



Exploring the Relationship between Language Attitude and Language Achievement among Chinese EFL Learners

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Abstract

This study explores the relationship between language attitude and language achievement among Chinese EFL learners, addressing the gap in empirical evidence within the Chinese context. Language attitude is a crucial factor influencing language learning, yet its connection to language achievement remains underexplored in China. The study employs the latent process viewpoint as its theoretical framework, analyzing both qualitative interviews and quantitative data to investigate this relationship. Qualitative insights from interviews with two students reveal how teaching methods and language policies impact students' attitudes and subsequent language performance. The study concludes that there is a strong positive relationship between language attitude and language achievement among Chinese EFL learners. It suggests that fostering positive language attitudes through flexible teaching approaches, such as post-method pedagogy and translanguaging strategies, can enhance language achievement. Additionally, the integration of Generative AI tools is recommended to further support positive attitudes and improve learning outcomes. These findings highlight the importance of cultivating positive language attitudes in educational practices to promote better language learning experiences and outcomes for Chinese EFL learners.

Subject Areas

Applied Linguistics and Language Education

Keywords

Language Attitude, Language Achievement, Chinese EFL Learners

1. Introduction

Language attitude has long been a focal point in the field of applied linguistics due to its multifaceted influence on various linguistic phenomena, including language maintenance [1] [2], language policy [3] [4], bilingualism/multilingualism [2] [3], and second language learning and acquisition [3] [5]. These areas are interconnected, as attitudes shape how individuals perceive and engage with languages, influencing both personal and societal linguistic behaviors. For instance, positive attitudes towards a minority language can contribute to its preservation, while negative attitudes may lead to language shift or loss [1]. Similarly, attitudes play a crucial role in shaping language policies, determining which languages are promoted or marginalized in educational and governmental contexts [4].

In the realm of second language learning, attitudes have been identified as a key motivational factor influencing learners' engagement, persistence, and ultimate success [6] [7]. Positive attitudes towards the target language and its speakers can enhance learners' motivation, leading to more effective language acquisition [8]. Conversely, negative attitudes may hinder learning by reducing learners' willingness to practice and engage with the language [9] [10]. This relationship between language attitude and language achievement has been empirically demonstrated in various contexts, with studies showing that positive attitudes correlate with higher language proficiency and exam scores [10] [11].

However, although many scholars [6] [12] argue that language attitude might be an important construct affecting learners' language learning, little is known about the relationship between language attitude and language achievement, especially in the Chinese context. China's unique linguistic environment, characterized by a complex interplay of Mandarin, regional dialects, and English as a foreign language (EFL), presents a distinct setting for examining the relationship between language attitude and language achievement. The growing importance of English in China's education system and global interactions further underscores the need to understand how attitudes influence EFL learning outcomes. This study, therefore, aims to fill this gap by exploring the correlation between language attitude and language achievement among Chinese EFL learners. By doing so, it seeks to provide valuable insights and practical recommendations for improving EFL teaching practices in China.

2. Literature Review

Attitude is defined as "a disposition to react favourably or unfavourably to a class of objects" [13]. This definition implies that attitude contains an evaluative stance on any target object. As a domain-specific concept, language attitude is regarded as a type of attitude which places language as the item to be evaluated [12]. Further, language attitude also refers to individuals' themselves as well as others, which can be favorable or unfavorable, and such attitudes towards language are associated with a person's language selection [14]. The former emphasizes that language attitude is formed based on the personal evaluation, while the latter points out that

language attitude has various attributes, and it expands the range of language attitudes from a person's own language to others' languages. In light of the definitions mentioned above, in the context of this study, the language attitude is defined as learners' feelings and thoughts about any languages related to them, which can be either positive or negative.

Several theoretical viewpoints towards language attitude are proposed: (1) tri-componential viewpoint [15]; (2) separate entities viewpoint [16]; (3) latent process viewpoint [17]. The tri-componential viewpoint claims that attitude is a combined concept with three subsections, namely behavioral, affective, and cognitive elements [18] (see **Figure 1**). Among them, the behavioral element refers to the propensity to behave in a certain way due to the target object [19] [20]. The affective element is concerned with one's subjective feelings towards the target object [21]. The cognitive element is related to an individual's opinions and assessments of the target object [22]. This viewpoint gives rounded illustrations of the components of attitude. However, the principal limitation is that this viewpoint contains a relatively high consistency among the three elements, whereas they cannot be seen as different elements if they are completely associated [18].

