



Article

Teachers' Acceptance of Online Teaching and Emotional Labor in the EFL Context

Renzhong Peng 1, Qiqin Hu 10 and Bochra Kouider 2,*

- School of Foreign Languages, Huazhong University of Science and Technology, Wuhan 430074, China
- ² Department of English, Abou Bekr Belkaid University, Tlemcen 13000, Algeria
- * Correspondence: bochkoui@gmail.com

Abstract: The recent growth and sustainability in online education have led to a greater demand for language teachers to accept online teaching and a heightened focus on language teachers' emotions in an online setting. Based on the Technology Acceptance Model (TAM), this study attempted to investigate the relationship between English as a Foreign Language (EFL) teachers' acceptance of online teaching and their emotional labor in online teaching. A questionnaire was distributed to 338 EFL teachers working at 19 middle schools and 24 high schools in China, and 10 teachers were interviewed. Following a series of analyses of the data, a structural relationship model integrating acceptance of online teaching and online teaching emotional labor strategies was developed and tested. The results indicate that EFL teachers' acceptance of online teaching significantly predicts three emotional labor strategies in online teaching. Specifically, EFL teachers' acceptance of online teaching positively influences deep acting and expression of naturally felt emotions, while negatively affecting surface acting. The obtained results address important theoretical, methodological, and practical gaps by examining the interplay between acceptance of online teaching and emotional labor in the context of online language education, a dimension that previous studies have largely overlooked.

Keywords: EFL teachers; teachers' acceptance of online teaching; emotional labor; online teaching environments; structural equation modelling



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1. Introduction

There has been remarkable success in spreading and sustaining English-language teaching over the world in recent decades [1]. This expansion and sustainability may be traced back to the fact that English is valued for its ability to boost sustainable economic growth and national progress. This growth pattern parallels the rapid development of new technologies [2]. The many advantages it provides to both teachers and students have contributed to its widespread adoption. As a result, there has been growth in adopting online teaching [3]. Literature demonstrated that online teaching offers advantages over traditional face-to-face instruction by overcoming spatial and temporal constraints, enabling remote interaction and access to diverse learning resources [4]. However, it also has limitations such as reduced interactivity and limited teaching content diversity [5,6], which raises concerns among teachers regarding the limited utilization of online teaching platforms and available technological resources [7]. At the same time, within online teaching, the intricate interaction between temporal and geographical isolation presents a unique challenge that compels teachers to adopt novel roles while effectively regulating their own emotional reactions. The implementation of this change is of paramount importance in order to maintain sustainability in the online instructional methodology [8]. As a result, the online teaching environment places increased demands on instructors' emotional expressions, requiring them to engage in what is referred to as emotional labor [9].

Emotional labor has an immediate and significant effect on the quality of instruction performed by instructors [8,9]. Teachers' emotional investment in their classrooms

has a significant impact on their motivation, concentration, and overall instructional outcomes [8,10,11]. The ability of a teacher to control their emotions is essential for fostering a positive and engaging online learning environment [1], which increases student engagement and retention rates. Teachers are being compelled to reassess and adjust the emotional labor they dedicate to the online education environment due to its dynamic character [8]. Hence, teachers are faced with the need to adapt their emotional involvement in order to address sustainable online teaching. The implementation of this transformation is crucial in order to guarantee that the emotional labor performed is effectively aligned with the complexities of distance education. The need for this adaptation necessitates a reassessment of the dynamics of emotional work in online education environments [8]. Nonetheless, the process of transitioning is subject to the effect of technological advancements on human emotions and the ongoing integration of technology into the realm of emotional labor [12]. The act of openly expressing emotions in the context of online education poses difficulties that are associated with the process of adapting to technology [8,13,14]. The dynamic nature of technology enables teachers to use diverse approaches to regulating their emotions throughout various virtual environments. Teachers have the ability to adapt their communication strategies, methods of sharing information, and ways of responding in accordance with their emotional displays. The adoption of online teaching by teachers has a crucial role in shaping their emotional experiences and actions, ultimately impacting the results of online education [4,7]. Hence, the lack of positive acceptance towards online teaching might result in resistance, changes in emotional labor practices, and adverse effects on perceived teaching outcomes [10]. In light of these complexities, there exists a need to investigate EFL teachers' acceptance of online teaching and its impact on their emotional labor strategies. Pertaining to this, this study attempted to investigate how EFL teachers' acceptance of online teaching affects their emotional labor strategies. Given that the interaction between teachers and students in online learning environments can be both asynchronous and synchronous, recognizing the increase in the synchronous mode of online teaching forms, this study focuses on the synchronous mode of online teaching forms.

The objective of the study was to facilitate a well-informed decision-making process for the advancement of emotional labor in online teaching within the context of China. The findings of this study hold promise for policymakers and teachers in various nations seeking to augment the level of sustainable technology integration in pedagogy and the management of emotional labor in online teaching. Furthermore, the ongoing study possesses the capability to provide novel scholarly insights into the urgent matter of sustainability in technology adoption and emotional labor in online education, which carry significant significance for teachers, educational establishments, and governmental entities across the globe. The present research has made a valuable contribution to the understanding of the viewpoints held by teachers regarding the implementation of technology and the emotional labor involved in online teaching, with the aim of enhancing the quality of EFL education.

2. Literature Review

2.1. Technology Acceptance Model and Acceptance of Online Teaching

The Technology Acceptance Model (TAM), originally proposed by Davis (1985; 1989) [15,16], is a widely utilized and influential model in the field of information technology. TAM emphasizes the role of technology acceptance in shaping users' attitudes and behaviors towards the utilization of new technologies [16]. It has gained substantial recognition and validation for analyzing the behaviors of students and instructors in relation to the utilization of emerging technologies across diverse educational settings [17–19]. In TAM, Perceived Usefulness (PU) and Perceived Ease of Use (PEU) are recognized as the two principal determinants that significantly influence individuals' technology acceptance [16,20]. In online learning environments, PU refers to users' perception of how online learning improves teaching and learning outcomes, while PEU refers to users' perception of the ease

of using specific technology [18,21]. When teachers perceive online teaching technology as easy and requiring less effort, they are more inclined to continue using it [21].

