

ENGLISH-MAJOR STUDENTS' PERCEPTIONS OF USING EDPUZZLE TO LEARN LISTENING SKILLS AT A UNIVERSITY IN VIETNAM

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<https://doi.org/10.63506/jilc.1001.447>

(Received: 27/02/2026; Revised: 16/04/2026; Accepted: 27/04/2026)

Abstract: This study aims to investigate students' perceptions of the effectiveness of Edpuzzle – a digital platform offering videos with interactive activities in a listening course at a university in Vietnam. The research employed a mixed-method approach involving 67 second-year English-major students to evaluate the benefits of using Edpuzzle for learning listening skills in three dimensions: engagement, enhancement, and extension. Data were collected through questionnaires, semi-structured interviews, and learning journals, and were analyzed using descriptive statistics and thematic analysis based on the Triple-E framework (Kolb, 2020). The findings indicate that students responded positively to the effectiveness of Edpuzzle in listening classes. However, some students reported difficulties related to maintaining concentration when processing both visual and auditory information simultaneously. Overall, the study suggests that Edpuzzle has considerable potential to support listening instruction if it is appropriately integrated into classroom activities. Pedagogical implications and recommendations for future research are also discussed.

Keywords: Edpuzzle; listening; Triple-E framework; educational technology; interactive video

NGHIÊN CỨU NHẬN THỨC CỦA SINH VIÊN NGÀNH TIẾNG ANH VỀ VIỆC ỨNG DỤNG EDPUZZLE ĐỂ HỌC KỸ NĂNG NGHE TẠI MỘT TRƯỜNG ĐẠI HỌC Ở VIỆT NAM

Tóm tắt: Nghiên cứu này nhằm khảo sát nhận thức của sinh viên về hiệu quả của Edpuzzle – một nền tảng trực tuyến cung cấp các video kèm hoạt động tương tác trong học phần Kỹ năng Nghe tại một trường đại học ở Việt Nam. Nghiên cứu sử dụng phương pháp hỗn hợp với sự tham gia của 67 sinh viên năm thứ hai chuyên ngành Tiếng Anh nhằm đánh giá lợi ích của việc sử dụng Edpuzzle khi học kỹ năng nghe ở ba khía cạnh: sự tham gia, sự nâng cao và sự mở rộng. Dữ liệu được thu thập thông qua bảng câu hỏi, phỏng vấn bán cấu trúc và nhật ký học tập, đồng thời được phân tích bằng thống kê mô tả và phân tích chủ đề dựa trên khung lý thuyết Triple-E (Kolb, 2020). Kết quả nghiên cứu cho thấy sinh viên có nhận thức tích cực về hiệu quả của Edpuzzle trong việc học kỹ năng nghe. Tuy nhiên, một số sinh viên cho biết gặp khó khăn trong việc duy trì sự tập trung khi đồng thời xử lý thông tin hình ảnh và âm thanh. Nhìn chung, nghiên cứu cho thấy Edpuzzle có tiềm năng đáng kể trong việc hỗ trợ giảng dạy kỹ năng nghe nếu được tích hợp phù hợp vào các hoạt động trên lớp. Nghiên cứu cũng đưa ra một số kiến nghị sơ phạm và gợi ý cho các nghiên cứu tiếp theo.

Từ khóa: Edpuzzle; nghe hiểu; khung lý thuyết Triple-E; công nghệ giáo dục; video tương tác

1. Introduction

Nowadays, with the rapid development of information technology, the use of mobile applications integrating artificial intelligence and big data into language learning has become increasingly common. The use of websites or software to support the teaching of practical language skills in English classrooms is widespread and has become an inevitable trend in language teaching and learning, both in face-to-face and online settings (Le & Bui, 2021). Foreign language teaching and learning approaches have changed considerably due to technological advancement, which has emerged as a clear and accelerating trend over recent decades (Hoang, 2024). The strong growth in both the quantity and quality of mobile applications, software, and websites has provided a basis for researchers to further explore the integration of information technology into foreign language teaching (Bui & Namaziandost, 2024).

Technological applications offer many advantages for enhancing the quality of language teaching and learning. However, best practices for applying technology to develop listening skills in foreign language learning have not yet been widely documented (Stockwell & Wang, 2025). Recent studies show that, besides diversifying listening resources in terms of genre and content, technology also affects what learners listen to, how they interact with listening materials, and how they develop listening competence in general (Stockwell & Wang, 2025). Teachers can personalize support by observing learners' viewing time, frequency of replay, and playback speed. Learners should also be guided to use active listening strategies, such as setting goals before listening, pausing intentionally, replaying strategically, and adjusting playback speed. However, there is still limited empirical evidence on the effectiveness and implementation of these strategies in technology-enhanced contexts.

Therefore, this study investigates second-year English-major students' perceptions of the effectiveness of Edpuzzle in learning listening skills. Specifically, this study addresses the following research questions:

1. How do students perceive the effectiveness of Edpuzzle in enhancing their engagement in listening classes?
2. How do students perceive the effectiveness of Edpuzzle in improving their listening comprehension?
3. How do students perceive the effectiveness of Edpuzzle in extending listening practice beyond class time?
4. What challenges do students perceive when using Edpuzzle to learn listening skills?