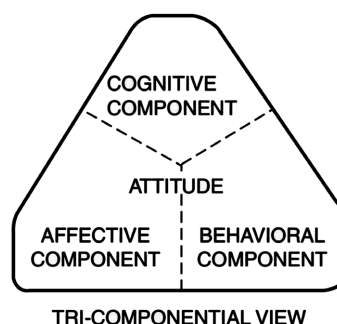


Figure 1. The tri-componential viewpoint [18].

Conversely, the separate entities viewpoint states that these three elements are separate and not necessarily correlated [18] (see **Figure 2**). The attitude solely refers to the affective element mentioned above [23], and the cognitive element and behavioral element are labeled as beliefs and behavioral intentions respectively [18]. As Fishbein and Aizen [16] said, there is no need for the three elements to be related. Nevertheless, this viewpoint seems questionable because it might oversimplify the concept of attitude and may neglect some aspects of attitude [16] [24].

As a response to the previous two viewpoints, the latent process viewpoint postulates attitude as an “intervening variable”, which is employed to explain the latent process between “stimulus events” and “responses” [18]. As shown in **Figure 3**, when stimulus events occur, individuals' non-observable behavioral, affective, and/or cognitive processes are activated. The non-observable processes comprise the attitude (non-observable), and then the attitude would cause observable behavioral, affective, and/or cognitive responses [18] [25]. According to this viewpoint, the attitude might stem from any one, two, and/or three kinds of processes

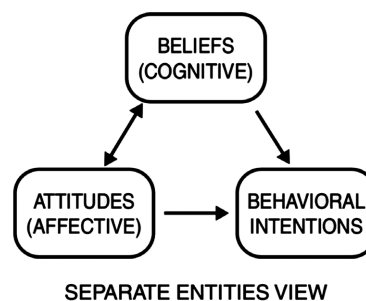


Figure 2. The separate entities viewpoint [18].

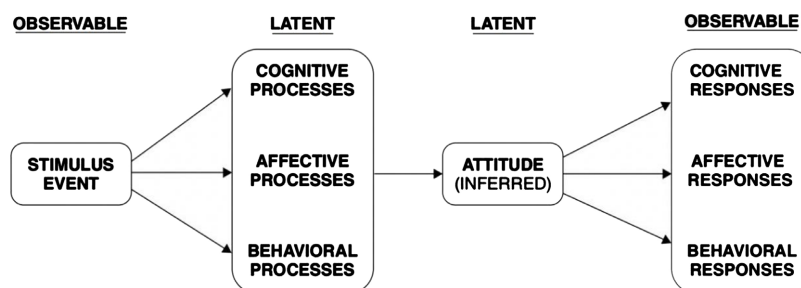


Figure 3. The latent process viewpoint [18].

produced from certain stimulus events [24]. Furthermore, Breckler [26] adds that the attitude will be manifested in the eventual responses, which can be behavioral, affective, and/or cognitive responses. More importantly, this viewpoint may avoid the premise that the three separate elements are highly consistent, and it also prevents oversimplified explanations of attitude. Given that the latent process viewpoint compensates for the weaknesses of the previous two viewpoints, it is utilized as the framework to analyze the issue in this study.

It has been demonstrated that language attitude could be an important factor influencing students' language learning [6] [12]. Huguet [8] argues that learners are more likely to learn a language if he or she has a positive attitude to the target language. Furthermore, positive language attitudes are beneficial to the process of L2 learning [7]. In contrast, negative language attitudes might exert adverse impacts on learners' language learning [9] [10]. In addition, some empirical studies have examined the relationship between language attitude and language achievement among learners at different levels of proficiency in different contexts. For example, Habók and Magyar [11] investigated the relationship between foreign language attitude and foreign language performance in a middle school in the Hungarian context. Analysis of the questionnaires revealed that foreign language attitude was positively correlated with foreign language performance. Furthermore, they found that students with higher marks on foreign language tests tended to have more positive attitudes towards foreign language learning, which means that there might be a virtuous cycle between good language performance and positive attitudes. Similarly, Cochran *et al.* [27] scrutinized the correlation between foreign language at-

titude and foreign language exam scores in a university in the United States. The results of correlation analysis and multiple regression analysis showed that there was a positive correlation between foreign language attitude and foreign language exam score, and foreign language attitude could positively predict the foreign language exam grade. Moreover, a meta-analysis conducted by Masgoret and Gardner [28] discovered that language attitude was statistically significantly correlated with language achievement obtained from different methods such as test scores and self-reported measures.