Online teaching is an educational approach facilitated by digital technologies, enabling teachers and students to engage in interactive learning anytime and anywhere [22]. Teachers' acceptance of the new technology and their willingness to use online technologies are essential for effective online teaching [16]. Technology acceptance significantly influences teachers' intention to continue utilizing online teaching platforms [7]. While TAM has been widely used to explore online teaching acceptance [19,23], there is limited empirical research on TAM in relation to teachers' emotional labor. EFL teachers' acceptance of online teaching predicts their active participation and recognition of the benefits of this instructional mode. Greater acceptance leads to increased efforts in overcoming emotional barriers, regulating emotion actively, and engaging in teaching wholeheartedly. Thus, it is worth exploring whether teachers' acceptance of online teaching can influence their choice of emotional labor strategies in online teaching environments.

2.2. Emotional Labor in Teaching

The idea of emotional labor, as first proposed by sociologist Arlie Hochschild in 1983, refers to the process of actively managing one's emotions in order to display detectable facial and body responses [24]. The concept mentioned has had a significant impact on the study of emotional labor, which is acknowledged as a separate kind of labor in addition to mental and physical labor within work environments [24]. At the core of this theoretical framework lie the principles governing emotions and feelings. These principles contain the overt or covert expectations established by companies, dictating that workers must exhibit appropriate emotions towards service recipients within certain settings [24]. According to Hochschild (1983) [24], there are three key requirements that delineate the nature of employment that entails emotional labor. These criteria include: (a) engaging in direct face-to-face and voice-to-voice encounters with the general public, (b) aiming to elicit certain emotional reactions in others, and (c) exercising management and control over emotional interactions.

While emotional labor was initially associated with service-oriented industries like flight attendants and doctors, the teaching profession has also been recognized as a context where emotional labor is required. This recognition is based on the criteria established by Hochschild (1983) [24] and has been supported by various studies [25–28]. The concept of teachers' emotional labor encompasses the deliberate adjustment, control, and administration of emotions and their manifestation, influenced by normative convictions, cultural anticipations, and the emotional display regulations inherent in the field of teaching [26,27,29–31]. Teachers possess inherent knowledge about the need to conform to certain laws that regulate the manifestation of emotions during instructional sessions inside the classroom. These regulations include the exhibition of positive emotions and the inhibition of negative emotions [9,32,33]. In addition, the concept of emotional labor involves the process of regulating and managing emotions, as discussed by Hochschild (1983) [24] and Grandey (2000) [34]. It is widely recognized as a crucial component of teachers' professional lives, as highlighted by Constanti and Gibbs (2004) [35] and Gkonou and Miller (2020) [36]. The act of engaging in emotional labor allows instructors to effectively convey good feelings throughout their teaching practices [25,37], hence facilitating successful communication between teachers and students [38,39]. The scholarly examination of teachers' emotional labor has primarily focused on four main inquiries: (a) the effects of emotional labor, as explored by Yin (2009, 2015) [27,40], Hülsheger et al. (2010) [41], Lyndon et al. (2021) [42], Yilmaz et al. (2015) [43], and Yin et al. (2013) [44], (b) the strategies employed by teachers to manage emotional labor, as investigated by Yin (2012) [30] and Beltman and Poulton (2019) [45], (c) the factors that influence teachers' emotional labor, as studied by Basim et al. (2013) [46] and Thies and Kordts-Freudinger (2019) [47], and (d) the measurement of teachers' emotional labor strategies, as examined by Yin (2012) [30] and Ma et al. (2023) [11]. In order to participate in emotional labor effectively, teachers use many ways to manage

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and regulate their emotions. These tactics include Surface Acting (SA), Deep Acting (DA), and the authentic expression of naturally felt emotion (ENFE). Simulated Affectation (SA) comprises the act of displaying emotions that are not experienced, while Deep Acting (DA) entails the deliberate modification of one's emotions in order to convey desired emotional states. Previous research has examined both methodologies [24,34,48]. Furthermore, the manifestation of innate emotions entails the authentic and spontaneous experience and communication of emotions that are consistent with the norms and standards of a professional context [40,49]. However, in the realm of language education, there has been a notable upsurge in scholarly inquiry about the substantial impact of emotions on the experiences of teachers and students [50]. Significant attention has been directed to the phenomenon of emotional work among language instructors in traditional classrooms [29]. While a substantial body of research has focused on the emotional labor methods used by instructors in traditional face-to-face teaching settings, there is a paucity of empirical studies that have explored this phenomenon in the online educational environment [8,9,13,14].

3. The Present Study

Previous studies have confirmed that factors such as the adaptation to online teaching, the invisibility of the online teaching space, and the peripheral environment surrounding the teachers can influence teachers' online teaching emotional labor [8,13]. The adaptation to online teaching technology has been found to have the most significant impact on teachers' emotional labor. However, the existing research has not specifically investigated the influence of acceptance of online teaching on teachers' emotional labor strategies in online teaching. Therefore, this study aimed to explore the effect of EFL teachers' acceptance of online teaching on their emotional labor within an online teaching context, drawing upon the TAM. The research questions of this study were as follows:

- A. To what extent do Chinese EFL teachers accept online teaching after experiencing online teaching?
- B. What are Chinese EFL teachers' online teaching emotional labor strategies?
- C. How does Chinese EFL teachers' acceptance of online teaching affect their online teaching emotional labor strategies?

4. Materials and Methods

4.1. Participants

The participants were 338 EFL teachers (242 women, 96 men) employed at middle (45%) or high schools (55%) in China. Although 381 teachers originally participated, 43 respondents with the same answers for all items, missing responses, or without online teaching experience were removed from the data analyses. The teachers' ages ranged from 24 to 55 years old (mean = 33.2, SD = 6.316), with 122 (36.09%) aged 31 to 40, 75 (22.19%) aged 41 to 50, 38 (11.24%) aged 51 to 60, and 103 (30.48%) aged 21 to 30; 228 (67.46%) held a bachelor's degree, and 103 (30.47%) and 7 (2.07%) held a master's degree and a doctor's degree, respectively. With a range of 0 to 27 years of experience teaching English in middle or high schools, the participants had generally taught English for 13.26 (SD = 6.975) years. All the participants had experienced EFL online teaching. Ten EFL teachers (referred to as A, B, C, D, E, F, G, H, I, and J to protect their anonymity) were selected for interviews using purposive sampling. These teachers represent a diverse range of backgrounds and come from eight different universities across China. They had been required to teach online via different online teaching platforms (e.g., Tencent Meeting) for 3 to 12 months. This group of teachers, consisting of five males and five females, exhibited a diverse range of characteristics, including their educational background, teaching specialties, and gender. This careful selection ensured a comprehensive representation of perspectives. It is noteworthy to emphasize that these teachers had embarked on this mode of instructional delivery without prior formal guidance or structured training, and their familiarity with online teaching remained comparatively limited. Before completing the questionnaire and engaging in teacher interviews, the participants were informed of the purpose of the study

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and that the results of data collection would be intended solely for academic purposes. They would not be identified through any report in this study. They volunteered to complete the questionnaire and to be interviewed.

