

# Study on the Application of Technology-Advanced Method in Middle School English Teaching

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**Abstract:** In the era of fast-developing educational technology, it is necessary to introduce some digitally-assisted ways into the English teaching in middle schools to break through the limitations of traditional teaching. Taking Unit 6 Travel Around the World of the second-semester Grade 8 English textbook (PEP) as an example, we design a complete lesson plan by combining the BOPPPS model with some technology-assisted ways such as multimedia materials, online interactive platforms, digital simulation tools, etc. After carrying out the lesson plan in class and reflecting upon its effects, we conclude that the proper use of technology can improve students language competence, cultivate their critical thinking and intercultural understanding, and help them learn independently. The findings of this study offer practical suggestions and a reproducible model for the innovation of English education in middle schools.

**Keywords:** Technology-Advanced Method, Middle School English Teaching, BOPPPS Model, Instructional Design, Teaching Reflection.

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## 1. Introduction

Against the background of global digital transformation, the Ministry of Education of China has clearly put forward the requirement of "promoting the deep integration of information technology and education and teaching". As an integral part of basic education, middle school English teaching is confronted with the challenge of breaking away from the traditional teacher-centered, textbook-centered teaching mode. Traditional English teaching often suffers from a variety of issues including monotonous teaching methods, inadequate student participation, and the inability to link language learning to real-life contexts, all of which hinder the enhancement of students' overall language application ability (Smith, 2020; Li, 2022).

Given these developments, there is now considerable interest in employing high-tech approaches to teach English in middle schools. Technological tools such as multimedia, online interactive platforms, and virtual reality can enrich teaching resources, generate immersive learning scenarios, and facilitate the transition of teaching from teacher-led to student-centered (Brown, 2019; Chen, 2022). Meanwhile, the BOPPPS model consisting of six links (Bridge-in, Objective, Pre-assessment, Participation, Post-assessment, and Summary) offers a systematic framework for the design of English teaching activities, assisting in enhancing the relevance and effectiveness of teaching (Johnson, 2021; Wang, 2023).

This study uses Unit 6 Travel Around the World of the 8th grade second semester English textbook (PEP) as the carrier, combines technology-advanced methods with the BOPPPS model to design an aimed instruction plan and carries out practical teaching.

Through the teaching practice and reflection, this study tries to explore the specific path and effect of technology-advanced methods on enhancing the quality of middle school English teaching, and to offer practicable experience to the front-line English teachers.

## 2. Literature Review

### 2.1. Challenges in Traditional English Teaching

Traditional English teaching has long been criticized. Smith (2020) pointed out that traditional ways of teaching English are characterized by teacher explanation and textbook exercises. Students play a passive role and their practical English skills are not well developed. In China, Li (2022) found some systemic problems in English teaching through a questionnaire survey of 50 middle schools. For example, English teaching is too dependent on the textbook; students are not exposed to enough authentic language input; there is only one form of examination which does not take into consideration the overall English proficiency of the students; and teachers do not differentiate instruction according to learners differences. All these problems prevent students from developing their English core competence (Wang, 2023).

Further research suggests that conventional classrooms rarely ignite learners internal motivation. Zhao (2022) observed that learners find it difficult to transform grammatical knowledge and vocabulary into real communication without a meaningful interactive context. Likewise, Huang (2021) pointed out that the lack of genuine cultural materials narrows students horizons and thus hinders their cross-cultural communication ability.

### 2.2. The BOPPPS Model

The BOPPPS model based on instructional design theory in North American postsecondary education is becoming more widely used in secondary education systems around the world. Its cyclic and student-centred design encourages active learning and ongoing feedback. Johnson (2021) recently published results of an empirical study showing that use of the BOPPPS model resulted in significantly increased classroom participation and knowledge retention. In the field of English language teaching, Wang (2023) used the model for reading instruction and found significant gains in both students comprehension ability and their level of engagement.

Recently, some variations of the BOPPPS model have been attempted to combine it with digital tools. For instance, Liu (2023) introduced mobile learning platforms into the BOPPPS model and created more customized and interactive learning. Nevertheless, few studies have investigated the combination of the BOPPPS model with overall technology-supported approaches in middle school English education in China (Garcia, 2020; Clarke, 2022).

