

The Integration of Technology-Based Teaching Methods Based on the BOPPPS Model in Middle School English Teaching

Xuran Zhang

Linyi University, Linyi, China

Abstract: This article analyzes the drawbacks of traditional middle school English teaching methods and explores the integration of technology-based teaching methods into the BOPPPS model for middle school English teaching. The article takes "He Lost His Arm but Is Still Climbing" as an instance in the instructional design part, illustrating the incorporation of the information and digital technologies into every stage of the BOPPPS model, and provides various concrete examples of technical tools and their usage.

Keywords: BOPPPS Model; Middle School; English Teaching; Technology-based Teaching.

1. Introduction

The introduction of technology has transformed several industries, including education. One possible way to improve student engagement and learning results in middle school English instruction is to include technology-based strategies into well-established pedagogical frameworks such as the BOPPPS model. The potential of technology to revolutionize conventional English teaching methods is examined in this essay, along with the advantages and practical implementation techniques for integrating it into the BOPPPS model.

2. Background

2.1. The Disadvantages of Traditional English Teaching

In the traditional English teaching process, many teachers just blindly instil English knowledge for students, and the lectures are rigid. From beginning to end, the main body of the whole class is the teacher. Teachers want to instil textbook knowledge into students. This kind of one-way, top-down teaching cannot mobilise students' enthusiasm and passion for learning, and it only makes students hate English learning more. In addition, due to the limitation of time and number of students, the communication between teachers and students is also hindered. Teachers only convey some key contents of the examination to students without any extension of knowledge. Moreover, with traditional English teaching methods, teachers are unable to take into account the differences of each student and are unable to carry out targeted teaching, which greatly reduces students' learning initiative. This is because, in traditional English teaching, students' pace must be consistent with the teacher's in order to absorb what the teacher teaches. As a result, every student follows a uniform pattern. However, students have different comprehension levels, and every student's ability to understand, master and apply knowledge is different, but traditional teaching methods do not respect students' differences and reduce students' learning efficiency.

2.2. BOPPPS Model

Modern approaches to teaching English have been created in response to the inadequacies of conventional techniques and one of them is the BOPPPS model. The BOPPPS teaching model is based on communicative interaction and constructivism and focuses on teaching interactions and student feedback in the classroom (Chen et al., 2022). BOPPPS consists of six elements: bridge-in, objective/outcome, preassessment, participatory learning, post-assessment and summary (Yin, 2018). The BOPPPS model emphasises student-centredness, participatory interaction in the teaching and learning process, and the pursuit of immediate results and timely feedback (Hu et al., 2022).

2.3. Technology-Based Teaching Methods

The incorporation of technology in the class allows for more ways of teaching, and teaching is no longer confined to textbooks. It also increases interaction between teachers and students and mobilises a positive atmosphere of teaching and learning in the classroom. The traditional English teaching model is teacher-centred, with the teacher explaining and the students passively accepting the knowledge taught by the teacher, which is not conducive to students' concentration. Technology-based teaching is student-centred, where the teacher prepares the lesson with the student as the receiver in mind, prompting the teacher to change the traditional way of learning in which the student passively receives knowledge, which helps students maintain their attention for a longer period of time. Teachers can stimulate students' motivation to learn English through video, audio and images, and also make abstract words and grammar vivid through information technology to improve students' learning efficiency (Osutor & Chiemeke, 2015). In addition, in the traditional teaching mode, it is difficult for teachers to teach students according to their aptitude, but the application of technology has solved this problem well. Technology-based teaching allows students to choose appropriate exercises according to their own English levels, in which case students will not find it difficult to learn English and become bored with it. Students with different learning abilities can also receive targeted

training and improvement, thus improving the efficiency of teaching and learning. It has been recognized that technology-based teaching has a positive impact “not only on student engagement, but also on their visualisation and graphical communication skills, better information retention, ability to adapt knowledge to solve open-ended problems and motivation for further learning” (Pusca & Northwood, 2016).

3. Instructional Design

3.1. Analysis of Teaching Material

The lesson, which lasts 45 minutes and is structured as a reading and thinking class, is based on Unit 7 of the seventh-grade textbook, "He Lost His Arm But Is Still Climbing."

(1) Content Overview

The motivational tale of a climber who, in spite of losing an arm, carries on with his love of climbing is presented in the text "He Lost His Arm But Is Still Climbing". The content mostly addresses themes of tenacity, fortitude, and conquering challenges.

(2) Key Elements

Vocabulary: Keywords pertaining to physical obstacles, perseverance, and climbing

Comprehension: Understanding the central concept, illustrative details, and story's lesson

Critical Thinking: Reflecting on the themes and relating them to one's own experiences or larger social settings.

