



Determinants of English Major Students' Learning Performance in A Blended Learning English-Chinese Translation Course at Zhanjiang University of Science and Technology, China

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Received 16/01/2025

Revised 24/01/2025

Accepted 24/02/2025

Abstract

Background and Aim: With the higher demand for translators in recent years, the English-major Students' learning performance in the English-Chinese translation course should be improved. The SWOT analysis shows that blended learning can bring positive impacts on teaching methods and English-major Students' learning performance, while if the teaching methods and English-major Students' learning performance are not improved, the students' employment will be affected negatively. This research aims to discover the determinants impacting English-major Students' Learning Performance in a Blended Learning English-Chinese Translation Course to help teachers improve teaching methods and enhance English-major students' learning performance.

Materials and Methods: Before distributing the questionnaire, Item-Objective Congruence (IOC) and a pilot test of Cronbach's Alpha were adopted to test the content validity and reliability. Interviews were used to collect qualitative data, with 20 students selected for pre-interviews. Subsequently, the Wenjuanxing application was utilized to collect quantitative data from 175 students, exploring the relationship between independent and dependent variables. Jamovi's multiple linear regression analysis was employed to strengthen the framework and hypotheses. After validating the framework, an intervention plan was developed, and the hypotheses were tested. During the IDI stage, 30 students from a blended learning English-to-Chinese translation course were selected to participate, spanning 16 weeks. During the post-IDI stage, participants were again administered some questionnaires, and additional observations and interviews were conducted. Both qualitative and quantitative data were analyzed and compared to confirm the findings of the IDI.

Results: The hypothesis that the five dependent variables (behavioral engagement, learning anxiety, learning attitude, learning motivation, and student-student interaction) are related to students' learning performance has been significantly verified. Then, after IDI, the five independent variables and dependent variables changed significantly.

Conclusion: Behavioral engagement, learning anxiety, learning attitude, learning motivation, and student-student interaction have a significant impact on students' learning performance in a blended learning English-Chinese translation course.

Keywords: Learning Performance; Behavioral Engagement; Learning Anxiety; Learning Attitude; Learning Motivation; Student-Student Interaction

Introduction

As economic globalization intensifies, international exchanges have become increasingly close, highlighting the pivotal role of English in facilitating these interactions. Consequently, the Chinese employment market demands highly skilled English translation talents. Despite significant improvements in English education in Chinese universities, the teaching model for English translation remains relatively traditional, hindering students' progress.

The Ministry of Education in China categorizes the translation major as a first-level discipline within linguistics, emphasizing the teaching of renowned translation theories from both domestic and international sources. Upon completion, students should possess fundamental English-Chinese translation and interpretation skills, culminating in a Bachelor of Arts degree. However, current translation major training focuses heavily on theoretical and knowledge-based learning, as noted by Guan and Wang (2019). Traditional teaching concepts prioritize cultivating basic translation abilities, yet the evolving market demands necessitate a shift. Modern translators must possess robust listening, speaking, and translation skills, coupled with strong cross-cultural awareness and interdisciplinary knowledge.



Currently, English-Chinese translation courses offer limited translation skills training, primarily in the third year, with a notable lack of instruction in translation theory and practice. The curriculum tends to be monotonous, emphasizing the systematic and professional aspects of the translation major while neglecting its cross-cultural, cross-linguistic, and interdisciplinary nature. This results in students' inability to construct and integrate interdisciplinary knowledge, further impacting their readiness for professional translation work post-graduation.

Translation is a comprehensive communication skill requiring teachers to master translation theory, practice, and cross-cultural communication. However, many university English teachers, primarily graduates of foreign language and literature majors, lack relevant practical skills (Guo et al., 2021). These educators often focus on theoretical teaching, with translation practice activities being scarce, thereby hindering their ability to effectively guide students in practical translation scenarios. The English translation course remains relatively traditional and teacher-led. For instance, only one class per grade adopts innovative teaching methods, while others continue with the traditional lecture-style approach. Students prefer discussion-based classes as the traditional method fails to ignite their enthusiasm, leading to low initiative and limited participation, ultimately resulting in poor translation application skills. In class, teachers assign a short article for quick translation, then provide a "standard answer", emphasizing key points for students to memorize. This teaching mode stifles student initiative, promoting passive translation and impeding effective teacher-student communication. Consequently, students struggle to adapt to employers' needs upon graduation.

Moreover, Machine translation has had a profound impact on translation teaching and employment. In terms of teaching, machine translation has transformed traditional teaching methods. Teachers can use machine translation as an auxiliary tool to quickly verify students' translation results, thereby improving teaching efficiency. However, over-reliance on machine translation may lead students to neglect the study of translation theory and the cultivation of practical skills, affecting the comprehensive development of their translation abilities. In terms of employment, machine translation has improved the efficiency of translation work and reduced labor costs, but it has also made some basic translation positions vulnerable to replacement. At the same time, the development of machine translation has also created new translation demands, such as post-editing and localization, providing new employment opportunities for translators. Therefore, translators need to continuously improve their translation skills and cross-cultural communication abilities to adapt to the changes in the era of machine translation and maintain their competitiveness. Educational institutions should also adjust their teaching content and methods to cultivate students' critical thinking and innovation abilities to address the challenges posed by machine translation.