### 2.3. Technology-Enhanced Teaching Methods

The application of technology in education has developed significantly, presenting new opportunities for language teaching. Brown (2019) pointed out that multimedia resources such as educational videos, animations and audio clips can help to concretize abstract linguistic notions. Interactive online platforms (e.g. “学习通” has similar functions to the Canvas / Blackboard and the Google Classroom, Tencent Classroom) enable real-time communication, collaborative tasks and ongoing assessment, thus extending learning outside the classroom (Zhang, 2021; Thompson, 2021).

Digital simulations and virtual tours have also been popular as ways of experiencing another culture and context without travelling there. For example, Chen (2022), Davis (2019) showed how simulated digital environments could enable students to explore foreign cultures and contexts, thus promoting cultural empathy and contextual language use. However, experts warn that technology integration should be pedagogically motivated or else it may be superficial and ineffective (Hattie, 2017; Richards, 2018).

Recent research has begun to emphasize blended learning approaches that combine traditional methods with digital tools. Larsen-Freeman (2019) and Zhou (2023) advocated for a balanced use of technology to complement rather than replace teacher-led instruction, ensuring that technology serves clear learning objectives.

## 3. Instructional Design

This instructional design is based on Unit 6 Travel Around the World of the English textbook of the second semester of Grade 8 (PEP), which is arranged within a 45-minute class. In this unit, students will learn some travel-related vocabulary (e.g., destination, transportation, scenery), some important sentence structures (e.g., How do you plan to get to? What can you do in?), and a reading passage about traveling in Europe. The overall goal of this unit is to develop students communicative competence and cultural awareness.

### 3.1. Analysis of Teaching Material

#### (1) Content Overview

This unit builds upon students' prior knowledge of everyday English, introducing theme-based content that is both engaging and practically relevant. It comprises three main components: vocabulary and sentence patterns, reading comprehension, and situational dialogue. Students are expected to acquire language skills necessary for discussing travel plans, describing landmarks, and comparing cultural practices.

#### (2) Key Elements

This unit centers around several key elements essential for building travel-related communication skills. The key vocabulary includes terms such as destination, transportation, scenery, hotel, booking, culture, and local food. Students will

also learn fundamental sentence patterns, including:

- How do you plan to get to [destination]? — I plan to take the plane/train/bus.
- What is the most famous scenery in [place]? — The most famous scenery is...
- Have you ever been to [place]? — Yes, I have. / No, I haven't.

In terms of reading skills, the unit emphasizes skimming for main ideas and scanning for specific details. Culturally, it introduces notable European landmarks such as the Eiffel Tower and the Colosseum, while encouraging comparisons between Chinese and Western travel practices and traditions.

### 3.2. Analysis of Students

The learners are 8th graders aged 14-15 years old, who usually have an intermediate level of English with a vocabulary of about 1500 words. They can communicate in simple dialogues, but they find it difficult to understand complicated sentence structures and use their language skills in real-life situations. They are very curious about the real world and like to work in groups and participate in interactive lessons. However, they have a short attention span and can easily get bored if the lesson is not interesting enough. They are also quite capable of using smartphones and computers and can easily navigate through simple educational software and websites.

### 3.3. Teaching Objectives

(1) Language competence: Learn 8-10 words about travelling (destination, transportation, scenery, hotel, booking, culture, local food) and sentence patterns (How do you plan to get to? I plan to take the plane/train/bus. What is the most famous scenery in? The most famous scenery is Have you ever been to? Yes, I have./No, I haven't.), and use them correctly in speaking and writing.

Understand the main ideas and extract specific information from the reading passage “Travel in Europe.”(such as the transportation mode to European countries, famous scenic spots).

Conduct a short dialogue (2–3 minutes) in English discussing travel plans about themselves.

(2) Critical Thinking: Analyze and compare different modes of travel transportation.

Compare and contrast Chinese and Western travel practices based on learned content and personal experience.

(3) Cultural Awareness: To understand the famous landmarks and related cultures of 2–3 European countries (e.g., France, Italy), recognize and appreciate cultural diversity, and develop awareness of cross-cultural communication.

(4) Learning Ability: Use online platforms to independently research travel-related topics in English(e.g., A pleasant trip to France), in order to the students participate effectively in group-based collaborative tasks.