4.2. Instruments

The research employed three instruments: an eight-item background questionnaire, a seven-item AOT (Acceptance of Online Teaching) scale, and an 18-item online emotional labor scale. In the introductory section of the questionnaires, it was clearly conveyed that participation was voluntary and anonymous. Responses to the questionnaire were intended exclusively for research purposes and were not intended for commercial or any other utilization.

Background information. The background survey included questions about teachers' contextual (school level) and personal information (gender, age, educational level, teaching years, and online teaching experience).

Acceptance of online teaching. The seven-item AOT scale used in this study (Cronbach's α = 0.937) was modified from that designed by Sun and Zou [7] (2022) and Venkatesh et al. (2003) [51]. The questionnaire was designed with a total of seven items encompassing the two dimensions of PU (Perceived Usefulness) and PEU (Perceived Ease of Use). The resulting AOT scale items were placed on a 5-point Likert-type scale, with values of 1 to 5 assigned to the five descriptors ranging from "strongly disagree" to "strongly agree," respectively.

Online teaching emotional labor strategy. The questionnaire consists of 18 items and has a reliability coefficient of 0.779. It was initially composed of 20 items but was later revised to include 18 items. In accordance with Ma et al. (2023) [11], item statements within a questionnaire are achieved through diverse methodologies encompassing the integration of qualitative data as well as existing scales. The process of item derivation for the present questionnaire followed a sequential procedure, whereby qualitative data collection served as the initial phase, as previously detailed in the scholarly contribution by Aydın (2016) [52]. Thus, before deciding on the questionnaire items, interviews were conducted with teachers first, focusing on the methods that teachers use to manage their emotions in online settings, the impact of online teaching on the expression of their emotions, and the factors influencing their emotional labor in online teaching. The interview outline can be seen in Appendix A. After conducting interviews with teachers, a content analysis approach was employed to systematically examine the insights provided by teachers. With the guidance of the analytical framework of the current study, different codes and signs related to online emotional labor were carefully reviewed. Based on the responses gathered from the interviews, three types of teachers' online teaching emotional labor strategies were identified: SA, DA, and ENFE (Table 1). For example, we categorized strategies where teachers pretend unfelt emotions or hide felt emotions in the online teaching environment as "SA", and strategies where teachers employ cognitive techniques to modify their felt emotions as "DA". The data describing that teachers directly expressed emotions in the online teaching process were coded as "ENFE". Teachers interviewed explicitly and implicitly indicated differences in emotional expression between online and offline teaching. Their responses were summarized and categorized using keywords mentioned by the teachers (see Table 1).

A literature review was conducted to establish a theoretical basis, including the concepts and features of teachers' emotional labor [25,26,40], as well as the analysis of teachers' emotional labor in online contexts [9,14]. Then we referred to the detailed information in the teacher emotional labor strategy scale [30], teachers' emotional labor strategy in classrooms [11], and student teachers' emotional labor strategy [53]. Items that fit the online setting were collected from these existing scales [11,30,53,54]. The initial questionnaire was developed as a three-factor model (SA, DA, ENFE) involving 20 descriptive items that were scored on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" (See Appendix B). Then, Exploratory Factor Analysis (EFA) and Cronbach's α were employed

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to revise the questionnaire's items and maintain the salient items. EFA was conducted to determine the proper factors. Cronbach's α examined the reliability, which ranges from 0.880 to 0.938. Finally, an 18-item formal questionnaire was formed. Since the original questionnaire was developed in English, all items were translated into Chinese following the translation-back-translation procedure [55].

	Table 1. Online teaching	g emotional	l labor strateg	gies profiles (of the interviewees.
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Online Teaching Emotional Labor Strategies	No. of Interviewees	Interviewees
Hiding real emotions	3	T1, T2, T9
Faking a positive emotion	3	T1, T3, T9
Suppressing negative emotions	3	T2, T3, T9
Attentional deployment through recalling pleasant memories	6	T4, T5, T6, T7, T8, T10
Cognitive shifting to consider students' perspectives	5	T4, T5, T7, T8
Displaying genuine and authentic emotions during online teaching	7	T2, T4, T5, T6, T7, T8, T9
Expressing satisfaction sincerely	5	T3, T4, T5, T7, T8
Showing anger naturally	4	T5, T6, T7, T8

4.3. Data Collection and Analyses

Two types of data were collected from the questionnaire and interview. In the present study, a method of simple random sampling was employed, and the online questionnaire was hosted on Wenjuanxing (www.wjx.cn) (accessed from 23 February to 28 March 2023), a reputable online survey platform extensively used in China. The survey, accompanied by an informed consent form, was subsequently distributed online to potential respondents across various regions of China over a span of one month through platforms including WeChat and email. The data obtained from the questionnaire were analyzed using SPSS version 22, JASP, and AMOS version 22. Firstly, EFA was performed to extract the main factors and remove items that did not meet the requirements for factor extraction. Secondly, reliability analysis and Confirmatory Factor Analysis (CFA) were conducted to test the internal consistency and validity of the revised questionnaire. A revised 18-item questionnaire was constructed. Thirdly, descriptive statistical analysis was conducted to gain an overall understanding of EFL teachers' acceptance of online teaching and their online teaching emotional labor strategies. Finally, Structural Equation Modelling (SEM) was employed to examine the relationship between EFL teachers' acceptance of online teaching and their online teaching emotional labor strategies. Ten EFL teachers were randomly selected for interviews, which served two purposes: questionnaire design and interpretation of questionnaire data results. The interview questions focused on how teachers express and manage their emotions when interacting with students in online teaching environments, the strategies they employ to regulate emotions when their true feelings differ from the required emotions, and the factors influencing emotional labor in online teaching contexts.