Objectives

This research aims to investigate the students' learning performance at Zhanjiang University of Science and Technology, located in the west of Guangdong, China, a private comprehensive university. The objectives include the following:

1. Based on the research, teachers can find useful methods to improve teaching methods in blended learning English-Chinese translation courses.
2. English-major students' learning performance in a blended learning English-Chinese translation course can be improved, thus enhancing their employment competitiveness.

Literature review

1. Learning Performance (LP)

Young et al. (2003) stated that learning performance encompasses learners' self-assessment of gained knowledge, comprehension, and skill development, along with their motivation to further their learning. Many elements play a crucial role in shaping learning performance, with pedagogical interactions like teacher skills and student collaboration standing out. These components are essential in fostering productive learning settings that can enhance student learning performance. Students' beliefs regarding their learning



abilities impacted their attitude toward schoolwork, task selection, and the level of persistence and effort exerted in completing them (Costa, 2015). This influences student engagement and consequently enhances learning performance. Typically, learning performance was related to a heightened positive attitude toward the learning environment (Dunn et al., 1990; Duke, 2002). Learning performance is influenced by a combination of factors, including motivation, study habits, engagement in learning activities, cognitive abilities, and the quality of instruction. Students with more favorable attitudes towards learning and instruction are inclined to achieve higher learning performance.

2. Behavioral Engagement (BE)

Kuh et al (2008) stated that behavioral engagement is about the extent of time and effort students dedicate to academic pursuits, encompassing interactions with peers and instructors, as well as active participation in learning tasks. Student engagement is recognized as a crucial factor in fostering motivation for learning and a drive for achievement among students (Raza et al., 2020). According to Fredricks and McColskey (2012), student engagement is characterized as a meta-construct encompassing behavioral, emotional, and cognitive engagement. Ladd and Dinella (2009) argued that student engagement behavior had a positive impact on students' academic progress and performance. According to Reeve and Tseng (2011), student engagement was viewed as a crucial educational outcome that mirrored students' learning attitudes and performance. Consequently, the following hypothesis is formulated:

H1: Behavioral Engagement has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

3. Learning Anxiety (LAN)

Learning anxiety is a psychological state characterized by feelings of apprehension and worry related to academic tasks. It can manifest in various forms, such as test anxiety, fear of failure, and general anxiety towards learning situations. A substantial body of research indicates that learning anxiety significantly affects students' academic performance, often leading to negative outcomes.

Research has consistently shown that high levels of learning anxiety can impair students' cognitive functioning and overall academic performance. According to Sarason (1980), anxiety led to a decrease in working memory capacity, which was crucial for problem-solving and learning. Students who experience high anxiety levels may struggle to concentrate, retrieve information, and perform under pressure, resulting in poorer academic outcomes (Zeidner, 1998). A meta-analysis conducted by Hembree (1988) revealed a strong negative correlation between test anxiety and academic performance across various age groups and educational settings. Consequently, the following hypothesis is formulated:

H2: Learning Anxiety has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

4. Learning Attitude (LAT)

Learning attitude refers to the predisposition of students to approach their learning tasks with a positive or negative mindset, encompassing beliefs, feelings, and behaviors toward learning. A growing body of research underscores the significant impact of learning attitudes on students' academic performance.

Firstly, a positive learning attitude is consistently associated with higher academic achievement. Students who exhibit enthusiasm, curiosity, and a willingness to engage with the material are more likely to perform well academically. This is supported by the study conducted by Schunk et al. (2008), which highlighted that positive attitudes toward learning foster greater motivation, leading to enhanced academic outcomes. Secondly, learning attitude influences students' engagement in learning activities. Research by Reeve (2012) indicated that students who maintain a positive attitude tend to participate more actively in class discussions, collaborate with peers, and seek help when needed. Furthermore, the role of self-efficacy intersects with learning attitude. According to Bandura (1997), students with a positive learning attitude were more easily to develop high self-efficacy. This relationship suggested that fostering a positive learning attitude enhanced students' self-belief and, consequently, their academic performance (Zimmerman, 2000). Consequently, the following hypothesis is formulated:



H3: Learning Attitude has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

5. Learning Motivation (LM)

Learning motivation is a crucial factor influencing students' academic success and overall learning performance. A substantial body of research indicates that learning motivation significantly affects students' academic outcomes.

