

Research on the Current Status of Bilingual Teaching Practice in KET Preparation Courses: A Study Based on Mixed Research Method

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Abstract. Bilingual teaching serves as a pivotal instructional approach in Key English Test (KET) preparation courses for adolescent learners, balancing academic content delivery and second language proficiency development. This study adopts a mixed research method combining classroom observation, teacher interviews and student questionnaires to investigate the current application of bilingual teaching in KET preparation classrooms in a training institution in Nanjing, China. The study analyzes the data mainly through a large language model (DeepSeek) and SPSSAU. By exploring the frequency, links and strategies of bilingual use, analyzing existing problems from both teacher and student perspectives, and proposing targeted optimization strategies, the research aims to fill the empirical research gap of bilingual teaching in adolescent KET preparation scenarios, which is rarely involved in previous studies focusing on higher education. The findings reveal that bilingual teaching is widely applied in KET classrooms but with obvious randomness and lack of systematic planning; the main problems include the absence of bilingual use standards and the mismatch between student needs and teacher supply. Based on the research results, differentiated bilingual use strategies, targeted teacher training, and supporting teaching resources are proposed to optimize bilingual teaching practice. This study expands the scenario boundary of bilingual teaching research and provides empirical evidence for KET teachers to optimize classroom language use.

Keywords: KET, bilingual teaching, mixed research method, adolescent English learning

1. Introduction

Bilingual teaching has long been a central topic in applied linguistics and education, with extensive theoretical and practical research conducted by scholars worldwide. Theoretically, Pan defined bilingual teaching as "learning through a foreign language" [1], while Zhong and Yuan established its core framework covering dual goals, language media, and teacher qualifications [2]. Practically, most studies focus on higher education, examining implementation, challenges, and improvement strategies. Concurrently, KET has grown into a key area in adolescent English education, with research concentrating on vocabulary instruction [3], task-based teaching [4], and teacher performance comparisons [5]. Interdisciplinary work has also linked bilingual teaching to cognitive

load, affective filter, and language proficiency [6]. Although both bilingual teaching and KET research have developed mature systems, they remain largely separate fields with limited integration.

However, significant gaps exist at the intersection of bilingual teaching and KET preparation. First, most bilingual teaching research targets university settings, with little empirical focus on adolescent KET classrooms. Second, KET studies emphasize teaching content and methods rather than the medium of instruction, leaving bilingual practices underexplored. Third, adolescent English teaching research often relies on single-method designs rather than mixed qualitative-quantitative approaches. As a result, the application of bilingual teaching in KET preparation remains under-researched, requiring targeted empirical investigation.

This study addresses these gaps by investigating bilingual teaching in KET preparation classrooms through three research questions: the current use of bilingual strategies, key challenges and their causes, and feasible optimization principles. A mixed-methods design is employed, combining classroom observation, teacher interviews, and student questionnaires in a Nanjing KET training institution. Data are analyzed via DeepSeek for thematic coding and SPSSAU for statistical analysis, with triangulation ensuring validity. Theoretically, this study expands bilingual teaching research to KET preparation and builds an integrated framework for the Cambridge exam and bilingual education studies. Practically, it offers evidence-based strategies for teachers and supports learner needs. Socially, it helps standardize the KET training market, promotes rational bilingual instruction, and fosters adolescents' cross-cultural competence and core English literacy in line with national educational goals.

2. Literature review

2.1. The conceptual definition of bilingual teaching

Based on the definitions of Merriam-Webster Dictionary and Longman Dictionary, Pan defines bilingual teaching as "educational activities in schools using two languages as mediums for subject content teaching" [1], emphasizing that its essence is learning through foreign languages rather than simply learning foreign languages. Zhong and Yuan further pointed out that bilingual teaching contains three core elements: dual goals (mastery of subject knowledge + improvement of foreign language ability), language medium (alternate use of two languages with proportions varying according to scenarios), and teacher requirements (teachers who understand both professional knowledge and have foreign language ability) [2]. This definition lays a theoretical foundation for the identification and analysis of bilingual teaching behavior in KET preparation classrooms in this study.

