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EDITED BY

Ramon Ventura Roque Hernández,
Universidad Autónoma de Tamaulipas, Mexico

REVIEWED BY

Usman Jayadi,
Lafadz Jaya Publisher, Indonesia
Alejandro Pérez Carvajal,
Universidad Andres Bello, Chile

*CORRESPONDENCE

Miluska Villar-Guevara
✉ miluskavillar@upeu.edu.pe

RECEIVED 15 September 2025

REVISED 07 November 2025

ACCEPTED 24 November 2025

PUBLISHED 10 December 2025

CITATION

Sanchez-Pastor V, Villar-Guevara M,
Fernández-Mallma I and
Apaza-Cáceres JA (2025) Factors driving
educational quality within the framework of
SDG 4 for the 2030 agenda: what do training
professionals think the 21st century?
Front. Educ. 10:1706135.
doi: 10.3389/feduc.2025.1706135

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Factors driving educational quality within the framework of SDG 4 for the 2030 agenda: what do training professionals think the 21st century?

Valeria Sanchez-Pastor¹, Miluska Villar-Guevara^{2*},
Israel Fernández-Mallma³ and Jesús Alfredo Apaza-Cáceres⁴

¹EP de Educación, Facultad de Ciencias Humanas y Educación, Universidad Peruana Unión, Lima, Peru, ²EP de Administración, Facultad de Ciencias Empresariales, Universidad Peruana Unión, Juliaca, Peru, ³EP de Educación, Facultad de Ciencias Humanas y Educación, Universidad Peruana Unión, Juliaca, Peru, ⁴EP de Ingeniería de Sistemas, Facultad de Ingeniería y Arquitectura, Universidad Autónoma del Perú, Lima, Peru

Introduction: Achieving educational quality has always been an essential pillar for sustainable development, social equity, and the transformation of education systems globally. Educational institutions, especially those responsible for training future professionals, play a strategic role in achieving Sustainable Development Goal 4 (SDG 4) by fostering inclusive and equitable educational processes centered on meaningful learning. Therefore, the objective of this study was to analyze the influence of teachers' effectiveness and English language acculturation on educational quality, examining the mediating role of disposition learning.

Methods: A cross-sectional explanatory study was conducted with the participation of 457 university students. The sample was distributed between women (57.8%) and men (42.2%), with ages ranging from 18 to 37 years ($M = 21.87$; $SD = 3$). Data were collected using an online self-report questionnaire and analyzed using PLS-SEM. Internal consistency coefficients showed adequate values and confirmed the internal robustness of each construct.

Results: The hypotheses were supported, with teachers' effectiveness and disposition learning found to influence educational quality, while teachers' effectiveness and English language acculturation influenced disposition learning, with the latter assuming a mediating role. However, the proposed model shows that the direct effect of English language acculturation on educational quality is not statistically significant.

Discussion: This new model suggests a reevaluation of existing models on the topics analyzed, given that it involves emerging variables for higher education. The validated findings of this research provide valuable information for higher education management and leadership seeking to achieve higher levels of educational quality. This model merits special attention in future research, including the exploration of other potential factors and the application of these findings to diverse contexts and cultures.

KEYWORDS

global education, higher education, educational quality, teachers' effectiveness, disposition learning, English language acculturation, SDG 4, 2030 agenda

1 Introduction

Achieving quality education is an essential pillar for sustainable development, social equity, and the transformation of education systems globally (ONU, 2023). Educational institutions, especially those responsible for training future professionals, play a strategic role in achieving Sustainable Development Goal 4 (SDG 4) by fostering inclusive and equitable educational processes focused on meaningful learning (Miranda, 2023; Chakraborty and Kaur, 2024; Olmos et al., 2024; Yıldırım et al., 2024). However, progress towards this goal has been slower than projected, with only 58% of students achieving minimum levels of educational competencies (ONU, 2023). Furthermore, the effects of the COVID-19 pandemic have exacerbated pre-existing inequalities, leading to alarming setbacks in educational achievement on a global scale (Wagner et al., 2021).

In this context, educational quality cannot be conceived solely as the achievement of academic results, but as an integral process that articulates the cognitive, emotional and social information of the student (Mastrokouskou et al., 2022). And in this sense, the role of teachers takes on an indisputable centrality, as their pedagogical practice is crucial to the success of the teaching-learning process. It is also known that teaching strategies directly impact students' learning commitment, which in turn influences other factors directly linked to this process (Zhang et al., 2024). All of this translates into the importance of developing effective teachers linked to the use of active and collaborative methodologies, which constitute a key element in improving educational quality (Darling-Hammond et al., 2020). Likewise, it is believed that promoting self-assessment of learning develops evaluative judgment, self-regulation and performance, especially in higher education, where professionals are trained for lifelong learning (Köppe et al., 2024).

In Latin America, various studies have shown the existence of structural gaps that affect the quality and equity of the education system, especially at the higher education level (Balbachevsky, 2013; Villar-Guevara et al., 2025). Some countries face challenges related to teacher training, technological infrastructure, and educational inclusion, which limit effective access to meaningful learning opportunities (Joarder et al., 2020; Olmos-Gómez et al., 2021; Villar-Guevara et al., 2024). For this to happen, it is necessary that university professors have these competencies in the teaching-learning processes, given that their role is important from the quality standards of governmental institutions in Peru such as the "Ministerio de Educación" (MINEDU), the "Superintendencia Nacional de Educación Superior Universitaria" (SUNEDU), the "Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa" (SINEACE), and indeed, from the perception of university students (Lavalle and de Nicolás, 2017; Jerez et al., 2018; Aguilar-Alonso et al., 2020; Acevedo-Flores et al., 2022; Ñáñez-Silva et al., 2023).