Firstly, intrinsic motivation has been shown to lead to deeper learning and higher academic achievement. According to Deci & Ryan (2000), students who were intrinsically motivated were more likely to seek out challenges and achieve better understanding. This finding was supported by studies indicating that intrinsic motivation correlates positively with academic performance across various educational contexts (Ryan & Deci, 2000). Secondly, extrinsic motivation, which involves engaging in learning activities for external rewards or to avoid negative outcomes, also plays a significant role in students' learning performance. Moreover, Studies have shown that students with high self-efficacy are more easily to set challenging goals and exhibit resilience in the face of setbacks, contributing to better learning performance (Zimmerman, 2000). Consequently, the following hypothesis is formulated:

H4: Learning Motivation has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

6. Student-Student Interaction (SSI)

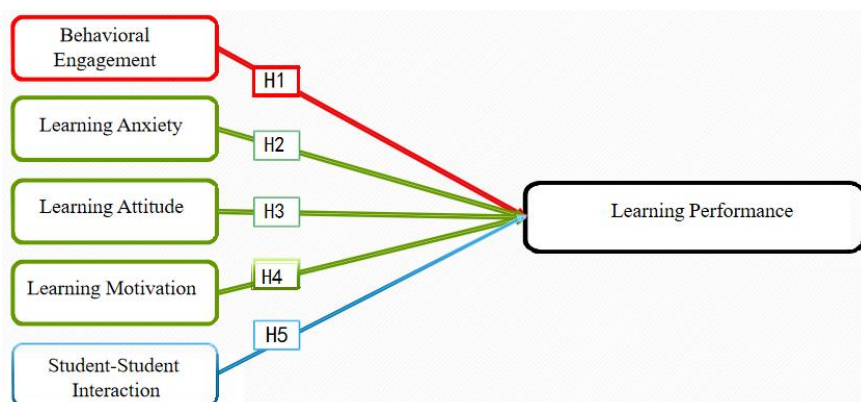
Student-to-student interaction has been extensively explored in educational research, with an increasing body of evidence indicating that it has a significant impact on students' learning performance.

Firstly, student interaction can promote collaborative learning, thereby improving academic performance. Research by Johnson and Johnson (1989) showed that cooperative learning groups effectively fostered interaction among students, enhancing their understanding and support for one another. Through discussions and problem-solving within groups, students can understand the learning material better, which often leads to higher academic achievement and learning performance. Secondly, social interaction can significantly boost students' motivation to learn. Studies have found that when students actively participated in group interactions, their intrinsic motivation and self-efficacy were notably enhanced (Deci & Ryan, 2000). Additionally, through peer evaluation and feedback, students received timely advice and guidance, which helped them identify their weaknesses and areas for improvement (Gielen et al., 2010). Consequently, the following hypothesis is formulated:

H5: Student-to-student interaction has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

Conceptual Framework

The researcher makes the conceptual framework by integrating three foundational theories along with insights from three significant prior studies. The three primary research theories utilized in the conceptual framework include: Pedagogical Interaction and Learning Performance as Determinants of Academic Achievement by Costa et al. (2015), Factors Affecting Students' Performance Web-based the COVID-19 Pandemic by Mahande et al. (2021), and Examining the impact of case-based learning on student engagement, learning motivation, and learning performance among university students by Raza et al. (2020).



H1 Behavioral Engagement (BE) has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

H2 Learning Anxiety (LAN) has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

H3 Learning Attitude (LAT) has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

H4 Learning Motivation (LM) has a significant impact on Students' Learning Performance in a blended learning English-Chinese translation course.

H5 Student-Student Interaction (SSI) has a significant impact on Students' Learning Performance in blended learning English-Chinese translation courses.

Methodology

Starting from the pre-IDI stage, a combination of research methods is employed. Initially, the qualitative method takes precedence, utilizing tools like observation and interviews. The feedback provided by students was utilized as qualitative data in the evaluation of the pre-IDI diagnosis. For pre-IDI interviews, 20 students were intentionally selected as participants, and teachers would engage in conversations with students while observing their reactions and responses as external observers. Five instructors reviewed and analyzed the qualitative data gathered from interviewees through content analysis to identify the main findings. Following the collection of qualitative data, the Wenjuanxing survey application was utilized as a tool to gather data for quantitative research purposes. After ensuring the validity and reliability of the survey questionnaire through tests, it was distributed to 175 students as participants to investigate the relationship between the independent and dependent variables. The outcomes of the Jamovi multiple linear regression analysis were utilized to solidify the framework and hypotheses presented. The IDI lasted for 16 weeks. Following the intervention, the post-IDI stages involved a collaborative use of both qualitative and quantitative methods to assess the outcomes of the IDI stage. Participants were once again administered some questionnaires, and additional observations and interviews were conducted. Both qualitative and quantitative data were analyzed and compared to confirm the findings of the IDI.

1. Research Population

In the thesis, the research population is the students who majored in English Literature, English Teaching, English Translation, and Business English at Zhanjiang University of Science and Technology, Guangdong, China. The author is a teacher from the university. There is 1 class from grade 2022 English Literature, 1 class from grade 2022 English Teaching, 2 classes from grade 2022 English Translation, and 1 class from grade 2022 Business English. Each class typically consists of about 35 students, so 5 classes will have a total of approximately 175 students. These students represent the research population for this study.

2. Sample size



The survey questionnaire was distributed through a WeChat group to a total of 175 students. After reviewing the responses, 127 were deemed eligible for further study. In the second stage of IDI, students were selected through purposive sampling, specifically choosing 30 participants from the student managers of the English Department. In the post-IDI stage, students from the experimental group were asked to complete the survey questionnaire once more. Additionally, 6 students were randomly chosen from the participants to take part in an interview session aimed at evaluating the outcomes of the IDI.

