The interplay between identity and emotion of young LOTE (languages other than English) teachers in their early careers: A sociocultural theory perspective

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ABSTRACT: There is conflicting evidence regarding the relationship between teachers' identities and emotions. The inconsistency may be explained by a one-way causal relationship or two-way support. However, from a sociocultural perspective, the two might dialectically influence each other. Furthermore, most studies on teacher identities have focused solely on teaching and research identities without considering their social service roles as well. Further, little is known about LOTE (Languages Other than English) teachers in higher education, and even less is known about younger novice teachers. To fill these gaps, this study included a survey of 843 young LOTE teachers and in-depth interviews with three respondents at universities to gain a deeper understanding of their identities and emotions. As a result, the interaction between the two variables in the teaching dimension was observed to have a more robust relationship. Teachers' identities and emotions were inextricably linked in either a positive or negative manner. Specifically, a higher sense of identity and positive emotion correlated closely, whereas a lower sense of identity and negative emotion walked together. As a result of the weak sense of research identity, this relationship was evident in teaching and social service, de-emphasizing research. The present study provides additional evidence with respect to the dialectical relationship between teacher identity and teacher emotion.
Keywords: LOTE (languages other than English), young teachers, identity, emotion, interrelationship

La interacción entre identidad y emoción de los jóvenes profesores de IDAI (idiomas distintos al inglés) en los inicios de su carrera profesional: La teoría sociocultural

RESUMEN: La literatura existente es contradictoria sobre la relación entre las identidades y las emociones de los profesores. La inconsistencia puede explicarse mediante una relación causal unidireccional o un apoyo bidireccional. Sin embargo, desde una perspectiva sociocultural, ambas podrán influenciarse dialéctica. Además, la mayoría de los estudios sobre

las identidades de los profesores ha habido centrado en las enseñanzas e investigadoras sin el servicio social. Por lo demás, se ha investigado poco sobre los profesores IDAI (idiomas distintos al inglés) y aún menos sobre los profesores jóvenes. Para colmar estas lagunas, el estudio incluyó encuestas a 843 jóvenes profesores y entrevistas con tres de los encuestados. Mostró que las dos interacciones destacaron en la enseñanza y el servicio social, mientras que se restaron importancia a la investigación debido al débil sentido de la identidad investigadora. Y las identidades y emociones se desarrollaron en un patrón inextricable en una tendencia positiva o negativa. Un mayor sentido de la identidad y la emoción positiva estuvieron estrechamente relacionados, mientras que la identidad de bajo sentido o de reconstrucción y la emoción negativa caminaron juntos. El presente estudio demuestra una evidencia adicional con respecto a la relación dialéctica entre las identidades y las emociones de los profesoresa.
Palabras clave: IDAI (idiomas distintos al inglés), los profesores jóvenes, la identidad, la emoción, los interacciones

1. INTRODUCTION

There is a widespread consensus that the identity of teachers is fundamental to teacher development and education (Thomas & Beauchamp, 2011; Wang & He, 2022). Language teachers have been arguing for many years that identity and emotions are intertwined (Schutz & Lee, 2014; Song, 2016; Yuan & Lee, 2016; Yip *et al.*, 2022; Derakhshan *et al.*, 2023a). It has been widely acknowledged that identity plays a significant role in a language teacher's emotional perspective, and these issues have been addressed in recent research. Some researchers indicate that emotion may contribute to the dynamic construction of language teacher identity (Song, 2016; Teng, 2017; Rodrigues & Mogarro, 2019). Others believe that teacher identity produces more diverse emotions, however, the interaction between the two has been associated with varying conclusions (Benesch, 2018). In contrast, sociocultural theory researchers maintain that identity and emotion are mutually beneficial (Qin, 2021; Qin *et al.*, 2022b; Wang & He, 2022; Chen *et al.*, 2022; Zhang *et al.*, 2022). Due to the qualitative nature of most existing studies, researchers cannot draw conclusions regarding generalizability and statistical significance. To further clarify the inconsistent conclusions, the present study adopts sociocultural theory in order to determine whether and how teacher identity is related to teacher emotions through a mixed method approach.