In this sense, as long as university students are involved in the teaching-learning process, participate in class debates demonstrating their interest and enthusiasm for learning, learning is being active and fulfilling the greater purpose of preparing them in skills, knowledge, characteristics and values to be a maximum human capital in their country or the world, thus fulfilling SDG 4 (Harith et al., 2024; Coombs, 1985; Malik et al., 2025; Velankar et al., 2025). According to recent reports (SUNEDU, 2021), many university students do not meet minimum quality standards, even though the voices of professionals in training, often absent in high-level educational

discourse, are essential to understanding the alignment between global objectives and real educational contexts (Acevedo et al., 2024). These future professionals not only embody expectations for future education, but also express key questions about its direction, actively influencing the way SDG 4 is understood and applied in real-life contexts (Darling-Hammond et al., 2020).

This overall outlook demands an urgent shift from prioritizing inclusive policies, technology-based education, and robust approaches that involve the entire education system. Without these measures, the country's potential for economic and social development could be seriously threatened. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), Global Education Monitoring Report, more than 244 million children and young people are excluded from the education system globally, and many of those who do attend do not acquire basic skills (UNESCO, 2024). In light of the above, researchers, academics, educational management and pedagogy leaders, and specialists who design public educational policies have expressed interest in analyzing these topics. Bibliometric indicators also highlight the 10 countries most interested in disseminating their scientific results, including the United States, China, India, Indonesia, Spain, the United Kingdom, South Africa, Peru, Ukraine, and Malaysia. These countries have primarily applied their research to diverse areas, sectors, and populations, such as the social sciences, arts and humanities, and decision sciences.

On the other hand, although the international scientific literature has independently addressed the links between teachers' effectiveness, learning disposition, English language acculturation, and educational quality, there is still a significant gap in the integration of these variables within a single explanatory model. This lack of integrative studies limits our understanding of the internal mechanisms that enhance educational quality in higher education. For Peru, this research takes on particular relevance given the challenges facing higher education in terms of quality standards, academic internationalization, and teacher training. Addressing this model allows for the generation of contextualized scientific evidence that contributes to the improvement of teaching and learning, in line with SDG 4. In this way, this study not only contributes to the scientific literature by presenting a novel theoretical framework, but also offers practical input for the design of educational policies and university training programs aimed at strengthening educational quality in the Peruvian context. In this sense, the objective of this study was to analyze the influence of teachers' effectiveness and English language acculturation on educational quality, examining the mediating role of disposition learning.

2 Literature review

2.1 Educational quality

For UNESCO (2022) educational quality implies equity in access, curricular relevance, and efficiency in the teaching-learning processes. Educational quality is not limited to the acquisition of knowledge, but rather involves the development of skills and competencies that enable us to face life's challenges (Hasbi et al., 2025), participate actively and responsibly in society and make intelligent and informed decisions (Makki et al., 2023; Miranda, 2023). On the other hand, research shows that educational systems with high standards and continuous

assessment achieve better results in international tests (Hanushek and Woessmann, 2021). Furthermore, educational quality begins with the fundamental needs of human beings, which promote meaningful and relevant learning, developing students' skills, knowledge, and values to face contemporary challenges (Olmos et al., 2024). In this sense, studies have been published that link educational quality with academic performance (Schneider and Preckel, 2017), student engagement (Li and Xue, 2023), teachers' effectiveness (Blazar and Kraft, 2017), resources, conditions and psychosocial factors of students (Schneider and Preckel, 2017), internationalization and language skills (OECD, 1999), and pedagogical innovation and digitalization (Lundberg and Stigmar, 2025). All of this shows that educational quality transcends traditional evaluation based on academic achievements and curricular standards (Coombs, 1986).

2.2 Teachers' effectiveness

Teachers' effectiveness involves the ability of teachers to positively impact the learning and comprehensive development of students, being key to quality education (Munna and Kalam, 2021). On the other hand, it refers to the educator's ability to maximize the use of resources and time in the execution of educational practices (Alvarez, 1992; López-Martín et al., 2023), guaranteeing effective results in the teaching-learning process (Sofyan et al., 2021; Villar-Guevara et al., 2024). In the face of this, self-efficacy theory (Bandura, 1978), this would be relevant to teachers' beliefs about their ability to plan and implement strategies aimed at achieving educational goals. In this regard, studies have analyzed how teacher effectiveness moderates students' academic performance (Arop et al., 2020), their relationship between psychological characteristics, well-being, retention and their interpersonal relationships (Bardach et al., 2022), in addition, its link with the personality of the tutor (Chan, 2002), how teachers' effectiveness is impacted by leadership styles (Lin and Hamid, 2025), and that the greater the perception of teachers' effectiveness, the greater the task orientation and satisfaction with learning (Tadesse et al., 2021).

2.3 Disposition learning

Some scholars have made efforts to distinguish "disposition learning" from "readiness-to-learn," "learner autonomy," "self-regulated learning," "willingness to learn," however, others refer that they are constructs that share conceptual attributes. Faced with this, although the scientific literature is limited with respect to this topic, very few experts have defined it clearly, within them, the most widespread refers to the disposition/willingness to learn as a psychological state of desire/impulse to acquire new knowledge (Hotifah et al., 2020). On the other hand, this study proposes a definition that could be understood as the most up-to-date and clearest in the literature available to date. Learning disposition is understood as a relatively stable but educable inclination that combines a positive attitude towards the educational process (combining curiosity and openness), the autonomous motivation to acquire new knowledge, and the intention to voluntarily and actively engage in the learning process. A study associates it with certain patterns of thinking, behavior,

and emotions that students use when interacting with the educational process, influencing how they engage, participate, and respond to learning challenges. This could impact not only concentration on academic tasks, but also students' ability to adapt, persist, and self-regulate in dynamic learning environments (Costa and Kallick, 2011).