5. Results

5.1. Validity and Reliability

Drawing upon the works of Venkatesh and Davis (2000) [56] and Davis (1989) [16], a two-factor solution was employed to assess acceptance of online teaching. The results showed that the Kaiser–Meyer–Olkin (KMO) statistic obtained was 0.924 (>0.7) and Bartlett's test of sphericity was significant (χ^2 = 1925.388, df = 21, p = 0.000 < 0.001), indicating that the selected sample size and data collection meet the requirements for conducting factor analysis. Through orthogonal rotation, which converged after five times of iteration rotation, two latent factors were extracted by adopting an eigenvalue greater than 1.0 and factor loading greater than 0.40 [57]. Higher eigenvalues represent factors that account

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for more variance in the observed variables [58]. The eigenvalues for the two factors were 5.103 and 1.626, respectively, which means two latent factors explain a substantial amount of variance in the observed variables [58]. Factor 1, labelled as Perceived Usefulness (PU), included four items pertaining to concerns regarding the efficacy of online teaching, its impact on teaching and learning outcomes, and the utilization of online teaching methods. This factor accounted for 44.021% of the total variance. Factor 2, labelled as Perceived Ease of Use (PEU), explained 37.810% of the total variance and comprised three items related to the perceived ease of using online teaching technology. The factors loading for the acceptance of online teaching items are presented in Table 2.

To examine the internal structure of the original 20-item questionnaire on EFL teachers' online teaching emotional labor strategies and conduct factor extraction, the first EFA was performed using principal component analysis and varimax orthogonal rotation. The iteration rotation process was repeated seven times until convergence was achieved. The results revealed a KMO statistic of 0.911 (>0.7), indicating that the sample size and data collection met the requirements for factor analysis. Additionally, Bartlett's test of sphericity was significant ($\chi^2 = 4991.220$, df = 190, p = 0.000 < 0.001), further supporting the suitability of the data for factor analysis. Similarly, a second EFA was conducted, during which two descriptive items related to online teaching emotional labor strategies (Items sa7 and sa8) were removed due to cross-loading. The results showed a KMO value of 0.920 (>0.7), and Bartlett's test of sphericity was significant ($\chi^2 = 4613.038$, df = 153, p = 0.000 < 0.001). Using orthogonal rotation, which underwent six iterations, three latent factors were extracted by applying a criterion of eigenvalues greater than 1.0 and factor loading exceeding 0.40 [57].

Table 2. Results of the exploratory factor analysis.

Component	Item Statement	Factor Loading	Eigenvalues	% of Variance
	pu2. Both online and offline teaching methods possess the capability to improve students' language learning outcomes.	0.873		
Perceived Usefulness	pu1: Online teaching will increase my productivity in my English teaching.	0.828	5.103	44.021
	pu3. Online teaching enhances my English teaching effectiveness.	0.787	0.787	
	pu4. In general, online teaching proves to be an effective approach to English instruction.	0.736		
Perceived Ease of Use Surface Acting	peu3. I quickly became proficient in operating online teaching software.	0.858		
	peu1. I find the operation of online teaching software to be straightforward.	0.812	1.626	37.810
	peu2. The operation steps of online teaching software platforms are clear and comprehensible.	0.751		
	sa4. In conflicts with students, I suppress any feelings of displeasure.	0.828		
	sa5. In cases of student misconduct, such as skipping classes, I restrain my own discontent.	0.797		
	sa2. I artificially display enthusiasm, even if it does not genuinely reflect my inner state.	0.775	1.273	21.629
	sa3. When faced with network interruptions or technical malfunctions, I maintain composure despite feeling flustered.	0.768		
	sa6. Even in instances of copying homework, I do not show any internal displeasure.	0.729		
	sa1. Despite feeling tired, I pretend I have energy.	0.721		

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Table 2. Cont.

Component	Item Statement	Factor Loading	Eigenvalues	% of Variance
	da5. When experiencing anxiety during online teaching, I make an effort to calm myself by appreciating the merits of online teaching.	0.818		
Deep Acting Expression of Naturally Felt Emotion	da6. I actively strive to genuinely experience the positive emotions that I need to display while teaching online.	0.814		
	da4. Despite any personal displeasure, I am able to maintain a joyful disposition while delivering my online classes.	0.753		
	da3. Even when facing resistance towards online teaching, I redirect my attention towards positive aspects as much as possible.	0.683	2.694	22.285
	da2. In cases of student mistakes, such as copying homework, I consciously calm myself and initiate a conversation with the student.	0.665		
	da1. When students' performance in online learning is unsatisfactory, I employ perspective-taking techniques to prevent anger from arising.	0.578		
	en2. Positive feedback from students greatly boosts my confidence in online teaching.	0.862		
	en6. In cases where students lack engagement during class, I openly display my discontent.	0.848		
	en4. When students actively participate and provide insightful answers, I feel a strong sense of accomplishment.	0.813		
	en3. When students fail to pay attention in class, I openly express my disappointment.	0.806	8.524	25.478
	en5. When students are in a good state, it enhances my enthusiasm for online teaching.	0.803		
	en1. When students make progress after online learning, it brings me a profound sense of gratification.	0.543		

After the EFA, a revised questionnaire on online teaching emotional labor strategies was developed, comprising 18 descriptive items that could be classified into 3 types: SA (6 items), DA (6 items), and ENFE (6 items). Refer to Table 2 for the specific breakdown. The loading values of the items in both acceptance of online teaching and online teaching emotional labor strategies, as well as the eigenvalues and variance explanatory rates of the factors, are also provided in Table 2. In terms of the acceptance of online teaching, the factor loading of the seven descriptive items ranged from 0.736 to 0.873. Concerning online teaching emotional labor strategies, the factor loading of the 18 descriptive items ranged from 0.543 to 0.862.