2. Theoretical background

2.1 Listening skills

It is undeniable that listening is an important skill that enables learners to process and interact with language input and allows them to develop other skills (Vandergrift & Goh, 2012). The very first task of a listener before processing any further information is to decode spoken discourse, which can be done immediately during the listening process (Richards, 2008). Two main approaches to information processing are bottom-up processing and top-down processing. In bottom-up processing, listeners use their existing knowledge of vocabulary and grammar to decipher information at multiple levels, including sounds, words, clauses, sentences, and texts,

until meaning is constructed (Richards, 2008). In contrast, in top-down processing, background knowledge is used to interpret meaning based on context, situation, and prior knowledge of the topic (Richards, 2008).

Given these cognitive demands, it is understandable that listening is often considered particularly challenging. For students, listening has long been considered a relatively difficult skill among the four language skills because they often experience a sense of insecurity and find it difficult to measure their own progress (Field, 2009). Bozorgian and Shamsi (2025) explain that listening is difficult because of “the fleeting nature of input” (p. 1), while Nunan (2002) metaphorically describes listening as the “Cinderella skill” in language teaching because it is often considered less important (p. 238). This perception may negatively affect learners’ motivation to study English and their confidence when approaching this skill.

From this perspective, listening instruction should not focus only on testing comprehension outcomes but also on supporting the listening process itself. Learners need opportunities to interact with input, reflect on their difficulties, and gradually develop confidence, strategic awareness, and sustained participation in listening activities conducted both inside and outside the classroom over time.

2.2 Introduction to Edpuzzle

Edpuzzle is an online platform and mobile application developed in 2013 by a group of educators with the aim of creating a repository of high-quality interactive instructional videos (Nguyen et al., 2024). Edpuzzle contains more than 8 million video lessons, has 3 million student users, and is used by over 70% of schools in the United States (Duri, 2023). Its core function is to provide a platform that allows teachers to design interactive tasks by embedding questions directly into videos. Videos can be easily accessed from reliable sources such as YouTube, Khan Academy, TED Talks, National Geographic, and Crash Course. Users can also upload, edit, and add questions to videos they create themselves (Mawaddah et al., 2022).

In addition, Edpuzzle offers other useful features, including (1) gamified interaction, (2) learner progress tracking, and (3) integration with classroom management platforms. Edpuzzle allows teachers to insert multiple-choice questions, fill-in-the-blank questions, open-ended questions, and notes or explanations in audio or text form into videos (Duri, 2023). Users can answer embedded questions while the video is playing, and Edpuzzle records response speed, the number of correct answers, and ranking tables, similar to other online game-based platforms commonly used in classrooms, such as Kahoot!, Quizizz, and Wordwall.

2.2.1 Advantages of using Edpuzzle in listening learning

Edpuzzle has several features that help learners process listening input through both bottom-up and top-down approaches. In bottom-up processing, learners can pause, replay, and adjust the speed of the video; therefore, they have the opportunity to identify phonemes, catch keywords, distinguish homophones with different meanings, and follow word order and sentence structure in spoken discourse (Richards, 2008). From a top-down approach, they can contextualize the content of the video based on audio and visual elements. They can also notice some non-verbal cues, such as facial expressions, turn-taking, and communicative settings to infer meaning and combine all pieces of information together to have an overall understanding of the content

(Richards, 2008). Compared with listening activities based only on audio, this audiovisual mode provides additional “clues” that support inference and more closely approximates real communicative conditions, in which listeners often rely on both verbal and nonverbal signals to understand messages. Numerous studies have demonstrated that Edpuzzle has a positive impact on the enhancement of learners’ listening comprehension compared with traditional listening methods (Kholid et al., 2024; Nguyen et al., 2024). Additionally, a quasi-experimental study conducted in Indonesia reported similar findings. Kholid et al. (2024) concluded that Edpuzzle demonstrated its effectiveness through its feature of embedding questions directly into videos and providing immediate feedback. This encourages active engagement, improves the processing of input, and supports the retention of information during listening.

2.2.2 Challenges in applying Edpuzzle to listening learning

Besides its useful features that create favorable conditions for both teachers and learners, users also encounter certain difficulties when using Edpuzzle to teach and learn listening skills. These difficulties are mainly related to technological factors, the platform interface, and its operation.

One major obstacle is a poor internet connection, which can interrupt the playback of instructional videos and negatively affect the user experience (Nguyen et al., 2024). Some studies suggest that the very interactive nature of the application may cause learners to have difficulty maintaining concentration and remembering information when they have to watch videos and answer questions at the same time (Mawaddah et al., 2022). In addition, learners with lower levels of English proficiency may feel overloaded when listening to fast-paced YouTube videos. As a result, they may need subtitles in their mother tongue to better understand the content (Lestari et al., 2023).

2.3 Theoretical framework for evaluating the effectiveness of a technology application

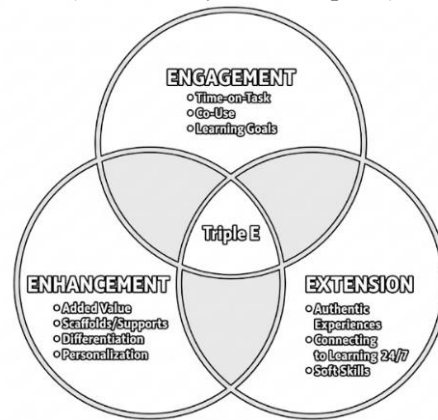
The Triple-E framework (Figure 1) was developed by Dr. Liz Kolb in 2011 (Kolb, 2020) to help teachers measure the effectiveness of technological applications implemented in classroom instruction. This framework provides specific criteria that assist teachers in identifying appropriate methods and strategies to achieve learning objectives in technology-integrated lessons (Gaer & Reyes, 2022). The Triple-E framework evaluates the effectiveness of a technology tool based on its ability to promote engagement, enhance the achievement of learning goals, and extend learning beyond the classroom.