2.2. The conceptual definition of KET examination and KET preparation classrooms

Developed by Cambridge Assessment English, KET is the first level of Cambridge General English Tests, corresponding to the Common European Framework of Reference for Languages Level A2 (CEFR A2 level), with the core examination content covering listening, speaking, reading and writing abilities in daily life scenarios [5]. KET preparation classrooms refer to instructional scenarios with the direct goal of passing the KET examination, which have three distinctive characteristics: the main students are upper primary and junior high school students with basic English proficiency; the teaching goals balance the improvement of language ability and the training

of examination skills; the teaching content is guided by the KET examination outline, covering core vocabulary, grammar and question type training [4].

2.3. Domestic and foreign research status

Domestic and foreign research on bilingual teaching is mainly divided into theoretical and practical levels: the theoretical level focuses on the connotation, types and theoretical foundation of bilingual teaching [7]; the practical level mainly investigates the implementation status and problems of bilingual teaching in higher education [2]. Research related to KET is mostly based on KET as a research tool or level screening standard: Bozorgian et al. used KET to test listening ability to study the effect of vocabulary teaching [3]; Rezai used KET to screen subjects to study the effect of dynamic assessment [8]; Fuangkarn & Rimkeeratikul used KET to test students' proficiency to compare the teaching effects of native and non-native English teachers [5]. Few studies take KET preparation classrooms as the research object and focus on the medium of teaching language (bilingual use). Even international research on bilingual education implementation in K-12 contexts has also pointed out the universal challenges in bilingual teaching practice and the lack of standardized language use strategies [9], which further reflects the necessity of exploring bilingual teaching in adolescent KET preparation scenarios.

2.4. Research on the relationship between variables

Although there are few studies directly exploring the relationship between "KET classrooms" and "bilingual teaching", relevant existing studies have revealed the relevant variable relationships that provide a theoretical basis for this study. First, the relationship between language proficiency and bilingual demand: Krashen pointed out that the lower the students' language proficiency, the higher their dependence on mother tongue support, and KET students at the CEFR A2 level have a high theoretical demand for bilingual teaching [6]. Second, the relationship between teachers' beliefs and classroom practice: Fuangkarn & Rimkeeratikul confirmed that teachers' understanding of bilingual teaching directly affects their teaching practice, and whether the bilingual teaching concepts and practices of KET teachers are consistent needs to be verified by empirical research [5]. Third, the interaction between teaching methods and teaching languages: task-based teaching emphasizes meaning priority, and the choice of teaching language may affect the quality of task completion [4], which means that bilingual use strategies need to be matched with KET teaching methods.

2.5. The innovation of this study

This study has three main innovations in filling the research gap. First, scenario innovation, focusing on KET preparation classrooms for adolescents, which is different from previous studies focusing on bilingual teaching in higher education; second, perspective innovation, taking the medium of teaching language (bilingual use strategies) as the research core, different from previous KET teaching research focusing on teaching methods and teaching content; third, object innovation, taking adolescent KET learners (upper primary and junior high school students) as the research object, different from previous bilingual teaching research taking college students as the main object.

3. Research methodology

3.1. Research design

This study adopts a mixed-methods observational research design, which integrates qualitative and quantitative research methods, referring to the research designs of Miao [10] and Fuangkarn & Rimkeeratikul [5]. The core rationale for adopting this design is to realize the mutual verification and complementarity of multiple data sources through triangulation, so as to comprehensively and in-depth explore the complex phenomenon of bilingual teaching in KET preparation courses.

Qualitative research methods (teacher interviews, thematic analysis of classroom observation notes) are used to explore the in-depth connotations of bilingual teaching in KET classrooms, such as teachers' bilingual teaching concepts, perceived challenges, and the specific functional characteristics of bilingual use in different teaching links, which can capture the rich and detailed contextual information of bilingual teaching practice. Quantitative research methods (descriptive statistics of student questionnaires, frequency statistics of classroom observation data) are used to objectively describe the overall status of bilingual teaching in KET classrooms, such as students' overall preferences for bilingual teaching, and the frequency of teachers' use of Chinese and English in teaching, which can provide objective and measurable data support for research conclusions. The combination of the two methods can avoid the one-sidedness of a single research method, effectively improve the reliability and validity of research conclusions, and make the research findings more comprehensive, objective and in-depth.