3. Sampling Procedures

The researcher conducted several sampling and related sampling procedures as follows:

Sampling 1: Sampling for pilot survey and pilot test. The researcher sampled 30 students randomly by asking students to fill out the survey questionnaire and to give feedback for a pilot survey and pilot test.

Sampling 2: Sampling for pre-survey Researcher sampled. The researcher intentionally selects students from English majors, taking into account their positions in the English department. The survey questionnaire was distributed through a WeChat group to a total of 175 students. After reviewing the responses, 127 were deemed eligible for further study.

Sampling 3: Sampling for IDI. The researcher randomly selected and sampled 30 voluntary students to implement IDI.

4. Design of Questionnaire

The researcher crafted a survey questionnaire through a three-step process:

Step 1: Sourcing Questionnaire Material. The researcher began by identifying suitable questionnaire materials from three openly published articles: Costa et al. (2015), Mahande et al. (2021), and Raza et al. (2020).

Step 2: Adapting for Chinese University Students. The researcher adjusted and tailored the survey questionnaires to fit the context of Chinese university students.

Step 3: Implementing the IOC. The researcher implemented the Integrity of Construction (IOC) process to ensure the validity and reliability of the survey questionnaire.

5. Components of Questionnaire

The survey questionnaire items were structured into three distinct parts:

Part 1: Qualifying Questions. This section comprised screening questions designed to exclude individuals who did not belong to the target research population.

Part 2: Demographic Information. Here, questions were included to gather basic demographic details of the research population, such as gender, age, birthplace, and other pertinent information.

Part 3: Preliminary Survey Inquiries. This part featured pre-survey questions aimed at assessing the current levels of the independent variable (IV) and dependent variable (DV) among a total of 175 English major students at Zhanjiang University of Science and Technology.

6. IOC Results

This study engaged five experts to provide their evaluative opinions on the questionnaire that was developed based on prior research. In this study, all dimension scores surpassed the 0.67 threshold for this criterion. After the discussion, the original questions are kept.

7. Pilot Survey and Pilot Test Result

The researcher conducted a pilot survey among 30 students, randomly selected, by requesting them to complete the survey questionnaire and provide feedback. Subsequently, the researcher applied Cronbach's Alpha test for internal consistency reliability, adhering to the threshold of 0.7 or higher, as recommended by Nunnally and Bernstein (1994). The following table presents the confirmed results, indicating high reliability for each construct.

Table 1 Pilot Test Result

Variables	No. of items	Cronbach's Alpha	Strength of association
Behavioral Engagement	4	0.775	Acceptable
Learning Anxiety	5	0.710	Acceptable
Learning Attitude	5	0.905	Excellent



Variables	No. of items	Cronbach's Alpha	Strength of association
Learning Motivation	5	0.804	Good
Learning performance	5	0.795	Acceptable
Student-to-Student Interaction	4	0.866	Good

Results

8. Demographic Profile

The researcher demonstrated the demographic profile of the entire research population (n=127), followed by the selected students' group (n=30). All participants in the research are students from blended learning English-Chinese translation courses, with ages ranging from 20 to 22. The basic information is summarized in Table 2.

Table 2 Demographic Profile

		Frequency	Percent	Valid Percent
Gender	male	14	11.02	11.02
	Female	113	88.98	88.98
Major	English literature	34	26.77	26.77
	English translation	42	33.07	33.07
	English teaching	30	23.62	23.62
	Business English	21	16.54	16.54

9. Results of Multiple Linear Regression

Multiple linear regression was applied to test the hypotheses. Since both the independent variables (the five determinants of English-major students' learning performance in a blended learning English-Chinese translation course) and the dependent variable (learning performance) are continuous, the analysis was conducted using multiple linear regression techniques.

Table 0 The Multiple Linear Results of the Independent Variables on Learning Performance

Variables	Standardized Coefficients Beta	t	P-value	R	R Square
Behavioral engagement	0.160	2.66	0.014	0.914	0.835
Learning anxiety	0.192	2.91	0.008		
Learning attitude	0.279	4.45	<.001		
Learning motivation	0.166	2.71	0.012		
Student-Student Interaction	0.470	8.26	<.001		
Dependent variable: learning performance					

Table 3 illustrates the relationship between the independent variables and dependent variables at the diagnosis stages. The multiple regression analysis conducted using Jamovi revealed that all p-values were below 0.05, indicating that all five independent variables significantly impacted the dependent variable. The R-squared value is 0.835. The R² value is very close to 1, indicating that the independent variables used in this study have a strong explanatory power for the dependent variable. Furthermore, the significant results (P < 0.05) indicate that all independent variables have an impact on students' learning performance. The research hypotheses were tested using the results from the MLR analysis. The finalized research hypotheses pertain to the changes in all variables between the pre-IDI and post-IDI stages.

H6 There is a significant difference in behavioral engagement between the Pre-IDI and Post-IDI stages.

- H7 There is a significant difference in learning anxiety between pre-IDI and post-IDI stages.
H8 There is a significant difference in learning attitude between the Pre-IDI and Post-IDI stages.
H9 There is a significant difference in learning motivation between the Pre-IDI and Post-IDI stages.
H10 There is a significant difference in learning performance between the Pre-IDI and Post-IDI stages.
H11 There is a significant difference in student-student interaction between the Pre-IDI and Post-IDI stages.