Collectively, language attitude is significantly positively correlated with learners' language achievement in many contexts. Nevertheless, considering that empirical evidence for such a relation in the Chinese context is quite limited, there is an urgent need to examine the relationship between language attitude and language achievement in the Chinese context.

3. Analysis of Quantitative and Qualitative Data

The latent process viewpoint towards language attitude is employed to scrutinize the experiences and reflections in interviews with two students. Both the content of interviews with two students and the empirical research used in this section are in the Chinese EFL context so as to explore the correlation between language attitude and language achievement in Chinese EFL learners.

As mentioned in the interview 1, during the period of undergraduate studies, the English course was a compulsory course for the student 1 (Amy), and the English teacher Dr. Liu could teach English in an interesting and vivid way. In this case, Amy always enjoyed the process of learning English. Furthermore, Dr. Liu was an extremely friendly and responsible teacher and helped Amy tackle all the difficulties in English learning. Thus, Amy thought that it was necessary to study English hard and obtain a high mark in the final test to show gratitude to Dr. Liu. Therefore, Amy attended the class on time every day and paid full attention to the class. At the end of the semester, Amy performed well on the final English exam. From the perspective of the latent process viewpoint [17], Dr. Liu's interesting style of instruction and the arrangements of English as a mandatory course are the observable stimulus events. The enjoyable and motivated feeling of attending the English course is the non-observable affective process, and the tendency to study hard is the non-observable behavioral process [29]. These two kinds of processes work together to make Amy's attitude towards English positive. Due to this positive language attitude, Amy becomes immersed in learning English (the observable response) and then has a good performance on the final language test. Although there are three kinds of non-observable processes that can make up one's attitude [18], only two processes (affective and behavioral process) occur in this example, which is in line with the ideas of Zanna and Rempel [25], who suggest that attitude can be derived from only one or two processes among all the three processes. Furthermore, this example indicates that positive language attitudes may be advantageous to learners' language achievement [7].

By contrast, as illustrated in the interview 2 (Mike), the EFL teacher in Mike's senior high school established a language educational policy for the EFL course, asking students to use English alone to engage in teaching activities. Even though this policy aimed to provide students with an immersive English learning environment, which could be appealing and promising, it neglected those students with relatively weak oral EFL ability to some extent. In this case, the class engagement of students might be influenced since some students might believe that they were unable to perform well in activities by using English, and others could be concerned about others' possible scorn for their poor English pronunciation, correctness, and oral fluency. Eventually, the average EFL score of Mike's class was lower than other parallel classes at the end of the semester. According to the latent process viewpoint [17], the EFL teacher's language educational policy for only using English in EFL class can be regarded as the observable stimulus event, and this stimulus event stimulates students' non-observable cognitive, affective, and behavioral processes, namely the thinking about their own speaking ability, concerns about others' scorn, and the final choice of keeping silent in the class. These non-observable processes make up the latent negative attitude towards English, which leads to poor engagement in Mike's EFL class (the observable response). Consequently, the negative attitude towards English affects students' EFL learning, which is eventually reflected in the lower EFL average score of Mike's class in the final test. This may imply that negative attitudes could be detrimental to students' language achievement [9] [10].

Considering all of the evidence above, it could be that there is a positive relationship between language attitude and language achievement in Chinese EFL learners, which is corroborated by the findings of Li and Wei [30] further. They scrutinized the correlations between learners' language attitude and language achievement in the Chinese context, and 5,237 students at different educational levels participated in this research [30]. Among them, participants of elementary level were all from grade 6. In Li and Wei's [30] study, a language attitudes scale was employed to measure learners' language attitudes, and learners' language achievement was measured by both self-reported language proficiency and score in the final exam. However, the language achievement of students at the tertiary level was only measured through self-reported language proficiency. It is worthwhile to point out that Li and Wei's [30] study used English, Mandarin, and other dialects of Mandarin as the target languages to study. However, considering that this study focuses on Chinese EFL learners, only statistics related to English are used in this study.

The results of Pearson correlation analyses in Li and Wei's [30] study are presented in **Table 1** and **Table 2**. As shown in **Table 1**, a statistically significant positive correlation is found between language attitude and self-reported language proficiency in Chinese EFL learners at different educational levels. Alternatively, the more positive the students' language attitudes, the higher the self-reported language proficiency in English, and vice versa. In the same vein, it can be seen

from the data in **Table 2** that language attitude is statistically positively correlated with the scores in the English exam in Chinese EFL learners at different educational levels. That is to say, the more positive the students' language attitudes, the higher the EFL achievement on the test, and vice versa.