3.2. Research setting and participants

The research was conducted in a professional KET teaching institution in Nanjing, China. This institution has been engaged in KET preparation teaching for young learners for a long time, with a relatively mature KET teaching system and stable teaching staff, and its bilingual teaching mode is highly representative in the local KET preparation teaching market. The research only takes the regular KET preparation classes of the institution as the research object, excluding simulated exam classes and other non-regular teaching activities, to ensure the representativeness of the research context.

The research participants are selected by the purposive sampling method, and the sample selection fully considers the representativeness and diversity of participants, with the following specific composition:

(1) KET Teachers: 3 full-time KET teachers of the institution, covering different teaching ages (novice teacher, intermediate teacher, and senior teacher), all of whom have more than one year of KET teaching experience, and are undertaking the KET preparation teaching of primary school students, ensuring the diversity and professionalism of the teacher sample.

(2) KET Students: Approximately 30 primary school students (Grade 1 to Grade 6) enrolled in the KET preparation courses of the institution, covering different grades and English foundation levels, excluding students who have already passed the KET exam, to ensure that the sample is consistent with the core population of KET preparation learners.

3.3. Data analysis

This study adopts a mixed-methods research design that combines qualitative and quantitative methodologies, with distinct and targeted analytical strategies for each type of research data,

ensuring that all analytical processes are closely aligned with the core research themes and objectives, and guaranteeing the accuracy and reliability of research results.

For the teacher interview data (qualitative data), thematic analysis guided by pre-designed core research themes is conducted with the assistance of a large language model (DeepSeek), which is exclusively applied to the analysis of teacher interview data to extract content highly relevant to the pre-set research themes. The specific analytical process is as follows: Firstly, strict anonymization processing is carried out on all teacher interview recordings to protect the privacy of research participants, and the recordings are fully transcribed into textual data to form a standardized interview corpus. Secondly, the pre-designed core research themes are input as clear guidance prompts into the large language model, and the model is instructed to conduct targeted coding and extraction of the transcribed interview texts, centering on these designated themes, avoiding irrelevant content induction. Then, the model is directed to screen and sort out the interview statements, viewpoints and practical experiences related to the pre-set themes, summarize the key viewpoints of teachers corresponding to each research theme, and refine the typical cases and detailed descriptions put forward by teachers in combination with actual teaching practice. Finally, the model systematically organizes the theme-related content extracted from the interview data, summarizes the common perceptions, practical dilemmas, practical experiences and improvement suggestions of teachers on the research core issues, and forms a structured qualitative analysis result that completely revolves around the pre-designed research themes.

For the student questionnaire data (quantitative data), quantitative statistical analysis is implemented solely using SPSS AU. The first step is data cleaning: invalid questionnaires with missing answers, inconsistent logical responses and incomplete filling are screened and eliminated to ensure the validity of the data sample. On the basis of clean data, descriptive statistical analysis is carried out, including frequency statistics, percentage calculation, mean and standard deviation analysis, etc., to systematically sort out the basic demographic characteristics of students, their attitudes towards bilingual teaching, language use ratio preferences in classrooms, self-assessment of learning effects in KET preparation courses and other key quantitative indicators. Meanwhile, according to the research needs, corresponding statistical analysis can be carried out for different student groups to explore the differences in questionnaire data among groups, so as to provide objective data support for the research.

For the classroom observation data, a purely manual and quantitative-qualitative combined analysis method independent of the large language model is adopted. Researchers formulate a standardized classroom observation scale in advance around the research themes, focusing on recording the frequency of bilingual use in classrooms, the distribution of teaching links, the implementation of bilingual teaching strategies, students' classroom participation and other key observation indicators. On the one hand, the observation data is quantified into operable indicators such as frequency and proportion, and SPSSAU is used for statistical summary to analyze the objective laws and characteristics of bilingual teaching in actual classrooms. On the other hand, researchers conduct manual thematic induction on the textual records of classroom observations, combined with the actual teaching context, to interpret the practical connotation of teaching behaviors and the matching degree with the pre-set research themes.