10. IDI Intervention Stage

The detailed design of the IDI stage is sixteen weeks. The IDI plan outlines the schedule and place, the participants involved, the objectives of the intervention, the tools used, and the specific activities to be undertaken.

Table 4 Implementation Time and Activities

No.	Time and Duration	Implementation keywords
1	Week 1-2	Establishing a research team
		Setting a research goal
		SWOT diagnose
2	Week 3-4	Developing an intervention plan
3	Week 5-9	Group intervention
4	Week 10-14	Individual counseling
5	Week 15-16	Interview and summary

Intervention to Improve Behavioral Engagement

(1) Group Discussion

Dividing students into groups of 4-5, ensuring a diverse range of language abilities and translation experiences within each group. Each group chose a translation topic, such as "The Impact of Cultural Differences on Translation." The teachers would provide a discussion framework, including a time limit (30 minutes) and guiding questions (e.g., "How do you handle culture-specific elements?"). Each group shared their discussion results for 10 minutes, followed by questions and discussions from other groups.



Figure 1 Students' Group Discussion

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(2) Role-Playing Activity

Creating a simulated translation environment, such as a translation review meeting: Students perform based on their roles, simulating a real translation discussion scenario and engaging in role interactions. Allowing students 15 minutes of preparation time to familiarize themselves with their roles and

responsibilities, discuss key points, and prepare to express their viewpoints during the performance. The teacher and other students provided feedback, discussed the performance's strengths and weaknesses, and emphasized the rationale and effectiveness of translation choices, encouraging students to share their thought processes.



Figure 2 Students' Role-Playing Activity

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(3) Peer Review

Students submitted a translation assignment (such as a paragraph or short essay), and the teacher provided clear evaluation criteria, including accuracy, fluency, and cultural appropriateness. Students then reviewed each other's work, filling out feedback forms and offering specific suggestions. The teacher organized a class discussion to share common issues and strengths identified during the reviews.



Figure 3 Students' Peer Review

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

Intervention to Improve Learning Anxiety

(1) Fostering an Open Communication Atmosphere

Teachers should encourage students to express their thoughts and feelings, especially regarding the learning content and methods. This has been done by setting up suggestion boxes or using online survey tools to allow students to provide anonymous feedback. Additionally, regular one-on-one communication has also been arranged to allow students to discuss their learning progress and mental state with their teachers. This personalized attention makes students feel valued and fosters trust.



Figure 4 Suggestion Boxes and Regular One-on-One Communication

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(2) Building Peer Support Networks

The students were divided into small groups to encourage collaborative learning and discussion. These groups helped each other, shared their learning techniques, and reduced individual learning pressure. Establishing a peer tutoring system allows older or high-achieving students to assist younger students.



Figure 5 Peer Support Networks

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(3) Creating a Positive Classroom Atmosphere

Teachers should recognize and reward students' efforts and progress, providing timely encouragement and praise to help build their confidence. Techniques such as "praise cards" or a "wall of recognition" were used to publicly acknowledge outstanding students.



Figure 6 Positive Classroom Atmosphere

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(4) Setting Realistic Expectations

At the beginning of a course, teachers should communicate the learning objectives and assessment criteria to help students understand what they need to achieve. Reasonable learning objectives help students clearly understand the key points and direction of the course, providing them with clear guidance throughout the learning process so they do not feel lost.

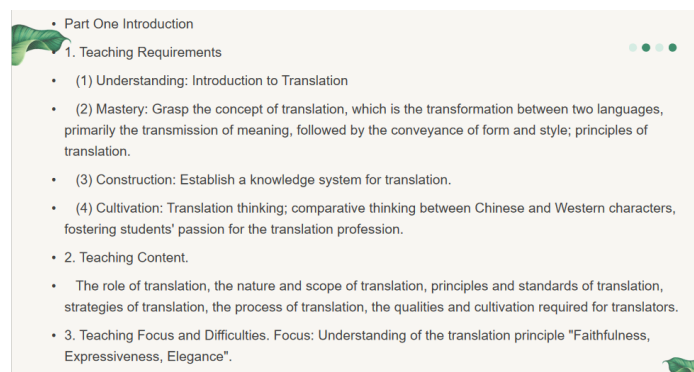


Figure 7 Setting Realistic Expectations

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

Intervention to Improve Learning Attitude

(1) Different Teaching Methods: The teachers assigned part of the theoretical knowledge for self-study outside of class, allowing for more in-depth discussions and practical activities during class to enhance students' proactive learning abilities. They also introduced real translation cases to help students connect theory with practice and stimulate their interest.



Figure 8 Students Sharing Their Translation Experiences

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(2) Regularizing Feedback and Assessment: The teachers combined regular grades with final exam scores, emphasizing the importance of process-oriented learning and stage-wise improvement. The teachers provided regular feedback throughout the learning process to help students understand their progress and identify areas for improvement.

