Investigating University Students' Adaptation: An Empirical Study of English Learning Adaptation Scale for University Students

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This paper presents the development and validation of the English Learning Adaptation Scale for University Students (ELASUS) designed to investigate university students' adaptation to English learning. The study aims to answer two research questions: (1) What factorial structure best represents the dimensions of university students' English learning adaptation? (2) How are different dimensions of university students' English learning adaptation correlated with each other? The sample consisted of 751 Chinese university students, and data analysis started with descriptive analysis and correlation, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA). The results revealed that university students' English learning adaptation is influenced by four dimensions, including English Teacher (ET), Teaching Content (TC), Online Teaching (OT), and Teaching Atmosphere (TA). CFA results from the 751 university students supported the four-factor correlated model with the best model fit, confirming the validity and reliability of the ELASUS. This study provides valuable insights and guidelines for future research in the field of language learning and teaching, particularly in English Language Teaching (ELT).

Keywords: English learning adaptation, English Language Teaching (ELT), reliability, scale development, validity

English language education has witnessed a rapid evolution due to advancements in information technology, leading to increasingly diverse teaching approaches. However, English language learners still face challenges adapting to highly individualized English language instruction (Shu, 2020). Moreover, the demand for English language proficiency has increased dramatically in China, driven by the country's rapid economic development and globalization. As a result, Chinese university students face significant challenges in adapting to English language learning, particularly in the context of the country's complex cultural and educational landscape. While previous research has established a strong correlation between students' perception of teaching quality and their ability to adapt to it, as well as their academic adaptation being influenced by the instructional environment (Fryer, 2017; Khaleghi et al., 2021), there is a need for further empirical investigation into the specific factors that influence Chinese students' adaptation to English language teaching. To address the challenges that students face, this empirical study seeks to identify the challenges that English language learners face in adapting to modern teaching approaches. This study used the English Learning Adaptation Scale for University Students (ELASUS) to identify factors that affect students' adaptation to English language learning and to promote better and faster adaptation to new developments in English teaching and learning in China. The findings of this study could serve as a foundation for enhancing English language teaching methods and promoting the healthy growth of English language education in China. Additionally, this study contributes to a more comprehensive understanding of English language education and its effects on student learning, ultimately assisting educators in developing more effective and targeted strategies to support student learning and growth.

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Literature Review

Learning Adaptation

There have been a number of definitions of adaptation by

different researchers, but Piaget's definition in his theoretical concept of "equilibration" is widely accepted. He conceives adaptation as the process of strengthening or improving the actions of the subject to adapt to changes in the object (Piaget, 1985). In the study by Collie and Martin (2017), students' self-reported adaptability to changing situations was found to be an important factor in student engagement and could also be a predictor of academic success for students. One major area of study on how students adapt their learning in higher education is the interaction between the teacher and students (Granot, 2014; Niu et al., 2016; Zhu, 2017). The academic adjustment of several Ph.D. students was examined by Zhao and Jiang (2020) through the lens of supervisor support. It is recommended that the supervisor support mechanism be improved, as well as the mode of communication and guidance be refined. Another study by Wang et al.(2022) examines the impact of the supervisor-student relationship on procrastination in postgraduate students. Results indicate that students' learning adaptations play a mediating role in their interactions with their supervisors and that their academic procrastination has a cascading effect. However, despite the fact that prior research has looked at a variety of aspects of student adaptation in various subjects like mathematics, science, and social studies, there is a dearth of research on how students adjust to the particular difficulties presented by English language education. Therefore, it is crucial to investigate how students perceive English language teaching quality and instruction content, as this information can promote the development of more effective and targeted teaching strategies to facilitate student adaptation to English language learning.

Educational Approaches for Promoting Student Adaptation and Performance

Over the past few years, various educational approaches have been proposed to promote student adaptation and performance. And a number of studies have suggested that students' perceptions of teaching quality and their approaches to adapting to it are greatly intertwined. For instance, Qin et al. (2018) explored the impact of flipped classroom design on the academic adaptation of Chinese university students. They found that the flipped classroom design was beneficial to students' academic performance, engagement, and motivation, as well as their adaptability towards content learning. According to a recent study by Raza (2018), instructors could use a relevant and effective pedagogical approach based on his Teaching Strategies Adaptation Model to stimulate students' English learning development. This study modified foreign language teachers' instructions in an effort to accommodate students' needs in EFL classrooms. Moreover, Terpstra-Tong and Ahmad (2018) identified five skills that university students frequently applied to adapt to their academic learning in higher education as swiftly as possible. These studies are important in that they suggest that students' perceptions of the quality of the teaching and the content of the instructional material are closely linked with their learning adaptation. Similarly, Ghani and Daud (2018) examined how well instructional design and personalized learning strategies supported academic adaptation and performance among Arabic language learners. The results demonstrated a significant improvement in students' academic adaptation, motivation, and learning outcomes when appropriate instruction and personalized learning approaches are used. In addition, Feng and Zheng (2016) conducted a study on the use of reflective learning and found that it was an effective approach for promoting writing competence and academic adaptation among Chinese university students. They discovered that reflective learning activities fostered students' critical thinking, self-awareness, and self-regulation, leading to better academic adaptation and performance. These studies demonstrate that various educational approaches can be implemented to promote student adaptation and writing performance in the context of Chinese higher education. It is especially important for foreign language teachers to assess students' adaptation to the learning environment and guide them towards achieving a coordinated balance between themselves and the learning environment using appropriate methods (Feng et al., 2006). However, there is still a need for further research to explore the effectiveness of these approaches in diverse settings and among different student populations.

