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EDITED BY

Ying Zhang,
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Corrine Aramburo,
The University of New Mexico, United States
Maria Carmen Diez Gonzalez,
Universidad CEU Cardenal Herrera, Spain

*CORRESPONDENCE

Karen Porter
✉ kporter001@dundee.ac.uk

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Emotional drivers of pedagogy and their place in the motivational process: distinguishing percepts from outcomes

Karen Porter^{1*} and David Ian Donaldson²

¹School of Humanities, Social Sciences and Law, University of Dundee, Dundee, United Kingdom,

²School of Psychology and Neuroscience, University of St. Andrews, St. Andrews, United Kingdom

Introduction: Research examining teachers' experiences during the Covid pandemic highlighted the importance of emotion as a driver of motivation, specifically the emotions of CARE, CURIOSITY, COOPERATION and CHALLENGE. Here we examine the generalisability of those findings in the post-pandemic period.

Methods: Interviews were carried out with a new cohort of nine Scottish teachers, and deductive thematic and narrative analyses were used to analyse the data.

Results: Results confirmed the presence of the four motivating emotions, as distinct from outcome emotions such as pride and frustration. However, their prevalence shifted, with CARE and CURIOSITY less dominant than during Covid, while CHALLENGE was more prevalent. Teachers' accounts also suggested that COMMUNITY is a more accurate label than COOPERATION for capturing the feelings associated with shared social motivation. Examination of co-occurrence of emotions showed they were frequently mentioned in close temporal proximity to each other. Narrative analysis highlighted individual stories that link emotional percepts, cognitions, volitional behaviour, and outcome emotions within each teacher's situational context. We consequently propose a motivational process model consisting of these four factors, in contrast to a recent integrative framework including six stages of action in which emotions are less foregrounded.

Discussion: We discuss how these findings support the development of a *Theory of Emotionally Motivated Pedagogy* that presents emotions as a central component of teacher motivation. Implications are discussed for pedagogical practitioners seeking to understand their own motivation, as well as for researchers examining motivation as a complex affectivist phenomenon.

KEYWORDS

teaching, emotion, motivation, agency, Affectivism, theory of emotionally motivated pedagogy, thematic analysis, narrative analysis

Introduction

The role teachers' emotions play in influencing their beliefs and motivating their actions in the classroom has received surprisingly little attention to date, despite growing recognition that cognition and behaviour are inextricably linked with emotional states (Immordino-Yang, 2015; Immordino-Yang and Damasio, 2007). When teachers' emotions are examined, emphasis is typically placed on achievement emotions arising from teachers' appraisals of the preceding circumstances. For example, Control-Value Theory (CVT), which dominates

research in the sphere of emotions in education, recognises reciprocity between cognitions, actions, and emotions. CVT focuses, however, on emotions such as enjoyment, pride, enthusiasm, anger, anxiety and shame, that are identified as resulting from cognitive appraisals of both the perception of control and the value one assigns to goals and situations (Frenzel, 2014; Owens and Hudson, 2021; Pekrun and Perry, 2014). By contrast, a new approach reported by Porter et al. (2022) complements CVT in recognising reciprocity between emotions, cognitions and actions, but with a shift in focus from a larger number of emotions as subjective outcomes (Allen et al., 2014), to a small number of emotions that *drive* motivated behaviour. This view of emotion stems from an examination of teachers' reflections on their experiences within the classroom, revealing that CARE, CURIOSITY, COOPERATION and CHALLENGE (referred to as emotional percepts) motivate teachers' behaviour. In teachers' reflections, each emotion was associated with beliefs about purpose and efficacy, and with actions that were performed – including the choice not to act – providing support for a Theory of Emotionally Motivated Pedagogy (TEMP) that positions emotion as a key route for understanding teaching practise.

The current paper aims to increase understanding of how emotional motivations shape teachers' pedagogical beliefs and behaviours by further exploring the TEMP account, with the immediate goal of assessing whether the original findings can be replicated in a new cohort of teachers. Replication is important because the data on which the TEMP was developed stem from interviews conducted during the Covid pandemic, when in-person teaching was restricted. The current paper therefore examines whether findings from research conducted at the start of the global pandemic replicated 2 years later, when in-person teaching had resumed. We further extend our original analysis by linking these motivational drivers to a more wide-ranging examination of motivational processes (Urhahne and Wijnia, 2023). We take the opportunity offered by the availability of rich data produced from a series of semi-structured interviews to develop *participant narratives* that allow for the identification of patterns that may equate to motivational processes. In this introductory section, we provide context by restating the findings of the earlier paper by Porter et al. (2022), and we elaborate on distinctions made between the four motivating emotions and outcome emotions. We briefly describe the integrative framework of motivation in education presented by Urhahne and Wijnia to provide context for the analysis of the role of emotions in motivational processes presented here. The introduction concludes with a description of the methodological approach and questions asked in the current study.

First, however, we provide a brief note on replication as an aim within psychological research. Typically associated with the quantitative methods used in examining relatively large samples of data, replicability is a contentious issue, mired in disagreements about whether and how it is possible to assess validity, robustness and transferability of findings (Bienefeld et al., 2020; Pownall, 2024; Spiers et al., 2018; Tuval-Mashiach, 2021). Indeed, the very nature of replication is contested, ranging from attempts at exact replication, to partial replication, to conceptual replication (Tuval-Mashiach, 2021). In contrast, qualitative methods are typically distinguished from quantitative approaches by intense examination of much smaller numbers of participants to gain a “rich contextualised understanding of human experience” (Tuval-Mashiach, 2021, p. 370). Lively debate

continues about the extent to which qualitative methods are suited to replication or to making generalised inferences about psychological phenomena (Bienefeld et al., 2020; Makel et al., 2022; Pownall, 2024; Talkad Sukumar and Metoyer, 2019). Our view is that conceptual replication, aimed at corroborating and validating earlier findings, is essential for qualitative research approaches that aim to show similarities in human experiences across a range of contexts and populations (Pownall, 2024). In the current study, therefore, we use deductive thematic analysis (Braun and Clarke, 2013; Byrne, 2022) to provide a rich account of teachers' experiences, asking whether the same emotional drivers of pedagogic practise can be found in data gathered 2 years on from the original study by Porter et al. (2022), examining whether earlier findings generalise across contexts, and over time.