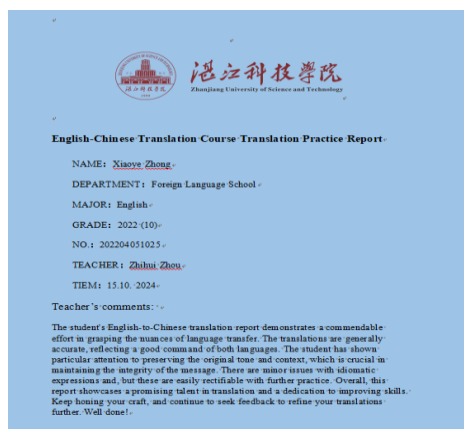


Figure 9 Student's Translation Work and Teacher's Feedback

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(3) Introduction of Technology Tools: The teachers utilized online platforms, such as Shiyibao, to provide additional learning resources and exercises, flexibly meeting students' learning needs. They taught students to use translation aids and tools to improve their translation skills and efficiency.



Figure 10 Technology Tools

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

Intervention to Improve Learning Motivation

(1) Project-Based Learning: The teachers demonstrated the application of translation skills in real-life situations and professions, such as inviting industry experts to share their experiences, helping students understand the importance of translation.



Figure 11 Translation Materials

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(2) Incentive Mechanisms: The teachers encouraged students to participate in contests that could earn them rewards, such as recognizing outstanding assignments and offering progress awards, and encouraging them to participate in some famous contests, to motivate students to actively participate in various competitions.



Figure 12 Student Award Certificate

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(3) Personalized Support: The teacher provided individualized tutoring based on students' diverse needs to help them overcome learning challenges and build confidence. The teachers assisted students in developing personalized learning plans, clarifying learning steps and timelines, and enhancing their learning autonomy.



Figure 1 Personalized Support from Teachers

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(4) Interactive Applications: The teachers used interactive applications (such as online quizzes, discussion forums, etc.) to increase the fun and interactivity of learning, thereby enhancing students' motivation to participate.



Figure 2 Online Discussion Forums

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

Intervention to Improve Student-Student Interaction

(1) Setting Group Tasks: The teachers designed group projects or translation tasks, ensuring that each student had clear roles and responsibilities. This promoted student collaboration and encouraged them to engage in discussions and exchanges while completing the tasks.



Figure 15 Students' Project Groups

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

(2) Conducting Role-Playing: In role-playing activities, students needed to collaborate to complete tasks, which helped cultivate their team spirit and communication skills. By translating within specific roles, students better understood the impact of different cultural backgrounds and contexts on translation, enhancing their translation skills.



Figure 3 Role-Playing

Source: Blended Learning English-Chinese Translation Course in Zhanjiang University of Science and Technology, China

Results

Comparison between Pre-IDI and Post-IDI

This section will present the results of the paired samples t-test conducted on each variable before and after the IDI, indicating whether the intervention was effective.

Table 5 Paired Samples T-Test of Behavioral Engagement

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-BE	30	3.43	0.676	-3.03	29.0	<.001
Post-BE	30	4.50	0.576			

According to Table 5, there was a significant difference in behavioral engagement interaction between pre-IDI (M=3.43, SD=0.676) and post-IDI (M=4.50, SD=0.576) conditions; $t(29) = -3.03$, $p < .001$, and the mean difference was -1.067.

Table 6 Paired Samples T-Test of Learning Anxiety

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-AN	30	2.88	0.623	-4.55	29.0	<.001
Post-AN	30	4.37	0.597			

According to Table 6, there was a significant difference in learning anxiety interaction between pre-IDI ($M=2.88$, $SD=0.623$) and post-IDI ($M=4.37$, $SD=0.597$) conditions; $t(29) = -4.55$, $p < .001$, and the mean difference was -1.487 .

Table 7 Paired Samples T-Test of Learning Attitude

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-AT	30	3.65	0.689	-4.59	29.0	<.001
Post-AT	30	4.45	0.585			

According to Table 7, there was a significant difference in learning attitude interaction between pre-IDI ($M=3.65$, $SD=0.689$) and post-IDI ($M=4.45$, $SD=0.585$) conditions; $t(29) = -4.59$, $p < .001$, and the mean difference was -0.762 .

Table 8 Paired Samples T-Test of Learning Motivation

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-MO	30	3.49	0.718	-5.45	29.0	<.001
Post-MO	30	4.41	0.682			

According to Table 8, there was a significant difference in learning motivation interaction between pre-IDI ($M=3.49$, $SD=0.718$) and post-IDI ($M=4.41$, $SD=0.682$) conditions; $t(29) = -5.45$, $p < .001$, and the mean difference was -0.913 .

Table 9 Paired Samples T-Test of Learning Performance

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-LP	30	3.62	0.485	-5.81	29.0	<.001
Post-LP	30	4.44	0.441			

According to Table 9, there was a significant difference in learning performance interaction between pre-IDI ($M=3.62$, $SD=0.485$) and post-IDI ($M=4.44$, $SD=0.441$) conditions; $t(29) = -5.81$, $p < .001$ and the mean difference was -0.820 .