The willingness to learn is seen as an important factor that favors learning behavior and the main and interactive effect of this together with anxiety during learning influence the active attitude of class (Takeda et al., 2021). On the other hand, research has suggested that the disposition to learning in university students is composed of three interconnected systems: belief, behavioral, and emotional, and is strongly linked to the academic performance of university students (Larose and Roy, 1995); while another study suggests that it is rooted in school motivational experiences remembered in adulthood (Gorges et al., 2013). Regarding its links with other topics, previous studies have addressed learning disposition with informal digital learning and motivation (Liu and Han, 2025), the students' flow experience (Huang et al., 2025), with specific learning disorders (Ninaus et al., 2025), the perceived confidence of students (Baby and Ravi, 2024), the motivational memories of high school (Gorges et al., 2013), and the development of skills (Hamade et al., 2011).

2.4 English language acculturation

It is recognized as the process of acquiring different aspects of another culture, including language, social norms, customs, and values, through frequent interaction (Salamonson et al., 2008). This process is believed to lead to changes in one's original cultural identity, especially in the context of immigration or social interaction. On the other hand, for the English language, this may involve the introduction of English words, terms, and structures into one's native language or, as a result of globalization, media, and international communication (Tran, 1988; Salamonson et al., 2008, 2013). Furthermore, the literature links linguistic acculturation with university retention rates and academic self-efficacy (Salamonson et al., 2008, 2013), cultural adaptation, student persistence, academic performance (Salamonson et al., 2008), academic progression and willingness to learn, as it facilitates both the understanding of specialized content and social and professional interaction in multicultural environments (Salamonson et al., 2013). In this sense, English language acculturation not only predicts academic success, but is also related to psychosocial and educational variables critical for the retention and success of students in culturally diverse contexts (Salamonson et al., 2008).

Based on the above, the following hypotheses are proposed:

H1. Teachers' Effectiveness (SETE) influences Educational Quality (EQ).

H2. Teachers' Effectiveness (SETE) influences Disposition Learning (DL).

H3. English Language Acculturation (ELA) influences Educational Quality (EQ).

H4. English Language Acculturation (ELA) influences Disposition Learning (DL).

H5. Disposition Learning (DL) influences Educational Quality (EQ).

H6. Disposition Learning (DL) assumes a mediating role between Teachers' Effectiveness (SETE) and Educational Quality (EQ).

H7. Disposition Learning (DL) assumes a mediating role between English Language Acculturation (ELA) and Educational Quality (EQ).

Taking into account the aforementioned hypotheses, the conceptual model resulting from the study can be visualized in the graphic representation of Figure 1.

3 Materials and methods

3.1 Study design and participants

This research is classified as an explanatory cross-sectional study (Ato et al., 2013). The study population consisted of university students from a private educational network comprising 124 higher education institutions worldwide. To participate in the study, university students had to be enrolled in in-person instruction during the 2025-I academic semester, be at least 18 years old, reside in Peru, and have completed (no more than 1 year previously) or be currently completing some level of English. All university students enrolled in other modalities (blended and distance learning) and those who did not meet specified criteria were excluded.

To define the sample size, a non-probability sampling was chosen (Otzen and Manterola, 2017), and the Soper (2024) electronic tool was used. This tool considers the number of variables, both observed and latent, in the SEM, along with the expected effect size ($\lambda = 0.2$), the desired level of statistical significance ($\alpha = 0.05$), and the required statistical power ($1 - \beta = 0.80$). Based on these parameters, a minimum sample size of 323 participants was determined. However, a total of 457 valid surveys were included, leaving void those that were excluded from the study due to incorrect completion or other factors. Participation was distributed between women (57.8%) and men (42.2%), with ages ranging from 18 to 37 years ($M = 21.87$; $SD = 3$).

The majority of participants were concentrated in university students between 18 and 21 years old (54.6%), who professed an Adventist philosophy (58.9%), as evidenced in Table 1.

3.2 Data collection instruments and adaptation process

Before beginning data collection, translation, adaptation, and semantic validation procedures were performed. Because two of the original scales ("Educational Quality Scale" and "English Language Acculturation Scale") were not available in Spanish, they were translated by two native English and Spanish speakers (Behr, 2017). Validation was performed through expert judgment (four educational management specialists with master's and doctoral degrees). The judges evaluated criteria such as clarity, objectivity, timeliness, organization, adequacy, intentionality, consistency, coherence, methodology, and relevance (Beaton et al., 2000), obtaining Aiken's V values of 89.90 and 95.43% for each scale, respectively. A focus group was also developed, consisting of six participants who met the requirements established in the inclusion criteria (Krueger and Casey, 2000). The semantic comprehension of the scales contextualized in other countries was reviewed, with the aim of obtaining an improved version of the instrument for the Peruvian university context. An online questionnaire was then designed, divided into three sections. The first section included brief but precise instructions for participants, as well as informed consent and a declaration from participants that they had completed (less than a year ago) or were completing some level of English at the time of completing the questionnaire. Another section requested sociodemographic information from participants, and finally, the measurement scales were presented. Four valid and reliable measurement scales were used, as detailed below:

3.2.1 Educational quality

The Educational Quality Scale was taken from Olmos et al. (2024), which was designed and validated for Spanish university students. It contains 22 items and a three-dimensional structure: Curriculum, Management and Organization (CMO), Material Resources (MR), and General Satisfaction (GS). The items were evaluated using 5-point Likert-type response options (1 = Very dissatisfied to 5 = Very satisfied). This metric demonstrates good internal consistency ($\alpha = 0.863$).