The Impact of Instructional Environment on Student Adaptation

In the context of learning adaptation, the psychological and behavioral process of adapting to learning environments and meeting educational needs is referred to as the process of learning adaptation. In order to maintain harmony with the learning environment, one must adjust their learning plans, habits, and states (Wang, 2002), and actively regulate their ego in order to achieve a balance with the learning environment (Feng & Li, 2002). This definition is relevant to the challenges faced by foreign students, such as New Zealand students

studying in China, who need to adapt to a new cultural and educational environment (Gong et al., 2021). They conducted a study on the challenges faced by New Zealand students studying in China and the strategic countermeasures they adopt in adapting to Chinese culture. As a means of coping with these challenges, foreign students make strategic efforts to enhance their cognitive, emotional, and skill development, so as to facilitate their communication practices with local Chinese people. This highlights the importance of adaptation in foreign language education and the strategies that can be employed to promote effective adaptation among students. Likewise, as Yu and Downing (2012) pointed out, although the research results indicate that non-Asian international students have a higher level of learning motivation, Asian international students have a lower level of learning motivation. After examining the effects of different motivations and L2 proficiency levels on their adaptation to Chinese social culture and academic environment, there is no significant difference in learning adaptation between the two groups. For instance, García-Perales and Almeida (2019) conducted a longitudinal study on students with high intellectual ability and found that students' academic adaptation is significantly influenced by the classroom environment and the teaching atmosphere. According to Khaleghi et al. (2021), students' academic adaptation is dependent upon the instructional environment in which they are taught. Their findings indicated that the classroom environment and the teaching atmosphere can have a significant impact on students' adjustment towards learning.

Furthermore, the COVID-19 pandemic has made it extremely stressful and difficult for both instructors and students in higher education. The abrupt transition to a new instructional environment has an impact on students' academic and non-academic performance, making it critical for students to adapt to these new learning environments (Besser et al., 2020; Donitsa-Schmidt & Ramot, 2020; Salasiah et al., 2022). Besser et al. identified five personality variables that influence students' adaptation to online learning. Belongingness and mattering were associated with positive online learning experiences in general. Similarly, Eri et al. (2021) used data from surveys of tertiary students in Australia, Cambodia, China, India, and Malaysia to compare student perceptions of digital competence, confidence, and resilience in the present, and the results showed that students with higher levels of digital competencies and resilience adapt better while pursuing higher education. In response to this situation, Liu (2012) emphasized the importance of optimizing online learning environments and other training mechanisms to improve college students' adaptation to English listening, speaking, and reading, thereby promoting their English learning outcomes. Similarly, Zhang (2017) suggested that the learning adaptation of college students can be improved by shifting from passive learning to innovative learning, from regulated learning to customized learning, and from offline learning communities to online learning communities under the context of Internet Plus.

Research Questions

This study endeavors to investigate the multifaceted nature of university students' experiences of adapting to the English class by validating an adapted questionnaire scale in students learning adaptation context, expecting to improve the applicability of the research results and enrich the research in the field related to college students' foreign language learning adaptability. Framed within an adapted framework of learning adaptation experiences, ELASUS was developed through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). This study aims to address the following research questions:

1. What factorial structure best represents the dimensions of university students' English learning adaptation?
2. How are different dimensions of university students' English learning adaptation correlate with each other?

Methods

Participants

The participants of this study were primarily students from various universities across the country, covering 12 disciplinary fields including literature, arts, economics, science, engineering, and education. A total of 760 individuals were recruited and completed the questionnaire, and 751 valid questionnaires were collected. Of these 751 students, there were 165 males (22.0%), 554 females (73.8%), 8 non-binary individuals (1.1%), and 24 participants who chose to keep their gender undisclosed (3.2%). The sample included 410 freshmen (54.6%), 206 sophomores (27.4%), 90 juniors (12%), 17 seniors (2.3%), 20 first-year postgraduates (2.7%), 2 second-year postgraduates (0.3%), and 1 student each for the first-, second-, and third-year in their Ph.D. studies (0.1%, 0.1%, 0.1%). Additionally, there were 3 students in gap years (0.4%). Their ages were between 17 and 45 (M = 20.24, SD =

2.009), and Chinese is their mother tongue. The questionnaire has broad coverage that includes both undergraduate and postgraduate students from multiple universities, which could be considered representative.

Development of the ELASUS

Questionnaires have become an essential tool in foreign language teaching and testing as they provide a method of testing and evaluating language abilities (Herzog, 2003). In the 1980s, scholars started developing tools to assess students' learning adaptation. The College Adjustment Scales (CAS), developed by Baker and Siryk (1984), is widely regarded as one of the best questionnaires for evaluating college students' adaptation, including academic adaptation as well (Credé & Niehorster, 2012). This questionnaire is widely used abroad due to its reliability and validity. Meanwhile, Larose and Roy (1995) developed the Learning Adaptation Inventory (LAI), which categorizes learning adaptation into three dimensions: belief, emotion, and behavior. Likewise, the College Adjustment Questionnaire was developed by O'Donnell et al. (2018) in order to predict how college students will adapt in terms of educational, relational, and psychological dimensions. As a result of their research, an understanding of how students adjust to the college environment was gained, as well as an opportunity to develop a future adaptation questionnaire. Furthermore, Tseng et al. (2020) created a new language learner self-guidance motivation scale to assess language learners' self-image and language motivation for different languages, which has been validated.

In terms of foreign language education, few adaptation scales have been developed, though the dimensions considered are not comprehensive. Some studies have considered factors such as self-efficacy (Zhang et al., 2017), self-concept (Zhou & Zhang, 2013), self-achievement (Collie & Martin, 2017), engagement, and motivation (Liu, 2016; Wang, 2006) from the perspective of the student. However, the education and training models of Chinese universities and the learning methods of students differ greatly from those in foreign countries. Even if these tests are introduced, they could not be completely applicable. Therefore, it is of great theoretical and practical significance to develop a set of tests suitable for contemporary Chinese college students' learning adaptation based on local conditions. Especially after the expansion of enrollment in universities, the learning adaptation problems of college students have become more prominent, making it more urgent and important to develop such a test (Nan & Wang, 2022).