Table 10 Paired Samples T-Test of Student-Student Interaction

Variables	N	Mean	Std. Deviation	t-value	df	p-value
Pair 1 Pre-SSI	30	3.54	0.722	-4.53	29.0	<.001
Post-SSI	30	4.47	0.697			

According to Table 10, there was a significant difference in student-student interaction between pre-IDI ($M=3.54$, $SD=0.722$) and post-IDI ($M=4.47$, $SD=0.697$) conditions; $t(29) = -4.53$, $p < .001$, and the mean difference was -0.925 .

In conclusion, the quantitative data indicated significant differences in behavioral engagement, learning anxiety, learning attitude, learning motivation, learning performance, and student-student interaction between the pre-IDI and post-IDI stages.

Discussion

This study explores the factors that influence students' learning performance in a blended learning English-Chinese translation course in Zhanjiang University of Science and Technology, and demonstrates that behavioral engagement, learning anxiety, learning attitude, learning motivation, and student-student interaction have significant impacts on students' learning performance.



In English-to-Chinese translation classrooms, the blended learning model demonstrates significant advantages. It primarily functions through three aspects: personalized learning, enhanced interaction and engagement, and improved flexibility and teaching efficiency. Blended learning combines online and offline resources to provide students with customized learning paths that meet their individual needs. Through big data and AI technology, it analyzes students' learning behaviors and achievements to provide precise feedback. Meanwhile, online platforms and classroom discussions facilitate interaction among students, enhancing their learning interest and engagement, and cultivating teamwork and communication skills. Additionally, blended learning breaks the temporal and spatial constraints, improves learning efficiency, and allows teachers to provide remote tutoring and timely feedback. AI technology facilitates automatic grading and provides improvement suggestions, enhancing teachers' teaching efficiency and management capabilities. In summary, blended learning holds significant value in English-to-Chinese translation classrooms, nurturing students' autonomous learning abilities, practical skills, and innovative thinking through diverse learning resources and paths, and driving the reform and development of translation curriculum teaching.

In Chinese English-to-Chinese translation classrooms, while blended learning offers advantages, it also faces multiple challenges. Teachers need to master information technology and online teaching skills, but the challenges in technology and instructional design cannot be overlooked. Students need to possess self-discipline and digital literacy, but often struggle to meet these requirements in practice. At the same time, schools and educational institutions need to make adjustments in the allocation and management of teaching resources, but financial, technical, and personnel constraints often make it difficult to achieve optimal configurations. To overcome these challenges, schools and teachers should work together to enhance their professional competencies and technological skills, strengthen the cultivation of students' self-discipline and digital literacy, and optimize the allocation and management mechanisms of teaching resources to ensure the effective implementation of blended learning.

Conclusion

Drawing upon the intervention and findings from the pilot survey, the researcher formulated conclusions and engaged in discussions regarding the application of blended learning in English-Chinese translation courses.

Online platforms offer a wealth of translation learning resources, such as online courses, lecture videos, and case analyses. These resources can be customized according to students' needs and characteristics, enabling them to better master translation knowledge and skills. Additionally, students can choose their learning resources and pace based on their learning progress and interests, fostering personalized learning experiences. Moreover, blended learning leverages big data and artificial intelligence technologies to analyze students' learning behaviors and grades. By analyzing students' performance in online tests, teachers can identify areas of weakness and provide targeted tutoring and exercises. This not only improves students' learning outcomes but also cultivates their self-learning abilities and lifelong learning habits. Another notable advantage of blended learning in English-Chinese translation classrooms is its enhancement of student interaction and engagement. Teachers can utilize online platforms for group discussions, online quizzes, and other activities, encouraging students to engage in more in-depth exchanges and discussions in the classroom. This interaction boosts students' interest and participation while cultivating their teamwork and communication skills. Furthermore, blended learning incorporates modern technological tools such as Virtual Reality (VR) and Augmented Reality (AR) to provide students with more realistic and vivid translation scenarios and experiences. Through VR technology, students can simulate translation practices in real-life situations, gaining a deeper understanding and mastery of translation skills.

However, despite its advantages, the implementation of blended learning in English-Chinese translation classrooms poses several challenges. Teachers must possess solid professional knowledge and master certain information technology and online teaching skills. Similarly, students need high levels of



self-discipline and digital literacy to manage their learning time autonomously and effectively utilize online resources. Additionally, schools and educational institutions must make corresponding adjustments and optimizations in terms of teaching resource allocation and management.

Recommendation

The findings of this research demonstrate that blended learning has effectively increased students' performance in English-Chinese Courses. Below are recommendations structured into five key areas.

To further engage students in the learning process and foster a dynamic and inclusive classroom environment, it is imperative to integrate interactive activities that encourage active participation and collaboration. Group discussions stand out as a potent tool in this regard, as they empower students to articulate their thoughts, share perspectives, and justify their translation choices in a supportive setting (Kaid & Rashad, 2019).

Encouraging open communication is essential, allowing students to express their thoughts and feelings about the learning content and methods (Ranjbar & Khodabakhsh, 2020). This can be facilitated through anonymous feedback channels such as suggestion boxes or online survey tools. Regular one-on-one communication between teachers and students can also provide a safe space for discussing learning progress and mental state.

To foster a proactive learning mindset, teachers can implement different teaching methods that cater to various learning styles. For instance, flipping the classroom allows students to independently study theoretical knowledge outside of class, leaving more time for practice and discussion during class. This approach enhances students' initiative and autonomy, fostering critical thinking skills.