3.2.2 Teachers' effectiveness

The Student Evaluation of Teachers' Effectiveness (SETE) Scale was originally proposed by Ayaneh et al. (2021) and subsequently translated, adapted and validated for Latin American university students by Villar-Guevara et al. (2024), contains 28 items and a four-dimensional structure: Subject Knowledge (SK), Professional Competence (PC), Ethical Competence (EC), and Time Management (TM). Items were scored using 5-point Likert-type response options (1 = Never to 5 = Very Frequently). The SETE scale exhibits excellent internal consistency ($\alpha = 0.904$).

3.2.3 Disposition learning

The Disposition Learning Scale (DLS) was taken from Sáez-Delgado et al. (2022), which was administered to South American students. It contains five items and a one-dimensional structure. Items

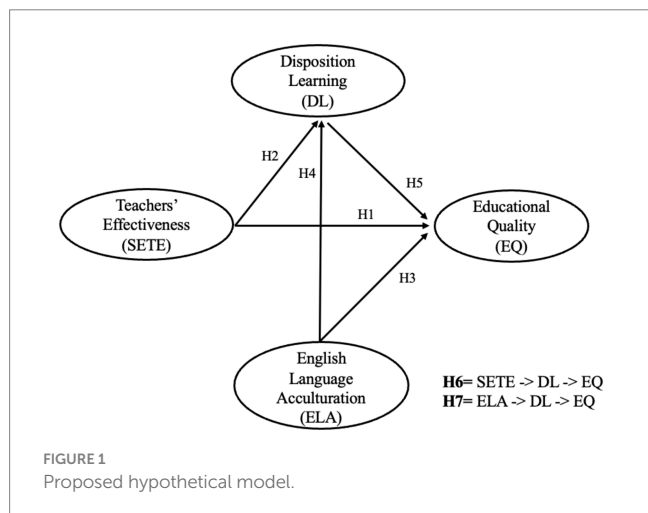


TABLE 1 Profile sociodemographic of the study sample ($n = 457$).

Characteristic	Category	Frequency	%
Sex	Female	264	57.8
	Male	193	42.2
Age range	18–21 years old	249	54.6
	22–37 years old	208	45.4
Religious inclination	Adventist	269	58.9
	Catholic	140	30.6
	Evangelical	8	1.8
	Another Christian denomination	12	2.6
	Not religious	28	6.1

were scored using five-point Likert-type response options (1 = Never to 5 = Very Often). The DLS exhibits good internal consistency ($\alpha = 0.878$).

3.2.4 English language acculturation

The English Language Acculturation Scale (ELAS) was taken from [Salamonson et al. \(2013\)](#), which was validated for Australian female university students. It contains five items and a one-dimensional structure. Items were scored using five-point Likert-type response options (1 = Non-English language(s) only to 5 = English only). The ELAS has excellent internal consistency ($\alpha = 0.905$).

3.3 Ethical considerations

Prior to data collection, the research project underwent a rigorous evaluation process for subsequent approval by the corresponding academic department. In addition, approval was received from the Ethics Committee of the Graduate School of a private university in Peru (code 2025-CEEPG-00004). Confidentiality standards and the principles of the Declaration of Helsinki were respected throughout the collection process ([Liu et al., 2025](#); [Zhang et al., 2025](#)), informing each participant about the purpose of the research, assuring them that their participation was completely voluntary and that their data would be treated anonymously and with complete confidentiality. The online questionnaire was hosted on a Google Form from early March 2025, and participants were invited to complete it for a period of 4 months, before completing the data collection process.

3.4 Statistical analysis

The study performed a two-stage statistical analysis: first, the measurement model was evaluated, and then the structural model. As part of the initial process, IBM SPSS version 25 software was used to examine the sociodemographic data of the study participants, as shown in [Table 1](#). For statistical analysis of the data, the partial least squares structural equation modeling (PLS-SEM) method was used with Smart-PLS version 4.0 software. This method was selected due to its robustness in working with complex models, moderate samples, and formative or reflective latent variables.

The measurement model evaluation process examined three indicators: (1) internal consistency using Cronbach's alpha (α) and composite reliability (CR); (2) convergent validity and average variance extracted (AVE) of the constructs; (3) discriminant validity of the constructs, using the Fornell–Larcker scale and the Heterotrait–Monotrait (HTMT) criteria. Finally, an analysis of the structural model was performed to evaluate the proposed hypotheses. First, it was determined whether the relationships defined in the model were significant; for this, the p -value had to be less than 0.05. In addition, the coefficient of determination (R^2) was used, which reflects the amount of variance explained by the endogenous constructs and acts as an essential indicator of the explanatory capacity of the model. This approach allowed the validation of the proposed model and a thorough analysis of the relationships between the latent variables ([Hair et al., 2019](#)).