The earlier paper by Porter et al. (2022) identified that teachers' behaviour, sense of efficacy and beliefs about their agency within the classroom were motivated by combinations of the four emotion percepts of CARE, CURIOSITY, COOPERATION and CHALLENGE – where the term percept emphasises the perceptual experiential nature of the feelings associated with each emotion. CARE refers to feelings of affection that lead to a desire to nurture, protect and support specific others. The earlier study took place shortly after a lockdown was imposed, leading to teaching and learning moving online, which offers context to the example of CARE from the participant who reported “*Just hearing [students'] voices is emotional... I realise how much I miss that aspect of teaching*” which led to them scheduling a regular Teams meeting “*where students can come online to get in person help and a bit of banter, a bit of engagement, hearing them.*” By contrast, CURIOSITY reflects feelings of interest in a topic or situation leading to a wish to know or learn more about that topic. When experienced fleetingly, it may be identified as surprise. If sustained over time, CURIOSITY becomes recognised as an ongoing interest, and when experienced at a sustained high level it may be identified as passion or obsession. An example of CURIOSITY identified in the earlier study is the report that “*[Lockdown has meant] I've been enabled to investigate different ways of teaching. That does not mean logistically... but it's kind of 'What am I?', not 'What content am I teaching?'*” And COOPERATION, the label given to the feeling of belonging to a valued group or identifying strongly with such a group, is exemplified by the participant who reported “*We have a wonderful, wonderful pastoral team at the school... all the teachers stay in close contact with them... [and] my hat is off to the management team... They've really done an outstanding job*” alongside reports of how the switch to online teaching has been “*transformative*” in offering opportunities for new uses of technology, giving “*the opportunity to champion [among colleagues] something I believed in for a long time.*”

One unexpected outcome of the original study was that the majority of teachers spoke most frequently about their experience of CARE – whereas the *a priori* prediction was that CURIOSITY would be the dominant driver. Even more surprising was the finding that one teacher reported their primary emotional experience to be CHALLENGE, including stating, in response to ongoing staff shortages “*I've been stepping in to help., [but] I've got no interest whatsoever in a promoted post, I think it's horrific.*” Whilst this particular teacher frequently spoke of feeling crushed by the level of CHALLENGE they were experiencing, other teachers often appeared to welcome opportunities to tackle and overcome difficulties, as illustrated by the teacher who noted “*I also enjoy the challenge of making it successful when it, it's going off track, you know.*” CHALLENGE then reflects experiences related to loss, or the

threatened loss, of valued resources, whether tangible (as in the case of teaching resources), or intangible (such as reputation, achievement, and time). Findings in relation to CHALLENGE provided clear links with both self-efficacy and agency (i.e., motivating actions and behaviours within the classroom), with responses ranging from enthusiastic engagement with opportunities arising from threat to *inaction* arising from the belief that efforts would be futile.

A recent review of motivation theories in education by [Urhahne and Wijnia \(2023\)](#) integrates constructs from expectancy-value theory, social cognitive theory, self-determination theory, interest theory, achievement goal theory, and attribution theory into a six-stage action framework consisting of situation, self, goal, action, outcome and consequences. Whilst acknowledging that “affective factors can be active in all phases of the motivation process and take influence on the course of action” (p. 21), the framework primarily emphasises cognitive and behavioural stages. Emotions associated with the beginning of the action process are limited to situational and individual interest, curiosity, surprise, hope for success, and fear of failure. The first four appear semantically related to the CURIOSITY percept, suggesting that this is the emotion most typically associated with motivation for teaching and learning. The other emotions highlighted in the review, hope and fear, map more closely onto the CHALLENGE percept, whilst no motivating emotions were suggested that clearly align with CARE or COOPERATION. Feasibly then, the dominance of CARE in [Porter et al. \(2022\)](#) may have been a temporary consequence of the extraordinary circumstances prevailing when that study was conducted, in contrast to periods when the theories examined by [Urhahne and Wijnia \(2023\)](#) were developed, in which CARE may have been less obviously a motivating factor.

An alternative to the idea that CARE was only temporarily elevated during the global pandemic is suggested by the rise of *Affectivism*. This growing literature emphasises the influence of affective phenomena across all stages of psychological processes ([Dukes et al., 2021](#); [Iancarelli et al., 2025](#)). Despite growing awareness of the importance of affective processes more broadly, much of educational motivation research continues to frame emotions primarily as outcomes of behaviour (e.g., in CVT theory, [Becker et al., 2015](#); [Frenzel et al., 2016](#)), rather than initiating forces. At the same time, evidence is growing that a culture of care in schools significantly shapes the experiences of both teachers and students ([Carrasco and Montoya, 2024](#); [Taylor et al., 2024](#)). Against this recent prioritisation, we reconceptualise motivational processes with a greater emphasis on affect, and particularly the role of motivating emotions, than was identified by [Urhahne and Wijnia \(2023\)](#).

To classify individual emotion percepts as drivers of behaviour, [Porter et al. \(2022\)](#) employed the criteria that each emotion should be distinct from other emotions and should not be justified by prior cognitive appraisal. This pragmatic definition is perhaps best illustrated with examples from individual teachers, such as Heather reporting that for “*Some [teachers] it’s very much about the love of their subject but most of us it’s just about people.*,” or Gregory talking about always having “*had an enquiring mind and a desire to, to improve what I’m doing but also just enquiring about the subjects that I’m teaching.*” In neither example does the teacher offer any rationalisation beyond “*just*” people and “*just*” enquiring (i.e., there is no cognitive rationale). By contrast, when outcome emotions were identified, such as teachers reporting “irritation” at the volume of emails received or being “impressed” with how well an idea worked in practise, the

emotion experiences were linked to an appraisal of behaviour. Part of the rationale for developing TEMP was, therefore, that the same core set of emotion percepts appeared to drive volitional behaviour in each teacher that was interviewed. Whilst CARE was most often the dominant driver, there was also clear evidence of individual differences in the balance of the four percepts across the teachers, as well as variability in the subjective cognitions associated with the percepts they experienced, and in the types of behaviour they choose to enact in response to their motivating emotions.

Teachers’ reports emphasised both the presence of shared emotion percepts and the influence of situational factors including the environment, resources and prior experience, all of which contributed to their behavioural choices. Such choices, defined in the earlier study following [Sherman and Teemant’s \(2021\)](#) account of agency as “action taken not accidentally, unknowingly, unwillingly or unwillingly” (p5), included sub-themes of adaptability, collective agency, constrained agency, and non-action. The rich, detailed accounts also highlighted that the four percepts were often experienced in rapid succession or even concurrently – giving rise to one of the questions examined in the current study, namely whether specific combinations of emotions tend to co-occur.

Consequently, the current study was designed to examine consistencies and differences between earlier findings and data collected from a new group of teachers working in a post-Covid time. Since the new data were collected 2 years after the original study, at a time when teachers had returned to in-person teaching and were no longer constrained in their ability to engage in person with their colleagues and students, we anticipated that there may be a reduction in the instances of references to CARE and CHALLENGE ([Urhahne and Wijnia, 2023](#); [Weissbourd et al., 2021](#)), offset by increases in the proportion of instances of CURIOSITY and COOPERATION ([Anderson et al., 2022](#); [Cohen and Sikenyi, 2025](#)).

The action model developed by [Urhahne and Wijnia \(2023\)](#) recognises the challenge of integrating several major theories of motivation, each employing its own terms and concepts to describe aspects of motivated behaviour, and thereby contributing to the field’s conceptual inaccessibility. As we develop a novel perspective on the role of emotions in pedagogy, our aim is to clarify rather than add to this theoretical complexity. To achieve this, we adopt a narrative analysis approach that supports the linking of verbally reported experiences to an inferred psychological sequence ([Wells, 2011a](#)). This approach is particularly suited to contexts shaped by a shared culture, such as the current case where participants have volitionally chosen to work in Scottish secondary schools in the post-Covid period ([Labov, 1973](#)). We therefore provide an idiographic examination of each of their interviews that briefly retells, or restories ([Ollerenshaw and Creswell, 2002](#)) teachers’ accounts of their motivation to become and to remain a teacher, with the aim of identifying recurrent salient features and the important interactions, or “signature dynamics,” that link them ([Dörnyei, 2014](#); [Riessman, 2015](#)).