In China, research on students' adaptation to the learning environment, particularly the development of adaptation scales, can be traced back to Feng et al.'s (2006) College Students Learning Adaptation Scale. This scale divides college students' learning adaptation into five dimensions: learning environment, teaching mode, learning motivation, learning ability, and learning attitude. Discussions on learning adaptation mainly focus on the "state perspective" (the adaptation state exhibited by students in their learning performance, psychology, and self-satisfaction) and the "influencing factors perspective" (the perspective of influencing factors understands learning adaptation as the interaction process between individuals and the environment in specific contexts). Guo et al.'s (2021) adaptation scale uses a five-level Likert scale that includes 30 items covering five dimensions: adaptation to foreign language teachers, teaching content, teaching environment, online learning, and modes of teaching. According to relevant theoretical frameworks and previously developed scales, appropriate deletions, adjustments, and modifications were made to the above learning adaptation scales after they have been collected and analyzed (Guo & Li, 2018; Hu, 2011; Li & Liu, 2017), and the English Learning Adaptation Scale for University Students (ELASUS) used in the current study is developed. The main focus of this research is to examine what factorial structure best represents the dimensions of university students' English learning adaptation, and how are they correlated. To achieve this goal, a scale is applied to investigate the factors mentioned above. The scale items were proofread by three expert reviewers. The first reviewer is a Cognitive Linguistics professor from the School of Foreign Languages and Cultures. The second reviewer is a Foreign Language Education professor from the School of Foreign Languages. The last reviewer is a Language Testing expert from the School of Foreign Languages. They all teach in higher education. They believe the question items of the scale are appropriate, demonstrating good representativeness.

A modified adaptation scale is developed in Chinese and adopts the five-level Likert scale, with a scale of 1 to 5 representing "strongly disagree," "disagree," "neutral," "agree," and "strongly agree," respectively. Participants are required to choose a variable scale that corresponds to their actual English learning experience according to their own level of learning adaptation. The original scale contains 22 items, including four dimensions: English Teacher (ET), Teaching Content (TC), Online Learning (OT), and

Teaching Atmosphere (TA). It should be noted that the TA adaptation combines the teaching environment and teaching mode adaptation dimensions in Feng et al.'s (2006) scale into one dimension for a number of items have overlapping background information. In the adaptation dimension of ET, this scale refines the original scale item "I get along well with English teachers and feel happy" into "My English teacher shows respect and cares for students in class" and "I get along well with my English teacher and enjoy studying under her/his English instruction." The purpose is to concentrate on the affective experiences of university students from their teachers. Under the adaptation dimension of TC, this questionnaire adds explorations on adaptation to learning content before class ("I often find it difficult to preview the knowledge in the English textbook"), during class ("The English teaching content/form is relatively difficult/complex, and I cannot bear it"), and after class ("I do not like the heavy workload of English homework after class"), considering that more emphasis should be placed on the entire class rather than a single class moment. Additionally, this questionnaire includes basic information questions such as introductions, majors, gender, and age.

Data Analysis

After the valid questionnaires are collected and sorted, the data is entered into IBM SPSS Version 26.0 for providing a descriptive analysis of the variables, as well as exploratory factor analysis to verify the validity of the scale. That includes the means, standard deviations, and Pearson correlations, and tests the possibility of common method deviation in the scale data. IBM SPSS AMOS Version 28.0 was also used to examine the factorial structure underlying the ELASUS, including chi-square values (χ2/df), the comparative fit index (CFI), the Tucker-Lewis fit index (TLI), the Incremental Fit Index (IFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) to evaluate the model.

Results

Descriptive Statistics and Correlation Analysis

Data collected from the questionnaire were screened and cleaned first. Table 1 lists the means, standard deviations, and correlation coefficient matrix of each variable. There is a positive correlation between English teacher and teaching content ($r = -0.094$, $p < 0.05$), a significant positive correlation between English teacher and the teaching atmosphere ($r = 0.276$, $p < 0.01$). There is also a significant positive correlation between teaching content and online teaching ($r = 0.590$, $p < 0.01$). Finally, significant negative correlations between English teacher separately with the teaching content and online teaching ($r = -0.094$, $p < 0.01$; $r = -0.047$, $p < 0.01$), between teaching content and teaching atmosphere ($r = -0.043$, $p < 0.01$) have been found, as well as online teaching and teaching atmosphere ($r = -0.026$, $p < 0.01$).

Table 1

Means, Standard Deviations, and Correlations (N=751)

Variables	M	SD	ET	TC	OT	TA
ET	4.4666	0.73672	1			
TC	2.9603	0.99195	−0.094*	1		
OT	2.9744	1.1673	−0.047	0.590**	1	
TA	3.9153	0.79677	0.276**	−0.043	−0.026	1

* $p < 0.05$, ** $p < 0.01$

ET, English Teacher Adaptation; TC, Teaching Content Adaptation; OT, Online Teaching Adaptation; TA, Teaching Atmosphere Adaptation.

Reliability analysis was conducted to check the internal consistency of the ELASUS. SPSS 26.0 measures the total number of items on the scale as 22. Based on the standardized items, the Cronbach's Alpha value is 0.854, which is greater than 0.8. This indicates that the scale and its dimensions have good internal consistency and stability, and therefore, the reliability of this scale is good. Through further assessment, it is found that the Corrected Item-Total Correlation of the 11th item (TC2) is less than 0.5, and so does the 25th item (TA6) and the 26th item (TA7). Therefore these three items are deleted and excluded in the subsequent analysis. The retention of 19 items was re-evaluated and the four-dimension scale was confirmed (KMO = 0.890, $df = 171$, $p < 0.001$). The Cronbach's Alpha value is 0.838, with 0.934, 0.887, 0.937, and 0.911 in each dimension, as depicted in Table 2. Cronbach's alpha coefficient of internal consistency of the subcategories is much higher than the benchmark (0.70), suggesting the robust reliability of the scale. It should also be noted that the maximum and minimum means in each dimension are presented in Table 3. Under the ET dimension, the teacher's appearance and demeanor significantly increase students' English classroom adaptation, although many students are not satisfied with the English teacher's teaching level. Under the TC dimension, pre-reading the course content can bring adaptation difficulties to students, although English is not

their major, students still have a positive attitude towards English learning. Under the OT dimension, online testing greatly affects students' English learning adaptation, and completing homework online also brings adaptation pressure to students. Under the TA dimension, a good atmosphere among classmates greatly contributes to students' adaptation to the English class, while the impact of the English teaching mode on students' English adaptation is relatively small.