4 Results

4.1 Convergent validity

The results of the reflective measurement model evaluation demonstrate satisfactory levels of reliability and convergent validity for all constructs examined, including both first-order and second-order variables ([Table 2](#)). The internal consistency coefficients show adequate values: Cronbach's alpha (α) ranges from 0.878 to 0.966, well above the minimum threshold of 0.70 recommended by [Hair et al. \(2017\)](#), while the composite reliability (CR) presents values ranging from 0.881 to 0.966, confirming the internal robustness of each construct. The second-order variables, specifically Teachers' Effectiveness (SETE) with $\alpha = 0.904$, AVE = 0.775, and Educational Quality (EQ) with $\alpha = 0.863$, AVE = 0.784, demonstrate particularly solid psychometric properties, validating the hierarchical structure of the model. The external factor loadings show values above 0.700 in most of the indicators, meeting the criterion established by [Hair et al. \(2022\)](#), although some items present loadings between 0.40 and 0.70, which are acceptable when they do not compromise the content validity of the construct. Convergent validity is confirmed by the Average Variance Extracted (AVE), whose values fluctuate between 0.573 and 0.794, consistently exceeding the critical threshold of 0.50 proposed by [Fornell and Larcker \(1981\)](#), indicating that each construct explains more than 50% of the variance in its respective indicators. These findings provide strong empirical evidence that the model's constructs, both first- and second-order, possess psychometric properties appropriate for inclusion in the structural model.

4.2 Discriminant validity

The assessment of discriminant validity using the Heterotrait–Monotrait (HTMT) criterion for the first-order variables demonstrates satisfactory results that confirm the empirical distinction between the model's constructs ([Table 3](#)). All HTMT values are below the critical threshold of 0.90 established by [Henseler et al. \(2015\)](#), with the highest value being MR-GS (0.792), indicating that discriminant validity has been successfully established. Most relationships present values considerably below the limit, such as ELA with all constructs (values between 0.083 and 0.195), demonstrating an excellent discriminant

TABLE 2 Convergent validity results.

Construct	Code	Factor loading	α	CR	AVE
First order					
Disposition learning (DL)	DL1	0.785	0.878	0.881	0.673
	DL2	0.848			
	DL3	0.791			
	DL4	0.825			
	DL5	0.850			
English language acculturation (ELA)	ELA1	0.870	0.905	0.950	0.719
	ELA2	0.872			
	ELA3	0.851			
	ELA4	0.800			
	ELA5	0.845			
Ethical competence (EC)	EC1	0.897	0.917	0.921	0.801
	EC2	0.901			
	EC3	0.919			
	EC4	0.861			
Professional competence (PC)	PC1	0.791	0.966	0.966	0.693
	PC2	0.817			
	PC3	0.843			
	PC4	0.862			
	PC5	0.788			
	PC6	0.825			
	PC7	0.847			
	PC8	0.854			
	PC9	0.851			
	PC10	0.790			
	PC11	0.847			
	PC12	0.829			
	PC13	0.849			
	PC14	0.859			
Subject knowledge (SK)	SK1	0.848	0.929	0.930	0.739
	SK2	0.838			
	SK3	0.858			
	SK4	0.861			
	SK5	0.877			
	SK6	0.874			
Time management (TM)	TM1	0.885	0.914	0.914	0.794
	TM2	0.890			
	TM3	0.897			
	TM4	0.893			

(Continued)

TABLE 2 (Continued)

Construct	Code	Factor loading	α	CR	AVE
Curriculum, management and organization (CMO)	CMO1	0.815	0.942	0.943	0.682
	CMO2	0.796			
	CMO3	0.793			
	CMO4	0.783			
	CMO5	0.836			
	CMO6	0.848			
	CMO7	0.844			
	CMO10	0.850			
	CMO11	0.863			
Material resources (MR)	MR21	0.840	0.917	0.920	0.751
	MR22	0.869			
	MR23	0.858			
	MR24	0.876			
	MR26	0.889			
General satisfaction (GS)	GS8	0.834	0.952	0.953	0.749
	GS9	0.860			
	GS12	0.880			
	GS14	0.867			
	GS15	0.861			
	GS17	0.851			
	GS19	0.897			
	GS20	0.870			
Second order					
Teachers' effectiveness (SETE)	EC	0.849	0.904	0.910	0.775
	PC	0.907			
	SK	0.889			
	TM	0.877			
Educational quality (EQ)	CMO	0.886	0.863	0.867	0.784
	GS	0.901			
	MR	0.870			

The convergent validity results ensured acceptable values (Factor loading, Cronbach's alpha and Composite Reliability (CR) ≥ 0.70 and Average Variance Extracted (AVE) > 0.5).

TABLE 3 First-order discriminant validity Heterotrait–Monotrait Ratio (HTMT)—matrix.

Construct	CMO	DL	EC	ELA	GS	MR	PC	SK
DL	0.591							
EC	0.493	0.305						
ELA	0.195	0.289	0.083					
GS	0.743	0.388	0.537	0.108				
MR	0.777	0.482	0.430	0.122	0.792			
PC	0.580	0.400	0.760	0.102	0.600	0.506		
SK	0.666	0.490	0.722	0.105	0.623	0.583	0.818	
TM	0.553	0.394	0.786	0.083	0.570	0.531	0.778	0.759

capacity for English language acculturation. Even applying the more conservative criterion of 0.85 suggested by [Franke and Sarstedt \(2019\)](#). The discriminant validity results for the second-order variables using the HTMT criterion demonstrate exemplary performance, confirming the conceptual robustness of the structural model ([Table 4](#)). All HTMT values are substantially below the 0.90 threshold recommended by [Henseler et al. \(2015\)](#), with the highest value being SETE-EQ (0.680), providing strong evidence of discriminant validity. The lowest relationships are observed between ELA-SETE (0.084) and ELA-EQ (0.147), demonstrating an exceptional empirical distinction between English Language Acculturation and the other main constructs. The values for DL-ELA (0.289), DL-SETE (0.431), and EQ-DL (0.480) confirm that these constructs represent theoretically

TABLE 4 Second-order discriminant validity Heterotrait–Monotrait Ratio (HTMT)—matrix.