In addition, previous studies have focused on teachers' teaching and research without considering other aspects of teachers' social lives outside the educational setting. The conceptualization of language teacher identity was also primarily limited to teaching and research sector (Tsui, 2007; Xu, 2014). However, recent years have seen it conceptualized with social services added (Wen & Xu, 2014), a perspective that is becoming more relevant to university teacher studies (Blix *et al.*, 1994; Day & Leitch, 2001; Wen & Zhang, 2017; Barahona & Ibaceta-Quijanes, 2020). Young novice teachers in Chinese universities tend to be under 40 years old with less than 5 years' teaching experience since most of them started their teaching career after they acquired the doctor degree, making them an important population that requires additional training to work in higher education. In addition, the previous literature, which includes both language teacher identity as well as emotion, has usually involved English teachers (Teng, 2018; Zhang, 2019). Therefore, there is a signif-

icant lack of research on LOTE teachers. Chinese governments invest significant amounts in LOTE-related higher education programs in order to enhance their teaching and research abilities. Further research is required to determine whether or not these young LOTE teachers will survive in Chinese universities (Guo *et al.*, 2020) and how their identities and emotions interact regarding teaching, research, and social services.

2. Literature review

2.1. Language teacher identity and emotion

Research on foreign language teachers' identities began in the mid-1990s (Duff & Uchida, 1997), and interest has grown ever since (Teng, 2018; Derakhshan *et al.*, 2023b). There are several definitions of language teacher identity, some of which define it in terms of teachers' roles and views it as a method of determining and pursuing teachers' roles and occupations. Further, some argue that language teachers' identities are determined by the interaction, negotiation, and reconstruction between individuals and sociocultural influences (Varghese *et al.*, 2005; Zhang *et al.*, 2022). According to sociocultural theory, language teachers' identities are shaped by their interactions with diverse sociocultural factors both inside and outside of the higher education system.

It has been recognized that teachers' emotions play a critical role in higher education (Derakhshan *et al.*, 2023c). As Hargreaves (1998) stated, emotion plays a crucial role in teaching under the influence of sociocultural environment, and teacher emotions are closely linked to the school's educational objectives. A key component of this view is the importance of teacher emotion in teaching practice, as well as the importance of sociocultural factors in teacher emotion. In general, teachers' emotions are shaped by their experiences and performance at work (Hu & Wang, 2014). In teaching and research practice, teachers typically have fewer negative emotions and more positive ones to gain professional and pedagogical recognition. Positive emotions are usually associated with positive performance (Zembylas, 2002). Accordingly, teacher emotions have shifted from being subjective experiences to being related to the individual's interaction with the environment outside. Based on the findings of this study, it can be concluded that teachers' emotions are influenced by sociocultural factors in a dynamic manner.

2.2. Research on language teacher identity and emotion

Studies on the relationship between teachers' identities and emotions have not yielded general conclusions. The above inconsistency can be explained in three ways. Firstly, teacher emotions influence teacher identity. Using interviews with five secondary English teachers in South Korea, Song (2016) examined the effect of vulnerability on teacher identity. Moreover, Rodrigues & Mogarro (2019) examined 22 empirical studies to examine the role of teacher emotion in student teacher identity, concluding that emotions influence professional perception. However, this conclusion requires further discussion, particularly among language teachers. Second, teacher identity mediates teacher emotion. In collecting plagiarism policies and interviewing 13 English language instructors, Benesch (2018) determined that emotions were triggers and indicators of English teacher identity, and follow-up responses were conducted to

identify plagiarism in student texts from students who plagiarized. However, Benesch (2018) did not address the role of emotion and identity in teachers' career development. The third point is that teachers' emotions and identities are not only linearly interdependent, but are also curvilinear (Schutz & Lee, 2014). Zhang *et al.* (2022) examined the positive and negative emotions experienced while interviewing a Chinese professor. According to the authors, teachers' well-being and burnout contributed to the development of the researcher's identity. Despite the fact that Zhang *et al.* (2022) only included one teacher-researcher in their study, it is difficult to interpret their results as representative of the entire Chinese homogeneous group. Based on the analysis of 50 questionnaires, 20 narratives, and five interviews with preservice Chinese English teachers, Chen *et al.* (2022) conclude that identity and emotion are dialectical. Emotion can be considered an indicator of identity, whereas identity can be considered a determinant of emotion. It was found that positive emotions, such as well-being, increase teacher identity construction, while negative emotions, such as burnout, hamper it. Although the data were analyzed using descriptive analysis, various types of emotions were explored. There was no statistical evidence by far, however, regarding how teacher identity and teacher emotion were related, nor were any other aspects of career development investigated (e.g., teaching and social service).