Exploratory Factor Analysis (EFA)

The results showed that the KMO value is 0.890, which is greater than 0.5, and the Bartlett's sphericity test has a significant *p*-value of < 0.001, reaching a highly significant level, indicating that the data is suitable for factor analysis. In terms of the dimension division of the factors, the initial eigenvalues of four dimensions with initial eigenvalues greater than 1 are identified, and the cumulative sums of squared loadings reach 76.976%, indicating that the four principal components extracted by this scale have good explanatory power for the original variables.

According to the factor loading coefficient component as depicted in Table 4, it was found that the initial eigenvalue of principal component 1 (ET1-5) is 5.718, and the factor loading coefficients of the items are all greater than 0.5, indicating that principal component 1 could be identified as the English Teacher dimension. The initial eigenvalue of principal component 2 (TA1-5) is 4.722, and the factor loading coefficients of the items are all greater than 0.5, indicating that

Table 2

Item-Total Statistics

Variable	Dimension	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	Items
ET1	English Teacher	0.762	0.932	0.934	5
ET2		0.849	0.915		
ET3		0.855	0.914		
ET4		0.856	0.913		
ET5		0.808	0.922		
TC1	Teaching Content	0.497	0.911	0.887	5
TC3		0.804	0.844		
TC4		0.818	0.842		
TC5		0.77	0.852		
TC6		0.756	0.855		
OT1	Online Teaching	0.843	0.919	0.937	4
OT2		0.857	0.915		
OT3		0.851	0.917		
OT4		0.847	0.918		
TA1	Teaching Atmosphere	0.663	0.915	0.911	5
TA2		0.847	0.875		
TA3		0.84	0.876		
TA4		0.781	0.889		
TA5		0.746	0.896		

Table 3

Max. and Min. Means in Each Dimension

Dimension	Mean	Item
ET	4.6	ET1. It is appropriate for my English teacher to display a professional demeanor and dress code.
	4.55	ET3. I am satisfied with the instruction level of my English teacher.
TC	3.36	TC1. I often find it difficult to preview the knowledge in the English textbook. (—)
	2.48	TC5. The English teaching content is not related to my major, and I do not like it. (—)
OT	2.78	OT3. I do not like taking English exams online. (—)
	2.63	OT4. I do not like doing homework assigned by my English teacher on the online learning platform. (—)
TA	3.97	TA5. I enjoy socializing with classmates in English class.
	3.81	TA1. I like the current English teaching mode.

this dimension is consistent with the original Teaching Content dimension. The initial eigenvalue of principal component 3 (OT1-4) is 2.773, and the factor loading coefficients of the items are all greater than 0.5, indicating that this dimension is consistent with the original Online Teaching dimension. The initial eigenvalue of principal component 4 (TC1 + TC3-6) is 1.412, and the factor loading coefficients of the items are all greater than 0.5, indicating that this component could be identified as the Teaching Atmosphere dimension. Based on the factor analysis results, the principal components extracted in this study, and the item division of the original scale, it was found that the four principal components are consistent with the original four dimensions of the scale, indicating that the structural validity of the questionnaire is good.

Table 4

Factor Loadings and Reliability

Item	Factor Loading			
	ET	TC	OT	TA
ET1	0.845			
ET2	0.896			
ET3	0.896			
ET4	0.906			
ET5	0.860			
TA1		0.770		
TA2		0.900		
TA3		0.895		
TA4		0.863		
TA5		0.825		
OT1			0.851	
OT2			0.872	
OT3			0.889	
OT4			0.874	
TC1				0.688
TC3				0.845
TC4				0.852
TC5				0.784
TC6				0.754
Initial Eigenvalues	5.718	4.722	2.773	1.412
% of Variance	21.187	19.688	18.099	18.002
Cumulative %		76.976		
KMO		0.890		
Bartlett's Test of Sphericity		< 0.001		

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was used to assess the structural validity of the scale by testing the fit between the proposed theoretical model and the actual data. EFA proposed a four-factor correlated model with 19 items, with each indicator constrained to load only on the first-order factor it was designed to measure. The results of the confirmatory factor analysis showed that $\chi 2/df$ = 4.463 (subject to sample size) (Hooper, Coughlan & Mullen, 2008), CFI = 0.956 > 0.9 (Kline, 2010), IFI = 0.956 > 0.9 (Hu & Bentler, 1999), TLI = 0.948 > 0.9 (Kline, 2010), RMSEA = 0.068 < 0.1 (Steiger, 1990), SRMR = 0.048 < 0.08 (Hu & Bentler, 1999), indicating a good fit between the theoretical model and the actual data. The factor loading coefficients for all 19 items ranged from 0.52 to 0.90, with all factor loading coefficients greater than 0.5, as depicted in Table 5.