In the final comprehensive analysis stage, triangulation validation is carried out across the three types of data: teacher interview data, student questionnaire data and classroom observation data. Researchers conduct a cross-comparative analysis of the qualitative results derived from teacher interviews, the quantitative data from student questionnaires and the actual situation reflected in classroom observations, verify the consistency and convergence of the research results from

multiple sources, and analyze the possible divergences and their causes. This multi-data source cross-validation method effectively overcomes the one-sidedness and bias caused by single data source analysis, and provides comprehensive, solid and credible research evidence for putting forward targeted optimization strategies for bilingual teaching in KET preparation courses.

4. Research results

This study adopts a mixed research method combining classroom observation, teacher interview and student questionnaires to investigate the current situation, existing problems and optimization paths of bilingual teaching practices in KET preparation courses, taking a KET teaching institution in Nanjing as the research object, and collecting classroom observation data of 10-15 regular courses, interview information of 3 KET teachers with more than one year of teaching experience, and 27 valid student questionnaires. Based on the triangulation verification of the three types of data, the research conclusions on the three core research questions are drawn as follows, and the limitations of the study and future research directions are also clarified.

4.1. Current status of bilingual teaching in KET classrooms

Bilingual teaching with a mixture of Chinese and English has become the mainstream teaching mode in KET preparation courses, and the use of Chinese shows obvious link-specific characteristics, which are highly consistent with the perception of students and the teaching practice of teachers. Classroom observation found that teachers use Chinese at a significantly higher frequency in the teaching of new vocabulary, grammatical rules and KET test-taking skills (including reading and writing skills), while English is the dominant language in oral dialogue practice and simple classroom instructions. From the perspective of student perception, 77.77% of students confirmed that teachers use more Chinese in grammar explanation, 62.96% of students perceived a high frequency of Chinese use in new word interpretation, and more than 80% of students explicitly hoped for Chinese explanation in complex grammar and test-taking skills teaching. Teachers also said in the interview that they use a large number of Chinese in explaining abstract grammar concepts, interpreting vocabulary hyponyms and teaching reading and writing test-taking skills and adopt the teaching strategy of "English first, then Chinese" in actual teaching, which verifies the practical reality of the high proportion of Chinese use in the core knowledge and skill teaching links of KET classrooms.

In terms of the overall application of bilingual teaching, the current KET classroom has not formed a standardized and systematic bilingual use ratio. Teachers' ideal English use ratio (75%-80%) has not been realized in practice, and the actual language use is highly dependent on students' actual situations. Affected by the pressure of short-term score improvement in intensive training courses and the cognitive characteristics of young learners (primary school grades 3-5 as the main body), teachers have to increase the input of Chinese to improve teaching efficiency and reduce students' cognitive load. In addition, 88.89% of students recognized that the current Chinese-English mixed teaching mode is suitable for their own learning needs, and 92.59% of students confirmed that Chinese explanation can significantly improve their understanding of key and difficult knowledge points, reflecting the high acceptance of the current bilingual teaching status among students.

4.2. Main problems in bilingual teaching of KET classrooms

Combined with the three types of research data, the current bilingual teaching in KET classrooms has achieved positive teaching effects, but there are still prominent problems in the implementation process, which are mainly reflected in the mismatch between teacher supply and student demand, the lack of standardized bilingual use strategies and the excessive dependence of students on Chinese, which specifically includes the following aspects:

First, there are differences in the demand for bilingual teaching among students of different English levels, and the current teaching lacks differentiated language use strategies. The questionnaire shows that students with lower self-evaluated English proficiency have a stronger demand for Chinese auxiliary teaching, and are more likely to feel anxious about all-English teaching (the average score of anxiety is 4.33), while students with higher proficiency have lower dependence on Chinese (the average score of recognition for Chinese explanation of test-taking skills is only 2.0), and have higher recognition for flexible language switching. However, teachers have not yet formed a targeted bilingual use plan for students of different levels in actual teaching, and the one-size-fits-all language use mode is difficult to meet the personalized learning needs of students.