3.2. Analysis of Student Characteristics and Learning Needs

Students have prior knowledge about encountering difficulties in life and their attitudes towards these challenges. However, they may struggle to express the process of overcoming difficulties and demonstrating resilience in English writing. Students can relate to the topic, making it easier to resonate with the text. Nonetheless, they have varying levels of ability to think critically and comprehend new content, requiring appropriate guidance from the teacher.

3.3. Teaching Objectives

(1) Language Competence: By the end of the lesson, students will accurately recognize key vocabulary such as "climber", "be used to", "take risks", "accident", "situation", "rock", "run out of", "knife", "cut off", "get out of", "importance", "decision", "control", "spirit", "death", "give up", and "trouble." Students will be able to use context clues to infer the meaning of unfamiliar words and will develop their ability to summarize the text and articulate the story's themes.

(2) Critical Thinking: After analyzing the text, students will understand the overall storyline, uncover the deeper meanings, and appreciate the author's attitude towards the story of a climber who continues his passion despite losing an arm. In the attitudinal aspect, students will appreciate the value of perseverance and resilience and reflect on how the story's themes apply to their own lives and the world around them.

(3) Cultural Awareness: Students will be aware of and analyze the different mindset in different culture when it comes to extreme sports and the attitude toward nature, e.g., individualism and adventure VS. balance and caution, pursuit of personal challenge VS. respect for nature. Students will learn to respect different attitude toward climbing and other extreme sports.

(4) Learning Ability: Students will learn to assess their own

language levels and set their learning goals. They will engage effectively in collaborative tasks and contribute to group discussions. They will learn to identify the difficulties they come across when learning.

3.4. Teaching Methods

(1) BOPPPS teaching model: Structuring the lesson around 6 elements including bridge-in, objective/outcome, preassessment, participatory learning, post-assessment, and summary.

(2) Technology-based teaching methods: Utilizing digital tools to enhance engagement and understanding.

(3) Differentiated teaching and instruction: Respecting students' individual development, particularly when discussing personal interests and thoughts.

3.5. Teaching Procedures

(1) Phase 1: Bridge-in (5 minutes)

Introduction and Context Setting:

Display photos of the climber Aron as an introduction.

Discuss the photos briefly to activate prior knowledge and set the context.

Ask a few students to predict the content of the article based on the title and images (refer with figure 1).

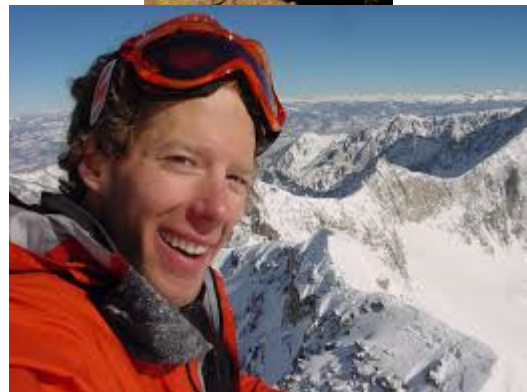
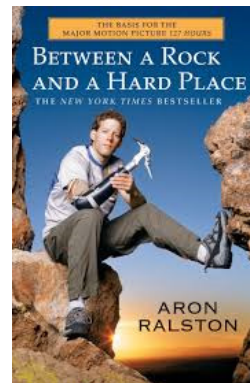


Figure 1. Between a rock and a hard place Images

(2) Phase 2: Objective/outcome (5 minutes)

Objective clarification:

Clearly explain to the students the expected outcomes of this lesson, including vocabulary expansion, reading comprehension improvement, communication skill enhancement, and critical thinking improvement.

Inform the students of the key points and difficulties of this lesson. Display some key sentences and words that might be difficult for some students.

(3) Phase 3: Preassessment (5 minutes)

Vocabulary Preview:

Use an interactive multimedia presentation to present key vocabulary.

Include images, definitions, and example sentences.

Conduct a quick quiz using interactive tools (online real-time Q&A system, refer to Fig 2.) to assess the students' levels of vocabulary understanding. For example, ask students to give some synonyms for a keyword and submit their answer and then create a word cloud or create a spinner and ask students to give a synonym for the word the wheel stops at.