The first dimension considered in the Triple-E framework is the promotion of learner engagement. According to Kolb (2020), the extent to which technology encourages learner engagement can be determined by three criteria: (1) helping learners focus on learning activities with minimal distraction, often described as time-on-task; (2) supporting learners in achieving the intended learning goals; and (3) encouraging a shift in learner behavior from passive participation to active involvement through co-use or co-engagement. Kolb (2020) argues that in order to evaluate engagement effectively, teachers need to examine whether learners actively participate in the learning process, including actions such as independently gathering information, interacting with learning materials, and sharing or explaining knowledge to others. In this sense, engagement does not only refer to attention during a task but also involves the degree to which learners interact with content and collaborate with each other to co-construct their understanding. Technology that

meaningfully supports engagement should therefore encourage learners to remain focused, contribute ideas, and become active participants in the learning experience rather than passive recipients of information.

Figure 1

Triple-E theoretical framework (Gaer & Reyes, 2022, p. 35)



The second criterion in the Triple-E framework concerns the enhancement of learning goals. According to Kolb (2020), enhancement can be understood as the degree to which technology improves or supports learners in achieving better learning outcomes. A technological application is considered capable of enhancing learning goals when it demonstrates several characteristics. First, the technology allows learners to develop a deeper understanding of the learning objectives or subject matter. Second, the technology provides step-by-step support that helps learners gradually grasp concepts or ideas that might otherwise be difficult to understand. Third, technology creates new ways for learners to demonstrate and express their understanding of learning objectives in ways that traditional tools cannot easily provide.

The final component of the Triple-E framework is extension. The extension of learning can be understood in terms of three main aspects. First, technology creates opportunities for learners to continue learning beyond classroom time. Second, technology helps establish connections between classroom learning and real-life experiences. Third, technology encourages the development of lifelong learning habits. According to Kolb (2020), learners tend to remember knowledge more deeply when they are able to apply what they have learned in class to everyday life. For this reason, a technological application becomes more effective when it enables learners to engage in authentic learning experiences that are closely connected to real-world contexts.

2.4 Research gap

It can be observed that most studies evaluating the effectiveness of Edpuzzle have mainly focused on three directions: (1) measuring whether participants' listening performance improved before and after the application of Edpuzzle in listening learning (Nguyen et al., 2024); (2) investigating participants' perceptions of the advantages and challenges of using Edpuzzle (Alvarez-Alvarez & Mischel, 2024; Mischel, 2019); and (3) applying Edpuzzle to the teaching of specific language skills, such as listening, speaking, reading, writing, or vocabulary, and evaluating its effectiveness (Duri, 2023; Fabillar, 2022; Hidayat & Praseno, 2021; Nguyen & Le, 2022; Rahayu & Bhaskoro, 2022).

However, most of these studies have not employed a well-established theoretical framework specifically designed to evaluate the effectiveness of a technological application in education such as the Triple-E framework, and have not examined in depth how Edpuzzle may influence the learning process. In addition, Edpuzzle remains a relatively new application in Vietnam, and there has been limited research on this platform in the Vietnamese context. Therefore, this study was conducted to fill these gaps by investigating students' perceptions of the effectiveness of Edpuzzle based on the Triple-E framework. More specifically, the study seeks to provide a clearer understanding of how Edpuzzle may promote engagement, enhancement, and extension in the teaching and learning of listening skills at the tertiary level in Vietnam.

3. Research methodology

3.1 Participants and research scope

This study adopted a mixed-method approach to investigate students' perceptions of the effectiveness of Edpuzzle through questionnaires, interviews and learning journals. The participants consisted of 67 students, aged 19 to 21, who were second-year students at a university in Central Vietnam. They were majoring in English Language Studies and English Language Teaching. All of them were enrolled in the Listening 3 module and were taught by the researcher. None of the participants had used Edpuzzle before taking part in this study. This helped ensure that their reflections on the platform were objective and genuine.

3.2 Research design

The study was conducted over one semester (September–December, 2025). Edpuzzle was used for both in-class learning activities and self-study at home. In class, after completing the content of each lesson, the teacher added a supplementary listening activity designed on the Edpuzzle platform. The listening tasks were approximately three-minute videos taken from YouTube with content related to the lesson, and Edpuzzle's features were applied to design the listening exercises. Students could complete the tasks individually or in groups in class.

In addition, the students participating in the study were required to complete self-study tasks at home on Edpuzzle. After receiving instructions on how to operate Edpuzzle and how to insert questions into a video, groups of students were formed and assigned to create videos with embedded questions on Edpuzzle. A total of four classes participated in the study. After the video tasks had been created, they were exchanged among the classes. Specifically, students in one class completed eight video-listening tasks designed by another class, ensuring that no group completed tasks created by their own classmates. During the process, each student wrote a learning journal, which served as a reflective diary focusing on: (i) summarizing the main content of the listening text; (ii) noting difficulties encountered while listening on Edpuzzle; and (iii) keeping a record of vocabulary items learned, interesting points, or impressions of the video content.

