, as well as in the language education (Yan, 2016). Endowed with a high level of autonomy under the guiding principle of "One Country, Two Systems," Macau has experienced a noteworthy enhancement in tertiary education. Over the last two decades, Macau's tertiary education sector has progressively garnered international acclaim (Wang et al., 2022). Therefore, it is necessary to compare the differences of these two cities.

In this study, although learning anxiety had a significant negative impact on motivation for both Beijing and Macau students, differences were observed between Beijing students' anxiety ($\beta = -0.169$, $p = 0.047$) and Macau students' anxiety ($\beta = -0.269$, $p = 0.001$), with the effect being more significant for Macau students. Previous research explored factors like historical backgrounds (Young, 2006) and personal aspects (Cao and Wei, 2019) that may further explain Macau students' learning anxiety levels. Regarding involution, involution showed significant positive correlations with motivation for both Beijing and Macau undergraduate English majors. As internationalized cities (Wang et al., 2011; He et al., 2023), this aligns with the perspective of geography's influence of involution on motivation (Mulvey and Wright, 2022). The negative impact of learning anxiety on motivation was stronger for undergraduate English majors from Macau compared to Beijing. For students from Beijing, the relationships between anxiety types and involution were more varied. For example, speaking anxiety was positively correlated with listening involution, while writing anxiety showed significant negative correlations with speaking involution and writing involution. Whereas for students from Macau, only listening anxiety was significantly positively correlated with listening involution.

Considering Macau's distinctive socio-cultural background, its future development trajectory in education is noteworthy. With its multicultural strengths and global outlook, Macau is well positioned as a burgeoning international education hub (Xu and Sukjairungwattana, 2022). In order to cultivate a learning environment that nurtures intrinsic motivation while reducing unhealthy forms of involution, Macau must promote educational internationalization, cultural exchange, and innovative pedagogical approaches. Moreover, Macau's unique position as a bridge between Chinese and Western cultures offers opportunities for developing educational models that harmonize diverse perspectives. The implementation of such initiatives could pave the way for more balanced and holistic approaches to student development, where motivation is a genuine passion for learning rather than excessive competition among peers. The findings of this study underscore the significance of fostering positive emotional environments and addressing cultural nuances in student motivations as Macau continues to evolve its educational landscape. In order to create a future where involution is replaced by a culture of collaborative growth, and where students are empowered to pursue knowledge driven by intrinsic motivation and a shared love for learning, Macau must embrace its distinctive identity and capitalize on its multiculturalism.

## 6 Conclusions and limitations

In this study, undergraduate English majors from Beijing and Macau were examined for the effects of learning anxiety and involution on motivation and the relationship between anxiety and involution. The results were as follows: Beijing and Macau students' motivation levels were both above the average level, while anxiety and involution scores were moderate. Both groups will be negatively affected by anxiety, while motivation will be improved by involution. In Macau undergraduates, anxiety appeared to have a stronger negative impact on motivation. Speaking anxiety was positively correlated with listening involution in Beijing students, and writing anxiety was negatively correlated with speaking and writing involution in Beijing students. The listening anxiety of Macau students was positively correlated with the listening involution. According to these differences

in the impact of affective factors on motivation and their interconnections, English learning experiences differ across educational contexts. With the results of this study, we expect that practical recommendations can be made on how to increase students' motivation for English learning. For over two decades, Macau has been incorporated into the nation as a distinctive special administrative region of China. As a Portuguese colony for more than a century, Macau has a very different educational framework than mainland China (Lee et al., 2020). Consequently, this study can shed light on the differences between Macau and Beijing foreign language learning. However, there are some limitations to this study. First, the present study did not consider students' learning outcomes. An in-depth analysis of the impact of affective factors on students' learning outcomes is required in the future. The sample size should also be enlarged to include more universities from Beijing and Macau to make the results more generalizable and representative. In addition, future studies might employ qualitative methods in order to gain a deeper understanding of the reasons for students' learning anxiety and motivation.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical approval was not required for the studies involving humans because as it involved the collection of anonymous survey data from adult participants, with no sensitive personal information being gathered. All participants provided informed consent before completing the questionnaires, and the study adhered to widely accepted ethical guidelines for educational research. Additionally, the research posed no foreseeable risk to participants and was conducted by standard protocols for non-invasive, questionnaire-based studies. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and institutional requirements because Written informed consent was not required for this study as participants provided implied consent by voluntarily completing the online questionnaires. Before participation, all respondents were informed about the study's purpose, the voluntary nature of their involvement, and the confidentiality of their responses. Since the study collected anonymous data and posed minimal risk to participants, this approach was consistent with ethical standards for survey-based research in educational settings.

## Author contributions

PS: Methodology, Formal analysis, Validation, Writing – review & editing. WX: Conceptualization, Formal analysis, Investigation,

Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing. DD: Conceptualization, Investigation, Resources, Validation, Writing – original draft. FL: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Validation, Visualization, Writing – original draft, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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## Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2025.1523205/full#supplementary-material

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