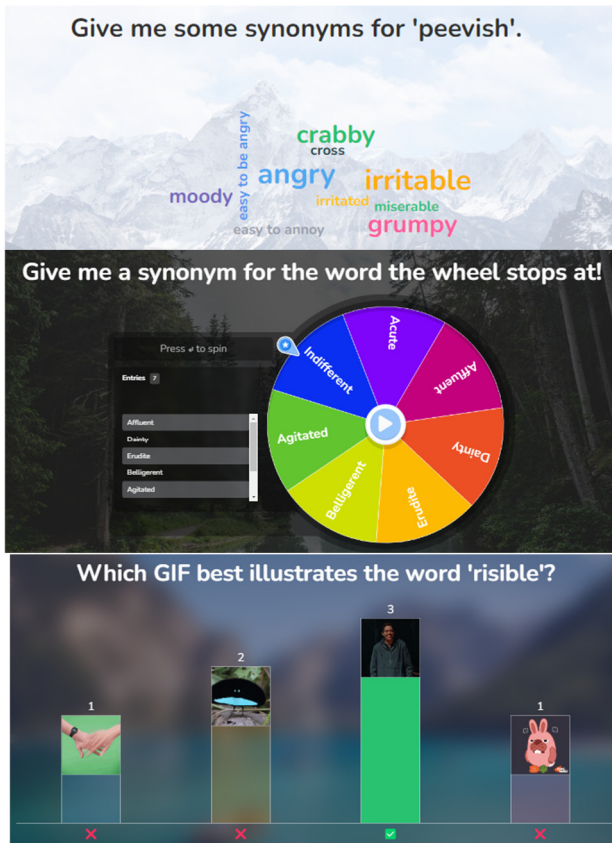


Figure 2. Online Real-time Q&A System

(4) Phase 4: Participatory learning (20 minutes)

Skim and perusing:

Ask students to skim the text and then ask whether there are any students who can try to summarize the story. If there are some hands up, give them opportunities to talk about their summaries of the story.

Ask the students to read carefully for basic information. At the same time, display the questions on the smartboard for students to think: a. When did the accident happen? b. Where did the accident happen? c. Why couldn't Aron move? d. How did Aron react after the accident? e. What does "between a rock and a hard place" mean?

Group discussion:

Divide students into small groups and assign each group a

section of the text. Use separate tables for in-person group discussions.

Have each group summarize their section and identify the main ideas and supporting details. Through this Q&A session, clarify the main storyline and present relevant details on PowerPoint.

Guide students to identify emotionally charged words and analyze the author's attitude towards Aron's perseverance. Use a digital annotation tool to highlight and comment on important parts of the text. Encourage students to annotate their copies with questions, comments, and connections.

Encourage students to share their thoughts on Aron's determination and reflect on the power of passion. Encourage students to share their attitudes toward adventure, exploration, nature, and risk management.

Enhance vocabulary retention by showing clips (refer with Fig 3.) from movies where the new words are used.

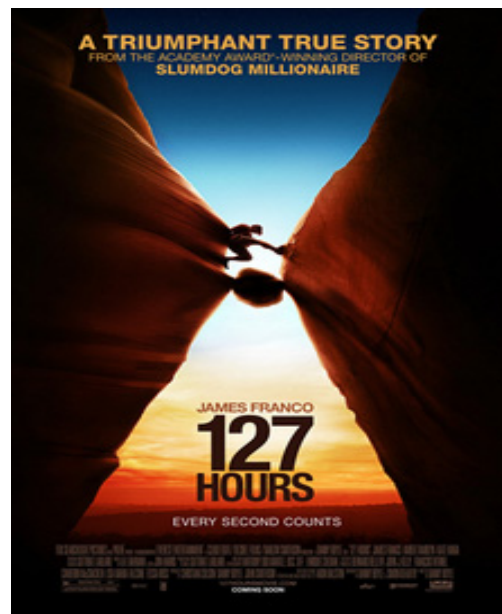


Figure 3. 127 Hours Movie Clip

127 HOURS - Full Length Official Trailer HD:

<https://www.youtube.com/watch?v=OlhLOWTnVoQ>

Meet the man behind the movie '127 Hours':

<https://www.youtube.com/watch?v=R04oMySbBjQ>

Critical Thinking and Reflection:

Pose open-ended questions to the class, such as: What challenges did the protagonist face, and how did they overcome them? How do you think you would react in a similar situation?

Use an online discussion board where students can post their responses and comment on each other's posts.

Use a digital tool to create a word cloud (refer with Fig 4.) to present students' ideas and encourage them to discuss.

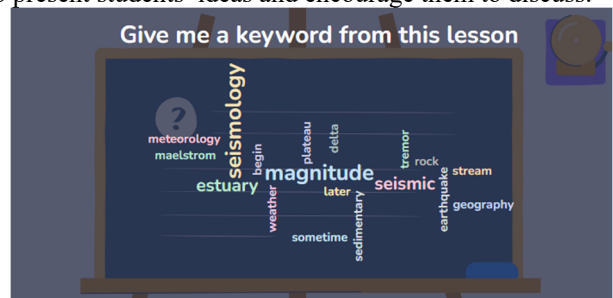


Figure 4. Word Cloud

Creative Expression:

Play motivational music to create an atmosphere.

In order to improve their language proficiency and core competencies, students use new vocabulary and grammar to express how they have overcome hurdles to pursue their passions.