In addition, the measurement model was assessed using multiple fit indices, including $\chi^2/df=7246.651$, the Root Means Square Error of Approximation (RMSEA) = 0.087, the Comparative Fit Index (CFI) = 0.903, the Goodness of Fit Index (GFI) = 0.978, Standardized Root Mean Square Residual (SRMR) = 0.057, and the Tucker–Lewis Index (TLI) = 0.890. All these values of the fit indices seemed to be appropriate, and they confirmed the validity of the proposed model, and that the final six-factor model fit well. The Cronbach's alpha (α) value for perceived usefulness is 0.925, perceived ease of use is 0.880, SA is 0.884, DA is 0.890, and ENFE is 0.938. The Average Variance Extracted (AVE) for all variables was adequate as they are higher than 0.50, indicating a good approximation of validity: The average variance extracted of perceived usefulness is 0.754, perceived ease of use is 0.712, SA is 0.582, DA is 0.595 and ENFEs is 0.735. The composite reliability for each factor was 0.246, 0.288, 0.418, 0.405, and 0.265. In order to evaluate discriminant validity, each

factor that contained the AVE was also tested with the squared correlation. The proof of discriminant validity was satisfactory.

5.2. Descriptive Statistics and Correlations

Table 3 presents the descriptive analysis results for acceptance of online teaching and online teaching emotional labor strategies, including the means and Standard Deviations (SD). According to TAM [56], if individuals exhibit a higher PEU and PU regarding information technology, it typically implies a greater level of acceptance of that information technology. The findings indicate that teachers obtained moderate scores for perceived usefulness (M = 3.43, SD = 0.89), perceived ease of use (M = 3.65, SD = 0.86), and overall acceptance of online teaching (M = 3.52, SD = 0.88). Among the three types of online teaching emotional labor strategies, teachers demonstrated the highest inclination towards the ENFE (M = 3.74, SD = 0.89), followed by DA (M = 3.47, SD = 0.88), and the least inclination towards SA (M = 3.04, SD = 0.94). Analyzing the descriptive statistics, it is apparent that the mean scores for all variables fall within the range of 3 to 4. The rating scale employed in this study is a positively oriented Likert scale ranging from 1 to 5, conceptualized as extending from one extreme to another—low to high, small to large, negative to positive, or weak to strong [59]. Consequently, it can be inferred that the EFL teachers in this study display an above-average level of acceptance towards online teaching and demonstrate a consistent inclination towards specific emotional labor strategies.

Variables M SD 5 6 7 3.52 AOT0.88 1 PU0.962 ** 3.43 0.891 0.925 ** 0.785 ** **PEU** 3.65 0.861 0.474 ** 0.461 ** **OTELS** 3.42 0.90 0.495 ** 1 0.715 ** 0.676 ** 0.677 ** 0.776 ** DA 3.47 0.88SA 3.04 0.94 -0.532 ** -0.498 **-0.511**0.108*-0.410 ** 1 **ENFE** 3.74 0.89 0.653 ** 0.622 ** 0.613 ** 0.789 ** 0.728 ** -0.416**

Table 3. Descriptive statistics and correlation matrix (n = 338).

** p < 0.01; * p < 0.05. Note. AOT = Acceptance of Online Teaching; PU = Perceived Usefulness; PEU = Perceived Ease of Use; OTELS = Online Teaching Emotional Labor Strategies; DA = Deep Acting; SA = Surface Acting; ENFE = Expression of Naturally Felt Emotions.

Regarding the correlation between acceptance of online teaching and online teaching emotional labor strategies, Table 3 shows that there are significant correlations between the acceptance of online teaching and the three sub-variables of online teaching emotional labor strategies at the 0.01 level. The correlation matrix in Table 3 indicates that all factors significantly correlated with each other. In general, significant correlations were found among the three online teaching emotional labor strategies, but it was noted that SA negatively correlated with all other variables (p < 0.01). Moreover, a negative and stronger correlation was found between SA and acceptance of online teaching (r = -0.532, p < 0.01). Significant correlations, in a positive direction, were found between acceptance of online teaching and all other factors except SA. Although significant correlations were found between acceptance of online teaching and all other factors, the correlations between acceptance of online teaching and DA (r = 0.715, p < 0.01) were higher than those between acceptance of online teaching and other factors. Moreover, it was found that acceptance of online teaching displayed relatively stronger correlations with online teaching emotional labor strategies as a whole (r = 0.653, p < 0.01).

5.3. Structural Equation Modelling

To examine the specific relationship between the EFL teachers' acceptance of online teaching and emotional labor strategies within online teaching contexts, path analysis was conducted using structural equation modelling. The results of the goodness-of-fit measures reveal that the structural model has a good fit to the data ($\chi^2/df = 2.788$, normed fit index

(NFI) = 0.900, Tucker–Lewis Index (TLI) = 0.923, Comparative Fit Index (CFI) = 0.933, Root Means Square Error of Approximation (RMSEA) = 0.073) (Table 4).

Table 4. Path ana	lysis resu	lts of model	fits.
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	χ^2/df	NFI	TLI	CFI	GFI	AGFI	RMR	RMSEA
Threshold value	1–3	>0.80	>0.90	>0.90	>0.90	>0.80	<0.80	<0.80
Index value	2.788	0.900	0.923	0.933	0.873	0.824	0.047	0.073

As shown in Figure 1, acceptance of online teaching is a significant predictor of online teaching emotional labor strategies. Specifically, acceptance of online teaching has positive impacts on DA ($\beta=0.79$, p<0.001) and ENFE ($\beta=0.67$, p<0.001), while it has negative impacts on SA ($\beta=-0.58$, p<0.001). Acceptance of online teaching is reflected by seven pathways, with standard path coefficients ranging from 0.75 to 0.89; all the estimates are significant at the 0.001 level. Furthermore, DA can be explained by six pathways, with standard path coefficients ranging from 0.58 to 0.84 and significant at the 0.001 level. ENFE can be reflected by six pathways (their standard path coefficients are 0.68, 0.84, 0.85, 0.87, 0.89, and 0.92, respectively, with a significance level of 0.001). Additionally, SA is explained by six pathways, with standard path coefficients ranging from 0.63 to 0.85; all the estimates are significant at the 0.001 level.

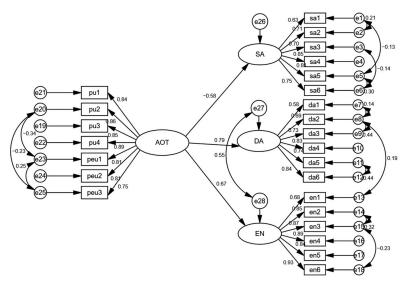


Figure 1. Structural equation model of pathways from acceptance of online teaching to online teaching teaching emotional labor strategies. Note: AOT = Acceptance of Online Teaching; SA = Surface Acting; DA = Deep Acting; EN = Expression of Naturally Felt Emotions.