Taken together, previous studies on language teacher identity and emotion have been incomplete in four key ways: (1) The relationship between teacher identity and emotion is only examined within their teaching and research practice, excluding their social service roles; (2) Few studies have examined the relationship between teacher identity and emotion in terms of positive (e.g. well-being) or negative (e.g. burnout) emotions and their joint effects on identity; (3) there is a small sample size ranging between one and fifty and the majority of participants are English teachers. The research on this issue with LOTE teachers is extremely lacking; (4) there is a scarcity of quantitative studies that investigate the relationship between teacher identity and teacher emotion.

To address the above issue, this study administered a five-Likert questionnaire to 864 teachers of LOTE and conducted a semi-structural interview with three teachers. We included the teaching and research practice as well as teachers' social service in which teachers play an important role in the sociocultural environment. Regarding positive and negative emotions, we compared teachers' well-being and burnout, since university young teachers are likely to be either satisfied with their career development (Han *et al.*, 2020) or burnout as a result of being overloaded due to getting along with a large number of students, faculty, and administrators (Blix *et al.*, 1994). The following two research questions guided the study:

1. What is state the LOTE teachers' burnout, well-being and identity?
2. What are the interrelationships among LOTE teachers' burnout, well-being and identity?

3. THE STUDY

3.1. Research Design

The study is divided into three phases. First, we collected qualitative interview data covering three dimensions (teacher burnout, well-being, and identity) for revision and for-

mulation of the pilot questionnaire and subsequently, trialed the scales in the second phase. The questionnaire was then distributed to the participants and an interview was conducted to provide further information.

3.1. Participants

In Phase one, to develop the scale including teacher burnout, well-being and identity, three participants (average age 35.6), who hold Ph.D degrees at different stages of their professional development, and lectured in various universities, took part in the interview. In Phase two, 108 homogeneous subjects participated the testing of the scale through exploratory and confirmatory factor analysis and regression. Their age ranges from 30 to 40 years old (average age 35.6). In Phase three, there were 843 young LOTE teachers, 661 females and 182 males, from various provinces of China who participated voluntarily in the survey. Their age ranges from 31 to 40 years old (average age 37.8). The majority of participants (58.1%) are lecturers or assistant professors. They have beyond 3-16 years of working experience. The participants reported teaching a wide variety of languages, including French (N = 302), Spanish (N = 248), Russian (N = 89), Arabic (N = 111), Japanese (N = 65), Korean (N = 16), other (N = 12). In general, it can be assumed that the participants are representative of the significant number of teachers who teach LOTE.

A convenience sample of three interviewees consented to participate in the interview survey as well. Participants had a variety of backgrounds, educational histories, and teaching experiences. The following table provides additional demographic information regarding the participants identified using T1 to T3.

Table 1. *Demographic information of the participants*

NAME	GENDER	AGE	YEARS OF WORKING	MAJOR	DEGREE
T1	Female	35	11	French	Ph.D
T2	Male	37	15	Japanese	Ph.D
T3	Female	39	16	Russian	Ph.D

3.2. Instruments

3.2.1. Teacher burnout scale

The scale, developed by Hiver (2017), measures teachers' burnout in new surroundings and challenges. The revised Chinese Version of the scale (translated by two scholars with doctor degree) included 5 items (e.g., "At school I feel burned out from my work" or "I feel that teaching is hardening me emotionally"). 108 participants were asked to rate each item from 1 (strongly disagree) to 5 (strongly agree) on a Likert-type scale. The Cronbach alpha coefficient is 0.909 with 108 subjects in Phase two (as discussed above) in the current study.

3.2.2. Teacher well-being scale

This scale contained five items from Well-being Scale (Butler & Kern, 2016), ranging in responses from 1 strongly disagree to 5 strongly agree. Sample items included: "I often feel positive to my work" or "I feel that what I do in my life is valuable and worthwhile." Cronbach alpha coefficient reported with 108 subjects in Phase two (as discussed in participants section) is 0.747.