Table 5

Goodness-of-Fit Indices

Indicator	$\chi 2/df$	CFI	TLI	IFI	RMSEA	SRMR
Cut-off values	⩽ 5.0	⩾ 0.90	⩾ 0.90	⩾ 0.90	⩽ 0.08	⩽ 0.05
Four-factor model	4.463	0.956	0.948	0.956	0.068	0.048
Three-factor model	21.153	0.736	0.697	0.736	0.164	0.303
Two-factor model	37.837	0.511	0.446	0.511	0.222	0.376
One-factor model	52.970	0.305	0.218	0.306	0.263	0.393

The discriminant validity of this study was demonstrated by comparing the fit indices between different hypothesized models and the proposed model using AMOS 28.0. The fit indices of the proposed model (four-factor model) were better than those of the three-factor, two-factor, and one-factor models, as shown in Figure. 1, indicating that these four

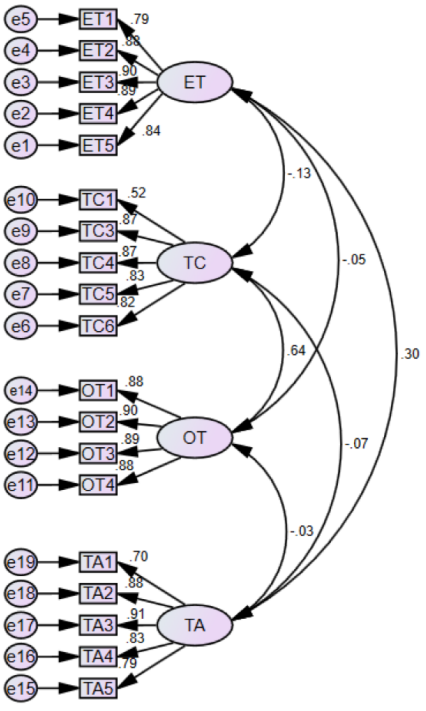

Figure 1. The Four-Factor Correlated Model of the ELASUS

Note. ET: English Teacher; TC: Teaching Content; OT: Online Teaching; TA: Teaching Atmosphere.

factors were clearly correlated but distinct constructs. That indicates a high level of discriminant validity.

Discussion

This study revealed that the adaptation of Chinese learners in English learning is influenced by various factors in four dimensions, namely English Teacher, Teaching Content, Online Teaching, and Teaching Atmosphere. Among these, English Teacher is a crucial factor affecting students' adaptation to English learning, as it represents students' evaluations of teachers' demeanor, English proficiency, teaching ability, and affinity towards English learning. Investigating teacher factors can assist English teachers in focusing on students' academic performance, recognizing their significant role in enhancing students' adaptation, and realizing that in addition to academic performance, emotional communication and care for students should also be strengthened, which can alleviate students' difficulties in adapting to English learning, which is consistent with Granot (2014) and Wang et al. (2021).

In addition to the impact of teaching methods, English Teacher also plays an important role in student adaptation. One such factor is teachers' attention to students, which can create a positive classroom environment and foster harmonious teacher-student relationships. This can make students feel respected, cared for, trusted, and understood, as well as yield positive academic adjustment (Zee & Koomen, 2016). Therefore, it is imperative to conduct an analysis of the impact of various factors on students' adaptation to facilitate the development of competent teachers who possess ideal qualities, moral character, solid academic knowledge, and empathy so that they understand what the students are going through and make adjustments accordingly (Arghode et al., 2013). This approach can encourage students to enhance their professional skills, optimize their course performance, and contribute to their overall professional development.

Another important adaptation factor is the Teaching Content, which includes elements such as the amount and structure of content before, during, and after English classes, relevance to the profession, and student participation. By paying attention to students' evaluations of English teaching content, teachers can align their teaching methods with the basic principles of human-centered foreign language teaching, and have a clearer disciplinary affiliation. According to Jin (2022), this promotes the integration of disciplines and the cultivation of versatile talents. Teaching content also serves as a means of student learning engagement, where learners provide effective feedback to improve their learning outcomes. By addressing these factors, students can better adapt to English learning and achieve maximum learning efficiency (Arghode et al., 2013). Therefore, it is essential to consider both teacher and teaching content factors in promoting student adaptation to foreign language learning.

In the context of English language learning, the Online Teaching factor pertains to students' ability to adapt to various online activities such as submission of homework, downloading learning materials, online platform exams, and submission of assignments. The continuous advancement of educational technology has made it essential to optimize online teaching resources and platforms, teaching methods, and learning strategies for English language learners. A crucial aspect of optimizing blended learning in English is determining students' adaptation to both online and offline learning environments (Zhang & He, 2020). This study is significant for suggesting that colleges and platform management departments should provide a good online learning environment, and pay attention to issues such as lagging resource updates and incomplete functionality. In order to improve the quality of college English learning from a holistic perspective, online communication and interaction functions should be optimized, as well as the communication between teachers and students, students and students, and teachers and platforms. It is also important to consider students' learning adaptation issues as they shift from traditional classrooms to new information-based classrooms. According to Zhong (2013), information literacy is fundamental to students' learning ability in the information age. Therefore, Online Teaching adaptation is a crucial variable that must be given due attention to enable students to better adapt to English classroom learning.

In this study, one of the adaptation factors identified is Teaching Atmosphere, which encompasses various hardware facilities and teaching environments such as teacher-student and student-student interactions, classroom teaching atmosphere, class learning environment, and learning resources. It is important to note that for Chinese students, English learning can be influenced by cultural differences and language identity in English-speaking countries (Masgoret et al., 2000), and the choice of English teaching environment and mode can have a significant impact on their adaptation factors (Andrade, 2006). Shu (2020) argues that reform efforts in college English teaching in China should prioritize

enhancing the quality of teaching, cultivating students' cultural awareness, and creating a harmonious classroom environment. To achieve this, the teaching atmosphere should be relaxed, pleasant, and open to provide students with an optimal learning environment.