Second, the use of bilingual teaching in KET classrooms is random and lacks standardized norms for the timing and degree of language switching. Although teachers have formed the habit of "English first, then Chinese" in teaching, they lack accurate judgment on the timing of Chinese intervention in actual classroom teaching, and there is no clear standard for the proportion of Chinese use in different teaching links. This randomness not only makes it difficult to give full play to the auxiliary role of Chinese in complex knowledge explanation, but also may affect the cultivation of students' English thinking.

Third, young KET learners have a strong dependence on Chinese, which has brought negative effects on their English learning and test-taking. Teachers mentioned in the interview that due to the low age of current KET candidates, the mastery of their mother tongue is not firm, leading to excessive reliance on word-for-word translation in English reading, which not only reduces reading efficiency, but also makes some students unable to adapt to the reading difficulty of regular courses after intensive training with more Chinese input. The questionnaire also shows that 59.26% of students will feel nervous or afraid in all-English classrooms, and the negative emotion is negatively correlated with English proficiency, which further reflects the problem of students' excessive dependence on Chinese auxiliary teaching.

Fourth, the professional support for KET teachers' bilingual teaching is insufficient. Teachers have received professional training in second language teaching and neurolinguistics, but they still face confusion in the practical application of bilingual teaching. At the same time, the current teacher training mainly focuses on the teaching skills of different modules of KET, and lacks special training on bilingual teaching strategies, which makes it difficult for teachers to further optimize their bilingual teaching practice. This is consistent with the research conclusion that targeted professional support and resource supply are the core to improving the effectiveness of multilingual teaching for young learners [11].

4.3. Optimization strategies for bilingual teaching in KET classrooms

Based on the empirical research results, aiming at the above problems, this study puts forward targeted optimization strategies from three levels: teaching practice principles, differentiated use

strategies and teacher professional support to provide operable reference for the optimization of bilingual teaching in KET preparation courses:

4.3.1. Basic principles for the implementation of bilingual teaching

The implementation of bilingual teaching in KET classrooms should adhere to three core principles: the student-centered principle, the link differentiation principle and the flexible adjustment principle. Taking the cognitive characteristics and English level of young learners as the starting point, the use of Chinese and English is adjusted according to the difficulty of teaching content and the type of teaching links; teachers should keenly observe students' classroom reactions, flexibly switch teaching languages according to students' degrees of understanding, and realize the organic combination of Chinese's cognitive and emotional support value and English's immersive language environment construction value.

4.3.2. Differentiated bilingual use strategies based on teaching links and student levels

In terms of teaching link differentiation, a clear bilingual use ratio should be formulated: in the teaching of new vocabulary, grammatical rules and KET test-taking skills, Chinese should be used as an effective auxiliary tool to explain abstract and complex content, and the key points should be explained in Chinese to ensure students' understanding; in oral dialogue practice, listening training and simple classroom instructions, English should be the dominant language (the proportion of English is not less than 90%) to create an immersive English language environment and cultivate students' English thinking and language output ability.

In terms of student level differentiation, targeted bilingual teaching strategies should be implemented: for students with lower English proficiency, appropriately increase the proportion and depth of Chinese auxiliary; use Chinese to explain basic knowledge and test-taking skills; and help them build learning confidence; for students with higher proficiency, reduce the input of Chinese in the teaching of test-taking skills and expand reading; increase the proportion of English input; and guide them to use English for thinking and communication, so as to meet their higher-level language development needs.

4.3.3. Strengthen the professional support system for KET teachers' bilingual teaching

First, carry out special training on KET bilingual teaching strategies, focusing on the accurate grasp of language switching timing, the formulation of bilingual use ratio in different links and the solution to students' excessive dependence on Chinese, and improve teachers' professional ability of bilingual teaching; second, build a peer communication platform for KET teachers, encourage the exchange and sharing of bilingual teaching experience, and form a set of standardized and replicable bilingual teaching practice plans combined with actual teaching situations; third, develop supporting teaching resources for KET bilingual teaching, such as compiling bilingual teaching handouts for different links and different levels of students, to provide material support for the implementation of differentiated bilingual teaching.