3.2.3. Teacher identity scale

This component of the scale was developed based on interviews with three purposefully selected participants with their consent. The interviews were conducted online in Mandarin, the native language of the participants, ranging from 80 to 130 minutes (310 minutes in total). The recorded conversations were transcribed by two authors (98, 268 words in total). Based on the interview text, a 5-point Likert scale was developed to measure the teacher's identity in terms of teaching, research, and social service activities. For this purpose, two researchers with doctoral degrees extracted the themes together for agreement and transformed them into statements. Throughout the survey, 1 represents "strongly disagree" and 5 represents "strongly agree". A total of 17 items were included on the scale: 5 related to teaching, 6 to research, and 6 to social service. To perform the initial test, 108 participants were invited to indicate their responses. The explanatory factor analysis revealed Cronbach's alpha = 0.905, KMO = 0.854, and the total variance explained = 66.631, which indicates good convergent validity and reliability. As can be seen in Table 2, all items had loadings above 0.6. Both Cronbach's alpha and KMO values for teaching, research, and social services exceeded the recommended threshold of 0.7 (Straub *et al.*, 2004; Wu, 2010). The total variance explained for each construct exceeded 50%.

Table 2. *Results of factor analysis*

CONSTRUCT	INDICATOR	LOADING	CRONBACH'A	KMO	VARIANCE EXPLAINED
teaching	T1	.688	.765	.766	51.899
	T2	.749			
	T3	.630			
	T4	.807			
	T5	.716			
research	R1	.799	.869	.826	60.739
	R2	.850			
	R3	.873			
	R4	.758			
	R5	.637			
	R6	.735			
social service	SS1	.733	.836	.826	56.888
	SS2	.718			
	SS3	.678			
	SS4	.769			
	SS5	.870			
	SS6	.744			

3.2.4. Semi-structured interview

Twice semi-structured one-to-one interviews were held: one was for the development of scale in Phase One and the second was to dig in-depth the link between young LOTE teachers' identities and emotions in Phase three. Researchers developed three interview prompts, and the main questions focused on teachers' perceptions, including their expectations, feelings, and emotions concerning their work, the extent to which these emotions influenced their self-perceptions, and how they perceived themselves as a teacher, a researcher, and a social server.

3.3. Data collection

The participants were asked to sign a consent letter showing that they voluntarily participated in the study and were fully aware of their rights to withdraw at any time for discomfort. For the quantitative phase, teachers answered the online questionnaires prepared through Wenjuanxing. The survey remained open for submission for about one month. 843 solid answers were obtained (86.55% valid returns).

For the qualitative phase, the teachers participated in Semi-structured interviews. Each interview lasted from 60 to 90 min and was conducted face-to-face or online through Tencent Meeting software in the participant's native language, Mandarin. The authors recorded and transcribed all of the conversations. The selected excerpts that were used in this article were translated into English.

3.4. Data analysis

Cronbach alpha values were first calculated to determine whether the proposed scales (i.e., burnout, well-being, and identity) measured the constructs under investigation in a reliable way. Descriptive and inferential statistics were then computed to establish burnout, well-being, and identity levels, as well as the interrelationships among the scales. The former involved tabulating the means and standard deviations for the different scales, while the latter consisted of running correlation and regression analysis with each term as the dependent variable and the scales concerning each as independent.

After sorting out the interview texts, researchers extracted the meaning unit of the content related to the outline and encode the meaning units in qualitative data using NVivo 12 plus back-to-back. Then one of them would be in charge of the remaining data analysis when they complete discussing the controversial tagging and reaching the consistent annotation, which ensures the validity by investigation triangulation.

4. Rᴇsᴜʟᴛs

4.1. State of Teachers' well-being, burnout and identity and Their Correlations Out of Quantitative Data

In relation to the descriptive statistics (Table 3), the results indicate that teachers were highly identified (M = 3.994, SD = 0.658) or in other words, they have higher sense of identities. In addition, their positive emotions were apparent in the well-being items (M =

3.915, SD = .661). However, they also experienced negative emotions, though at a lower level (M = 3.419, SD = 1.030). The picture of teachers' identity across the three areas of their career development (i.e., teaching, research, and social service) differs slightly.