Moreover, as higher education institutions continue to navigate the challenges posed by the COVID-19 pandemic, it is important for both students and teachers to promote their adaptation to English learning. One way to do this is through the use of technology, such as online learning platforms and digital tools. According to a study by Rizk and Hillier (2022), digital technology can enhance students' motivation and engagement in learning, leading to increased language proficiency. In addition, teachers can use technology to provide personalized feedback and support to students, which can improve their learning outcomes (Donitsa-Schmidt & Ramot, 2020). Another strategy for promoting adaptation in English learning is through the use of authentic materials and tasks. This approach, which emphasizes real-life language use, has been shown to enhance students' communicative competence and motivation (Lombardi et al., 2011). For example, teachers can incorporate news articles, podcasts, and videos into their lesson plans to provide students with exposure to different English accents and contexts. In addition, task-based learning which involves engaging students in authentic language use activities can improve their language skills and confidence (Ellis, 2017). Finally, fostering a supportive learning environment can also promote adaptation in English learning. Teachers can create a safe space for students to practice and make mistakes, which can reduce anxiety and facilitate language acquisition (Sakai & Kikuchi, 2009). In addition, peer feedback and collaboration can help students develop their language skills and social competencies (Golonka et al., 2014). When a positive and inclusive learning environment is provided, students will feel more comfortable taking risks and adapting to new language learning challenges.

Conclusion and Implications

English language teaching is crucial for education in many countries due to the role of English as a tool for international communication in a globalized world. The effectiveness of English language teaching depends not only on the learners themselves but also on the quality of English teaching. To address this issue, this study employs a novel perspective to investigate the impact of English teachers' teaching on students' adaptation, which is an essential factor for successful language learning. The development and validation of the English Learning Adaptation Scale provide a reliable and scientific tool for evaluating students' English learning adaptation, which can contribute to the improvement of English teaching effectiveness. The ELASUS identifies four dimensions of English learning adaptation: English Teacher, Teaching Content, Online Teaching, and Teaching Atmosphere. These dimensions have helped to unveil the core features of English learning adaptation and enriched our understanding of English teaching and learning. The indicators and research results have demonstrated the robust reliability and validity of the scale, which has a well-structured design and a strong explanatory power for the original variables. As a result, foreign language teachers can use the scale as a valuable reference to enhance the effectiveness of English teaching by evaluating students' English learning adaptation in a reliable and scientific way.

The ELASUS can be viewed as a map that guides researchers through the new room, revealing four dimensions of English learning adaptation. Its development and validation can significantly contribute to foreign language education, providing a valuable tool for foreign language teachers, akin to a magnifying glass that allows them to better understand their students' English learning adaptation, leading to improved teaching effectiveness. Therefore, this study's findings have important implications for foreign language education and can help teachers optimize the teaching and learning of English, ultimately benefiting learners in their language acquisition process. Furthermore, the ELASUS can serve as an essential tool for evaluating and enhancing English teaching effectiveness, providing valuable insights and guidelines for future research in the field of language learning and teaching.

There are several limitations to the study on university students' adaptation to English learning that should be mentioned. To begin, learning adaptation is a long-term self-adjustment process that changes in response to the learning environment. As a result, long-term observation is required when evaluating students' English adaptation ability in order to better understand their adaptation situation. Second, English education emphasizes broad skills such as listening, speaking, reading, writing, and translation. As a result, when assessing students' English adaptation ability, their performance in these areas should be considered in order to provide a more accurate assessment of their English adaptation ability. Furthermore, the sample size is an important factor to be considered. The current sample size of college students

collected is still insufficient, which may affect the reliability of the conclusions. As a result, when employing the English adaptation scale, it is critical to ensure that the sample size is sufficient and that students from diverse backgrounds and cultures are fully included. Only by taking these limitations into account and overcoming them to the greatest extent possible can more accurate, reliable, and meaningful conclusions be drawn, and more targeted guidance for English education be provided.

References

Andrade, M. S. (2006). International students in English-speaking universities: Adjustment factors. *Journal of Research in International Education*, *5*(2), 131–154. https://doi.org/10.1177/1475240906065589

Arghode, V., Yalvac, B., & Liew, J. (2013). Teacher empathy and science education: A collective case study. *Eurasia Journal of Mathematics, Science and Technology Education*, *9*(2), 89–99. https://doi.org/10.12973/eurasia.2013.921a

Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology*, *31*(2), 179–189. https://doi.org/10.1037/0022-0167.31.2.179

Besser, A., Flett, G. L., & Zeigler-Hill, V. (2020). Adaptability to a sudden transition to online learning during the COVID-19 pandemic: Understanding the challenges for students. *Scholarship of Teaching and Learning in Psychology*, *8*(2), 85–105. https://doi.org/10.1037/stl0000198

Collie, R. J., & Martin, A. J. (2017). Students' adaptability in mathematics: Examining self-reports and teachers' reports and links with engagement and achievement outcomes. *Contemporary Educational Psychology*, *49*, 355–366. https://doi.org/10.1016/j.cedpsych.2017.04.001

Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and relationships with correlates and consequences. *Educational Psychology Review*, *24*(1), 133–165. http://dx.doi.org/10.1007/s10648-011-9184-5

Donitsa-Schmidt, S., & Ramot, R. (2020). Opportunities and challenges: Teacher education in Israel in the Covid-19 pandemic. *Journal of Education for Teaching*, *46*(4), 586–595. https://doi.org/10.1080/02607476.2020.1799708

Ellis, R. (2017). Position paper: Moving task-based language teaching forward. *Language Teaching*, *50*(4), 507–526. https://doi.org/10.1017/S0261444817000179

Eri, R., Gudimetla, P., Star, S., Rowlands, J., Girgla, A., To, L., Li, F., Sochea, N., & Bindal, U. (2021). Digital resilience in higher education in response to COVID-19 pandemic: Student perceptions from Asia and Australia. *Journal of University Teaching & Learning Practice*, *18*(5),1–28. http://dx.doi.org/10.53761/1.18.5.7