These activities served as “instructional moves” built around the application, helping learners apply higher-order thinking skills and reflect on what they were learning and doing within the app (Kolb, 2020). The researchers wanted the participants to experience Edpuzzle from two perspectives: as app users and as task designers. This allowed them to gain diverse experiences and viewpoints on the features and effectiveness of Edpuzzle when applied to the teaching and learning of listening skills.

3.3 Research instrument

a. Student questionnaire

A questionnaire was designed to explore students' perceptions of the effectiveness of Edpuzzle in learning listening skills. The questionnaire consisted of five parts and was designed in both English and Vietnamese to ensure that students clearly understood the content of the questions and could choose their answers more conveniently, thereby avoiding misunderstandings caused by incomplete comprehension and thus increasing the reliability of the data. This bilingual design also helped participants respond with greater confidence and accuracy, especially when expressing their perceptions of a new learning platform, thereby strengthening the consistency and trustworthiness of the collected data as a whole.

The first part collected participants' personal information, including age, gender, English proficiency, and previous experience with Edpuzzle. The second part included items grouped into four main clusters corresponding to the four aspects addressed in the research questions: engagement, enhancement of listening comprehension, extension, and difficulties learners encountered when using Edpuzzle. The items in the questionnaire were designed based on Nguyen et al. (2024) and the Triple-E framework (Kolb, 2020). All items in the questionnaire were designed using a five-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree).

The questionnaire was piloted with three second-year students from the Faculty of English, and these students did not participate in the main study thereafter. The pilot participants were invited to provide feedback on whether any items were unclear or whether there was overlap in meaning among the questions. After receiving their comments, the researcher revised the questionnaire to make it more comprehensible. The pilot also indicated that the questionnaire required approximately 10–14 minutes to complete. The questionnaire was designed using Google Forms and distributed to four classes for students to complete online.

Table 3.3

Structure of the questionnaire

| | Cluster | Question Item | Cronbach's Alpha | Number of Items |
|--------|---|-----------------------|------------------|-----------------|
| Part 1 | Personal Information | | | |
| Part 2 | Investigating the impact of Edpuzzle on students' engagement | 1,2,3,4,5,6,7,8, 9 | 0.806 | 9 |
| Part 3 | Investigating the impact of Edpuzzle on students' enhancement | 10,11,12,13,14,15, 16 | 0.839 | 7 |
| Part 4 | Investigating the impact of Edpuzzle on students' extension | 17,18,19, 20 | 0.815 | 4 |
| Part 5 | Investigating the difficulties encountered while using Edpuzzle | 21,22,23,24,25,26, 27 | 0.913 | 7 |

The Statistical Package for the Social Sciences (SPSS) version 22 was used to analyze the reliability of the questionnaire items. Cronbach's Alpha was employed to assess the internal consistency of the items, ensuring that all questions within each group consistently measured the same construct under investigation.

According to Dörnyei (2007), a Cronbach's Alpha value of 0.70 or above is considered acceptable. As shown in Table 3.3, the Cronbach's Alpha value for each cluster of items was higher than 0.70. This indicates that the sub-items in the questionnaire demonstrated good reliability and a high degree of consistency. Table 3.3 presents the structure of the questionnaire.

b. Semi-structured interviews

A set of semi-structured interview questions was developed based on the Triple-E framework. Six main interview questions were divided into four parts corresponding to the four research questions: (1) learning engagement, (2) enhancement of listening comprehension, (3) extension of learning goals, and (4) the difficulties students encountered when using Edpuzzle. The Triple-E framework was selected as the theoretical foundation because it provided clear criteria for evaluating the extent to which technology supports and enhances the effectiveness of the listening learning process.

3.4 Data collection and analysis procedures

For quantitative data, the collected responses were first downloaded from Google Forms. Participants' names were anonymized and replaced with ID codes. The data were carefully checked before analysis to ensure accuracy. The data were then analyzed using descriptive statistics and frequency analysis with SPSS version 22. Descriptive statistics, including mean, standard deviation, minimum, and maximum values for the five-point Likert scale, were calculated. Questionnaire data were presented in the form of charts and tables. The classification thresholds used to interpret the mean values were based on Oxford's (1990) recommendations regarding mean score ranges.

For qualitative data (interview transcripts), this study employed thematic analysis following the procedures suggested by Braun and Clarke (2006). This method consists of six stages: familiarizing oneself with the data, generating initial codes, identifying themes, reviewing themes, defining and naming themes, and reporting the results.

4. Findings and discussion

4.1 Students' perceptions of the effectiveness of Edpuzzle in enhancing their engagement in listening activities

The descriptive statistical results in Table 4.1 indicate that students gave positive feedback on Edpuzzle's role in promoting engagement in listening tasks in the Listening 3 course. All nine statements obtained high mean scores, ranging from 4.25 to 4.72. These findings suggest that most participants agreed or strongly agreed with the statements concerning the effectiveness of Edpuzzle. In addition, the low standard deviation values, ranging from 0.454 to 0.865, indicate a relatively consistent pattern of responses among participants, reflecting a generally shared perception that Edpuzzle contributed positively to their level of learning engagement.

