

Research on Cultivating Foreign Language Aptitude of International Talents in the Context of ‘Trinity’ in the New Era

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Abstract: This article explores the role of foreign language teaching and technology-assisted language teaching and learning in predicting foreign language aptitude in the new trinity era. Taking college English as an example of foreign language teaching, this article investigated the English scores of 180 non-English majors and their teachers' teaching habits, textbook use, and technology-assisted English teaching and learning. The results of the study were analysed by SPSS with ordinal logistic analysis. It was found that textbook had a significant positive effect on students' English scores, teaching habits were less correlated than textbook, and technology-assisted language teaching and learning mainly played a facilitating role. This study contributes to accelerating the pace of foreign language textbook reform, taking students' interests as the breakthrough of teachers' teaching, and enhancing the effect of technology application in foreign language teaching and learning.

Keywords: Teacher Teaching, Textbook, Technology-assisted Teaching and Learning, Language Aptitude, Internationalized Talents

1. Introduction

Internationalized talents are those who have a global vision and good foreign language skills, who are familiar with their own country's history and traditions, and who learn the achievements of the world's excellent civilization^[1]. A good command of foreign languages or excellent foreign language aptitude is the key for internationalized talents to go out into the world. Foreign language education plays a fundamental role in improving the foreign language ability of internationalized talents. A large number of countries and regions attach great importance to the foreign language education of talents in order to promote economic and social development in the era of globalization, especially the cultivation of international talents. However, the development of science and technology has brought new challenges to foreign language education. More and more countries are emphasizing the link between technology and education. What accelerates the application of technology in education and increases the technological literatures of foreign language teachers has become a common demand.

In November 2022, the report of the 20th Party Congress in China stressed that “education, science and technology, and talents are the basic and strategic support for the comprehensive construction of a socialist modernizing country”, which is the first time that the Party integrates education, science and technology, and talents together for systematic planning to serve the construction of an innovative country. The new trinity strategy requires universities to integrate the basic role of education and the supporting role of science and technology, which promotes the development of internationalized talents and provides abundant talent reserve for the construction of China's innovative country. Foreign language ability is the ability that internationalized talents must possess, and it is also one of the goals of talent cultivation in foreign language education.

Previous researches are also abundant and diversified in foreign language teaching and the function of technology on language teaching and learning. However, there are fewer studies on the interactive effect of them on the foreign language aptitude of talents. In a new trinity era, in addition to the improvement of foreign language teaching and the development of technology, it is more important for the cultivation of internationalized talents to have a high degree of interaction between them. Therefore, based on the above discussion, this study tries to explore the interaction between foreign language teaching and science and technology application in the cultivation of foreign language aptitude of nationalized talents.

2. Literature Review

2.1 Effects of FL teachers' teaching on foreign language aptitude

Foreign language (FL) aptitude generally refers to the specific talent for learning a foreign or second language (L2)^{[2][3]}, which is a concept mainly rooted in educational psychology. Additionally, the interpretation of FL aptitude in applied linguistics is inevitably affected by developments in the neighboring fields of education and psychology. In recent years, after decades of rapid developments within the cognitive revolution^[4], human cognitive factors have increasingly become significant research directions in FL aptitude. As Dörnyei^[5] pointed out, FL aptitude has increasingly become something of a kind of hybrid construct related to a number of cognitive factors that form a composite measure considered as the general ability to master an L2. To summarize, educational psychology and cognitive construction have been research points including affective variables^{[6][7]}, language learning strategies^{[8][9]}, learning styles as contributors to aptitude and aptitude as a cognitive construct affected by language variables^{[10][11]}, individual differences in language learners^{[5][12]} and the importance of phonological/orthographic processing for foreign language learning^{[13][14]} etc.