Participants reported the lowest degree of identification for the teachers' social service, and this was also the section of the identity where the responses varied most (M = 3.958, SD = .744). This might indicate that teachers did not identify much from social service in terms of helping them with career development, regardless of whether these concerns the individual, academic or social spheres. Statistically, the teaching and research dimensions showed statistically higher mean values (M = 4.002; 4.018, SD = 0.723; 0.652), indicating teachers' greater involvement with both areas of practice. Consequently, when faced with career development, teachers demonstrate heightened awareness of their responsibilities, intending to maximize teaching and research improvements but pay less attention to her social roles or social contribution.

Table 3. *Descriptive statistics of the scores (N = 843)*

CONSTRUCT	MIN.	MAX.	MEAN	SD	SKEWNESS	KURTOSIS
identity	2.06	5.00	3.994	.658	-.663	-.350
teaching	1.20	5.00	4.002	.723	-.665	-.110
research	1.33	5.00	4.018	.652	-.554	-.316
social service	1.83	5.00	3.958	.744	-.710	-.397
burnout	1.00	5.00	3.419	1.030	-.845	-.845
well-being	1.60	5.00	3.915	.661	-.321	-.321

Table 4 presents Pearson's correlation between teacher identity and emotion. In the internal scales of identity, identities in social services show the highest correlation with identities in research (r = .822, p < .01) and identities in teaching (r = .820, p < .01). And there is a high correlation between identities in teaching and identities in research (r = .773, p < .01). In the different levels of emotions, identity is generally weakly related to burnout and strongly related to well-being. Additionally, burnout does not correlate with well-being at all, not even negatively. Furthermore, the marked difference concerning the correlation between teachers' identity and emotion raises some interesting questions about the extent to which teachers identify to develop themselves. This indeed seems to be an essential issue considering which area teachers tend to make more effort, as indicated by the higher correlation between well-being and identities in teaching (r = .734) and identities in research (r = .743) but a relatively lower correlation between well-being and identities in social service (r = .590).

Table 4. *Pearson's correlations of identity-emotion*

SCALE	1	2	3	4	5
1.identity in teaching	–				
2.identity in research	.773*	–			
3.identity in social service	.820**	.822**	–		
4.burnout	.101**	.044	.140**	–	
5.well-being	.734**	.590**	.743**	.000	–

Note. n = 182 students. *p < .05. **p < .01 (two-tailed).

Considering that correlation analyses cannot reveal cause-and-effect relationships, four sets of simple linear regression analyses were conducted to investigate the relationship between teacher identity and teacher emotion. As shown in Table 5, there is a cause-and-effect interrelationship between burnout and identity in teaching (β = .101, p < .005) and identity in social service (β = .140, p < .005). A surprising finding in research is that there is no correlation between burnout and identity. As regards well-being and identity, the study indicates that there exists a cause-and-effect relationship between well-being and identity in teaching (β = .026, p < .005), between well-being and identity in research (β = .027, p < .005), and between well-being and identity in social service (β = .026, p < .005).

Table 5. *Results of regression analysis*

PREDICTOR	B	Std.error	β	t	P VALUE	OUTCOME	R2
burnout	.071	.024	.101	2.952	.003	identity in teaching	9%
well-being	.804	.026	.734	31.374	.000	identity in teaching	53.9
burnout	.028	.022	.044	1.278	.201	identity in research	1%
well-being	.582	.027	.590	21.186	.000	identity in research	34.7
burnout	.101	.025	.140	4.089	.000	identity in social service	18%
well-being	.836	.026	.743	32.196	.000	identity in social service	55.2
identity in teaching	.144	.049	.101	2.952	.003	burnout	9
identity in research	.070	.054	.044	1.278	.201	burnout	1
identity in social service	.193	.047	.140	4.089	.000	burnout	18
identity in teaching	.671	.021	.734	31.374	.000	well-being	53.9
identity in research	.598	.028	.590	21.186	.000	well-being	34.7
identity in social service	.660	.021	.743	32.196	.000	well-being	55.2

nurturing emotional intelligence and providing teachers with strategies for handling challenging situations. Additionally, training programs should pay more attention to encouraging EFL teachers to consider how their preferences and personal traits may affect their selected ER strategies. This reflective process can motivate teachers to adapt or optimize their employed ER strategies efficiently, which is likely to further enhance their effectiveness.