Table 4.1

Students' perceptions on the effectiveness of Edpuzzle in enhancing their engagement in listening activities

| No. | Statement | <i>N</i> | Min | Max | Mean (<i>M</i>) | Standard Deviation (<i>SD</i>) |
|-----|--|----------|-----|-----|-------------------|----------------------------------|
| 1 | Edpuzzle helps me focus on listening tasks without distraction. | 67 | 2 | 5 | 4.42 | .655 |
| 2 | I use Edpuzzle with my classmates to share ideas and support one another in learning. | 67 | 1 | 5 | 4.36 | .865 |
| 3 | Edpuzzle encourages me to change from a passive learner into an active learner. | 67 | 3 | 5 | 4.31 | .701 |
| 4 | I use Edpuzzle to generate ideas, create new questions, and produce learning products. | 67 | 1 | 5 | 4.46 | .804 |
| 5 | I use Edpuzzle to collaborate with my classmates on learning products to achieve learning goals. | 67 | 2 | 5 | 4.25 | .804 |
| 6 | Edpuzzle arouses my interest in learning Listening. | 67 | 3 | 5 | 4.58 | .555 |
| 7 | Edpuzzle makes me feel happy when I choose the correct answer. | 67 | 4 | 5 | 4.72 | .454 |
| 8 | Edpuzzle makes me interested and excited when combining visual images and audio. | 67 | 3 | 5 | 4.55 | .585 |
| 9 | Edpuzzle makes me feel excited when competing with others. | 67 | 1 | 5 | 4.39 | .816 |
| | Valid N (listwise) | 67 | | | | |

The findings show that most surveyed students agreed with the statement that Edpuzzle helped them focus on listening activities without being distracted ($M = 4.42$, $SD = 0.655$). This demonstrates their strong approval of the platform's effectiveness in supporting listening activities. The result suggests that video-based listening activities on Edpuzzle may offer certain advantages in supporting students' attention, particularly when questions are embedded at appropriate points in the listening process. The in-depth interviews with six students also revealed responses that were consistent with the quantitative data. All interviewed students expressed strong appreciation for the embedded-question feature and the platform's connection to multiple video sources, especially YouTube. A representative explanation is presented below.

I find listening on this platform more effective than on YouTube. On YouTube, there are sometimes advertisements that distract me, but here I can concentrate better and feel more interested in listening practice. Edpuzzle is also a completely new platform, so it creates a lot of curiosity and interest in me. I think the biggest difference with Edpuzzle is that it can divide a video into segments and insert questions, and that helps us focus on the specific segment being separated. This is better than conventional listening activities with audio only. When I listen to a whole audio recording, I often lose concentration, even when I listen again to check my answers. (P1)

According to Kolb (2020), educational technology enhances engagement when it reduces distractions and directs learners' attention toward learning goals. Therefore, these findings suggest that Edpuzzle performed this role effectively by focusing students' attention on key listening content and encouraging continuous interaction with learning materials. The results also indicate a positive effect on cognitive engagement, as students believed that Edpuzzle helped them process information more effectively.

The findings also indicate that students perceived Edpuzzle supported their active participation in listening activities. The high mean scores of Statements 3, 4, and 5 clearly support this point ($M = 4.31$; $M = 4.46$; $M = 4.25$). These results suggest that Edpuzzle promotes interactive learning behaviors such as asking questions, reflecting, and producing responses during the listening process, which is consistent with the Triple-E framework (Kolb, 2020). These behaviors are in line with Fredricks et al.'s (2004) conceptualization of behavioral engagement, which includes making an effort, maintaining persistence, raising questions, and participating actively. This can be seen as indicators of students' involvement in learning tasks. Therefore, the findings suggest that Edpuzzle appears to be a useful tool to activate students' active engagement in listening activities. The following student comment further illustrates this point:

When doing group work, sometimes I felt unsure and had difficulty deciding how to divide a video into parts for inserting questions. We had to discuss a lot about how to divide the questions appropriately because in some videos, one part of the answer appeared in one place, and then another supporting point appeared somewhere else. But between those two parts, there was already the evidence to another question. So, for listening scripts where ideas were scattered like that, it was difficult to think of and create appropriate questions. (P1)

It should also be emphasized that the use and integration of educational technology in the classroom depend greatly on the teacher's guidance, classroom organization, and instructional strategies (Kolb, 2020). Rather than using technology only as a tool for drill and practice, Edpuzzle in this study was intentionally integrated by the lecturer, who was also the researcher, into listening lessons to encourage collaboration among students through group work. Indeed, the results suggest that Edpuzzle has the potential to promote collaborative learning interactions and thereby strengthen students' engagement.

4.2 Students' perceptions of the effectiveness of Edpuzzle in supporting listening comprehension

The statistical results presented in Table 4.2 indicate that students gave positive feedback on the effectiveness of Edpuzzle in supporting listening comprehension and helping them achieve their learning goals. All seven statements related to the enhancement aspect of the Triple-E framework reached relatively high mean scores, ranging from $M = 4.33$ to $M = 4.63$, indicating that most survey participants selected either "agree" or "strongly agree" in response to the statements concerning the effectiveness of Edpuzzle.