Table 1. Correlations between language attitudes and self-reported language proficiency in English [30].

Educational Level	Grade	N	Pearson Correlation Coefficient (r)
Elementary	6	665	0.44***
	1	900	0.62***
Junior	2	921	0.55***
	3	613	0.49***
Senior	1	417	0.63***
	2	425	0.39***
	3	425	0.43***
Tertiary	1	566	0.44***
	2	305	0.45***

Note. ***p < 0.001.

Table 2. Correlations between language attitudes and actual language achievement in English [30].

Educational Level	Grade	N	Pearson Correlation Coefficient (r)
Elementary	6	612	0.34***
	1	765	0.42***
Junior	2	921	0.41***
	3	492	0.27***
Senior	1	417	0.28***
	2	405	0.26***
	3	414	0.25***

Note. ***p < 0.001.

4. Discussion

Overall, taking the results of analyses of interviews and the results of Pearson correlation analyses into account, it can be concluded that there is a significant positive correlation between language attitude and language achievement in Chinese EFL learners. Based on the findings of this study, the following implications could be made to cultivate Chinese EFL learners' positive language attitudes so as to enhance their language achievement.

First, EFL teachers in the Chinese context could consider the application of post-method pedagogy. In fact, the teacher's way of teaching languages plays an

important role in students' language attitudes. For example, as reflected in the interview 1, the teacher taught English in a way that fits well with the students in Mike's class, and this made students develop positive attitudes towards the language. However, due to various contextual factors, a particular teaching approach cannot meet the needs of all learners [31], and thus language teachers should have the right to decide the way of instruction according to the actual teaching situations [32]. Accordingly, post-method pedagogy can be seen as a response to this situation since it is classroom-oriented [33] and it allows teachers "to theorize from their practice and practice what they theorize" [34]. Peer feedback may also be used when applying the post-method pedagogy [35]. Therefore, teachers can teach flexibly based on the characteristics of different students so that students are more likely to have more positive language attitudes.

Second, Chinese EFL teachers could try to implement translanguaging strategy in the classroom. Translanguaging refers to the linguistic practice of using different languages in an integrated way [36]. As discussed in the interview 2, the monolingual language policy in Mike's EFL class might have negative impacts on many students' language attitudes. In contrast, most teachers and learners in China have positive attitudes towards the implementation of translanguaging approach in the language classroom, and it is also beneficial to students' EFL performance [37]. Therefore, this may be a possible approach to make students have more positive language attitudes.

In addition, the recent development of Generative AI (GenAI) tools have been increasingly adopted by language teachers and students during their learning and teaching process in many contexts [38] [39]. These tools have been found great potential in cultivating learners' positive attitudes towards English language learning to facilitate their language achievement [38] [39]. Therefore, it is recommended that teacher develop their GenAI literacy and use these tools in their teaching practices.

5. Conclusions

Based on the comprehensive analyses of both qualitative interviews and relevant empirical research, this study has conclusively identified a significantly positive relationship between language attitude and language achievement among Chinese EFL learners. The findings reveal that learners who hold more positive attitudes towards English tend to achieve higher levels of language proficiency and better performance in language assessments. This correlation underscores the critical role that language attitude plays in the language learning process, suggesting that fostering positive attitudes can be a powerful catalyst for enhancing language achievement.

The implications of these findings are particularly significant for educational practitioners in China. By raising awareness of the impact of language attitudes on learning outcomes, this study encourages educators to adopt strategies that promote positive attitudes among their students. For instance, teachers can create engaging and supportive classroom environments that make learning English en-

joyable and relevant. Additionally, incorporating culturally responsive teaching methods and providing meaningful opportunities for language use can further enhance students' motivation and positive attitudes towards English.

Moreover, the findings suggest that educational policies and practices should prioritize the development of positive language attitudes as a fundamental component of EFL education. This could involve teacher training programs that equip educators with the skills to identify and address negative attitudes, as well as curriculum designs that integrate elements of cultural exchange and global citizenship. By doing so, educators can not only improve students' language proficiency but also cultivate their overall enthusiasm for language learning.

Ultimately, this study highlights that the cultivation of positive language attitudes is not merely a supplementary aspect of language education but a crucial factor in achieving long-term success. By focusing on this aspect, educators can help Chinese EFL learners overcome challenges, build confidence, and realize their full potential in language acquisition.