### 3.4. Teaching Methods

#### (1) BOPPPS teaching model

- Bridge-in: Begin with a compelling video montage of global landmarks (e.g., Eiffel Tower, Great Wall) to stimulate interest and activate prior knowledge.
- Objective: Clearly state the lesson goals using multimedia slides, outlining linguistic, cognitive, cultural, and developmental aims.
- Pre-assessment: Administer a short quiz via “学习

通”(a prevalent Chinese online learning platform similar to Canvas or Moodle) to gauge prior knowledge of travel-related vocabulary and simple sentences.

- Participatory Learning: Facilitate vocabulary drills, group discussions on transportation choices, and role-playing activities such as simulated travel inquiries.
- Post-assessment: Assign a brief writing task (e.g., drafting a travel plan) submitted through “学习通” for timely feedback.
- Summary: Conclude with a teacher-guided review of key points and a preview of follow-up activities.

#### (2) Technology-based teaching methods

The use of technology-based instruments is carried out mainly through three channels: Multimedia resources such as PPT presentation with pictures, audio recording, and short animation clips are applied to demonstrate the vocabulary items and sentence patterns in context both visually and aurally; the online platform (such as Xuexitong“学习通”, which supports quiz administration, discussion forums, and assignment submission) is used to administer quizzes, facilitate cooperative discussion and assignment submission so that the teacher can keep track of the students performance all the time; digital simulation tools including interactive digital maps, 360 videos, and virtual tour software are used to simulate visits to famous sites and offer experiential learning opportunities that are both accessible and immersive without requiring special VR devices (Zhou, 2023; Liu, 2023).

#### (3) Differentiated instruction

Based on the results of the pre-assessment, students are divided into three levels of proficiency. The high-proficiency level group is given advanced tasks such as writing an 80-word travel guide; the medium-proficiency level group is asked to complete a 50-word travel plan and engage in dialogue practice; the low-proficiency level group is provided with specific support such as vocabulary building exercises and simplified dialogues.

### 3.5. Teaching Procedures

#### (1) Bridge-in (5 minutes)

The class begins with a 2-minute high-definition video montage featuring dynamic shots of world-famous landmarks (e.g., the Eiffel Tower, the Great Wall, the Pyramids of Giza, and the Statue of Liberty). The video is accompanied by upbeat, inspiring instrumental music. Immediately following the video, the teacher poses two questions: "Which place impressed you the most?" and "If you could travel to one of these places, how would you get there?" This multi-sensory introduction is designed to activate prior knowledge, stimulate curiosity, and naturally lead into the unit's theme of travel.

#### (2) Objective (2 minutes)

The teacher presents clearly defined learning objectives on a dedicated PowerPoint slide, using simple icons (e.g., a speech bubble for speaking, a globe for culture) to enhance comprehension. The objectives are stated as: "By the end of this lesson, we will be able to: 1) Use 10 new words and 3 key sentence patterns to talk about travel plans; 2) Compare different transportation modes and give reasons for our choices; 3) Learn about two famous landmarks in Europe; 4) Write a simple travel plan." This clarity helps students focus on the desired outcomes.

#### (3) Pre-assessment (3 minutes)

A 5-question quiz is administered via the Xuexitong

platform (a Chinese LMS comparable to Canvas or Blackboard) to gauge baseline understanding. Questions include multiple-choice (e.g., "What does 'destination' mean? a) a train b) a place you are going to c) a ticket") and translation (e.g., "How do you say '我计划乘飞机去北京' in English?"). Results are displayed in real-time on the teacher's dashboard, allowing for immediate diagnostic assessment and enabling the teacher to adjust the lesson pace and focus based on class needs.

#### (4) Participatory Learning (20 minutes)

This phase consists of three scaffolded activities:

- Guided Practice (8 minutes): The teacher presents target vocabulary (destination, scenery, booking, etc.) and sentence patterns using a PPT slideshow with embedded audio recordings by a native speaker and high-quality images. For example, the word "scenery" is shown alongside a picture of a mountain landscape. Students chorally repeat the words and sentences after the audio, with the teacher providing corrective feedback on pronunciation.
- Group Discussion (7 minutes): Students are divided into pre-assigned groups of four via the Xuexitong platform. The discussion topic-"What is the best transportation for a trip to Europe from China? Why?"-is displayed on the screen. Groups are instructed to list at least two advantages and disadvantages of their chosen mode (e.g., plane: fast but expensive; train: scenic but slow). Groups collaborate online using the platform's discussion forum, and one representative from each group briefly shares their conclusions orally.
- Role-play (5 minutes): Using printed scenario cards, pairs of students engage in a guided role-play. One card assigns the role of a customer inquiring about a trip to Paris, while the other is a travel agent. The cards provide key phrases to use (e.g., Customer: "How can I get to Paris?"; Agent: "You can take a direct flight."). This activity provides structured yet authentic practice of the target language in a communicative context.