In summary, then, the present study examines an overarching question about what motivates individuals to be teachers, which we address in two parts. First, relating to an attempt to replicate and expand on earlier findings that there are four emotion percepts driving teachers’ behaviour, we use thematic analysis to answer the following three questions: (1) Are the themes of CARE, CURIOSITY, COOPERATION and CHALLENGE necessary and sufficient in considering the emotional motivation of a new population of teachers,

and are they reported in relation to decisions to act with volition? (2) Are different proportions of percepts reported in the current data compared to the earlier study when loneliness, uncertainty and isolation may have made the experience of CARE and CHALLENGE more salient than at this later time? (3) Following up the observation that percepts appear to co-occur frequently, can we quantify the extent of co-occurrence and identify any patterns of co-occurrence of percepts? Second, to better characterise the links between emotion and behaviour that are proposed by TEMP, we use narrative analysis to answer the question: (4) Can we combine individuals' narratives to elucidate a motivational process model that recognises the role of emotions alongside cognitive and behavioural factors?

Study methods

Research approach

Opportunistic sampling was used to recruit nine classroom teachers working in Scottish secondary schools (Table 1). Five taught in independent schools and four in local authority schools. Participants, aged between 22 and 52 years old, taught a range of subjects and had a range of teaching experience. Five participants were female and four were male. Ethical approval was granted by the School of Psychology and Neuroscience Ethics Committee, University of St. Andrews (PS14861). The recruitment approach was substantively the same as that undertaken by Porter et al. (2022), with minor changes to the participant information sheet, consent and debrief forms to remove references to the global pandemic context that was extant in the original study.

Interviews were conducted on the Microsoft Teams platform (Version 1.6.00.4464.) using the schedule included in the Supplementary data. Each began with the interviewer ensuring the participant had given informed consent. Completed interviews were transcribed and pseudonymised by the interviewer. Subsequently, two postgraduate research assistants coded the pseudonymised interviews using NVivo software (NVivo 12, released 2017). Since a largely deductive approach was adopted, both coders familiarised themselves with Porter et al. (2022), from which the *a priori* codes were obtained (Saldaña, 2021). Coders were, however, also encouraged to identify and record themes in addition to the CARE, CURIOSITY, COOPERATION and CHALLENGE codes.

Both coders first independently analysed the interview with Alex, then met with the first author to discuss their findings. Both had identified multiple examples of the four percepts. Coder A initially coded an additional theme labelled as “ego,” relating to Alex’s subjective beliefs about their strengths and capabilities (or lack thereof). In discussion, this was agreed as an important example of cognition, rather than an emotion percept. Coder B did not find any additional themes related to emotion percepts in examining Alex’s transcript, and neither coder identified additional percept themes in subsequent analyses. Kappa coefficients of between 0.47 and 0.57 indicate fair to good interrater reliability (Fleiss et al., 2013). In discussion, coders demonstrated a stronger conceptual and experiential alignment than the statistics suggest, and indicating that interrater reliability would have been greater were it not for slight differences in the way that they had highlighted sections of the transcript. In practise, there were no substantive disagreements about which themes coders found in each section of the text. Both coders also emphasised that, whilst they consistently found all four *a priori* themes, a more noteworthy feature was the frequency with which multiple percepts co-occurred within utterances. Both coders next analysed the transcript of the interview with Bethan and, in reviewing their findings together, again confirmed their agreement on themes identified and notable co-occurrences. Each of the remaining interviews was subsequently analysed by only one or other of the coders, with regular calibration meetings to review findings and ensure consistency of interpretation. Once thematic coding was complete, to address the second and third research questions, a tally of codes was made to enable comparison with results reported by Porter et al. (2022), and NVivo was used to run a series of queries to quantify co-occurrence of percepts.

To address the fourth research question, the first author conducted content analysis using a holistic-content perspective (Lieblich et al., 1998), beginning by reading each transcript multiple times to identify patterns. Having spent considerable time analysing the transcripts individually and collectively, a brief narrative was developed for each participant. Each narrative is presented as a “narrative truth,” which may not fully align with “historical truth,” but instead describes participants’ interpretations of intra-personal experiences that link their reported experiences of feelings, beliefs, goals, and actions (Wells, 2011b). Language, meaning, and structure was preserved to maintain each participant’s authentic and idiosyncratic voice (Labov, 1972; Minami, 2015), and for the same reason no standardised chronology was applied to all participants (Ollerenshaw and Creswell, 2002). Finally, since visualisation is recognised as important, albeit necessarily “not the territory” (Hoel, 2017), a visual representation of the process model was developed to represent the key findings (Dörnyei, 2014). All data collected and generated in the current study, including interview schedule, transcribed interviews, coded files and participant narratives are available at osf.io/qy5du.

Results

Q1: identification of themes and associations with actions

For all participants, coders found examples of all four percepts that constitute the *a priori* themes. No additional emotional

TABLE 1 Summary of participant details.

Participant pseudonym	Subject taught	Years' experience
Alex	Science	3
Bethan	Classics	5
Clara	History and Politics	Not reported
Daniel	English	17
Eleanor	Psychology and PE	8
Fred	Biology and Science	13
Gabby	English and Literacy	16
Harry	English	20
Isla	RMPS	<1

motivation themes were identified, suggesting that CARE, CURIOSITY, COOPERATION and CHALLENGE are necessary and sufficient for capturing the emotional motivation of this population of teachers. Since Q4 reports narratives including all four percepts for each participant, we focus here on examples of COOPERATION:

So, you had at least shoulders to cry on, people to talk to, I suppose moan about the situation, have a good grump about it. And everybody else was in the same situation, so there was that at least... We would also have social ... get togethers online rather than in the pub... [Because we had Teams available] you had somebody there to chat to, to let your emotion out, let your stress go and share it. And so yeah, the interaction ... was a saviour, really. Alex

We have a very supportive staff unit who we've been able to rely on ... so now we have our staff briefings back and they're in person ... it's so much nicer to be able to, like, talk to people in person and have that ... casual conversation with someone rather than having to be like an e-mail or a formal like, oh I dunno, call about a child. Bethan

[Working remotely] was just lonely like without that colleague kind of camaraderie. It was just a bit rubbish to be just by yourself all the time, but I think as a department we would always have a ... zoom meeting every week so that we could like catch up with each other. Clara

I enjoyed coming back and I missed my colleagues. I feel ... lucky to work with Mr M and Miss S and a lot of people I'm friends with as well as colleagues. Like I missed my colleagues and missed the social interaction. Daniel

Yeah, so the science department are very sweet, and they sort of include me in the end of term drink that they go on, like 'oh you're an honorary science member' ... [As the only member of staff teaching my subject] that's definitely my biggest challenge. I rely a lot on Facebook support groups ... for that kind of insight and to be able to post a question! Eleanor

You'll struggle to find a stronger department in any school anywhere I think. And that is because we listen to each other ... and if we need something from somebody else it's there. And you know that if you're looking for support, you'll get it here ... If I've not explained something so well, I'll say "Right guys go to Mr F's supported study on a Wednesday night, he'll help you with it! Or come to Mr M's one." And it happens all the time ... and none of us are offended by that. You know? We all get on. We all talk to each other. Fred