2.2 Effects of CALL or MALL on Foreign Language Aptitude

Compared with internal factors (psychology & cognition), it is noted that with the advent of the internet, computer-assisted language learning (CALL) and mobile-assisted language learning (MALL) also occupy a crucial position in language learning. In 1980s, various types of CALL including the use of film, radio, television, language laboratories and videotapes, computers, and interactive video and some innovative uses of software, became commonplace^[15]. Subsequently, the use of multimedia^{[16][17][18]}, the Internet (especially the -World Wide Web)^{[19][20]} and various forms of distance learning^{[21][22][23][24]} are widely used. Generally speaking, interest, convenience and effectiveness make CALL and MALL as tools to support language learning, vocabulary^{[25][26]} grammar^{[27][28][29]} and acquisition^{[30][31]} which has become a trend for language educators and language learners. In fact, the application of CALL or MALL in language learning affects the language aptitude in a certain way.

Nevertheless, it can be noticed that more attention is paid to its internal factors (psychology & cognition). Its external aspects (CALL or MALL, referred to here as technology) generally concentrate on learners or teachers' attitudes, beliefs and functions etc., ignoring the effect on language aptitude. Grace Wiebe^[32] have made a comparison between students' attitudes and instructors' perceptions towards the use of educational technologies. This study revealed a discrepancy between students' awareness of instructors' goals for using new technologies and the importance instructors placed on CALL, as well as between the types of technologies that instructor thought were useful for students' success and those that students thought were useful for their own success. Some significant research has examined language learners' beliefs about particular technologies used in foreign language classrooms^[33]. The study demonstrated that increased exposure to effective and varied models of CALL may result in more positive beliefs towards it. However, other research has shown that while foreign language (FL) teachers may have positive attitudes towards informal MALL, many of them hold negative sentiments towards MALL in the classroom^[34]. Additionally, MALL or CALL may have a negative effect on the improvement of autonomy and motivation^[35]. It can be concluded that technology, specifically CALL and MALL, has been emphasized in language learning. However, there is no agreement on whether technology contributes to foreign language learning, and few researchers have compared the effectiveness of foreign language teaching with technology applications on language aptitude. Based on the above considerations, the analysis of the different effects of foreign language teaching and technology-assisted in language teaching and learning on language aptitude is necessary.

The following are main questions:

- 1) What is college English teachers' teaching habit in standing position and language choice in class?
- 2) What's the degree of satisfaction with the textbook and topic preference in textbooks for non-English major students?
- 3) What's the situation of technology-assisted in college English teaching and learning?
- 4) How do foreign language education (teachers' teaching habits, the satisfaction of textbook) and technology-assisted teaching and learning affect non-English major students' aptitude?

3. Research Design

3.1 Participants and Procedure

Given that English is a fundamental subject in China's foreign language education, this study takes college English as a factor of foreign language and investigates the situations of college English teaching and technology application. Additionally, the participants of this study are freshmen and sophomores of non-English major college students from the author's university. Those students have already learned English for several years before university and modern technology is widely used in college English teaching and learning in a way. After at least one academic year of technology-based college English learning experience, students gain better understanding of foreign language teaching and learning and technology-assisted on foreign language learning. Moreover, this study also surveyed the English final examination score of students to reflect the impact of foreign language teaching and technology-based on language aptitude.

This study randomly selected several classes, through online and offline distribution of questionnaires at intervals before class. Those students were required to finish the questionnaire at least 5 minutes. Consequently, 200 questionnaires were given out and 180 valid questionnaires were collected. Before conducting the questionnaire survey, the study obtained the students' consent and informed them that all the research data collected were anonymized to protect participants' privacy. Students' participation was cooperative and voluntary, and thus they completed the questionnaire carefully.

3.2 Questionnaire items

The total number of questionnaire items are 23 which are composed of three main themes: personal information, foreign language teaching and the application of technology: 1) personal information contains 4 items, students' grade, gender, times of College English course in a week and their final English scores. 2) foreign language teaching generally can't be devoid of foreign language teachers and relative textbooks. There are 9 items in the questionnaire, foreign language teachers' teaching including teaching habits, teaching preferences of contents; and textbooks including satisfaction and topic preference. 3) in the aspects of technological application, the questionnaire consists of 10 items with 2 dimensions application of technology in College English teaching and College English learning.