4.2. The Relationship of Teacher Identity and Emotion Out of Qualitative Data

4.2.1. Higher Sense of Teacher Identity Trigger Positive Emotions

The three participants were asked to explain and justify their sense of teacher identity in their teaching, research, and social service. To begin, two teachers identified themselves as teacher and researcher because they had been recruited as teaching and research positions when they entered their current workplaces in the universities. However, the identity of being "a teacher and a researcher" at the same time did not sustain throughout the working period.

T1, however, also explained that she does not see herself as having a major problem with teaching because she enjoys her job and has a great deal of well-being. As an example, T1 found teaching to be very fulfilling.

That is all I enjoy doing. Although there are some difficulties, everything takes work. This is a relatively good profession. Because we are all young teachers, the generation gap does not bother me much.

4.2.2. Lower Sense of Teacher Identity Trigger Negative Emotions

When it came to teaching, teachers were required to assume different roles. Initially, teachers revealed their expectations for a teacher job only as teachers. However, due to unfamiliarity and constraints associated with students' individual differences and teaching requirements, T1 soon realized that a qualified teacher must calibrate his identity as a teacher as well as a coordinator.

I wanted to give my knowledge to students and hoped they liked me. Practically, there is still a generation gap with my students that I need to adapt to their individual differences. More-over, some of my teaching concepts may not be realized due to class time length limitations and strict requirements set by the syllabus. Therefore, I need to coordinate these conflicts.

Again, though T1 is talking about her multiple task practitioner roles both as a teacher and as a coordinator, she clearly showed emotions of feeling burnout or not quite well-being of taking many roles being a college teacher.

In response to the same question, T2 questioned the role of teaching, felt burned out, and finally decided to end the teacher's identity and begin further education as a doctor student.

After continuously repeating the teaching work, I started to get burnout. I lost the enthusiasm to spend time thinking about what students like. I did not want to stay in the same situation anymore. I applied for the doctoral position.

4.2.3. Lower Sense of Researcher Identity Trigger Negative Emotions

Some teachers tended to identify themselves merely as a teacher, as T1 has said.

We doctoral students are all employed as teachers and researchers. When I was a teaching assistant, there were relatively few classes, but now that I am a lecturer, this workload will continue. Nonetheless, being a teaching assistant, the focus will remain on teaching positions, with many class hours to attend. The teaching workload is quite heavy, with two full days of classes per week. As part of my teaching duties, I must also prepare and batch homework assignments. New course teachers spend a great deal of time preparing their lessons. My research Project has no progress for a few week. I totally have no time and extra energy to take care of my research project.

Although she did not explicitly use any emotional terminology in the interview text above, we can nevertheless sense the negative emotions of burnout caused by not being able to work on her research project as planned. Her lower sense of being a teacher researcher is evident in this statement.

In the construction of the research identity, teachers are largely influenced by how they can identify themselves as researchers. Despite knowing the importance of scientific research, T3 has expressed her halt for the construction of her research identity. In the face

of publication pressure, she may wish to terminate her promising research career, indicating a tendency toward professional burnout.

> On the one hand, society and the university encourage us to do research. On the other hand, we need to research for the pressure of promotion of professional titles. I have written some manuscripts but have yet to receive the acceptance notice. I rarely hear people (coworkers) get their papers published. I need to find out how other colleges treat research. It may be an unpromising area that I would like to avoid.

She clearly does not make too much sense out of the researcher identity in her job due to too much pressure for publication.

4.2.4. Social Service Identities Trigger Positive Emotions

Social service is also a concern to the participants. According to T3, serving society is today's university teachers' unshrinkable responsibility and obligation. Hence, T3 reminded herself that she was a social server. When she fully leveraged the professional advantages, she felt that she got well-being, reinforcing her identity as a social server.