Being able to rely on your colleagues is immensely important ... You see teaching as being a solo sport, but it isn't really. It's deeply collaborative job. And we all need to work together to provide a good experience for children. Collaborative work is what makes the ethos of the school... Because we're quite small [department], we're quite tight knit. Gabby

[Teachers] need to be able to sound [colleagues] out, share approaches, talk about the experience in the classrooms. [In difficult circumstances, it's] like banging my head against the wall, you know,

I'm trying to teach and I'm getting very little back, and hearing well it's not just me, this is a kind of shared experience ... Being able to have strategies and approaches that you can share amongst colleagues was definitely useful. Harry

[Working remotely means] interacting with your faculty is very hard ... It's easier to be in person. So, I think the best part about being in school is just being around everyone because there's that sense of community. Isla

We make three observations about the preceding extracts: (i) as well as articulating the value of their colleagues, most participants also refer to CHALLENGE, indicating co-occurrence of at least two percepts; (ii) participants report relevant beliefs, such as that others are sharing similar experiences and contributing according to their strengths, and appropriate actions, such as attending virtual social gatherings, initiating informal conversations, and finding community beyond their immediate colleagues where necessary; (iii) whilst cooperative acts are mentioned in some extracts (e.g., Fred and Gabby), a more dominant theme is the feeling of belonging to supportive groups. Whilst they do appreciate the value of outcomes resulting from coordinated actions, emotional connections with their professional and social communities are even more important. We therefore propose that COMMUNITY is a more representative label of the emotion experienced than the previously used COOPERATION.

Related to the actions teachers reported, [Table 2](#) illustrates an example of each teacher's professional agency, associated with the sub-themes of adaptability, collective agency, constrained agency and non-action, and to associated percepts.

Q2: occurrence rates for each percept

A summary of the number of occurrences found in relation to each of the four *a priori* themes is shown in [Table 3](#). Three participants (Alex, Bethan and Fred) were recorded as having the highest number of utterances for CARE, followed closely in each case by CHALLENGE. The remaining six participants had the largest number of utterances related to CHALLENGE, with CARE in second position in each case. Despite some regularity in the percepts most frequently expressed, the pattern of proportions demonstrates a degree of individual variability between participants, including in the percentage of CURIOSITY ranging from 6 to 29%, and COOPERATION ranging from 5 to 15%. For comparison, the bottom row of [Table 3](#) shows the different proportions of each percept reported by [Porter et al. \(2022\)](#). Findings align with the prediction that the degree of CARE would drop between the two time periods but also reveals that the level of CHALLENGE reported between the two time periods almost doubles, from an average of 20 to 37% of utterances.

Q3: co-occurrence of percepts

Standard NVivo query functions used to quantify the degree of co-occurrence of percepts showed that 7 coded transcripts included

TABLE 2 Examples of expressions of agency by each participant.

Participant	Quote	Sub theme and related percepts
Alex	[I had experience creating videos for my hobby, so during lockdown] ... I made a YouTube channel for the school, for the department, and Biology, and now it's got hundreds of videos on it.	Adaptability CURIOSITY
Bethan	From a guidance point of view, it's been really tricky because it's like you just do not have enough time. And time is always the biggest pressure on teachers with everything.	Constrained agency CHALLENGE
Clara	I made, like, the second year modern studies resources into a kind of online version. [Previously we had used] a lot of PowerPoints in this department, but obviously that's not really the best thing to do online.	Adaptability CHALLENGE
Daniel	Pre March 2020, I probably had a quite a[n]... old fashioned way... I would talk to my classes and tell them what to do and hopefully they go and do it, and [I'd] give them the materials. That is completely transformed now.	Adaptability Unclear
Eleanor	Now, after every lesson all of the pupils, they might not be holding back on purpose, they might just be a slow bag packer, but it gives you just a two second opportunity just to be like "How's it going today? How was your weekend?" And you just open up a bit of conversation.	Adaptability CARE
Fred	[each teacher in the department took responsibility for preparing and teaching one age group of students]. That probably wasn't an easy experience for some young people. But from the logistical perspective ... it made sense...And that eases the burden rather than preparing [separate lessons for each year].	Collective agency Self-CARE
Gabby	I started a master's during Covid. I read more books than I ever have before. Things for school. I did a lot of professional development. I made resources for classes that I'd always want to, but I'd never got around to.	Adaptability CARE
Harry	Trying to re-integrate [students]... you would ask them questions, and they were really reticent to answer, very withdrawn... So, spending a lot of time just getting children back in to classroom, socialising with one another. The social aspect, just trying to get them talking and so on. I spent a good couple of months on that.	Constrained agency CARE
Isla	If you have a pupil, or pupils that are likely to act in an aggressive way towards you, would you want to challenge them on putting their phone away [or] taking their jacket off? Because it's the easier thing to just teach your lesson and get on with it.	Constrained agency CHALLENGE

TABLE 3 Summary of occurrences of each percept theme for each participant.

Participant	Total codes	CARE	CURIOSITY	COMMUNITY	CHALLENGE
Alex (coder A)	134	37%	19%	15%	30%
Alex (coder B)	118	36%	22%	8%	34%
Bethan (coder A)	107	40%	20%	7%	33%
Bethan (coder B)	116	35%	22%	9%	34%
Clara	34	32%	6%	15%	47%
Daniel	59	39%	8%	8%	44%
Eleanor	41	32%	29%	5%	34%
Fred	136	35%	24%	13%	29%
Gabby	54	31%	20%	7%	42%
Harry	111	33%	15%	14%	37%
Isla	148	28%	14%	11%	46%
MEAN	96	34%	18%	10%	37%
2022 results		42%	28%	11%	20%

The largest proportion of codes for each participant is highlighted in bold. For comparison, the bottom row shows proportion of each percept assigned in the [Porter et al. \(2022\)](#) paper.

at least one instance of all four percepts co-occurring, and 10 included multiple instances of three percepts co-occurring, with a mean of 13 co-occurrences per transcript. All eleven coded transcripts included co-occurrence of pairs of percepts, with the most common pairing being between expressions of CHALLENGE and CARE. The number of pairs of co-occurrences for each teacher ranged widely from 7 to 104, with a mean of 55.5. A table of all co-occurrences can be found in [Table 4](#).

In addition to the examples shown for Q1 above, we include an example of brief extracts from each participant to further illustrate a range of co-occurrences of percepts in [Table 5](#). Taking the example of Fred, initially he refers to his CARE for young people as his only professional motivation, before quickly revising the definitive "all" to recognise it as just one key factor. He then reports not being in physical proximity with those young people as constituting a major CHALLENGE during pandemic restrictions. Wishing to inculcate a

TABLE 4 Summary of co-occurrences of percepts for each participant.