5. Conclusion

In conclusion, the current Chinese-English mixed bilingual teaching mode in KET classrooms basically fits the cognitive characteristics and learning needs of young learners. The high proportion of Chinese used in teaching new vocabulary, grammar and test-taking skills is a rational choice

based on actual teaching needs. However, problems including non-standardized bilingual use, lack of differentiated strategies and students' excessive dependence on Chinese need to be solved urgently. Only by sticking to the student-centered principle, implementing differentiated bilingual use strategies according to teaching links and student levels, and strengthening teachers' professional support, can we continuously optimize KET classroom bilingual teaching, fully exert its dual value in cognitive and emotional support, and effectively improve the teaching quality of KET preparation courses.

Nevertheless, this study has limitations that restrict the generalizability of its findings. It only focuses on a single KET teaching institution in Nanjing with a small sample of teachers and students, so it cannot reflect the overall situation of bilingual teaching in China's KET preparatory courses. Besides, the cross-sectional design merely shows the status of bilingual teaching at a specific stage, failing to track long-term dynamic changes in students' learning demands and teachers' teaching practices. Also, teaching effect assessment mainly relies on students' self-evaluation without objective indicators like KET mock exam scores and classroom observation, reducing the objectivity of research results.

Accordingly, future research can be improved in several ways: expanding the sample scope to KET institutions in different regions and scales to enhance conclusion generalization; adopting a longitudinal design to track the evolution of teaching strategies and effects; building a comprehensive evaluation system combining subjective feedback and objective metrics; and exploring the integration of bilingual teaching with task-based and project-based methods to boost teaching quality. By addressing these limitations and conducting further research, the practice of bilingual teaching in KET preparation courses can be refined, providing reliable support for frontline teaching and promoting its sustainable high-quality development.

References

- [1] Pan, J. Z. (2003). On the Connotation and Implementation of Bilingual Teaching [J]. *Higher Education in Chemical Engineering*, (03), 48-51.
- [2] Zhong, W.H., Yuan, C.-Q., et al. (2010). *Exploration and practice of bilingual teaching reform in Chinese universities*. Higher Education Press.
- [3] Bozorgian, H., Nasari, F., & Matthews, J. (2026). The effects of aural and written vocabulary instruction on second language listening comprehension. *Pedagogies: An International Journal*, 21(1), 1-21.
- [4] Li, Y. X. (2025). The integration strategy of task-based teaching method in Cambridge CET-5 preparation classroom-based on the design and practice of typical KET/PET lesson examples *Teaching and Research of English Exams Abroad*, 7 (3), 114-120.
- [5] Fuangkarn, K., & Rimkeeratikul, S. (2020). An observational study on the effects of native English-speaking teachers and non-native English-speaking teachers on students' English proficiency and perceptions. *Arab World English Journal*, 11(3), 241-259.
- [6] Krashen, S. D. (1985). *The Input Hypothesis: Issues and Implications* [M]. London: Longman.
- [7] Su, D. (2016). *Research on Mongolian-Chinese bilingual education: From theory to practice*. The Ethnic Publishing House.
- [8] Rezaei, A. (2023). Cultivating interlanguage pragmatic comprehension through concurrent and cumulative group dynamic assessment: A mixed-methods study. *Asian-Pacific Journal of Second and Foreign Language Education*, 8(8).
- [9] Graham, K. M., & Yeh, Y.F. (2022). Teachers' implementation of bilingual education in Taiwan: challenges and arrangements. *Asia Pacific Education Review*.
- [10] Miao, Y. (2022). *Research on Bilingual Teaching in Mongolian Kindergartens*. Shanxi University.
- [11] Zhang, W. Q. (2023). Supporting superdiverse multilingual international students: Insights from an ethnographic exploration. *Research in the Teaching of English*, 57(4), 378-401.