> I actively respond to the new requirements bestowed on university teachers by the new era, which is necessary for today's university teachers. I enjoyed fully leveraging the professional advantages of Russian and devoting myself to serving local economic and social development. I have provided training, data translation, and information consulting services for enterprises and institutions. Showcasing my expertise in this beautiful city is a great blessing in life! I will continue to work hard to contribute to the society.

5. DISCUSSION

5.1. Dialectical Relationship Between Identity and Emotions

The authors draw upon the significant areas of career development (e.g., teaching, research, and social service) to document how university LOTE teachers develop their identities and experience emotions. Additionally, we discussed the interrelationship between teacher identities and emotions in the Chinese context. On the one hand, the study's findings are in line with previous research that has demonstrated a clear correlation between language teacher identity and teacher emotion (e.g., Qin *et al.*, 2019; Chen *et al.*, 2022; Zhang *et al.*, 2022; Derakhshan *et al.*, 2023a, 2023c). On the other hand, both positive and negative aspects of emotion and their relationship with identities were observed in the current study. According to the qualitative findings, teachers' identities trigger different emotions and affect their emotional well-being. Well-being reinforces teacher identity, and a sense of identity promotes well-being. T1, for instance, was aware of being a teacher as a result of the sense of well-being she experienced while teaching, and this continued sense of well-being confirmed her identity as a teacher. Additionally, teacher burnout can cause a loss of identity, and a low sense of identity can contribute to burnout. The burnout of T2 resulted in him becoming a student instead of a teacher. Additionally, T3's lack of a sense of research iden-

tity contributes to her unwillingness to carry out any research. By identifying these aspects of emotion, we can better understand how teachers construct their sense of self-identity as teachers. The interaction between identity and emotion offers a way for teachers to maintain their high sense of teacher identity and positive emotion. As a result, their identity remained stable and consistent over time.

5.2. Correlation Between Teacher Identity and Emotions

Quantitative results indicate a higher correlation between teacher identity and well-being and a lower correlation between teacher identity and burnout. Previous research confirmed that there is a link between teacher identity and teacher emotion. Our study went further to confirm the interconnection of emotion with identities in different areas of career development (including teaching, research and social services), which further supports the idea of the complex relationship between them (Schutz & Lee, 2014; Chen *et al.*, 2022; Zhang *et al.*, 2022). The findings indicate that differences among LOTE teachers exist in the different sense weights of the teacher identities as well as the emotions triggered by various identities.

Teacher emotions and identities associated with teaching and social service are more closely correlated than those associated with research. Further, among the three sub-identities included in the questionnaire, the teacher identity had the highest mean value, suggesting that the teacher role was more effective in developing teachers' careers than the researcher or server role. In line with some previous research that showed university teachers preferred teaching over research (Blix *et al.*, 1994), the results of this study demonstrate that teacher identities are crucial to successful career advancement. Nevertheless, these findings cannot be generalized to all language teachers. The findings of this study differ from those of other studies concerning English teachers in universities, which indicate that English teachers are generally highly motivated to carry out research and identify as teachers (Xu, 2014; Zhang *et al.*, 2022; Derakhshan *et al.*, 2023c). Inconsistency may be explained by the English-centered SSCI academic circle (Zheng, 2021) and by the smaller readership of CSSCI (China SSCI) journals and projects (Guo *et al.*, 2020), both of which compress the research space of LOTE teachers, resulting in different identifications for research.

In addition, teachers expressed their burnout from having to fulfill the role of researcher. This is also true for the present study. The time and effort teachers could devote to research was limited after they had spent hours and days preparing for face-to-face instruction (Guo *et al.*, 2020). Therefore, teachers' roles as researchers were much less noticeable in all career aspects, as indicated by the participants. Furthermore, this study expanded the career areas of identity development. As far as career development is concerned, teachers played a variety of roles. Teachers' identity in social service had a slightly lower mean difference than researcher identity but similar to teaching identity. That is to say, the role of doing social service was also noticeable for teachers. This finding agrees with Barahona & Ibaceta-Quijanes's (2020) findings which showed English teachers had a strong desire to contribute to society during their identity development. While we found that LOTE teachers are also willing to contribute to social services. This seems to suggest that teachers developed healthfully when teacher emotion is aligned with a specific set of circumstances with respect to their imagined identity. In light of this interpretation, additional measures

must have been taken to facilitate teachers' ability to cope successfully with the challenges associated with teacher development.