Participant	4 Percepts	Combinations of 3 percepts				Totals	Combinations of 2 percepts						Totals
		CA	CA	CA	CU		CA	CU	CO	CA	CA	CU	
		CH	CH	CO	CO		CH	CH	CH	CU	CO	CO	
		CO	CU	CU	CH								
Alex (coder A)	2	10	6	6	4	22	34	10	13	16	18	7	98
Alex (coder B)	5	10	11	5	6	26	29	12	10	19	10	6	86
Bethan (coder A)	0	1	6	0	0	7	20	4	11	18	2	0	55
Bethan (coder B)	3	6	14	4	3	24	25	16	7	20	7	4	79
Clara	1	3	2	1	1	6	9	5	2	2	3	1	22
Daniel	0	0	0	2	0	2	14	1	1	5	2	2	25
Eleanor	0	0	0	0	0	0	4	2	0	0	0	1	7
Fred	7	8	13	11	8	32	27	14	9	25	16	13	104
Gabby	0	0	0	1	0	1	7	3	1	2	0	0	13
Harry	4	8	6	4	4	18	25	7	9	11	13	4	69
Isla	1	2	2	3	2	7	14	5	5	11	13	4	52
Averages						13.18							55.45

For combinations of two percepts, all participants had the greatest number of CARE and CHALLENGE examples, as highlighted in bold. Key: CA, CARE; CU, CURIOSITY; CO, COMMUNITY; CH, CHALLENGE.

love for his subject and the educational experience more widely is interpreted as support for developing students’ CURIOSITY, whilst his presuming to speak for his colleagues indicates confidence in his COMMUNITY.

Q4: developing teachers’ motivational narratives and emotional motivation process

Detailed analysis confirmed that all participants reported all four emotion percepts, which they linked to beliefs about the value of their profession and their ability to benefit students. When participants considered their actions in pursuit of their professional goals to have been successful, they reported positive emotions; and when outcomes fell short of their goals, they reported a range of negative emotions. In retelling each participant’s story, we recognise high-level thematic alignments that vary widely in the specificity of narrative detail: related to CURIOSITY, whilst one expressed passion about psychology, another was excited to share their love of science; related to COMMUNITY, some valued an in-person community of teachers within their own faculty or subject, whilst others found their community in online forums. All reported a range of CHALLENGES associated with their circumstances and those of their students, some of which were shared among them, and some of which were unique to the individual. We also respect the distinctive ways in which participant narratives progressed: including inconsistent chronologies that mix historical incidents, events in the recent past, current circumstances and future considerations.

The brief narratives developed for Alex and Eleanor are reported below, with the remainder being available in the Open Science Framework repository.

Alex’s narrative:

I was a researcher before I became a science teacher and found my purpose in life. I always loved exploring science, including virology, biology and physics, but also gained a lot from teaching university students. So, I became a secondary teacher for the chance to enthuse younger people about something important to me, and I just love talking science and seeing young people’s wee minds click when they engage with my subjects. The lockdown interrupted my teacher training, stressing me out and affecting my beliefs about my capabilities as a teacher. I’ve been lucky that I have school leaders who support me and reassure me that I am doing ok at a very challenging time, and the well-designed and spacious environment I teach in helps too. It’s still very hard work though, a lot of hours planning, teaching and marking, so the holidays are vital to rest and rebuild enthusiasm for starting again next term. Once we could get back into schools after the lockdown I had a bit of a breakdown, because I just couldn’t cope. And it was the same stress for everyone. My colleagues and family supported me, and having the chance to just moan with people who understood was important to let the stress out. It’s exciting when resources I’ve developed are helpful to my colleagues, even some who teach other subjects. I still worry about the future, and how my long-term health could be affected by Covid. And I worry about the effects on kids—what they missed out on will carry on for years— so what I do to support them is vital. It’s a relief when your planning and paying attention to what the kids need works out, and I’m proud of things I’ve done that helped students engage in science and have ambitions for their future.

Eleanor’s narrative:

I teach psychology and help with the sports programme, and I’m heavily involved with the International Baccalaureate programme

TABLE 5 Examples of co-occurrence of percepts for each participant.

Participant/situation	Challenge	Emotions
Alex	On limitations to teaching practises during to lockdown: <i>"We did not really do experiments... I did demonstrations and things, but the kids did not really get hands on, which affects your lessons and their learning. The experiments not only help them reinforce the theory that they have been doing but it gives them a break from sitting there trying to listen to you and concentrate"</i>	CARE, CURIOSITY, CHALLENGE
Bethan	<i>"It is in some way like an act because ... you have got to be the one at the front of the class who's cheery, who keeps them motivated... And so, you know, a good teacher, to me, is someone, if you are having a bad day, that does not affect the experience of the children in front of them and someone who cares deeply about their subject and also the children in front of them...Someone who knows their subject well but is equally willing to learn and ...know they do not know everything."</i>	CARE, CURIOSITY, CHALLENGE
Clara	<i>"I was just in the flat by myself ... so it would just be me by myself all day, every day. And it was just lonely without that colleague kind of camaraderie ... it was just a bit rubbish to be yourself all the time, but as a department, we would always have a meeting every week so that we could catch up with each other ... we were relying on each other in the sense that we were kind of using like the same materials ..."</i>	CARE, COMMUNITY, CHALLENGE
Daniel	<i>"I was teaching the Berlin Wall a couple of weeks ago, was a really good documentary with that...It's not exactly very long. It's very interesting. It's showing people jumping the wall and somebody's being shot by the Stasi. It's quite dramatic. And usually the kids are like "oh my god, this is unbelievable." And I'm showing it this year and last year and they are just sitting there. I had to pause it and say, "Guys you are not watching."</i>	CURIOSITY, CHALLENGE
Elenor	<i>"The science department are very sweet, and they sort of include me in the end of term drink that they go on ..., however with respect to the IB, I am not in the sciences ... just in terms of the cooperation, that's definitely my biggest challenge. I sort of rely a lot on Facebook support groups, it's the only reason I've kept my Facebook!"</i>	COMMUNITY, CHALLENGE
Fred	<i>"I think for me, teaching is all about relationships. You know, well, certainly a big part of it. So online, not being able to form those relationships, right away, puts a barrier up. And... for me personally and probably for all of us in the department, our deal is to get the kids to love science. And to enjoy school as best they can"</i>	CARE, CURIOSITY, COMMUNITY, CHALLENGE
Gabby	<i>"We're seeing children who are coming up to first year that have not had a full uninterrupted year of education since they were in primary 4. And we are seeing the impacts of that in terms of immaturity. A 12-year-old now is not what a 12-year-old was in 2019."</i>	CARE, CHALLENGE
Harry	<i>"I think schools are only part of the solution [to poor mental wellbeing]... The waiting lists for outside agencies like CAHMs services, counselling services, are astronomical... Schools can only do so much. So, what we can do that's pragmatic [includes] group work, cooperative learning, building children's confidence, their social skills. Having less focus on assessment for example, alleviating some of those pressures and just spending a bit of ...[time planning] how we are actually going to recover... from the pandemic"</i>	CARE, COMMUNITY, CHALLENGE
Isla	On student wellbeing: <i>"It's hard. It's very hard. I'd love to pretend that I know that every single one of the pupils in front of me are okay. There's no guarantee. [My class] know they can speak to me if there's a problem. And ... they do come and speak to me if there's an issue... I do follow up and make sure they are okay. Since I only see the kids once a week, it's very difficult for me to pick up when there's something consistently wrong with a child."</i>	CARE, CHALLENGE