Table 4.2

Students' feedback on the effectiveness of Edpuzzle in supporting listening comprehension

| No. | Statement | <i>N</i> | Min | Max | Mean (<i>M</i>) | Standard Deviation (<i>SD</i>) |
|-----|---|----------|-----|-----|-------------------|----------------------------------|
| 10 | Edpuzzle helps me remember the lesson better. | 67 | 3 | 5 | 4.54 | .586 |
| 11 | Edpuzzle makes my learning more personalized and better suited to my needs. | 67 | 2 | 5 | 4.33 | .726 |
| 12 | Edpuzzle helps me understand video content more deeply and meaningfully. | 67 | 2 | 5 | 4.60 | .653 |
| 13 | Edpuzzle provides support that helps difficult ideas become easier to understand. | 67 | 2 | 5 | 4.42 | .721 |

| | | | | | | |
|----|--|----|---|---|------|------|
| 14 | Edpuzzle helps me break listening tasks into smaller and more manageable steps. | 67 | 3 | 5 | 4.63 | .546 |
| 15 | Edpuzzle offers me new ways to demonstrate my understanding that paper-based tasks cannot provide. | 67 | 3 | 5 | 4.46 | .745 |
| 16 | Edpuzzle allows me to explain complex ideas more clearly through video or visual illustrations. | 67 | 2 | 5 | 4.54 | .745 |

More specifically, most of the surveyed students reported that Edpuzzle helped them remember lesson content better ($M = 4.54$, $SD = 0.586$) (Statement 10). Edpuzzle also showed value in helping learners understand the lesson more deeply in a more meaningful way (Statement 12, $M = 4.60$, $SD = 0.653$), with 20.9% and 67.16% of the surveyed students agreeing and strongly agreeing with this view. These findings suggest that students perceived the platform's interactive features and embedded questions as helping them remember, analyze, and process information more effectively than traditional audio-only listening activities. Students also perceived that Edpuzzle also helps to alleviate the cognitive workload by breaking long videos into smaller and more manageable parts, which may have made them feel more confident and less overwhelmed during listening activities. These findings resonate with Cognitive Load Theory (Sweller, 2011), which highlights that learners' working memory is limited when processing new information. Since listening to new content also requires learners to process incoming information in real time, separating a video into smaller segments ensures that students are able to absorb a certain amount of information at a time. The following excerpts from the interview data provide specific evidence:

I think Edpuzzle helps improve my short-term memory. Previously, if a video or audio recording was not divided into segments, it was very difficult for me to identify which part contained the answer. (P1)

From my perspective, the strongest feature of Edpuzzle is that the questions are inserted in the middle of the video, which helps me stay close to the content. Moreover, when I can answer questions directly inside the video, I think I remember the content of that video for a longer time. Normally, when I listen to a video or audio recording in class, I listen only with the mindset of answering questions. So, after that listening lesson, I almost cannot remember anything about the content I have heard. However, when there are questions embedded in the video, if I answer incorrectly, I immediately listen again at that exact point, with the question placed right beside it. At that moment, I understand immediately where I was wrong and remember it more clearly afterward. (P2)

These comments clearly explain students' perceptions of the impact of Edpuzzle on learning. The cycle of watching the video, pausing, and replaying may have supported deeper cognitive processing from students' perspective, which could explain why they felt they retained lesson content more effectively. This finding is consistent with Kolb's (2020) argument that technology can support the development of deeper understanding of lesson content.

The statistical results also indicate that students perceived Edpuzzle as providing opportunities for learners to demonstrate their understanding in ways that conventional audio-only listening cannot provide. This aspect is clearly reflected in the high mean scores of Statements 6 and 7 ($M = 4.46$ and $M = 4.54$). The following comment from an in-depth interview helps explain the significance of these figures:

When I listen without watching a video, I can easily misunderstand words that sound the same but have different meanings. But when there are images, characters, and context, I can observe their lip movements and connect them with the previous ideas. From that, I can guess which word the speaker is saying with less confusion. (P1)

Clearly, this comment shows that students perceived the multimedia functions of Edpuzzle as supporting their listening comprehension. It therefore demonstrates clear advantages over conventional audio-based listening instruction. This comment can be understood through the interaction between bottom-up and top-down processing in listening comprehension. In audio-only listening, students mainly rely on bottom-up processing, such as recognizing sounds, words, and sentence structures. However, when visual information is available, Edpuzzle may also support top-down processing by providing contextual clues, such as images, characters, situations, and lip movements (Richards, 2008). These clues help learners use their background knowledge and context to predict meaning, clarify unclear words, and reduce misunderstanding. Therefore, students appeared to perceive that Edpuzzle supported their listening comprehension not only through auditory input but also through visual and contextual scaffolding.

4.3 Students' perceptions of the effectiveness of Edpuzzle in extending listening practice beyond class time

The statistical data for Research Question 3, presented in Table 4.3, provide information about students' perceptions of how Edpuzzle supports English listening practice on this platform beyond the classroom. In general, most survey participants gave positive responses to Edpuzzle as a supplementary tool for practicing listening skills outside of formal class hours.