The satisfaction investigation items were ranked on a five-point Likert Scale ranging from strongly disagree to strongly agree. The data was analyzed based on the assigned values of 1 to 5. The information was collected using Questionnaire Star and analyzed using the Questionnaire Star system and SPSS.26 software. Furthermore, the questionnaire was tested for reliability and validity, with a Cronbach's α value of 0.753 and a KMO value of 0.770, respectively. These results indicate that the questionnaire is highly reliable and valid.

4. Results and discussion

4.1 Teachers' habits

Teachers are essential figures in influencing students' learning level and development potential^[36]. Teachers' teaching habits and contents influence students' learning habits, attitudes and interests, etc., which will ultimately affect students' foreign language aptitude. Teachers' teaching habits are varied with their own personalities. The following presents statistics on the location of teachers in the classroom and their language options when teaching (see Table 1 & Figure 1).

4.1.1 Teachers' Location in Class

The teachers were classified as either 'podium-centered' or 'position-random' based on their location in the classroom. The former emphasizes the teacher's authority, while the latter promotes equal participation during the lesson. Based on the statistical results presented in Table 1, 46.11% of the teachers were perceived as 'podium-centered' while 53.89% were considered 'position-random'. This indicates that over half of the college English teachers actively engage with their students, viewing them as collaborators and participants, and prioritizing interaction to foster positive teacher-student relationships. In contrast, 46.11% of the teachers prefer to stand at the podium and observe the students and classroom dynamics. They aim to grasp the overall effect, participate in classroom teaching as an observer or reviewer, and maintain a certain distance from the students in order to build up teachers'

prestige. These two different habits reflect the teachers' approach to teaching. Teachers adjust their own classroom strategies based on their students' performance and strive to achieve positive outcomes. According to the Pearson correlation analysis ($p > 0.05$), there is a negative correlation between teachers' position and students' English scores, indicating that educators' positions do not necessarily reflect students' English aptitude.

Table 1: Teacher's position in class.

	Podium-centered	Position-random	Amount
Number	83	97	180
Proportion	46.11%	53.89%	100%

4.1.2 Language Choice and Question Times in Class

Verschueren^[37] argued that language use is a conscious and unconscious process influenced by both intra- and extra-linguistic factors. Language choice is generally determined by cultural, social and other objective factors. From the statistical results presented in Figure 1, it is clear that nearly 70% of college English teachers use English as the primary language in the classroom, supported by Chinese. Only a few teachers use either Chinese or English. In fact, in order to create an English learning environment for students, the majority of teachers choose English as the language of instruction, that is, in general, teachers choose the language according to the needs of the class including intra- and extra-linguistic factors. However, the number of questions in more English is lower than in the situation of more Chinese or even, which indicates that although teachers choose English as the main language to teach, they ignore the participation of students in class.

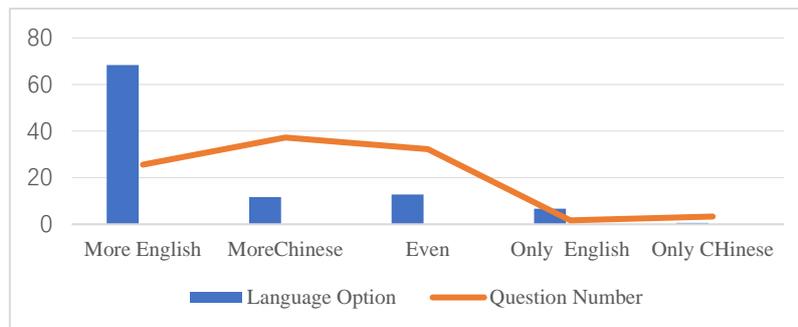


Figure 1: Language Option & Question Times.

4.2 Teachers' Teaching Instrument Textbook

The following statistics on students' satisfaction with textbook and topic preference in textbook are useful for teachers' teaching and textbook revolutionary.