as well. In my last year of uni, thinking about what I was going to do, I saw that ever since being a teenager, my jobs were always sports coaching and camps, so I thought, actually I think I want to pursue this as a career. There's not a day when I don't want to be at work. Teaching is full-on, you don't get a moment to yourself. Like, at the end of lessons you can ask the person packing their bag slowly how things are going, find out a bit more about them. So, as well as knowledge and energy, you need to take an interest in their lives, so ask them how that thing they were doing at the weekend went on the Monday morning. It would be difficult if you didn't enjoy it, but I'm here for the foreseeable future. Teaching online was all sorts of challenging, from being home when it was cold and not getting outside, to two pupils recording my lesson and putting it on social media. The flip side was jumping on the sofa as soon as I had finished, and learning so much about what the technology was capable of and being interactive with technology. It's better now we're back in person,

having that social interaction, and it's easier to keep lessons energised in person, though some of the younger ones are definitely lacking concentration and hyperactive now. Even though I worry about it being boring sometimes, I get good feedback from my approach to teaching, so that's given me a confidence boost. I believe the more they enjoy my subject, the more they'll remember and the better prepared they'll be for the future. I'm lucky to have support from my colleagues who have made me an honorary science faculty member, and from social media groups where I can ask questions, and share the good stuff with them too, when I think I've smashed a lesson!

The two narratives above, as well as those for other participants, share common features, albeit expressed in idiosyncratic orders and styles that reflect the nature of the original interviews. Such features include reporting experiences of (a) emotional motivation, in the form of the four percepts; (b) beliefs and values, such as the pivotal role that

teachers can have, and the value of both professional and personal reciprocal support; (c) goals, including being a “good enough” teacher, looking after themselves in order to best serve their students, and passing on benefits that teachers have gained from those who taught them or who they currently collaborate with; (d) volitional behaviours congruent with achieving ones goals; (e) a range of emotions associated with evaluation of one’s actions or the outcomes achieved; and (f) environmental and social factors over which one has no control, but that can influence outcomes. Without exception, all participants alluded to all four percepts, relating them to cognitions and behaviours, and reporting outcome emotions.

Whilst the integrative framework developed by [Urhahne and Wijnia \(2023\)](#) links cognitive and behavioural components in a broad presentation of the motivational process, the current analysis adds depth by contributing specific percepts and distinct outcome emotions to the process model. Rather than, for example, focusing on expectancy-value calculations, attribution schemas, or other cognitive constructs, the model proposed here starts with percepts, or felt experiences, which we believe to be more intuitive components of the process. By restricting the process model to four visual components (see [Figure 1](#)), we aim to complement the comprehensive six-stage model by offering a more practical model that might be of value to education practitioners who wish to improve their understanding of their own and others’ motivation.

Discussion

The current study examined teachers’ experiences of teaching, including the role that emotion plays in motivating cognitions and behaviour in the classroom, replicating an equivalent Covid-era study by [Porter et al. \(2022\)](#) and asking four questions related to teachers’ emotional processes. In answer to the first question, the same four emotion percepts were found as were identified by [Porter et al. \(2022\)](#). Using deductive thematic analysis to examine transcriptions of interviews with teachers in which they described recent professional experiences, coders found the same four emotion percepts and did not identify any other themes of motivating emotions. Teachers expressed CARE for their students, identified as feelings of warmth and concern, associated with beliefs about students’ current and future wellbeing and goals of supporting the young people’s social and intellectual development. Participants were also motivated by CURIOSITY to explore a range of pedagogical approaches and develop creative methods to encourage effective learning. Supportive relationships with colleagues, whether working in the same school or within more diffuse groups of individuals linked through social media platforms, were important to participants for sharing ideas and increasing the

availability of effective resources. Whereas the label of COOPERATION had been used in the earlier paper, here we noted that participants were more likely to refer to a valued COMMUNITY, which we acknowledge as a more appropriate label related to *feelings* rather than *actions* and consequently adopt hereafter. In contrast with the three positively-valenced emotion percepts of CARE, CURIOSITY, and COMMUNITY just mentioned, there was also evidence of an important motivational factor of CHALLENGE, which represents participants’ appetite to address difficulties experienced by themselves, their students, and colleagues.

Alongside evidence of percepts, teachers reported acting with agency to change their behaviour in response to circumstances (adaptability), acting with others to achieve collective goals (collective agency), and being unable to act in ways they might have chosen had circumstances been different (constrained agency). Unlike the earlier paper, no instances of non-action were identified, which may indicate, in this post-pandemic context, teachers remembering their proactive engagements rather than their deliberate restraint, in line with increased pressure to act to address the gap in learning caused by pandemic disruptions ([Gajderowicz et al., 2024](#); [Howard et al., 2024](#)). With this exception then, the current findings align with [Porter et al. \(2022\)](#). No additional themes relating to motivating emotions were identified, suggesting that at least for the two samples of populations analysed so far, the four percepts appear necessary and sufficient to describe teachers’ emotional motivation ([Brennan, 2024](#)). The actions teachers report reflect their adaptability to prevailing circumstances, the actions they take with others, and the limits imposed on their actions due to those circumstances.

In response to the second question, where we proposed that reports of CARE and CHALLENGE would be reduced, we made the surprising finding that the proportion of CHALLENGE reported by teachers almost doubled, from 20 to 37%. One might consider that declaration of a pandemic, and a rapid change from in-person teaching to remote teaching with few suitable resources available, would have elicited more statements associated with CHALLENGE than in this later period when teachers had returned to working in person with their students. Instead, the data recorded earlier showed higher proportions of CARE and CURIOSITY ([Porter et al., 2022](#)). In considering our original sample of teachers, we speculate that in periods of disruption, the novelty of the situation might have engendered high levels of CURIOSITY ([Berlyne, 1950](#); [Dubey and Griffiths, 2020](#)), whilst lack of access to those for whom one cares might have made the CARE more salient ([Bowlby, 1979](#)). In contrast, several teachers in the current study expressed beliefs that teaching required them to put on a reassuring performance for students, regardless of their own physical and emotional capacity. Two years on therefore, and with political

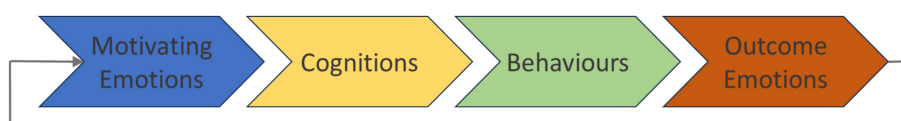


FIGURE 1

A revised process model of interactions between modalities associated with motivation in education, distinguishing motivating emotions from emotions arising as a result of evaluation of outcomes. As with the earlier version (cf. [Porter et al., 2022](#)), we continue to recognise reciprocal interactions between factors.

pressure to keep schools open and functioning normally as a “national priority” and a “moral duty” (Holt and Murray, 2022), the challenge of providing normalcy when students are continuing to experience the effects of unprecedented disruption (McDonald et al., 2023) may have further depleted teachers’ capacity for optimism, well-being and commitment to stay in the profession. Indeed, the present findings are consistent with wider reports (Adams, 2025; Mahat et al., 2025; National Education Union, 2025) of teachers experiencing challenges associated with insufficient time and excessive workload, with reports of working an average of more than 11 h per week more than their contracted hours (EIS, 2024). This additional time, primarily spent planning lessons, preparing resources, and marking pupils’ work, is positively associated with reported levels of stress, and negatively associated with job satisfaction (EIS, 2024). In addition, the same survey reported that the time allocated for face-to-face teaching is increasingly impacted by the need to address low level disruptive behaviour in the classroom, in line with reports by the current participants. As with any complex dynamic system, it would be simplistic to ascribe the findings to any single cause but combined additional burdens such as those just mentioned may have an influence on growing levels of CHALLENGE.