6. Conclusion

In conclusion, the present study indicates a dialectical relationship between teacher identity and teacher emotion, taking into account the areas of teaching, research, and social service. All three sub-roles of teachers were examined in details. The mean of teaching identity was highest, followed by social service identity, and the mean of research identity was lowest. In other words, teachers are most likely to identify themselves as teachers rather than researchers and social servers. In addition, these results indicate that teaching and social service teachers had performed more noticeable identities than they did in the research study. In addition to other detailed results verifying the relationship between identities and emotions, the present study showed that the verification of identity explicates the positive emotions experienced by the participating teachers. The non-verifications of identity, on the other hand, indicate the negative emotions of the teachers. In contrast, the participants' positive emotions reinforce a strong sense of identity, whereas the negative emotions reverse the identity route.

In three ways, these findings may impact teacher development and shed light on future studies of teacher identity and emotion:

Firstly, one of the major implications of this study is the inconsistency and conflict between teachers' teaching, research, and social service. The burden of teaching is considerable for teachers (Blix *et al.*, 1994). The lack of teaching faculty in Chinese universities poses a particular problem for LOTE teachers. As a result, they devote considerable time to teaching and are unlikely to devote additional time and effort to research. In order to accomplish this, it is essential to provide LOTE teachers with more research space. As well, LOTE teachers are responsible for a wide variety of tasks in China, such as foreign affairs reception, coordination, and language services (Wen & Zhang, 2017; Barahona & Ibaceta-Quijanes, 2020). According to our study, the identity of social service is an overlooked component of the professional development of LOTE teachers.

Second, the current study suggests that teacher identity and emotion are dialectical, as teachers are more satisfied when they identify as teachers and then experience higher levels of positive emotions as a result. In order to help LOTE teachers maintain their identities as teachers, stakeholders should employ various emotional strategies. In addition, they need more recognition and support for both their research and social service identities. It is feasible to create a research team or community for LOTE teachers, especially in the problem-oriented research area (Zheng, 2021). In addition to creating better conditions and promoting the vitality of the research area, experienced researchers can share their research ideas and offer tailored support to LOTE teachers as well (Qin *et al.*, 2022a; Guo *et al.*, 2023). Thus, a group of LOTE researchers could benefit from the community resources and speak up regarding LOTE education problems and solutions (Guo *et al.*, 2020). Additionally, LOTE teachers should be provided with diversified research appraisals that differ from that provided to English teachers in order to enhance positive emotions and research identities. This may be partly due to the fact that English teachers have greater access to international

academic communication and more publication space. There is, however, a limited number of journals for LOTE teachers to publish their work in, as well as a limited number of communities within which they can share and improve their research for the LOTE teachers.

Lastly, social service should be included as part of the career development of LOTE teachers, in addition to teaching and research. As part of the Belt and Road Initiative, LOTE teachers are positioned to provide social service in higher education, intercultural communication, and other social responsibilities. Thus, the government must provide additional support for LOTE teacher education and social development.

Despite the fact that this study provides valuable insights into the relationship between teacher identity and teacher emotion, it is necessary to acknowledge its limitations and consider future research directions. As a first step, it is necessary to recognize that relying solely on burnout and well-being scales may not entirely capture the depth and nuances of respondents' emotional experiences. Other positive and negative emotions, such as anxiety and enjoyment, can fluctuate and become more complex over time. In order to gain a more comprehensive understanding of teacher emotions, future research could incorporate additional constructs. It is also recommended that in order to enhance the generalizability of the findings, data or principles should be collected from additional populations and instruments in order to extend beyond this unique context. Longitudinal interviews and observations have the potential to provide rich insights into the lived experiences of EFL teachers and offer a deeper understanding of the intricate relationship between teacher identity and teacher emotion.

Funding information

Data Availability

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Competing Interests

The authors declare that they have not competing interests.

Declaration of paper originality by the corresponding author

I declare that the paper whose title is given above is original, unpublished and not submitted for publication in any other journal.

Consent to participants

Informed consent to participate was obtained from all individual participants included in the study.

Consent for publication

Informed consent for publication was obtained from all individual participants included in the study.

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