6. Discussion

This study aimed to explore the effect of EFL teachers' acceptance of online teaching on their emotional labor within an online teaching context. Firstly, drawing upon the TAM framework proposed by Venkatesh and Davis (2000) [56], this study revealed that EFL teachers displayed favorable acceptance of online teaching. Specifically, EFL teachers perceived online teaching as highly useful. This implies that EFL teachers believe that incorporating online teaching can enhance teaching and learning outcomes, which is consistent with previous research findings [18,21]. Additionally, EFL teachers found online teaching technology tools to be user-friendly and easy to use. These findings are consistent with numerous studies that have investigated teachers' acceptance of online teaching using the TAM framework [7,18,60,61]. However, it is worth noting that while studies exploring the acceptance of online teaching among teachers exist [7,17], research specifically

addressing the acceptance of online teaching among middle and high school EFL teachers has been lacking. Therefore, the present study sets a precedent about a topic not being addressed in the existing literature: EFL teachers' acceptance of online teaching in middle and high school settings. Furthermore, the mean scores for perceived ease of use were significantly higher than those for perceived usefulness and the overall scale scores for the entire sample. It indicates that teachers perceived the technology used in online teaching as easy to use and navigate. These results were further supported by insights gathered through interviews conducted with EFL teachers. During the interviews, participants were asked about their opinions on online teaching and to discuss the advantages and disadvantages of online teaching. Among the 10 EFL teachers interviewed, 7 mentioned that the ease-of-use of online teaching technology and the usefulness of online teaching were factors that facilitated their willingness to learn new teaching technologies and enhance their motivation to teach online.

One potential factor contributing to the moderately high level of acceptance of online teaching among EFL teachers in this study could be the influence of the external environment. Given that technology-assisted teaching has become the norm in the current era [62–64], instructors have a strong motivation to acquire online teaching technology, and their perceived usefulness of online teaching has increased as a result. Additionally, EFL teachers in this study expressed beliefs that online teaching offered advantages over traditional teaching in various aspects, such as enhancing students' autonomous learning abilities, providing flexibility in learning time and location, and offering abundant teaching resources. This finding aligns with the findings of Wingo et al. (2017) [65], who reported that instructors highly value students' success in an online learning environment.

Taken together, these findings provide strong evidence that EFL teachers generally accept online teaching as a viable approach. The availability of online courses that can be accessed by students anywhere (whether in the classroom or at home) using various digital devices (such as computers, tablets, or mobile phones) is likely to be perceived as useful by teachers. However, EFL teachers faced challenges in the online teaching environment that were beyond their control, including issues such as unstable internet connections, physical separation from students, and the need to keep up with technological updates. These factors can significantly impact teachers' emotional expression during the online teaching process, which is supported in previous studies [8,13,18,66]. Therefore, it would be beneficial to address these challenges and improve the effectiveness of online instruction, which, in turn, can enhance teachers' positive emotions and avoid choosing surface acting. Resolving technology-related issues could play a crucial role in achieving these goals.

Secondly, concerning the overall profiles of EFL teachers' online teaching emotional labor strategies, an operational conceptualization of EFL teachers' online teaching emotional labor was initially presented, situated within the emotional experiences of EFL teachers in online teaching, and, for the first time, the dimensions of EFL teachers' online teaching emotional labor strategies were validated. It is noteworthy that this study contributes to the existing literature by responding to a call made by previous researchers [8,30,67] for the development of measurement tools for teachers' emotional labor and the exploration of variations in online teaching emotional labor strategies. Subsequently, the predominant types of online teaching emotional labor strategies employed by Chinese middle and high school EFL teachers are examined. The three-dimensional structure of online teaching emotional labor strategy consists of surface acting, deep acting, and expression of naturally felt emotions, which aligns with Yin's (2012) [30] three-dimensional framework of emotional labor strategies that includes surface acting, deep acting, and expression of naturally felt emotions. This structural division is also consistent with prior research indicating that the performance of emotional labor online involves a complex decision-making process influenced by factors such as teachers' teaching philosophy [14], their level of adaptation and acceptance of online teaching technology [13], the invisibility of the online teaching space, and the external environment surrounding the teachers' physical location [8]. Analysis of EFL teachers' scores on the three types of online teaching emotional labor strategy

reveals a higher inclination toward utilizing deep acting and expression of naturally felt emotions as strategies for regulating their emotions, while displaying a lesser preference for surface acting. Echoing prior research on teachers' emotional labor in the online teaching context [14], the present findings provide empirical evidence supporting the notion that teachers can experience, manage, and regulate their emotions while teaching online. Moreover, concerning emotional labor strategies, previous studies by Yin et al. (2017) [28] and Zhang and Zhu (2008) [68] revealed that Chinese teachers utilized surface acting less frequently. The current study aligns with their findings, indicating that EFL teachers are more inclined to engage in deep acting and expression of naturally felt emotions rather than surface acting. This tendency may be attributed to the fact that EFL teachers, in the process of online teaching, prioritize the effectiveness and satisfaction of online instruction. In line with specific online teaching contexts, they exert efforts to adjust their internal emotions using deep acting strategies to align them with their emotional expressions, thereby fulfilling the emotional demands of online education [8].

The preceding discussion emphasizes the effectiveness of employing deep acting and expressing naturally felt emotions as effective strategies for emotion management, irrespective of the instructional context, be it a traditional classroom or an online setting. Through engaging in deep acting, the majority of teachers were able to achieve congruence between their emotions and expressions. This is supported by insights gained from the interviews:

"As a teacher, I firmly believe it is inappropriate to bring negative emotions into the classroom, whether it is a physical classroom or an online environment. I am convinced that maintaining a positive attitude towards online teaching contributes to creating a better online learning experience, which, in turn, facilitates positive educational outcomes. When we speak with enthusiasm, students perceive us as more approachable, and this boosts their confidence in actively participating and responding to questions" (T2)