4.2.1 Satisfaction & Usage Frequency

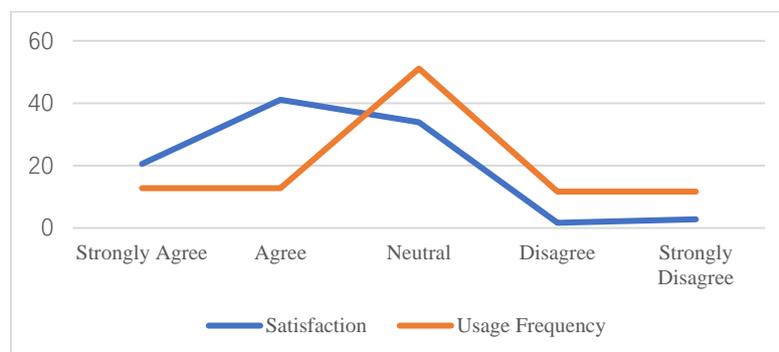


Figure 2: Textbook Satisfaction & Usage Frequency.

The statistical results of non-English students' satisfaction with the college English textbooks show that only more than 60% of non-English students are content with their English textbooks (Figure 2). At least one-third students keep neutral attitude. However, compared with satisfaction, the trend of textbook usage frequency shows differences. Explicitly, the proportion of agree attitude of textbook use is lower than its satisfaction but disagree attitude is higher. It indicates that although the reform of foreign

language textbook in colleges has achieved certain results in recent years and these textbooks basically meet the needs of non-English major students in learning English, they have not been fully utilized. Moreover, students' use of textbooks is primarily influenced by various external factors, completing homework, exam requirements, and teacher supervision etc., which clarifies the low initiative of students with textbooks learning English.

4.2.2 Topic Preference in Textbook

Figure 3 displays the percentage of students' preferences for articles in textbooks: social life (50.56%) > language and culture (38.89%) > current affairs and politics (35%) > education and psychology (18.33%) > others (16.11%) > ethics and morals (12.78%). The data shows that college students are interested in social, linguistic and current affairs and politics topics. Besides with a strong desire to learn English, they especially keep eyes on national affairs in textbook with a strong sense of family and country. However, at the same time, the data also demonstrate ethical and didactic articles in the textbooks are not popular among them. Living in an era of rapid technological development and diverse ideas, most of them pursue individualism and challenges traditional rules and ethics. These changes have brought new challenges to teachers and textbook compilers in designing effective teaching strategies.

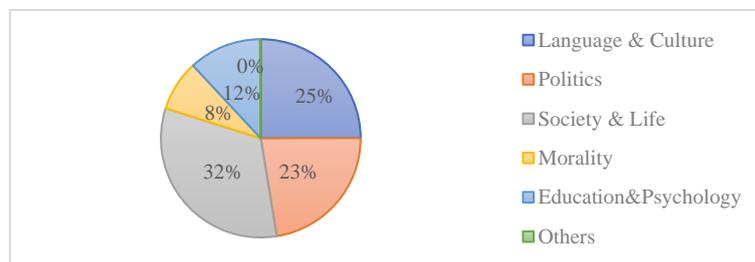


Figure 3: Topic Preference in Textbook.

4.3 Technology-assisted in College English Teaching and Learning

Computer-based teaching has become a symbol of the power of science and technology to promote the development of education in the Internet era. Especially in higher education, technology plays an increasingly important role in teaching and learning. The following demonstrates the application of technology in college English teaching and learning and its satisfaction.

4.3.1 Technology-assisted Teaching and Learning

Technology has been widely used in English teaching and learning. Research indicates that many teachers and students have a positive attitude towards technology in education. Figure 4 illustrates the role of technology in English teaching and learning, showing that the use of technology in teaching is more prevalent than in learning. It is worth noting that teachers tend to use technology more frequently in listening exercises, while students tend to use it more for translation purposes. Teachers prioritize their students' development, while students focus on learning and understanding English words meaning. Both groups find technology useful in achieving their respective goals.

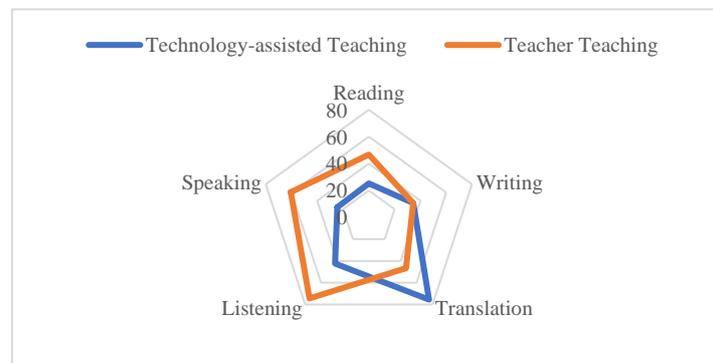


Figure 4: Technology-assisted Teaching & Learning.