Feng, M.-Z., & Zheng, X.-M. (2016). Using tasks to enhance english learners' reflective learning and writing competence among non-English majors in China. *Foreign Languages in China*, (06), 12–18. https://doi.org/10.13564/j.cnki.issn.1672-9382.2016.06.003

Feng, T.-Y., & Li, H. (2002). Primary research about study adaptation of undergraduate. *Psychological Exploration*, (01), 44–48. https://doi.org/10.3969/j.issn.1003-5184.2002.01.009

Feng, T.-Y., Su, D., Hu, X., & Li, H. (2006). The development of a test about learning adjustment of undergraduate. *Acta Psychologica Sinica*, (05), 762–769. https://doi.org/CNKI:SUN:XLXB.0.2006-05-014

Fryer, L. K. (2017). (Latent) transitions to learning at university: A latent profile transition analysis of first-year Japanese students. *Higher Education*, *73*(3), 519–537. https://doi.org/10.1007/s10734-016-0094-9

García-Perales, R., & Almeida, L.-S. (2019). An enrichment program for students with high intellectual ability: Positive effects on school adaptation. *Media Education Research Journal*, *27*(2), 39–47. https://doi.org/10.3916/C60-2019-04

Ghani, M. T. A., & Daud, W. A. A. W. (2018). Adaptation of ADDIE instructional model in developing educational website for language learning. *Global Journal al Thaqafah*, *8*(2), 7–16. http://dx.doi.org/10.7187/GJAT122018-1

Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014). Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*, *27*(1), 70–105. https://doi.org/10.1080/09588221.2012.700315

Gong, Y., Gao, X.-S., Li, M., & Lai, C. (2021). Cultural adaptation challenges and strategies during study abroad: New Zealand students in China. *Language, Culture and Curriculum*, *34*(4), 417–437. https://doi.org/10.1080/07908318.2020.1856129

Granot, D. (2014). Teacher-student attachment and student school adaptation: A variable centered and person centered analytical approaches. *American Journal of Educational Research*, *2*(11), 1005–1014. http://dx.doi.org/10.12691/education-2-11-2

Guo, J.-D., & Li, Y. (2018). The development and validation of scale of agentic engagement with foreign language learning. *Foreign Language Education*, *39*(5), 66–69. https://doi.org/10.16362/j.cnki.cn61-1023/h.2018.05.013

Guo, J.-D., Li, Y., & Liu, X.-H. (2021). Developing and validating a scale of foreign language learning adaptability of college students. *Foreign Language World*, (1), 46–53. https://CNKI:SUN:WYJY.0.2021-01-006

Herzog, M. (2003). Impact of the proficiency scale and the oral proficiency interview on the foreign language program at the Defense Language Institute Foreign Language Center. *Foreign Language Annals*, *36*(4), 566–571. http://dx.doi.org/10.1111/j.1944-9720.2003.tb02146.x

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: guidelines for determining model fit. *Electronic Journal of Business Research Methods*, *6*(1), 141–146. http://doi.org/10.3109/03005364000000039

Hu, J.-H. (2011). Evaluating autonomous foreign language learning capacity: Rating scale design based on the two-dimensional

model. *Foreign Language World*, (4), 12–17+35. https://CNKI:SUN:WYJY.0.2011-04-003

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6* (1), 1–55. https://doi.org/10.1080/10705519909540118

Jin, L. (2022). Strengthening the internal construction of foreign language and literature discipline and initiating the new disciplinary development. *Foreign Languages in China*, (3), 1+12–15. https://doi.org/10.13564/j.cnki.issn.1672-9382.2022.03.002

Khaleghi, R. S., Abolmaali, K., & Mirhashemi, M. (2021). Assessment of academic adaptation based on classroom environment perceptions, family functioning in high school students in in Sari, Iran. *International Journal of Pediatrics*, *10*(1), 15179–15190. https://doi.org/10.22038/IJP.2021.57400.4505

Kline, R. B. (2010). *Principles and Practice of Structural Equation Modeling* (4th). New York & London: Guilford Press.

Larose, S., & Roy, R. (1995). Test of reactions and adaptation in college (TRAC): A new measure of learning propensity for college students. *Journal of Educational Psychology*, *87*(2), 293–306. http://dx.doi.org/10.1037//0022-0663.87.2.293

Li, J.-Y., & Liu, P.-H. (2017). An empirical study on English learning motivation of tertiary-level EFL students in China. *Journal of Xi'an International Studies University*, *25*(2), 63–68. https://doi.org/10.16362/j.cnki.cn61-1457/h.2017.02.013

Liu, P. (2012). An empirical study on the development of adaptive kkills for independent learning in college English in the online environment. *e-Education Research*, *33*(1), 59–64. https://doi.org/10.13811/j.cnki.eer.2012.01.002

Liu, P.-J. (2016). The learning adaptability of college students: An analysis of operation dimensions, present situation and countermeasures: Taking some colleges and universities in Guangxi Zhuang Autonomous Regions as examples. *Journal of Yibin University*, (11), 111–118. https://doi.org/10.19504/j.cnki.issn1671-5365.2016.11.019

Lombardi, A., Murray, C., & Gerdes, H. (2011). College faculty and inclusive instruction: Self-reported attitudes and actions pertaining to universal design. *Journal of Diversity in Higher Education*, *4*, 250–261. http://dx.doi.org/10.1037/a0024961

Masgoret, A. M., Bernaus, M., & Gardner, R. C. (2000). A study of cross-cultural adaptation by English-speaking sojourners in Spain. *Foreign Language Annals*, *33*(5), 548–558. https://doi.org/10.1111/j.1944-9720.2000.tb01998.x

Nan, X.-P., & Wang, X.-F. (2022). A study on the learning adaptability and its influencing factor of undergraduate students of the new college entrance examination. *China Higher Education Research*, (2), 21–28. https://doi.org/10.16298/j.cnki.1004-3667.2022.02.04

Niu, D., Qu, Q.-F., & Zhang, J.-F. (2016). Effect of university's academic and academic-support service on freshmen' school adaption. *University Education Science*, (2), 10–16+122. http://dx.chinadoi.cn/10.3969/j.issn.1672-0717.2016.02.012

O'Donnell, M. B., Shirley, L. A., Park, S. S., Nolen, J. P., Gibbons, A. M., & Rosén, L. A. (2018). The college adjustment questionnaire: A measure of students' educational, relational, and psychological adjustment to the college environment. *Journal of College Student Development*, *59*(1), 116–121. https://doi.org/10.1353/csd.2018.0009

Piaget, J. (1985). *The equilibration of cognitive structures: The central problem of intellectual development*. Chicago, IL: University of Chicago press.