Construct	DL	ELA	EQ	SETE
DL				
ELA	0.289			
EQ	0.480	0.147		
SETE	0.431	0.084	0.680	

distinct entities with sufficient empirical specificity. Roemer et al. (2021) They highlight that HTMT ratios below 0.70 indicate excellent discrimination, a criterion met in three of the six relationships evaluated. These results convincingly validate the hierarchical structure of the model and confirm that each second-order construct captures unique and specific variance, providing a solid basis for causal inferences from the structural model.

4.3 Analysis of the structural model

The proposed hypotheses were tested using the PLS-SEM technique. Predictive relevance values were used for model fitting. Cross-validated redundancy (R^2) values represent the model's predictive relevance. R^2 values must be greater than 0 for model accuracy (Hair et al., 2014; Henseler et al., 2015). R^2 values were determined using the blindfolding method, where all endogenous construct values were greater than 0, representing the model's accuracy. Table 5 shows the endogenous latent variables, with their respective R^2 values.

The results of the structural equation model, presented graphically in Figure 2 and in detail in Table 6, reveal significant relationships between the study variables, confirming most of the hypotheses proposed. Teachers' Effectiveness (SETE) demonstrates a positive and significant effect on both Educational Quality ($\beta = 0.234, p < 0.001$) and Disposition Learning ($\beta = 0.369, p < 0.001$), validating hypotheses H1 and H2. For its part, English Language Acculturation (ELA) presents a significant influence on Disposition Learning ($\beta = 0.523, p < 0.001$), confirming H4; however, its direct effect on Educational Quality is not statistically significant ($\beta = 0.042, p = 0.324$), rejecting H3. Disposition Learning (DL) emerged as a strong predictor of Educational Quality ($\beta = 0.206, p < 0.001$), supporting H5. The model explained 20.4% of the variance in Disposition Learning and 40.9% in Educational Quality, indicating an adequate fit. The factor loading coefficients showed satisfactory internal consistency across all constructs, with values above 0.7 for most indicators, confirming the convergent validity of the measurement model.

The results of the bootstrap hypothesis testing (Table 6) confirm that six of the seven hypotheses proposed were empirically supported. The most robust direct relationships are observed between SETE and DL ($\beta = 0.369, t = 7.656, p < 0.001$) and between SETE and EQ ($\beta = 0.523, t = 7.641, p < 0.001$), demonstrating the critical importance of Teachers' Effectiveness in the educational model. English Language Acculturation (ELA) demonstrates a significant influence on Disposition Learning ($\beta = 0.234, t = 5.094, p < 0.001$), but lacks a significant direct effect on Educational Quality ($\beta = 0.042, t = 0.986, p = 0.324$), this being the only hypothesis rejected (H3). Particularly relevant are the confirmed mediation effects: Disposition Learning

TABLE 5 R^2 of the endogenous latent variables.

Construct	R^2
Disposition learning (DL)	0.204
Educational quality (EQ)	0.409

significantly mediates both the SETE-EQ relationship ($\beta = 0.076, t = 3.408, p = 0.001$) and the ELA-EQ relationship ($\beta = 0.048, t = 2.921, p = 0.004$), validating its role as an underlying explanatory mechanism.

5 Discussion

This study analyzed the influence of teachers' effectiveness and English language acculturation on educational quality, examining the mediating role of disposition learning. The results of this study show that teachers' effectiveness is a crucial factor influencing educational quality. In contrast, some studies on teachers' effectiveness support this finding by stating that teachers' effectiveness is not explained solely by formal credentials such as degrees, certifications, experience, or content mastery, but primarily by less measurable factors, such as dispositions, attitudes, and classroom practices, which include motivation, enthusiasm, attention, sense of efficacy, and commitment to personal and professional development (Stronge et al., 2015). On the other hand, studying with a teacher who is a specialist in a subject can have a greater impact on students' educational success (Lee, 2018). Of course, there are factors that mitigate teachers' effectiveness and educational quality, such as limited resources, lack of institutional support, resistance to technology and lack of digital skills, among other aspects (Ahmad et al., 2026). Although there are theorists who give greater importance to the application of theoretical models in the teaching process, teachers' effectiveness is not associated with a particular teaching approach but rather with the teacher's ability to combine various approaches according to the needs of the students (Chaudhary and Singh, 2022).

Regarding the influence of teachers' effectiveness on disposition learning, scientific evidence on students' academic emotions validates that pleasant classroom environments have positive and significant effects on learning effectiveness (Wang and Hsu, 2023). Considering that disposition learning is determined by patterns of thinking, behavior, and emotions, an effective teacher can create an environment that fosters greater disposition and commitment to learning (Chen et al., 2023). On the other hand, regarding the influence of English language acculturation on educational quality, this study did not find significant scores that would indicate a relevant influencing effect, but it was observed that it influences the disposition learning. This finding is consistent with previous research showing that English-speaking students who experienced acculturation had greater self-confidence and willingness to communicate in English, as well as improved academic performance (Salamonson et al., 2008, 2013; Aoyama and Takahashi, 2020).