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Conflicts of Interest

The author declares no conflicts of interest.

References

- [1] Galindo, D.L. (1995) Language Attitudes toward Spanish and English Varieties: A Chicano Perspective. *Hispanic Journal of Behavioral Sciences*, **17**, 77-99. <https://doi.org/10.1177/07399863950171005>
- [2] Garrett, P. (2010) *Attitudes to Language*. Cambridge University Press. <https://doi.org/10.1017/cbo9780511844713>
- [3] Salmon, W. and Menjívar, J.G. (2017) Setting and Language Attitudes in a Creole Context. *Applied Linguistics*, **40**, 248-264. <https://doi.org/10.1093/applin/amx017>
- [4] Lewis, E.G. (1981) *Bilingualism and Bilingual Education*. Pergamon.
- [5] Dewaele, J.M. (2009) Individual Differences in Second Language Acquisition. In Ritchie, W.C. and Bhatia, T.J., Eds., *The New Handbook of Second Language Acquisition*, Emerald, 623-646.
- [6] Gardner, R.C. (1985) *Social Psychology and Second Language Learning: The Role of Attitudes and Motivation*. Edward Arnold.
- [7] Onwuegbuzie, A.J., Bailey, P. and Daley, C.E. (2000) Cognitive, Affective, Personality, and Demographic Predictors of Foreign-Language Achievement. *The Journal of Educational Research*, **94**, 3-15. <https://doi.org/10.1080/00220670009598738>
- [8] Huguét, Á. (2006) Attitudes and Motivation versus Language Achievement in Cross-

- Linguistic Settings. What Is Cause and What Effect? *Journal of Multilingual and Multicultural Development*, **27**, 413-429. <https://doi.org/10.2167/jmmd426.1>
- [9] Gardner, R.C., Lalonde, R.N., Moorcroft, R. and Evers, F.T. (1987) Second Language Attrition: The Role of Motivation and Use. *Journal of Language and Social Psychology*, **6**, 29-47. <https://doi.org/10.1177/0261927x8700600102>
- [10] Krashen, S. (1982) *Second Language Acquisition and Second Language Learning*. Pergamon Press.
- [11] Habók, A. and Magyar, A. (2018) The Effect of Language Learning Strategies on Proficiency, Attitudes and School Achievement. *Frontiers in Psychology*, **8**, Article 2358. <https://doi.org/10.3389/fpsyg.2017.02358>
- [12] Artamonova, T. (2020) L2 Learners' Language Attitudes and Their Assessment. *Foreign Language Annals*, **53**, 807-826. <https://doi.org/10.1111/flan.12498>
- [13] Sarnoff, I. (1970) Social Attitudes and the Resolution of Motivational Conflict. In Jahoda, M. and Warren, N., Eds., *Attitudes*, Penguin, 279-284.
- [14] Amin, A. (2020) Attitude Towards Language in Sociolinguistics Settings: A Brief Overview. *REiLA: Journal of Research and Innovation in Language*, **2**, 27-30. <https://doi.org/10.31849/reila.v2i1.3758>
- [15] Allport, G.W. (1985) The Historical Background of Social Psychology. In Lindzey, G. and Aronson, E., Eds., *The Handbook of Social Psychology*, 3rd Edition, Random House, 1-46.
- [16] Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Addison-Wesley.
- [17] DeFleur, M.L. and Westie, F.R. (1963) Attitude as a Scientific Concept. *Social Forces*, **42**, 17-31. <https://doi.org/10.2307/2574941>
- [18] Oskamp, S. and Schultz, P.W. (2005) *Attitudes and Opinions*. Psychology Press. <https://doi.org/10.4324/9781410611963>
- [19] Eagly, A.H. and Chaiken, S. (2007) The Advantages of an Inclusive Definition of Attitude. *Social Cognition*, **25**, 582-602. <https://doi.org/10.1521/soco.2007.25.5.582>
- [20] Eagly, A.H. and Chaiken, S. (1993) *The Psychology of Attitudes*. Harcourt Brace Jovanovich.
- [21] Triandis, H.C. (1971) *Attitude and Attitude Change*. John Wiley & Sons.
- [22] Haddock, G. and Huskinson, T.L.H. (2004) Individual Differences in Attitude Structure. In Haddock, G. and Maio, G.R., Eds., *Contemporary Perspectives on the Psychology of Attitudes*, Psychology Press, 35-56.
- [23] Cheung, D. (2009) Developing a Scale to Measure Students' Attitudes toward Chemistry Lessons. *International Journal of Science Education*, **31**, 2185-2203. <https://doi.org/10.1080/09500690802189799>
- [24] Zanna, M.P. and Rempel, J.K. (1988) Attitudes: A New Look at an Old Concept. In Bar-Tal, D. and Kruglanski, A.W., Eds., *The Social Psychology of Knowledge*, Cambridge University Press, 315-334.
- [25] Eagly, A.H. and Chaiken, S. (2005) Attitude Research in the 21st Century: The Current State of Knowledge. In Albarracín, D., Johnson, B.T. and Zanna, M.P., Eds., *The Handbook of Attitudes*, Lawrence Erlbaum Associates, 743-767.
- [26] Breckler, S.J. (1984) Empirical Validation of Affect, Behavior, and Cognition as Distinct Components of Attitude. *Journal of Personality and Social Psychology*, **47**, 1191-1205. <https://doi.org/10.1037/0022-3514.47.6.1191>
- [27] Cochran, J.L., McCallum, R.S. and Bell, S.M. (2010) Three A's: How Do Attributions,