Moreover, the participants in this study were more inclined to express their feelings using expression of naturally felt emotions than using deep acting and surface acting, which is consistent with the results reported in Yin et al.'s (2017) [28] study. In other words, EFL teachers were less likely to fake emotions that they did not truly experience through surface acting and instead showed a preference for expressing their authentic feelings. These findings also offer support for the arguments put forth by Benesch (2020) [29] and Loh and Liew (2016) [69] that the unique and contextually typical features of emotional labor in EFL teaching emerge due to factors such as neoliberal educational culture, the identity of language teachers, intercultural perspectives within English language disciplines, and the emphasis on bidirectional interaction between teachers and students in language instruction. This helps understand why EFL teachers tend to express genuine emotions in the teaching process. Moreover, the challenges posed by the invisibility of teacher behavior and emotions in the online space can affect the process of emotional labor engagement for teachers. In the absence of visual cues from students in the online environment, teachers face difficulties in gauging their students' emotional reactions, and consequently, they may need to employ additional strategies and invest more energy to ensure students' attention during the lesson [8]. Teachers may choose to directly express their dissatisfaction and anger with the hope of actively engaging students in the classroom. Another reason for preferring the expression of naturally felt emotions could be the belief that such emotions are more likely to encourage students and are easier for students to perceive. Furthermore, the invisibility of the online teaching space presents challenges for teachers to fake or suppress emotions during online instruction. This finding contradicts the research conducted by Wang and Song (2022) [8], who examined a group of 20 Chinese English teachers and found that teachers tend to suppress their emotions to ensure the effectiveness of online teaching. However, it aligns with the findings of Li and Liu (2021) [54], who investigated 484 Chinese beginning secondary school EFL teachers and found that teachers engage less in surface acting. Regardless of whether teachers suppress negative emotions or

feign positive emotions, mobilizing genuine positive emotions is more effective [31]. As expressed by teachers in the interview:

"In a traditional classroom setting, we have the capability to remind students who may be inattentive. However, in the context of online teaching, this option is not available to us. Consequently, our only recourse is to directly express frustration or anger, aiming to foster active engagement and serious participation from students in the online teaching process" (T9)

"During the online teaching, I feel worried because I can't see the students' reactions or know if they understand what I teach. Sometimes, I even let the students know when I am angry. Being a teacher makes me feel a strong sense of responsibility, and I work hard to ensure that every student understands what I teach" (T6)

"In the online learning environment, I believe that suppressing or pretending my emotions is not beneficial for both myself and the students. This is because we spend a considerable amount of time together, and it becomes challenging for me to consistently fake or suppress my emotions during our long-term relationship" (T10)

Thirdly, the results demonstrated significant relationships between EFL teachers' acceptance of online teaching and the three types of online teaching emotional labor strategies (surface acting, deep acting, and expression of naturally felt emotions). Specifically, EFL teachers' acceptance of online teaching positively predicts their engagement in deep acting and expression of naturally felt emotions, while negatively predicting their involvement in surface acting. These results align with the initial expectations, indicating that EFL teachers' acceptance of online teaching significantly influences their adoption of different online teaching emotional labor strategies. This finding supports the key conclusions drawn from previous studies based on the TAM, which emphasize the critical role of instructors' acceptance of online teaching in shaping their attitudes, behaviors, and perceptions [7,70,71]. When teachers perceive online teaching as beneficial for their teaching outcomes, teachers' inclination towards a positive attitude and acceptance of online teaching can be enhanced [18]. Consequently, EFL teachers with a positive attitude towards online teaching are more likely to invest greater effort in utilizing educational technology for instruction. Conversely, resistance towards online teaching may result in a negative attitude, which can impact both the teachers' emotional experiences and behavioral tendencies during online instruction [13]. In addition, according to the investigation conducted by Jenßen et al. (2023) [72], there is a positive correlation between the integration of technology into teaching practices and teachers' professional expertise, as well as their affective-motivational dispositions encompassing emotions and self-efficacy. Wang and Song (2022) [8] argued that due to the influence of emotional norms associated with the target language culture and online teaching technologies, English teachers adopt different emotional labor strategies while engaging in online instruction. These findings provide additional support for the results of this study, and this is further corroborated by the interview data obtained from the teachers. Examples of responses are as follows:

"I have always been resistant to online teaching, as I believe it is not as effective as traditional teaching. I feel frustrated because I cannot observe the students' learning performance. However, I have to suppress my emotions and refrain from expressing my dissatisfaction to the students regarding the effectiveness of online live teaching. Instead, I need to convince the students to accept online learning" (T7)

"Online teaching is convenient for both students and teachers. We can teach anytime and anywhere, as well as share teaching resources. It allows us to showcase a wide range of engaging and authentic online teaching materials related to language and culture, which is beneficial for language instruction. However, online teaching also has its drawbacks, such as the physical separation between teachers and students. Therefore, as teachers, we need to adjust our mindset and utilize every possible means to demonstrate genuine teaching emotions to students" (T4)

The findings are in accordance with the findings of Davis (1989) [16], Venkatesh et al. (2003) [56], Nelson and Hawk (2020) [73], Sun and Zou (2022) [7], Zhu and Zhang (2022) [18] and Nguyen et al. (2023) [19], who suggested that TAM provides a robust and comprehensive explanation for behavioral intentions towards information systems. Among the observed variables of online teaching emotional labor strategies, EFL teachers' acceptance of online teaching primarily influences their emotional labor strategies through teachers' perceived usefulness of online teaching and perceived ease of use of digital technology. This finding provided empirical evidence for Wang and Song's research (2022) [8], which emphasized the importance of adaptation to online teaching technology for Chinese EFL teachers' online teaching emotional labor. As surface acting is positively correlated with emotional exhaustion [74], enhancing the ease of use and utility of online teaching platforms is crucial for facilitating greater engagement of teachers in deep acting and the expression of naturally felt emotions, which is beneficial to reducing teachers' emotional exhaustion.