#### (5) Post-assessment (10 minutes)

Students complete two tasks to demonstrate learning:

- A short writing task: They draft a 50-word personal travel plan for a dream destination, including transportation and activities, and submit it via Xuexitong.
- A 3-question comprehension quiz on the platform based on the reading passage (e.g., "What is the most famous landmark in Paris?").
- The teacher projects and anonymizes 2-3 student writing samples for immediate, whole-class feedback, highlighting effective use of vocabulary and correct sentence structure

#### (6) Summary (5 minutes)

The teacher facilitates a brief review using a summary PPT slide that lists the key vocabulary, sentences, and cultural points covered. The teacher then assigns differentiated homework: Level 1 (Basic): Post 3 sentences about a Chinese scenic spot on Xuexitong. Level 2 (Intermediate): Record a 1-minute audio introduction. Level 3 (Advanced): Create a short PPT slide with images and text. This consolidates learning and extends it beyond the classroom.

## 4. Teaching Reflection

### 4.1. Teaching Outcomes

The lesson was successful in reaching most of its goals. Post-assessment results showed that the majority of the students have acquired the target vocabulary and sentence patterns, which is a great improvement compared to their performance in the pre-assessment. In the writing part, approximately 80% of students successfully incorporated the target vocabulary and structures. For example, one student wrote: "My destination is Paris. I plan to take the plane because it is fast. I want to see the Eiffel Tower and try local food." This demonstrates effective uptake of the lesson's core elements. The observation during the lesson showed that the students were highly involved in the group discussion and role-play activities; almost all the students participated willingly in speaking English (Johnson, 2021).

The use of digital simulations—such as interactive maps and 360° videos—proved effective in fostering cultural awareness (Chen, 2022). Most students could accurately describe cultural landmarks and compare travel customs between China and Europe. For instance, many noted differences in travel preferences, such as the tendency for self-guided travel in Europe versus group tours in China.

### 4.2. Challenges Encountered

Several practical difficulties arose during implementation. A minority of students encountered technical issues with the online platform, occasionally delaying task submission (Zhang, 2021). Additionally, while differentiated group work was implemented, some lower-proficiency students still struggled with complex sentence construction and required more individualized support (Zhao, 2022).

Due to time constraints, the cultural segment of the lesson focused primarily on landmark recognition rather than deeper cultural concepts such as social etiquette or historical context. This limited the depth of cross-cultural understanding achieved (Huang, 2021).

### 4.3. Improvements and Adjustments

To overcome these problems, the following adjustments are proposed:

- **Technical Preparedness:** A brief tutorial video on how to use key features of the Xuexitong platform will be shared with students one day before the lesson. Additionally, a low-tech backup plan is prepared (e.g., printed quizzes and handouts) in case of connectivity issues.
- **Support for Lower-Proficiency Learners:** Allocate 5 minutes of dedicated time during practice activities for the teacher to provide small-group support to struggling students. Sentence frames (e.g., "I plan to go to \_\_\_\_\_ by \_\_\_\_\_ because \_\_\_\_\_.") will be provided on printed cards as a scaffold.
- **Deepening Cultural Understanding:** To move beyond landmark recognition, the next lesson will incorporate a short video clip showing daily life and social interactions in France, followed by a discussion comparing etiquette (e.g., greetings, dining customs) with Chinese culture.

## 5. Conclusion

This study explores the integration of technology-advan

ced methods and the BOPPPS model in middle school English teaching, taking Unit 6 Travel Around the World of the 8th-grade second-semester PEP textbook as a practical case. Through instructional design, classroom implementation, and teaching reflection, the research draws three key conclusions.

First, the combination of technology-advanced methods and the BOPPPS model effectively addresses the limitations of traditional English teaching. Unlike the teacher-centered, textbook-reliant traditional mode (Smith, 2020; Li, 2022), the integrated approach uses multimedia resources (Brown, 2019), online interactive platforms (Zhang, 2021), and digital simulation tools (Zhou, 2023) to enrich teaching scenarios, while the BOPPPS model's six links ensure systematic, student-focused activity design (Johnson, 2021). This synergy significantly improves student participation—nearly all students actively engaged in group discussions and role-plays—and enhances language competence, with 80% of students successfully applying target vocabulary and sentence patterns in writing.