Furthermore, the results of this study show that disposition learning influence educational quality, mediated by teachers' effectiveness and English language acculturation. These findings are supported by studies showing that student attitudes and dispositions can act as facilitators or hinderers of effective learning (Ehrhardt and

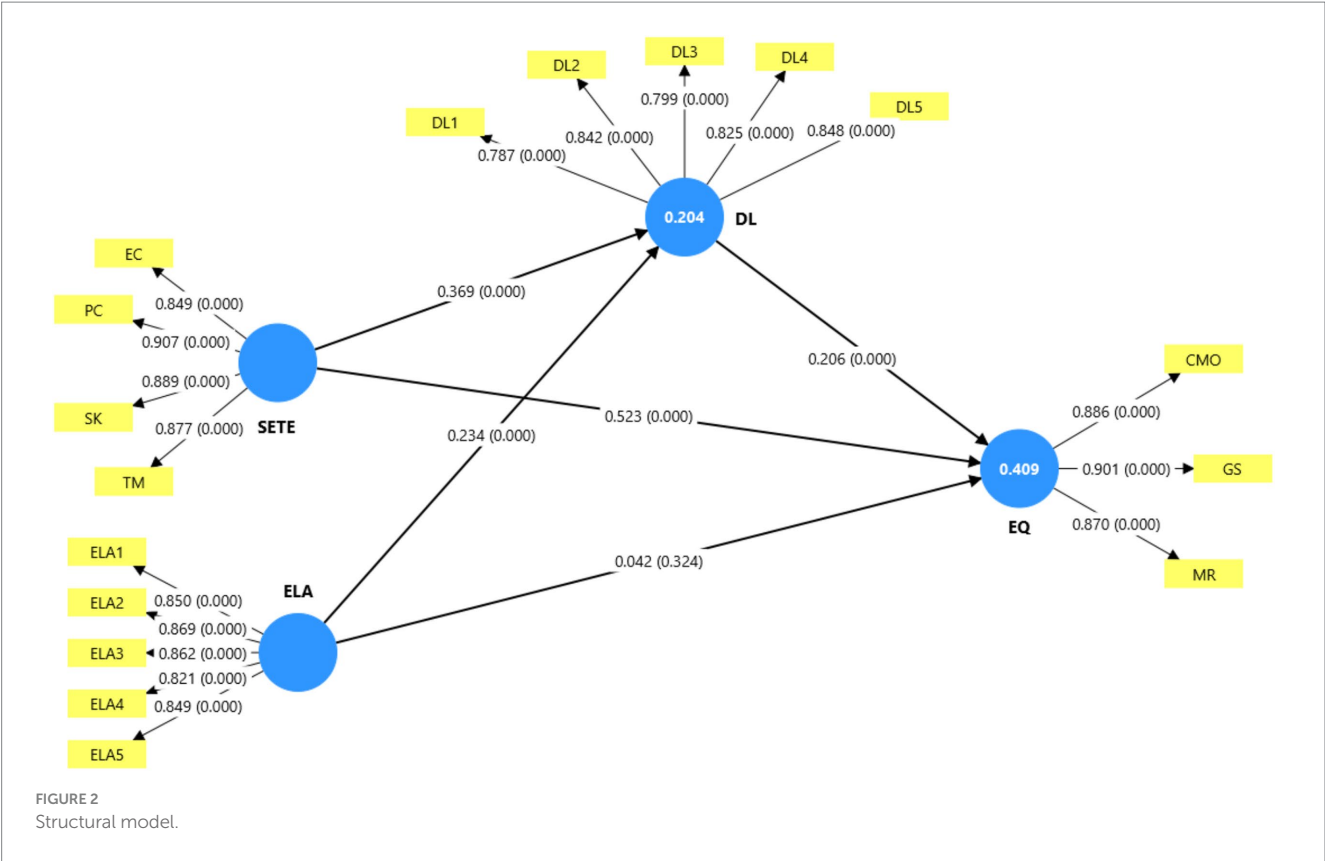


TABLE 6 Estimates of the proposed hypotheses.

H	Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	p values	Decision
H1	SETE → EQ	0.523	0.526	0.068	7.641	0.000	Accepted
H2	SETE → DL	0.369	0.370	0.048	7.656	0.000	Accepted
H3	ELA → EQ	0.042	0.042	0.042	0.986	0.324	Rejected
H4	ELA → DL	0.234	0.236	0.046	5.094	0.000	Accepted
H5	DL → EQ	0.206	0.204	0.058	3.542	0.000	Accepted
H6	SETE → DL → EQ	0.076	0.075	0.022	3.408	0.001	Accepted
H7	ELA → DL → EQ	0.048	0.048	0.016	2.921	0.004	Accepted

Archambault, 2022). Likewise, a learning environment where there is good student-personal interaction, among classmates, and a well-structured curriculum influences student motivation, as well as their disposition learning (Vermeulen and Schmidt, 2008; Abualrub et al., 2013). The scientific literature also demonstrates that effective learning strategies and student evaluations of teaching influence teachers' effectiveness and, consequently, educational quality (Al Kuwaiti et al., 2021; Wang and Hsu, 2023).

5.1 Theoretical and practical implications

This study contributes significant theoretical value by expanding knowledge on topics relevant to the education and business sectors, as it updates the literature on the development of teachers' effectiveness, educational quality, disposition learning, and English language

acculturation, topics of great interest to academics and education professionals. Considering the scarcity of scientific evidence in Latinx contexts, it is argued that this study is a very useful contribution to future scientific constructions. Furthermore, the link between the constructs presented has been empirically demonstrated, and the mediating role of disposition learning in this structural model has been validated. Furthermore, the study demonstrates the scientific validity of each hypothesis proposed, serving as a solid foundation for future models that could serve as the setting for new theoretical approaches.