7. Conclusions

This study attempted to examine the acceptance of online teaching, the emotional labor strategies employed in online teaching, and their relationship among Chinese EFL teachers. The findings demonstrate that EFL teachers generally had a positive acceptance of online teaching. The study supported the validation of three online teaching emotional labor strategies used by EFL teachers: SA, DA, and ENFE. Within the online teaching setting, DA and ENFE are the preferred online teaching emotional labor strategies for EFL teachers, while SA was employed to a lesser extent. EFL teachers' acceptance of online teaching significantly predicts three emotional labor strategies in online teaching. Specifically, EFL teachers' acceptance of online teaching positively influences DA and ENFE, while negatively affecting SA. By developing and testing a structural equation model to examine the relationship between EFL teachers' acceptance of online teaching and emotional labor in online learning environments, this study offers a new perspective for future research on EFL teachers' emotions and provides practical and pedagogical implications for achieving effective and sustainable online education, serving as a reference for future research concerning emotional labor in online teaching contexts. Firstly, it reveals that EFL teachers' positive attitudes regarding online instruction are an encouraging initial indicator that they are open to trying new methods in the classroom and making good use of technological advances in education. Since the participation and enthusiasm of instructors play a critical role in ensuring the effective implementation of online instruction mode, the positive implications of this are substantial for the sustainability of online instruction. Secondly, the validation of three emotional labor strategies (SA, DA, and ENFE) offers valuable support for the complex emotional landscape that teachers confront and highlights the importance of recognizing and understanding the emotional demands placed on EFL teachers in an online teaching setting. This insight can serve as a compass for teacher training programs, encouraging the integration of emotional management skills into their curricula to empower teachers in navigating the emotional difficulties of online teaching more effectively. Thirdly, EFL teachers' preference for DA and ENFE, along with the limited use of SA, underscores the importance of authenticity in online teaching. Promoting authenticity can foster stronger teacher-student connections, potentially lead to improved online learning outcomes, and guide educators to reduce insincere emotional displays in online teaching. Finally, it is noteworthy that the relationship between EFL teachers' acceptance of online teaching and their use of emotional labor strategies emphasizes the importance of promoting EFL teachers' positive attitudes towards online teaching. Enhancing teachers' acceptance of online teaching can result in better emotional management strategies and, possibly, enhance teaching and learning experiences. In conclusion, the study's findings shed light on the research on online teaching and emotional labor among EFL teachers. They stress the value of prioritizing the emotional well-being of EFL teachers while also improving the sustainability and effectiveness of online education.

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8. Limitations and Future Research Directions

It is imperative to acknowledge the limitations inherent in this study, which also suggest directions for future research. Firstly, this study relied on self-reported questionnaires to collect EFL teachers' perceptions of the acceptance of online teaching and their online teaching emotional labor strategies, potentially ignoring their actual emotional labor behaviors. Thus, we suggest that future researchers devote more attention to teachers' online teaching processes by conducting action research and gathering more qualitative data (such as the observation of teachers' teaching behaviors and teachers' emotion journals) to provide more sufficient evidence for verifying the relationship between EFL teachers' acceptance of online teaching and their online teaching emotional labor strategies. Secondly, this study exclusively focused on EFL teachers' teaching practices within English online courses. Further investigations are warranted to assess if the findings and implications of the present study would apply to similar and dissimilar samples of subjects. Thirdly, an important insight from the technology acceptance model theory is that factors such as age, gender, proactiveness, and prior experience moderate relationships among the model's constructs [56]. This suggests potential avenues for future research to explore these aspects. In addition, teachers' acceptance of online teaching and emotional labor strategies are both crucial factors influencing teaching quality and student academic performance, but this study lacks the relevant exploration of these predictive factors, including their longterm effects and whether they contribute to enhancing teacher efficacy. These questions require more in-depth investigation in future research. Lastly, it would be worthwhile to explore whether there are temporal variations in the emotional labor strategies employed by teachers in online environments.

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Institutional Review Board Statement: This study was conducted in accordance with all the required ethical considerations and practices. The study was approved by the Research Ethics Committee of the School of Foreign Languages, Huazhong University of Science and Technology (HUST).

Informed Consent Statement: Informed consent was gathered from all participating teachers. Confidentiality was maintained by not requesting names or any other information that would identify the participants involved and they were informed of their right to withdraw from the investigation at any time.

Data Availability Statement: Data will be made available on request.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. Questions in the Interview

- 1. What do you think of teaching English in an online environment?
- 2. What are the primary challenges you face in online teaching?
- 3. What differences does online teaching bring compared to teaching in a physical classroom?
- 4. What efforts did you make to adapt to these differences, and did you experience any negative emotions during this adaptation process?
- 5. How do you manage your emotions before beginning an online class? Do you adjust your emotions before starting an online class?
- 6. What factors do you believe influence your emotional labor in online teaching?
- 7. How does online teaching impact your expression of emotions? Do you ever display faked emotions? Or suppress your emotions?

Appendix B.

Table A1. Dimensions, Items, Sources of Online Teaching Emotional Labor Strategies.

Dimensions	Item statements	Sources
	sa1. Despite feeling tired, I pretend I have energy. sa2. I artificially display enthusiasm, even if it does not genuinely reflect my inner state.	[30,52,53] [30,52,53]
Surface Acting	sa3. When faced with network interruptions or technical malfunctions, I maintain composure despite feeling flustered.	Interview
	sa4. In conflicts with students, I suppress any feelings of displeasure.	Interview
	sa5. In cases of student misconduct, such as skipping classes, I restrain my own discontent.	Interview [52]
	sa6. Even in instances of copying homework, I do not show any internal displeasure. sa7. During online teaching, when students make mistakes, I fake anger.	Interview Interview [52]
	sa8. When students fail to complete their assignments, I pretend to be deeply disappointed.	Interview [52]
Deep Acting	da1. When students' performance in online learning is unsatisfactory, I employ perspective-taking techniques to prevent anger from arising.	Interview
	da2. In cases of student mistakes, such as copying homework, I consciously calm myself and initiate a conversation with the student.	Interview
	da3. Even when facing resistance towards online teaching, I redirect my attention towards positive aspects as much as possible.	[11]
	da4. Despite any personal displeasure, I am able to maintain a joyful disposition while delivering my online classes.	[30,53]
	da5. When experiencing anxiety during online teaching, I make an effort to calm myself by appreciating the merits of online teaching.	Interview [54]
	da6. I actively strive to genuinely experience the positive emotions that I need to display while teaching online.	[30,53]
	en1. When students make progress after online learning, it brings me a profound sense of gratification.	[11]
Expression of Naturally Felt Emotions	en2. Positive feedback from students greatly boosts my confidence in online teaching. en3. When students fail to pay attention in class, I openly express my disappointment.	Interview [52] [11,54]
	en4. When students actively participate and provide insightful answers, I feel a strong sense of accomplishment.	Interview [52]
Emotions	en5. When students are in a good state, it enhances my enthusiasm in online teaching.	Interview [52]
	en6. In cases where students lack engagement during class, I openly display my discontent.	[11,54]

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