(5) Phase 5: Post-assessment (5 minutes)

Send out an online questionnaire to test the achievement of the teaching objectives and obtain feedback. For example, use Microsoft Forms to create a questionnaire form and put the QR code of the questionnaire on the screen so students can scan the QR code and fill in the questionnaire.

Include multiple-choice questions and open-ended questions in the questionnaire. Assess students' mastery of vocabulary and key sentences and understanding of the text in multiple-choice questions. Encourage students to put down their own reflections on the lesson in the open-ended questions, including whether they still have difficulty in using some words or understanding the storyline, what they think about the lesson, or whether it is interesting or boring.

Display the answers to the multiple-choice questions and present the distribution of correct answers and wrong answers in the class. For example, there might be 25 per cent of students give the wrong answers in understanding a specific sentence. Then clarify the correct answers.

Display the answers to the open-ended questions and ensure the students that their questions will be addressed after class or in the next one (refer with Fig 5.).

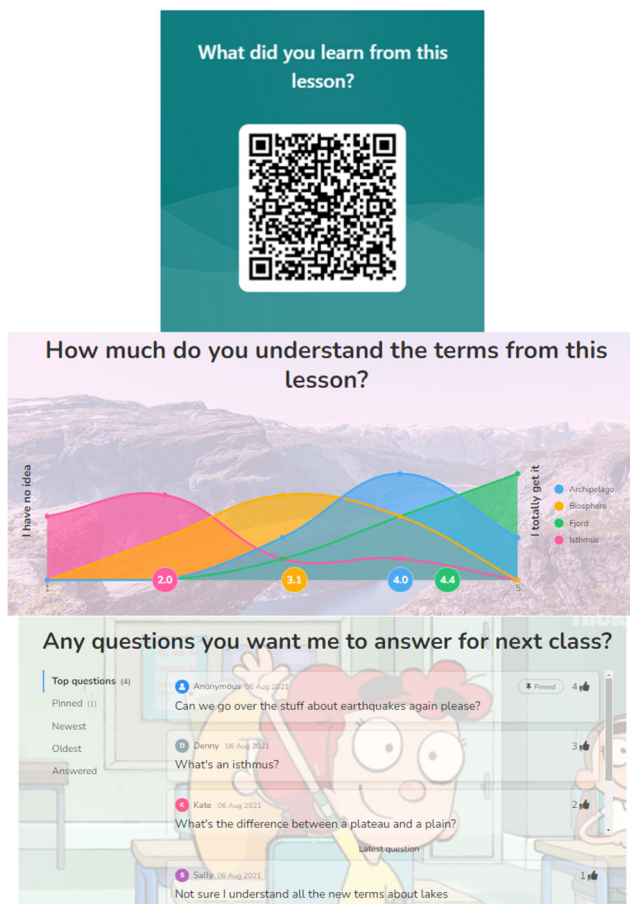


Figure 5. Questionnaire

(6) Phase 6: Summary (5 minutes)

Wrap-up and Assignments:

Recap the lesson's main ideas and emphasize the key point learned.

Give students a journaling assignment where they write about a time, they faced a struggle and how they overcame it. Ask students to actively use the vocabulary and grammar that they learn in this lesson. Inform them that the best five journals will be published in the online class forum if they agree for other students to read.

4. Teaching Reflections

(1) Using multimedia tools to improve learning is a necessary part of successfully incorporating digital technology into the class. Students can learn about various contexts and usage of new vocabulary terms, for instance, by watching movie clips featuring those words. Furthermore, adding music to student-sharing sessions can foster a more positive and interactive environment that promotes engagement and enhances the overall experience.

(2) To keep students focused and move quickly to the main topic, limit pre-class activities to one or two. Not only can too many pre-class activities lead to diminished student interest and concentration on the content itself, but they can also cause disruption in the classroom so that the teacher has to spend more time restoring discipline in the classroom.

(3) It is crucial to pose well-structured questions that are connected to one another and get more complicated as the class goes on. Following this approach, students can gain a deeper comprehension of the text and be encouraged to think critically. Questioning and answering is the main approach for teachers to communicate ideas with students and a prerequisite for improving interaction in the English class. Asking questions can also cultivate students' thinking ability and make them argue and think about the problem from a deeper level and multiple perspectives.

5. Conclusion

This instructional design aims to create a dynamic and engaging learning environment that not only improves students' reading and comprehension skills but also encourages critical thinking and personal growth by integrating technology into the BOPPPS teaching model. The innovation of this instructional design points to the incorporation of technology-based teaching methods and every stage of the BOPPPS teaching model. The advantages of the two teaching methods are exploited to free students from the old-fashioned and rigid mode of teaching and to make the English class more efficient, interesting and vivid.

Acknowledgments

This work is supported by Linyi University 2024 College Students Innovation and Entrepreneurship Training Program Project, Project Number: X202410452180.

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