Regarding their practical implications, these findings are considered to have a considerable impact on educational policies, teacher training, and the methodologies used in higher education classrooms. First, the findings highlight the influence of teachers' effectiveness on educational quality, indicating that faculty are a key factor in university students' perceptions when evaluating various

aspects of higher education quality. This could motivate relevant institutions to develop more effective and appropriate selection processes, where the work of faculty who demonstrate direct and active collaboration in educational quality indicators is recognized and valued. Reward plans, salary increases, periodic teacher induction, ongoing mentoring for new faculty, incentives for leading teachers, among others, could be some of the institutional plans that would drive increases in teachers' effectiveness indicators. Furthermore, universities should consider establishing training programs focused on strengthening faculty's pedagogical competencies. These initiatives could prioritize teachers' effectiveness techniques, classroom management skills, and methods that encourage active student participation. By equipping faculty with these tools, universities would have the opportunity to offer higher-quality teaching.

Furthermore, this study validated that English language acculturation influences disposition learning. Given these findings, universities could design linguistic and cultural reinforcement programs that exceed the expectations of traditional English language teaching, creating scenarios for academic and social immersion. This will allow for the development of communication skills, confidence, and cultural integration among university students. From an institutional perspective, these results highlight the crucial role of designing inclusive educational strategies. This implies promoting the internationalization of the curriculum and student mobility to foreign language cultures (English), enriching their university experience, in addition to integrating English proficiency as a key resource for research, job opportunities, and the development of transversal skills. Finally, these conclusions encourage university teachers of English and other subjects to adopt innovative and culturally adapted pedagogical approaches that celebrate students' linguistic richness and increase their disposition learning in the multicultural environments typical of today's university teaching.

Finally, the study highlights disposition learning as a core element of the model, suggesting that higher education institutions should prioritize the design of strategies that foster intrinsic motivation in university students and spark their interest in new learning experiences. This would entail the design of more flexible curricula and learning methodologies that are analyzed, studied, and designed with the student in mind; and the design of spaces that promote self-regulation, innovation, critical thinking, and a sense of exploration (physical, mental, and spiritual dimensions). This will generate a more inclusive and competitive academic environment, capable of responding with educational excellence to contemporary global demands. Consequently, it is the direct stakeholders who must establish effective educational policies that yield evident results and guarantee sustained improvement in the perception and indicators of educational quality.

5.2 Limitations and future research

While this study provides valuable information on teachers' effectiveness, educational quality disposition learning, and English language acculturation, it has some limitations that should be acknowledged. First, the research employed a self-report questionnaire, which may have introduced biases such as social desirability bias, inaccurate self-assessment, having previously failed a course, experiencing psychological problems that hinder student concentration, or having negative relationships with a professor.

Therefore, it is recommended that future studies incorporate more comprehensive and objective methods to evaluate teaching effectiveness, including interviews, classroom observations, or peer evaluations. This could help mitigate this limitation.

Second, the study's sample, although sizable, was limited to university students from a specific context (Peruvian residents), which may affect the generalizability of the findings to other countries and those with antagonistic economic, social, and cultural environments. In this regard, future research could explore other countries with different socioeconomic and cultural contexts to broaden the model's applicability. Third, the cross-sectional design of the study only offers a partial view of participants' perspectives during a specific period. However, longitudinal studies can analyze changes over time in the perception of educational quality and other assessed topics to provide a more complete understanding of their impact and behavior. Finally, this study only focused on four predominant variables in the context of higher education in Peru; however, future research should explore additional variables, such as teaching experience, sense of academic purpose, academic attention, employability expectations, perceived teacher empathy, and knowledge co-creation, to better understand the dynamics of teaching in higher education.

6 Conclusion

Achieving educational quality has always been an essential pillar for sustainable development, social equity, and the transformation of education systems globally. Educational institutions, especially those responsible for training future professionals, play a strategic role in achieving Sustainable Development Goal 4 (SDG 4) by fostering inclusive and equitable educational processes centered on meaningful learning. Therefore, the objective of this study was to analyze the influence of teachers' effectiveness and English language acculturation on educational quality, examining the mediating role of disposition learning. A cross-sectional explanatory study was conducted with the participation of 457 university students.

In this sense, the hypotheses were supported, observing the influence of teachers' effectiveness and disposition learning on educational quality, while teachers' effectiveness and English language acculturation on disposition learning were observed, with the latter using a mediating role in the model. However, the proposed model observes that the direct effect of English language acculturation on educational quality is not statistically significant. Given this, this new model suggests a reevaluation of existing models on the topics analyzed, given that it involves emerging variables for higher education. The validated findings of this research provide valuable information for higher education management and leadership seeking to achieve higher levels of educational quality. This model merits special attention in future research, including the exploration of other potential factors and the application of these findings to diverse contexts and cultures.

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 Ethics Committee of the Graduate School of the Universidad Peruana Unión (approved on January 17, 2025, with code 2025-CEEPG-00004). 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

VS-P: Conceptualization, Investigation, Project administration, Writing – original draft, Writing – review & editing. MV-G: Conceptualization, Data curation, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. IF-M: Investigation, Supervision, Visualization, Writing – original draft, Writing – review & editing. JA-C: Formal analysis, Funding acquisition, Software, Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that financial support was received for the research and/or publication of this article. The Article Processing

Charges (APC) was funded by “Universidad Peruana Unión” and “Universidad Autónoma del Perú.”

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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