- Attitudes, and Aptitude Contribute to Foreign Language Learning? *Foreign Language Annals*, **43**, 566-582. <https://doi.org/10.1111/j.1944-9720.2010.01102.x>
- [28] Masgoret, A.-M. and Gardner, R.C. (2003) Attitudes, Motivation, and Second Language Learning: A Meta-Analysis of Studies Conducted by Gardner and Associates. *Language Learning*, **53**, 167-210. <https://doi.org/10.1111/1467-9922.00227>
- [29] Huang, T. and Wu, C. (2022) The Effect of CLIL Implementation on Students' Development of English Reading Performance: An Empirical Study of Undergraduate Students in China. *International Journal of Applied Linguistics and English Literature*, **11**, 14-22. <https://doi.org/10.7575/aiac.ijalel.v.11n.3p.14>
- [30] Li, C. and Wei, L. (2022) Language Attitudes: Construct, Measurement, and Associations with Language Achievements. *Journal of Multilingual and Multicultural Development*. <https://doi.org/10.1080/01434632.2022.2137516>
- [31] Brown, H.D. (2002) English Language Teaching in the "Post-Method" Era: Toward Better Diagnosis, Treatment, and Assessment. In: Richards, J.C. and Renandya, W.A., Eds., *Methodology in Language Teaching*, Cambridge University Press, 9-18. <https://doi.org/10.1017/cbo9780511667190.003>
- [32] Scholl, J. (2017) Reconceptualizing Post-Method Pedagogy. *International Journal of Language Learning and Applied Linguistics World*, **15**, 96-101.
- [33] Kumaravadivelu, B. (1994) The Postmethod Condition: Emerging Strategies for Second/Foreign Language Teaching. *TESOL Quarterly*, **28**, 27-47. <https://doi.org/10.2307/3587197>
- [34] Kumaravadivelu, B. (2001) Toward a Postmethod Pedagogy. *TESOL Quarterly*, **35**, 537-560. <https://doi.org/10.2307/3588427>
- [35] Wu, C., Zhang, Y. and Li, A.W. (2023) Peer Feedback and Chinese Medical Students' English Academic Writing Development: A Longitudinal Intervention Study. *BMC Medical Education*, **23**, Article No. 578. <https://doi.org/10.1186/s12909-023-04574-w>
- [36] García, O. and Wei, L. (2014) *Translanguaging: Language, Bilingualism and Education*. Palgrave Macmillan. <https://doi.org/10.1057/9781137385765>
- [37] Fang, F. and Liu, Y. (2020) 'Using All English Is Not Always Meaningful': Stakeholders' Perspectives on the Use of and Attitudes Towards Translanguaging at a Chinese University. *Lingua*, **247**, Article 102959. <https://doi.org/10.1016/j.lingua.2020.102959>
- [38] Moorhouse, B.L., Wan, Y., Wu, C., Kohnke, L., Ho, T.Y. and Kwong, T. (2024) Developing Language Teachers' Professional Generative AI Competence: An Intervention Study in an Initial Language Teacher Education Course. *System*, **125**, Article 103399. <https://doi.org/10.1016/j.system.2024.103399>
- [39] Zhang, W., Li, A.W. and Wu, C. (2025) University Students' Perceptions of Using Generative AI in Translation Practices. *Instructional Science*. <https://doi.org/10.1007/s11251-025-09705-y>