The third question posed by the current study related to an observation made in the earlier study that the percepts appeared to be experienced concurrently or at least in close succession. Coders in the current study found this to be the case for all the participants, with most transcripts including instances of co-occurrence of all four percepts, and all transcripts including multiple concurrent combinations of CHALLENGE with one or more positive percepts. Whilst some CHALLENGE arose in relation to personal circumstances, as noted above, other instances resulted from societal constraints. For example, time-consuming marking constrained teaching goals and reducing capacity for self-care. Concurrency of emotion percepts aligns with considerations of the complex dynamics associated with motivational processes, from which non-linear outcomes develop (Gigerenzer, 2010; Gillies, 2014; Larsen-Feeman and Cameron, 2008) and supports the proposition that it is important to consider *combinations* of percepts, rather than simply examining the effects of one or other of the identified motivational factors.

One example of non-linear outcomes is whether a teacher remains in position. Official statistics show year-on-year decreases in the numbers of teachers working in Scotland between 2022 and 2024 (Scottish Government, 2024), indicating an overall trend of increased attrition. What such statistics do not offer is any predictive power as to which individuals will ultimately make the decision to leave the profession. Whilst there are undoubtedly themes associated with such choices, a constellation of factors likely pertains to the decision-making process. Teachers in the current study report that they often face very challenging circumstances that negatively impact well-being, contribute to professional attrition, and reduce the quality of the learning experience. Teachers (e.g., Emily in our 2022 study, and Clara in the current study) report having a “terrible time” that they “hated,” reflecting their struggles with maintaining personal wellbeing. Equally, however, teachers in both studies also reported positive motivational experiences associated with relationships with colleagues, students, family, or their passionate interests. Taken

together, therefore, the findings suggest that as long as individuals do not experience *too much* CHALLENGE and have a *sufficiently* supportive COMMUNITY, whilst continuing to experience *enough* CURIOSITY about pedagogy and *adequate* CARE towards and from students, they are likely to remain in the profession. Judgements about adequacy and sufficiency are obviously unique to each individual, as are evaluations of whether circumstances warrant making the decision to leave. Nonetheless, viewed from the perspective of TEMP, policy makers interested in encouraging teachers to stay within the profession might consider developing ways to address each of the motivating forces.

To respond to the question of whether the data were valuable for producing a motivational process model for teachers, we produced brief narratives for each participant that highlight how they integrate motivating emotions with relevant cognitions, actions, and evaluative emotions (Perrino, 2015). Although the narratives differ in style and substance, respecting the idiosyncratic story told by each participant, they also are notable in their thematic consistency. All include the four emotion percepts in close temporal proximity to each other along with related beliefs, goals, and actions. The distinction between a small number of emotional drivers of behaviour, and emotions as outcomes is seen in the range of outcome emotions highlighted, including enthusiasm, stress, excitement, pride, confidence, worry, frustration, happiness, sympathy and enjoyment. The larger number of outcome emotions illustrates the divergent results (Connell Pavelka, 2011; Richters, 1997) that arise from open complex systems such as teachers’ motivation, in which salient factors have multi-directional and nuanced effects on each other, operating in “constant, but patterned, flux” to produce non-linear effects (Thibodeau et al., 2016, p. 754).

Narrative approaches are perhaps surprisingly uncommon in a discipline dedicated to improving understanding of the human condition (Dinsmore, 2017; Torbert, 2000). However, as shown in the examples presented here, features shared by all participants illustrate the value of narratives as more than descriptions of fact. Narratives reflect the human imperative to tell important stories that link experiences, feelings, beliefs and actions into meaningful wholes (Bouizegarene et al., 2024; Murray and Sargeant, 2011). They represent a personally resonant method for deepening our appreciation of teachers’ motivational processes by recognising the individual and dynamic interplay between affective, cognitive and behavioural modalities. For participants in future action research, narratives may offer an intuitive means of expressing the motivational processes that sustain their professional lives, scaffolded by a descriptive framework that includes distinctions between motivating emotions and outcome emotions.

In combination, responses to the four research questions posed above strengthen the nascent theory reported by Porter et al. (2022). The results of our efforts at conceptual replication were: (1) confirmation of four motivating emotion percepts previously identified, albeit with a slight alteration to one of the labels used, and no additional percepts found; (2) further evidence of individual differences in the amount and proportions of each percept identified; (3) novel evidence of high levels of concurrency of the four percepts; (4) development of a motivational process based on narratives that include the four percepts associated with professional beliefs and goals, illustrating how they relate to

appropriate behaviour to achieve those goals, and highlighting a range of outcome emotions resulting from evaluation of performance and outcomes. This novel approach to characterising motivation provides support for the emerging *Theory of Emotionally Motivated Pedagogy* (TEMP, Porter et al., 2022), in which we identify four emotional percepts, recognise interrelations within them, and acknowledge non-linear relations between percepts, cognitions, behaviours and outcome emotions.

Whilst we recognise that the complexity of teachers' motivation precludes a comprehensive visualisation, such pictures are recognised as offering an important summary of the most salient components of a system together with important interactions between them (Dörnyei, 2014). We therefore offer a visualisation of the relationships between emotion, cognition and behaviour, shown in Figure 1, which revises the conceptual framework offered by Porter et al. (2022). Based on the present results we still identify the three distinct modalities of emotion, cognition and behaviour, but we now also distinguish between two expressions of emotion. Motivating emotions, to the left, we believe are trait-like, persistent, and small in number. Outcome emotions, to the right, we view as relatively transient, state-dependent, and numerous (Allen et al., 2014). In line with the affectivist view that acknowledges the importance of considering different modalities together, we nest cognitive and behavioural aspects of motivational processes between the two varieties of emotion (Dukes et al., 2021). Although not consistently recounted in the linear form represented in Figure 1, the narratives told by participants in the current study do clearly contain each of these components.

Limitations and opportunities

We offer a first attempt at producing a theory of teachers' motivated behaviour framed by motivating emotions that influence cognitions, actions, and outcome emotions. Both the current study and the original study that identified teachers' emotional motivations were conducted with small samples of teachers working in Scottish secondary schools, allowing comparison of the two to demonstrate temporal continuity over 2 years. Whilst the limited size and geographic range of these samples inevitably constrain generalisability, the depth of qualitative analysis, generating a rich and nuanced understanding of these teachers' emotional motivations provides a strong foundation for future replications involving larger numbers of participants. Such replications might examine the universality of factors included in this first iteration of the motivational process model: in teachers working in other stages and in other geographies; in individuals working in other professions; and related to domains other than employment such as family dynamics and political arenas.