Table 4.3

Students' perceptions of the effectiveness of Edpuzzle on out-of-class listening practice

| No. | Statement | N | Min | Max | Mean (M) | Standard Deviation (SD) |
|-----|---|----|-----|-----|----------|-------------------------|
| 17 | Edpuzzle provides me with opportunities to study anytime, including outside classroom hours. | 67 | 3 | 5 | 4.63 | .599 |
| 18 | Edpuzzle connects what I learn in class with my everyday life experiences. | 67 | 1 | 5 | 4.13 | .919 |
| 19 | I use Edpuzzle to explore authentic communicative situations and practice communication. | 67 | 2 | 5 | 4.28 | .794 |
| 20 | I use Edpuzzle to understand complex ideas more clearly by relating them to real-life situations. | 67 | 3 | 5 | 4.31 | .820 |
| | Valid N (listwise) | 67 | | | | |

Students perceived that Edpuzzle provided opportunities to practice listening at any time ($M = 4.63$, $SD = 0.599$). For this statement, 68.66% of participants selected "strongly agree" and 25.73% selected "agree." This result suggests that Edpuzzle creates flexible learning opportunities, allowing learners to access resources at a pace that suits their individual needs and schedules.

However, some students expressed the opinion that Edpuzzle was used mainly for entertainment or reference purposes. When asked which listening sources they mainly used for practice, they still prioritized official materials with standardized task types, mock-test audio with the same formats as they often see in real examinations. The following response is quite typical:

Usually, I only use Edpuzzle when I have a lot of free time to explore and want to browse YouTube through Edpuzzle to watch some content that I am interested in. But when I practice to improve my listening ability, I still prefer official sources such as books or Cambridge test-preparation websites. In short, if the purpose is listening practice for exams, then practicing on Edpuzzle is not as effective as practicing with standardized test materials. I think teachers could consider using AI to create a video based on an original audio track in the format of IELTS, KET, or PET tests and at the right level for learners. That might attract users more. (P6)

The interview response reveals another perspective on how students perceived and used Edpuzzle. While the quantitative findings show that most students acknowledged that Edpuzzle encouraged them to practice outside class, and indeed some students did use Edpuzzle to practice listening skills, a more important issue concerns the amount of time and the frequency with which students actually practiced listening on the platform. It can be clearly seen that some students may have viewed Edpuzzle primarily as a passive or entertaining source of listening practice, whereas students still preferred official sources when investing time in regular and serious preparation. This is an important point for teachers to consider if they wish to encourage more frequent and purposeful use of Edpuzzle for listening practice beyond the classroom.

The next aspect concerns the ability to connect classroom learning with real-life experiences (Kolb, 2020). The statistical result for Statement 18 shows that, in general, students agreed that Edpuzzle helped them relate classroom knowledge to everyday life. Although the mean score for this item ($M = 4.13$, $SD = 0.919$) was lower than those of the other statements, Edpuzzle still received a high level of agreement regarding its ability to connect knowledge learned in the formal curriculum with real-world experiences. The following comment illustrates this point:

In the topic about unusual occupations in Listening 3, when doing the task on Edpuzzle, I learned about many other types of jobs. From that, I learned more descriptive vocabulary and gained more knowledge about professions I had never known before and why those jobs even exist. I think this is a way for me to gain more knowledge and learn more new words. (P1)

It can be seen that the student is encouraged to move beyond simple comprehension and engage in deeper interpretation, reflection, and the expectation to broaden her knowledge and expand what she learned from the videos. This further highlights the role of Edpuzzle in fostering the extension of listening practice beyond the classroom.

4.4 Challenges students perceived when using Edpuzzle to learn listening skills

The descriptive statistics in Table 4.4 provide an overview of students' opinions when they were asked about the difficulties they might encounter when using Edpuzzle in the Listening 3 course. Based on the mean values and standard deviations, the results in this section show a varied pattern of responses from participants in their evaluation of the difficulties involved in operating the platform.

Table 4.4*Difficulties in applying Edpuzzle to listening learning*

| No. | Statement | N | Min | Max | Mean (M) | Standard Deviation (SD) |
|--------------------|--|----|-----|-----|----------|-------------------------|
| 21 | Edpuzzle makes me lose concentration when I have to listen and watch the video at the same time. | 67 | 1 | 5 | 2.67 | 1.386 |
| 22 | Editing videos on Edpuzzle is quite complicated, and I need a lot of time to become familiar with it even with guidance. | 67 | 1 | 5 | 2.85 | 1.384 |
| 23 | The "pause" function in Edpuzzle stops the video too abruptly, which interrupts my listening flow. | 67 | 1 | 5 | 3.04 | 1.364 |
| 24 | On Edpuzzle, I can only answer questions and cannot comment or interact with other learners. | 67 | 1 | 5 | 3.16 | 1.262 |
| 25 | The interface of Edpuzzle is not simple and user-friendly. | 67 | 1 | 5 | 2.09 | 1.311 |
| 26 | I often experience internet connection problems and slow video loading. | 67 | 1 | 5 | 2.25 | 1.271 |
| 27 | I lose concentration easily when doing tasks on Edpuzzle because I use the device for other purposes as well. | 67 | 1 | 5 | 2.30 | 1.267 |
| Valid N (listwise) | | 67 | | | | |