4.3.2 Satisfaction on Technology-assisted Teaching and Learning

Based on the statistical results presented in Figure 4, it can be observed that satisfaction with

technology-supported learning is higher than with teaching. The majority of students are satisfied with technology-supported learning, but almost half of the teachers are neutral. Nevertheless, according to Figure 3, the use of technology in teaching is more widespread than in learning, which indicates that the acceptance level of students is higher than that of teachers in technology-assisted application. Teachers have an objective approach to technology-assisted teaching and use it for students' knowledge acquisition and facilitate the achievement of teaching objectives, which shows the professionalism and rigor of college English teachers.

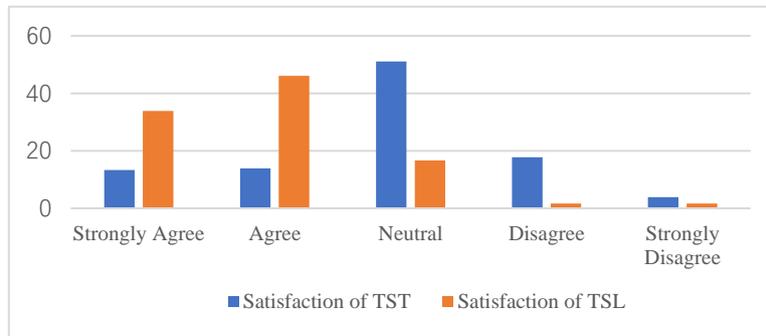


Figure 5: Satisfaction Comparison of Technology-assisted Teaching & Learning.

4.4 Effects of Both Educational Teaching and Technology-assisted Teaching and Learning on Foreign Language Achievement

The independent variables in this study are the situation of teaching, the use of textbook, and technology-assisted in English teaching and learning, and the dependent variable is students' final English grades, which are poor (below 60), average (60-69 points), good (70-79 points), very good (80-89 points), and excellent (above 90 points), and the final ordered by SPSS.26 logistics regression analysis.

4.4.1 Parallel Lines Test and Model Fitting

The ordered multi-categorical logistics regression model needs to be tested for the assumption that the coefficients of the independent variables are equal (also known as the parallel lines test). The parallel lines test is used to test whether the effect of each level of the value of the independent variable on the dependent variable is the same in each regression equation. According to the statistical results, the result of the parallel lines test of the questionnaire $p=0.168 > 0.05$ indicates that the model passes the parallel lines test and can be analyzed further. In addition, the model fit information is $p=0.001 < 0.05$, which means that this constructed model is meaningful.

4.4.2 Parameter Estimation Analysis

According to Table 2 below, it can be seen that: the regression coefficient of the situation of textbook satisfaction is 0.756, and it is significant ($p=0.000 < 0.05$), and the regression equation is: $y=0.756x+16.12$, which indicates that students' textbook satisfaction has a significant positive influence on the relationship with students' performance in English, and the use of textbooks has an explanatory degree of 75.6% of students' performance in English. However, the p-values for teacher teaching, technology-assisted teaching and learning are all greater than 0.05 and therefore not statistically significant.

Table 2: Summary of ordered logistics regression model analysis.

		Parameter estimation					95% CI	
		Estimation	standard error	Wald	DOF	S.	lower	Upper
		VPT	[SCORE = 1]	-1.839	.904	4.144	1	.042
	[SCORE = 2]	.012	.871	.000	1	.989	-1.695	1.720
	[SCORE = 3]	2.142	.889	5.806	1	.016	.400	3.884
	[SCORE = 4]	4.970	1.012	24.115	1	.000	2.986	6.954
Location	textbook	.756	.188	16.116	1	.000	.387	1.125
	teaching	-.077	.229	.113	1	.737	-.526	.372
	technology	-.300	.249	1.447	1	.229	-.789	.189

Correlation function: partial logarithm.