We also recognise that as a theoretical account, our TEMP is likely to be incomplete and overly simplified at this stage. Specifically, we acknowledge the omission of important aspects of the micro, meso- and macro-teaching and learning environments in which teacher motivation is enacted (Bronfenbrenner, 1979; Kumpulainen et al., 2014; Leonard, 2011). We do not, however, propose a single chronology from motivating emotions to cognitions, to behaviours, to outcome emotions, since we recognise the temporal discontinuity with which participants report their

experiences, sometimes in the historical past, sometimes in the recent past, relating to the present, or looking to the future. Additional factors and new relationships between existing motivating factors may also subsequently be found that render the model unduly parsimonious or not useful (Jones, 2014). We therefore welcome future amendments to the theory, which would illustrate that we are attempting to represent a process that defies complete comprehension and predictability (Larsen-Feeman and Cameron, 2008). At this early stage therefore, what we offer is a promising but provisional framework that offers a basis for further testing, criticism, and refinement. Nonetheless, by presenting the TEMP we hope to encourage further consideration of emotional factors as motivational drivers, complementing prevailing efforts that examine outcome emotions.

A major concern for some is likely to be how validity of the current findings can be examined or, more profoundly, whether the qualitative methods reported here are even scientific (Wells, 2011c). Although we believe the qualitative approach is valuable, we also recognise that providing additional evidence using quantitative methods would allow additional triangulation of these findings. Nonetheless, using replication studies of quantitative research as a reference point, our view is that the findings we report here appear to uphold a good standard of reproducibility (Aarts et al., 2015). Specifically, we propose that the current study is scientific because it is based on observations, provides conceptual labels to aid understanding of those observations, and attempts to develop theory rather than simply reporting the observations (Wells, 2011c). Recognising the interpretive nature of the analysis (Lieblich et al., 1998), we encourage assessment of validity by others by making the raw data, including schedule and transcripts, available at osf.io/qy5du. Related to validity is the finding that all four percepts were found in the transcript of each participant, with no omissions (Lieblich et al., 1998), which leads to the question of how representative the current sample is. Given current attrition rates and reports of disquiet among educators (Adams, 2025; Mahat et al., 2025; National Education Union, 2025), it seems reasonable to surmise that there are teachers who no longer experience the overall reward reported by our participants. Future effort is therefore needed to examine differences between those who remain dedicated to teaching, and those choosing to leave a profession to which they were previously committed.

We offer the current study as a conceptual replication of Porter et al. (2022), whilst recognising that the participants and situation are different from previously. As a result, the current goals are not exactly the same: the earlier study focused on discovery, whereas here we were concerned more with verification and refutation, with the aim of producing a motivational process model that describes key components of each participant's narrative. Future effort is, however, required to examine the developing theory further, adding where necessary and simplifying where possible. Subsequent studies gathering evidence about the completeness and universality of the elements identified in the process model will improve conceptual replicability. A critical step, therefore, is to engage with the wider population of teachers, who can provide feedback to enhance the comprehensiveness of the TEMP, guide its application to pedagogical theory, and shape future research into its value and utility (Hall and Wall, 2019). Indeed, as reflective practitioners, teachers should be well-positioned to identify

omissions, redundancies, or inaccuracies in the motivational process model. For example, semantic validity can be examined by engaging teachers in evaluation of the degree to which the model reflects their own understanding of their motivation, assessing the model's coherence and comprehensiveness (Moody et al., 2003). Similarly, given links exist between CURIOSITY and self-efficacy (Karwowski, 2012; Kim and Choi, 2019), as well as between self-efficacy beliefs and teachers' engagement with and enjoyment of work (Burić and Macuka, 2018), there is clearly a wider opportunity for action research to explore how understanding the importance of emotion, and reflecting on how past emotional motivations influence future beliefs, behaviour, and outcomes – both for teachers and among students.

One potentially fruitful question might be to consider any differences between teachers' initial motivations for entering the profession, and their current motivation to stay, or for considering leaving. The TEMP model offers structured support for such self-reflection, aligning with Hall and Wall's (2020) distinction between teachers' two internal selves: one actively engaged in discovery about outcomes and practises, whilst the other poses important questions and evaluates evidence gathered through reflection. The first self might reflect on outcomes, such as curiosity about curriculum content, the quality of relationships between teachers and pupils, teachers and colleagues, and pupils with their peers, and the effectiveness of strategies for handling challenging situations. The second self examines internal emotional states arising from alignment with, or discrepancies between, basic motivations, goals, and actions, providing an opportunity for self-coaching to foster wellbeing and professional development (Lofthouse, 2015). The TEMP process model supports reflection at both these levels.

To situate TEMP, future studies could systematically examine its relationship with existing theories of motivation in education that have not typically centred emotions (e.g., Social Cognitive Theory, Control-Value Theory, Self-Determination Theory, Expectancy-Value Theory: cf. Bandura, 2001; Pekrun, 2024; Ryan and Deci, 2000; Wigfield and Eccles, 2000). Looking ahead, the rise of affectivist approaches to complex psychological processes highlights opportunities to address gaps where emotional modalities have been underexplored. Narrative approaches, for example, may offer especially valuable tools for capturing the dynamic interplay of emotions, cognitions and actions, and for advancing future research on emotionally motivated pedagogy (cf. Dukes et al., 2021). Conclusion

The present study replicates and extends previous findings, providing evidence that supports the emerging Theory of Emotionally Motivated Pedagogy, linking emotional percepts to associated cognitions, actions, and outcome emotions. Since developing new theory is a relatively unusual activity in psychological research (Eronen and Bringmann, 2021; McPhetres et al., 2021; Oberauer and Lewandowsky, 2019), and being aware of theories that continue to be influential despite subsequent research demonstrating their lack of utility (Willingham et al., 2015), we are optimistic but cautious in sharing our belief that TEMP offers a useful new perspective on teaching practise. Equally, we recognise that raising awareness of TEMP among reflective practitioners will facilitate feedback on its validity and relevance. We therefore advocate for early efforts to establish whether (and if so, how much) awareness of the proposed motivational process model impacts the experiences and outcomes of educators and those they teach. Combining a new

theory of what motivates teachers with novel approaches to assessing that motivational model offers the opportunity for greater insight into a phenomenon that fascinates educators, psychologists, and the wider social sciences, and has profound impacts on everyone in society.

Author's note

In order to meet institutional and research funder open access requirements, any accepted manuscript arising shall be open access under a Creative Commons Attribution (CC BY) reuse license with zero embargo.

Data availability statement

The datasets presented in this study can be found in online repositories. All relevant data are available on the Open Science Framework at osf.io/qy5du.

Ethics statement

The studies involving humans were approved by School of Psychology and Neuroscience University Ethics Committee, University of St. Andrews. 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

KP: Conceptualization, Formal analysis, Methodology, Writing – original draft, Data curation, Visualization, Resources, Investigation, Project administration, Funding acquisition, Writing – review & editing. DD: Conceptualization, Visualization, Methodology, Writing – review & editing, Funding acquisition, Project administration, Supervision.

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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 Gen AI was used in the creation of this manuscript. AI was used to edit some text for clarity and cohesion.

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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.2025.1692383/full#supplementary-material>

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