Second, technology-advanced methods play a critical role in fostering cultural awareness and independent learning ability. Digital simulations (e.g., 360° videos of European landmarks) enable students to access authentic cultural contexts without physical travel (Chen, 2022), helping them recognize differences between Chinese and Western travel customs. Meanwhile, online platforms like Xuexitong support independent research on travel topics, aligning with the goal of developing students' learning autonomy (Liu, 2023). However, consistent with Hattie (2017) and Richards (2018), the study confirms that technology must serve clear pedagogical goals; otherwise, it risks being superficial. For example, the effective use of multimedia in vocabulary teaching relied on linking audio-visual materials to specific linguistic targets, rather than mere technological display.

Third, differentiated instruction, guided by pre-assessment results (Zhao, 2022), is essential for meeting the diverse needs of students with varying English proficiency. While lower-proficiency students still faced challenges in complex sentence construction, providing targeted support (e.g., sentence frames) and tiered tasks (basic vocabulary practice vs. advanced PPT creation) helped narrow the gap and ensured all students could achieve lesson objectives.

Despite its contributions, this study has limitations. The research is based on a single lesson in one grade, so the findings may lack broad applicability to other units or grade levels. Additionally, the cultural segment only covered landmark recognition, failing to explore deeper cultural concepts like social etiquette (Huang, 2021). Future research could expand the scope to multiple units and grades, and further integrate technology to design activities that promote in-depth cross-cultural understanding.

Overall, this study provides a reproducible instructional model for middle school English teachers, demonstrating that the rational integration of technology-advanced methods and the BOPPPS model can drive innovation in English teaching, enhance students' comprehensive language ability, and lay a foundation for their lifelong language learning.

## References

- [1] Brown, J. (2019). The Application of Multimedia Technology in Middle School English Teaching. *Journal of Educational Technology*, 15(2), 45–58.
- [2] Chen, L. (2022). Research on the Application of VR Technology in Middle School English Cultural Teaching. *Modern Educational Technology*, 32(5), 89–96.
- [3] Clarke, D. (2022). *Task-Based Language Teaching with Technology*. Cambridge University Press.
- [4] Davis, A. (2019). Integrating Technology in the Language Classroom. *ELT Journal*, 73(4), 411–423.
- [5] Garcia, M. (2020). Student-Centered Learning with the BOPPPS Model. *Educational Design Review*, 7(1), 22–35.
- [6] Hattie, J. (2017). *Visible Learning for Teachers*. Routledge.
- [7] Huang, Y. (2021). Cultural Elements in English Language Teaching. *Language and Education*, 35(3), 245–259.
- [8] Johnson, S. (2021). The BOPPPS Model: A New Framework for Improving Classroom Teaching Effect. *Journal of Curriculum Studies*, 53(3), 345–360.
- [9] Larsen-Freeman, D. (2019). From Theory to Practice: Using Technology to Enhance Language Learning. *TESOL Quarterly*, 53(4), 987–1002.
- [10] Li, X. (2022). A Survey of English Teaching in 50 Middle Schools. *Chinese Journal of Education*, 44(2), 112–120.
- [11] Liu, R. (2023). Blended Learning in Secondary English Education. *Computer Assisted Language Learning*, 36(2), 156–170.
- [12] Richards, J. C. (2018). *Technology in Language Teaching: A Practical Guide*. Routledge.
- [13] Smith, T. (2020). Beyond the Textbook: Innovative Approaches to Language Teaching. *Language Teaching Research*, 24(1), 78–95.
- [14] Thompson, R. (2021). Digital Tools for Cultural Immersion in Language Learning. *TechTrends*, 65(4), 601–610.
- [15] Wang, Y. (2023). Applying BOPPPS to English Reading Instruction. *English Language Teaching*, 16(2), 134–147.
- [16] Zhang, H. (2021). Online Interactive Platforms in Language Education. *Computer Assisted Language Learning*, 34(5), 623–642.
- [17] Zhao, L. (2022). Differentiated Instruction in Mixed-Ability Classrooms. *Educational Psychology Review*, 34(3), 789–805.
- [18] Zhou, M. (2023). Simulation Tools in Language Learning: Practical Applications. *Journal of Educational Multimedia*, 28(1), 45–60.