5. Conclusion and Implications

From the above statistical results, the more familiar students are with the textbook, the easier it is for them to get into the classroom learning environment quickly, which can attract their attention and contributes to following teacher's teaching progress and grasping teacher's key and difficult points. In addition, technology-assisted in teaching and learning doesn't have a significant effect on the students' English aptitude, which indicates that the application of educational software in teaching and learning is not an important reason for affecting the English aptitude of students, namely although as a kind of teaching tool and learning means, it can help improve the efficiency of English teaching and learning and enrich the way of teaching and learning, it can't drive the students to learn English independently or form the consciousness of learning English. On this basis, this paper puts forward the following suggestions:

Teachers should pay attention to the role of college English textbook in teaching, but also prevent the supremacy of textbook. The content of foreign language teaching should meet the needs of the times when students can show the world to China as well as China to the world^[38]. In addition, textbooks are extremely authoritative, which requires teachers to pay particular attention to the content of college English textbooks which should satisfy needs of students to learn knowledge and cultivate their interest in the subject, as well as meet the requirements of mainstream values. At the same time, we also need to prevent the theory of textbooks and supremacy, and take textbooks as the basic teaching materials, as a basis for expanding the content of learning, cultivating students' interest in learning English independently, developing self-driven, and setting up correct values as the main focus. Finally, the quality of compilers should be improved to ensure that the pace of reform of college for the improvement of the textbook quality.

College English teachers should change the teaching concept from "textbook-supreme" to "talent-first", and from enriching teaching content to nurturing people with moral values. Since entering the new era, in order to respond to the needs of trinity development in the national education, science and technology and talent, foreign language teachers should not only know how to teach and explain, but also know how to educate students, and strengthen the construction of civics and politics in foreign language courses^[39]. Secondly, foreign language teachers can recommend films, books, forums, etc., which are in line with the teaching theme, which can not only cultivate students' interest in learning foreign languages, broaden their horizons, but also spread national streamline value. In addition, teachers organize some learning games, such as foreign language word games, memorizing English scenes and describing them in their own words, etc., so as to let students come into contact with English in entertainment, and to reduce the fear and anxiety of students who are reluctant to open their mouths to speak English and are afraid of making mistakes. Finally, foreign language teachers learn to take the initiative to walk into the students' lives as students' mentors and friends.

Colleges should give full play to the important roles of "technology-assisted in teaching and learning". Meanwhile, colleges should also promote the feeding role of "talents helping science". The purpose of scientific and technological inventions is to serve mankind. In the process of foreign language education, teachers should not only learn the basic teaching technology to assist teaching, but also keep abreast of the times, learn in-depth technology-assisted translation, and improve personal technological literature etc. for the purpose of making full use of technology to impart knowledge to students. Students should also combine information technology and network with what they have learn to maximize the use of technology to assist personal learning. Last but not least, technology serve for human beings, but people also immersing into exploring science and technology, struggling for multi-directional and multi-level technological breakthroughs in foreign language.

Time creates talents, education guides talents, and talents revolutionize the times. This paper takes college English in foreign language teaching as an example and randomly examines the influence of teachers' teaching and technology-based talent cultivation. According to the statistical results, it is found that compared with the traditional influencing factors of language aptitude (LA), teachers are still the main reason for teaching and nurturing; the satisfaction of teaching materials is an important indicator influencing LA, which develops synchronously with talents; and technology can only play a helping role. In other words, teachers' teaching habits reflect how to cultivate talents and what kind of talents to cultivate, textbook satisfaction will directly affect the effect of students' learning, while the application of technology in teaching and learning still has a lot of room for improvement. It is urgent that how to use modern technology to cultivate students' interest in learning and improve their learning efficiency. In addition, it should be noted that due to the limitations of the sample size and influencing factors used in this study, the conclusions drawn in this paper need to be further examined and tested, and it is necessary to further increase the sample size and expand the research dimensions for subsequent studies.

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