The results indicate that many students perceived a lack of opportunities for commenting and interacting with peers on Edpuzzle ($M=3.16$, $SD = 1.262$). This feedback is consistent with Lawanwong (2023), who mentioned that Edpuzzle currently does not support direct interaction among learners while they are watching the same video, nor does it provide a function for commenting or conducting simultaneous discussion within the same interface. These limitations may reduce opportunities for collaborative learning and affect flexibility in lesson design. Another noteworthy observation concerns concentration when learners combine watching videos, understanding content, and answering questions on Edpuzzle. The relatively low mean score for Statement 21 ($M = 2.67$, $SD = 1.386$) suggests that students did not strongly perceive listening while watching videos as a major source of distraction. However, the distribution of responses shows that some students reported experiencing difficulty maintaining concentration when they had to process two channels of information, audio and visual channels, at the same time (with 35.8% selecting "agree" or "strongly agree," 22.4% selecting "neutral," and 41.8% selecting "disagree" or "strongly disagree"). The following excerpt from an in-depth interview reflects this contrasting view:

Because my listening skill is not very good, I am quite easily distracted by the images in the video. Sometimes I pay too much attention to the visual part, so I do not focus enough on the listening part. This is something I need to improve in the future. (P5)

However, as discussed in the findings for research questions 1, 2, and 3, most participants perceived visual images as helping them understand the context and characters clearly and supporting their comprehension and retention of the content. The following comment provides a contrasting perspective:

The images and movement in the video only help me understand more. I do not feel that my brain necessarily has to process all the information from those channels. So, I am not distracted during listening. (P2)

These contrasting perspectives can be explained through Mayer's Multimedia Learning Theory (2020). Processing multiple sources of information at the same time may increase learners' cognitive load, meaning that they may experience difficulty when both visual and auditory stimuli demand their attention simultaneously. Therefore, while multimedia elements may support comprehension for many learners, they may also create challenges for some students, especially those whose listening ability is still limited or who are not yet accustomed to processing multimodal input in listening tasks.

Although the majority of students believed that the segmentation function used to insert questions did not negatively affect their listening comprehension, a considerable number of students still appeared uncertain about this feature and some even found it difficult. The following comment from a participant in the "Disagree" group illustrates this point:

From my experience, I only feel that my listening flow is interrupted when the question is inserted immediately after the information needed to answer it. In other words, I need around two or three seconds to process the information before the question appears. But if the question comes right after that information, I feel that it is a bit sudden and surprising because I do not have enough time to grasp the information before the question appears and forces me to choose an answer. (P1)

This is indeed a very useful comment for teachers and for those who plan to use Edpuzzle to design listening comprehension tasks, as it suggests that careful thought is needed regarding when questions should be inserted into the video. It may also be explained that students who felt the flow of information was interrupted when listening to videos with embedded questions had already become accustomed to practicing with audio through traditional teaching methods. Therefore, disruptions in the listening sequence may sometimes affect learners' ability to process information smoothly and continuously.

5. Conclusion and implications

This study investigated students' perceptions of the effectiveness of the Edpuzzle platform when applied to a listening course. The study focused on examining the advantages that Edpuzzle offers in listening instruction as well as the difficulties students encountered when using this platform.

The findings show that most of the surveyed students held positive perceptions of the features available on Edpuzzle as well as its effectiveness in practicing listening skills. More specifically, Edpuzzle was perceived as promoting students' engagement in listening activities, enhancing their listening comprehension, and supporting the extension of listening practice beyond classroom hours. However, in addition to these advantages, some students also experienced certain difficulties when learning listening on this platform. A number of students believed that the integration of questions embedded in the middle of videos caused them to lose concentration and interrupted the flow of listening. These students felt that it was difficult for them to multitask by watching, listening, and answering questions at the same time. By contrast, issues such as the interface, the technical steps involved in inserting questions into or editing videos, the possibility of distraction from other applications, and problems related to internet

connection and loading speed were generally not perceived as major challenges when using Edpuzzle.

Based on these findings, several suggestions could be considered in order to make the use of Edpuzzle in listening courses more effective. First, the videos selected for instruction should meet several criteria: (1) they should be relevant to the lesson content; (2) they should have a high degree of authenticity; (3) they should be of an appropriate length; and (4) the questions inserted into the video should be designed in a guided sequence from easier to more difficult and should fit the video content. Second, in order to increase motivation, strengthen learning goals, and promote student collaboration, teachers may organize students into groups to select videos relevant to the lesson content, design questions following end-of-semester exam formats or standardized test formats such as VSTEP or IELTS, and exchange their products across groups or classes in order to enrich the pool of listening practice materials. In this way, students can both practice listening to content already taught in the curriculum and practice using examination formats, thereby contributing to the enhancement of their listening comprehension ability. Third, teachers can also integrate Edpuzzle with other learning management systems such as Canvas, Google Classroom, or Moodle in order to increase interaction and create opportunities for students to comment on and discuss videos with one another.

These findings and suggestions point to a potentially useful approach to listening instruction that may increase the interest and motivation for both teachers and learners. Other practical-oriented language courses, as well as teachers of other languages, may also consider integrating this platform into their teaching. However, in order to gain a more comprehensive understanding of the effectiveness of Edpuzzle, future studies should include a larger number of learners. Since this study focused extensively on listening skills in English, similar research should be conducted on other language skills and in different language-learning contexts. Finally, future research may employ experimental or quasi-experimental designs to evaluate learners' language performance before and after the use of Edpuzzle, thereby providing stronger evidence of the platform's pedagogical effectiveness.

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