Qin, C., Xie, F., & Gao, J. (2018). The key factors affecting the learning adaptability of the flipped classroom. *Modern Educational Technology*, (5), 54–60. http://dx.chinadoi.cn/10.3969/j.issn.1009-8097.2018.05.008

Raza, K. (2018). Adapting teaching strategies to Arab student needs in an EFL classroom. *Journal of Ethnic and Cultural Studies*, *5*(1), 16–26. http://dx.doi.org/10.29333/ejecs/93

Rizk, J., & Hillier, C. (2022). Digital technology and increasing engagement among students with disabilities: Interaction rituals and digital capital. *Computers and Education Open*, *3*, 100099. https://doi.org/10.1016/j.caeo.2022.100099

Sakai, H., & Kikuchi, K. (2009). An analysis of demotivators in the EFL classroom. *System*, *37*(1), 57–69. https://doi.org/10.1016/j.system.2008.09.005

Salasiah, S., Rahman, A. W., & Syawal, S. (2022). Challenges and adaptation on online learning during COVID-19 pandemic. *Journal of Education and Learning*, *16*(3), 342–349. https://doi.org/10.11591/edulearn.v16i3.20529

Shu, D.-F. (2020). College English teaching and the cultivation of international talents. *Journal of Foreign Languages*, *43*(5), 8–20. https://doi.org/10.12255/j.issn.1672-6677.2020.05.399

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research, 25* (2), 173–180. https://doi.org/10.1207/s15327906mbr2502_4

Terpstra-Tong, J. L. Y., & Ahmad, A. (2018). High school-university disconnect: A complex issue in Malaysia. *International Journal of Educational Management*, *32*(5), 851–865. http://dx.doi.org/10.1108/IJEM-10-2016-0214

Tseng, W. T., Cheng, H. F., & Gao, X. (2020). Validating a motivational self-guide scale for language learners. *Sustainability*, *12*(16), 6468. https://doi.org/10.3390/su12166468

Wang, H. (2006). T*he Study on undergraduates' academic adaptability and its influencing factors*. Masters level. Nanjing Normal University.

Wang, Q., Xin, Z., Zhang, H., Du, J., & Wang, M. (2022). The effect of the supervisor-student relationship on academic procrastination: The chain-mediating role of academic self-efficacy and learning adaptation. *International Journal of Environmental Research and Public Health*, *19*(5), 2621. https://doi.org/10.3390/ijerph19052621

Wang, T. (2002). A perspective on problems of Chinese contemporary educational psychology. *Journal of Southwest University Social Science Edition*, *28*(1), 28–32. https://doi.org/10.13718/j.cnki.xdsk.2002.01.006

Wang, X., Liu, Y.-L., Ying, B., & Lin, J. (2021). The effect of learning adaptability on Chinese middle school students' English academic engagement: The chain mediating roles of foreign language anxiety and English learning self-efficacy. *Current Psychology*. Advance online publication. https://doi.org/10.1007/s12144-021-02008-8

Yu, B., & Downing, K. (2012). Determinants of international students' adaptation: Examining effects of integrative motivation, instrumental motivation and second language proficiency. *Educational studies*, *38*(4), 457–471. https://psycnet.apa.org/doi/10.1080/03055698.2011.643111

Zee, M., & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A tynthesis of 40 years of research. *Review of Educational Research*, *86*(4), 981–1015. https://www.jstor.org/stable/44668241

Zhang, C.-L., Li, L.-J., & Li, J.-F. (2017). Student learning adaptability in MOOC-based blended teaching in Y university. *China Educational Technology*, (4), 60–66. https://doi.org/10.3969/j.issn.1006-9860.2017.04.009

Zhang, M. (2017). Research on the path of improving college students' learning adaptability in the field of Internet+. *Contemporary Education Sciences*, (4), 93–96. https://CNKI:SUN:SDJK.0.2017-04-023

Zhang, M., & He, X. (2020). A study on the adaptability of blended college English learning. *Technology Enhanced Foreign Language Education*, (4), 89–93+14. https://CNKI:SUN:WYDH.0.2020-04-012

Zhao, L.-L., & Jiang, B.-J. (2020). The influence of tutor support on academic adaptation of academic doctoral students: Based on the investigation of 16 universities in Jiangsu, Zhejiang, Shanghai and Anhui. *China Higher Education Research*, (8), 56–61. https://doi.org/10.16298/j.cnki.1004-3667.2020.08.10

Zhong, Z.-X. (2013). The core of lifelong learning: Connotations, evolution and standards of information literacy. *Chinese Journal of Distance Education*, (8), 21–29+95. https://doi.org/10.13541/j.cnki.chinade.2013.08.015

Zhou, X.-L., & Zhang, W.-L. (2013). A research on the learning adaptability problems of college freshmen and teaching management countermeasures. *Education Research Monthly*, (5), 91–93+111. https://doi.org/10.16477/j.cnki.issn1674-2311.2013.05.023

Zhu, J.-N. (2017). "Academic hard landing": The working adjustment of returning young faculty in humanities and social sciences at Chinese universities. *Fudan Education Forum*, (3), 87–92. https://doi.org/10.13397/j.cnki.fef.2017.03.014