To enhance motivation, teachers can employ project-based learning strategies. In a blended English-Chinese translation course, project-based learning allows students to engage in practical translation tasks, cultivating their translation skills and problem-solving abilities.

Interaction among students can stimulate learning interest and motivation (Kearney, 2018). To foster a collaborative learning environment, teachers can set group tasks and ensure that each student has clear roles and responsibilities. This promotes collaboration among students and encourages them to discuss and solve translation problems together.

Moreover, future studies could explore additional variables, such as cultural background, learning strategies, and prior experience with technology, to further refine our understanding of the factors that influence the effectiveness of blended learning in translation courses.

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Costa, C., Cardoso, A. P., Lima, M. P., Ferreira, M., & Abrantes, J. M. (2015). Pedagogical interaction and learning performance as determinants of academic achievement. *Procedia - Social and Behavioral Sciences*, 171, 874-881. <https://doi.org/10.1016/j.sbspro.2015.01.203>
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01
- Duke, J.A. (2002). *Handbook of Medicinal Herbs*. CRC Press, Boca Raton. <https://doi.org/10.1201/9781420040463>
- Dunn, R., Giannitti, M. C., Murray, J. B., & Rossi, I. (1990). Grouping students for instruction: Effects of learning style on achievements and attitudes. *Journal of Social Psychology*, 130(5), 485-494.
- Fredricks, J. A., & McColskey, W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 763-782). Springer. https://doi.org/10.1007/978-1-4614-2018-7_40



- Gielen, S., Tops, L., De Wever, B., & Struyven, K. (2010). The impact of peer feedback on students' learning and motivation. *Educational Studies*, 36(5), 629-640. <https://doi.org/10.1080/03055698.2010.505188>
- Guan, L., & Wang, X. (2019). Research on the interdisciplinary integration training of innovative translation talents in local undergraduate colleges. 207(3), 24-25.
- Guo, L. L., Zhao, L., & Lu, Y. X. (2021). Research on the training strategies of non-English major translation talents in the new era. 154, 116-117. <https://doi.org/10.16723/j.cnki.yycg.2021.10.035>
- Hembree, R. (1988). Correlates, causes, effects, and treatment of test anxiety. *Review of Educational Research*, 58(1), 47-77. <https://doi.org/10.3102/00346543058001047>
- Johnson, D. W., & Johnson, R. T. (1989). *Cooperation and competition: Theory and research*. Interaction Book Company.
- Kaid, M. A. J., & Rashad, A. B. W. (2019). A study of EFL students' attitudes, motivation, and anxiety towards WhatsApp as a language learning tool. *Arab World English Journal*, 5(5), 289-298. <https://doi.org/10.24093/awej/call5.19>
- Kearney, R. (2018). Peer review in education: A review of the literature. *Journal of Educational Research*, 111(2), 189-204. <https://doi.org/10.1080/00220671.2017.1280182>
- Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education*, 79(5), 540-563.
- Ladd, G., & Dinella, L. M. (2009). Continuity and change in early school engagement: Predictive of children's achievement trajectories from first to eighth grade? *Journal of Educational Psychology*, 101(1), 190-206.
- Mahande, R. D., Malago, J. D., Abdal, N. M., & Yasdin, Y. (2021). Factors affecting students' performance in web-based learning during the COVID-19 pandemic. *Quality Assurance in Education*, 30(1), 150-165. <https://doi.org/10.1108/QAE-08-2021-0130>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. McGraw-Hill.
- Ranjbar, S., & Khodabakhsh, M. (2020). The relationship between test anxiety, self-efficacy, and academic achievement among Iranian EFL learners. *International Journal of Instruction*, 13(1), 121-138. <https://doi.org/10.29333/iji.2020.1319a>
- Raza, S. A., Qazi, W., & Umer, B. (2020). Examining the impact of case-based learning on student engagement, learning motivation, and learning performance among university students. *Journal of Applied Research in Higher Education*, 12(3), 517-533. <https://doi.org/10.1108/JARHE-05-2019-0105>
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In *Handbook of Research on Student Engagement* (pp. 149-172). Springer, Boston, MA.
- Reeve, J., & Tseng, C. M. (2011). Agency is a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257-267.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Sarason, I. G. (1980). Test anxiety and cognitive interference: Theoretical perspectives. *Journal of Personality and Social Psychology*, 39(4), 810-814. <https://doi.org/10.1037/0022-3514.39.4.810>
- Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research, and applications* (3rd ed.). Pearson.
- Young, M., Klemz, B., & Murphy, J. (2003). Enhancing learning outcomes: The effects of instructional technology, learning styles, instructional methods, and student behavior. *Journal of Marketing Education*, 25(2), 130-142.
- Zeidner, M. (1998). Test anxiety: The state of the art. *Contemporary Educational Psychology*, 23(1), 27-50. <https://doi.org/10.1006/ceps.1997.0964>



Zimmerman, B. J. (2000). Attaining self-regulated learning: A social cognitive perspective. In *Handbook of self-regulation* (pp. 13-39). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50031-7>

