FOSTERING CRITICAL THINKING THROUGH INTEGRATING EDPUZZLE IN BLENDED LEARNING

Djoko Sutrisno, ¹* Azwar Abbas, ²

(Universitas Ahmad Dahlan, Yogyakarta 55166, Indonesia, djoko.sutrisno@mpbi.uad.ac.id)¹
(Universitas Ahmad Dahlan, Yogyakarta 55166, Indonesia, azwar.abbas@pbi.uad.ac.id)²

1. INTRODUCTION
The phrase "learning technology" refers to any modern application or medium utilized to acquire theoretical or practical information. The use of technology in the education of students raised in a time when digital information predominates is pertinent to the characteristics of an internet-dependent society. The Internet has been used for many things, including communication, information dissemination, entertainment, and most importantly the advancement of education. Students may improve their overall learning results by using advancements in internet-based learning technology, sometimes known as e-learning. Developing lower-level thinking skills, such as understanding and applying new concepts, is no longer the exclusive focus of skill-building for the 21st century; higher-order thinking skills are also the main priority.

Hasanah et al. (2022) ATC21S classifies 21st-century skills into four categories: living-in-the-world skills, thinking skills, working skills, and working tool skills. Winaya (2021) The Indonesian educational system still lacks higher-order thinking skills, including the ability to think creatively. Afriana et al. (2021) Due to the intricacy of certain abstract scientific topics, it might be difficult for students and teachers to comprehend the presented material. Sanggara & Doyan, 2019). Students do not demonstrate the same amount of interest in generating an idea, resulting in a lack of creative thought skills.

Creativity is needed since the new typical time in which a teacher’s critical thinking skills online presents a challenge in and of itself. The development of student's critical thinking abilities is mostly the responsibility of their teachers. It is the responsibility of the teacher to determine the causes of a student’s language learning challenges. According to Circular Memorandum 4 of 2020 about the Education Policy Implementation Policies in Emergencies of the Spread of Corona Virus Disease, the teaching and learning process must be carried out remotely or online (COVID-19). This follows the instruction that was given in response to COVID-19. As a result, all academic activities are shifted online. (Azhar et al., 2018) The goal of the statement issued by the Minister of Education was to communicate the notion that integrating technology into the learning process is highly anticipated under the existing standard (Ipek & Ustunbas, 2021). Therefore, applying technology to acquire critical thinking abilities is an integral part of it. It is possible to learn more quickly through distance learning. (Ipek & Ustunbas, 2021a)

Critical thinking is a key basic skill for English learners since it creates the platform for enhancing all other skills, such as reading, speaking, and listening. Critical thinking skills are crucial for English acquisition. (Rahayu & Bhaskoro, 2022). Teachers want pupils to be able to communicate politely orally and in writing for a number of reasons. Students frequently lack confidence in their abilities and feel despondent when they lack access to appropriate critical thinking skills and methods for learning new critical thinking skills. If individuals lack the language to express their beliefs, they cannot do (Deni & Fahriany, 2020)

The findings of the researcher’s observations while accompanying eighth-grade SMP Muhammadiyah 1 Kebumen students on the school field introduction program revealed various variables that contributed to the students’ difficulty in learning English. Lack of confidence and occasional physical activity engagement were among these issues. As a result, many pupils had difficulty expressing their views using suitable language. This contributed to students' lack of critical thinking abilities and comprehension, as the instructor did not employ a variety of instructional strategies. Inaccessible instructional resources and sound norms for critical thinking skills acquisition, as well as unclear ideas on critical thinking skills development, impede students’ ability to grasp language (Deni & Fahriany, 2020) Additionally, the inappropriate use of media contributes to the unpleasant quality of the educational experience (Dakhi & Fitria, 2019a). In addition, the instructor’s perspective on the significance of developing critical thinking abilities for junior high school students may influence the approach used and how the instructor teaches the content.

In other words, if teaching methods and instructional materials are chosen in accordance with the needs of the students, they will be more effective. (Gaynor, 2014) Teachers should have many strategies at their disposal and apply them while teaching critical thinking abilities. Some examples are using things, practising regularly, spelling, drawing, leveraging expressions and gestures, and making educated guesses based on context, as well as games or other kinds of media (Susanto, 2017). The published findings of Wessels’s research (Bakti, 2017) indicated that enhancing students’ knowledge of critical thinking abilities is one of the most effective approaches to assist learning. Students will have many possibilities to acquire as much experience as possible by utilizing this method. In addition, the technique of utilizing interactive media is a viable alternative. This option encourages students’ participation in the classroom.

The method of learning a foreign language is changing in terms of available teaching tools due to technological advancements and the proliferation of educational applications. The higher the number of applications, the more advantageous language learning becomes. As a result, mobile-assisted language learning supports a substantial number of language learnings (MALL). Teachers incorporate internet-based tools and technology into the language-learning process (Ipek & Ustunbas, 2021b). Students who participate in learning that incorporates interactive multimedia into the teaching and learning process are less likely to become easily bored. It can be difficult for educators to create successful learning environments using interactive media and technology (Ghofur & Youhanita, 2020).

Many parties will find it easier to communicate in an atmosphere that encourages
participatory teaching and learning (students and teachers, students and students, and students and computers). Exposing pupils to a range of media that fully engages their visual and auditory senses is one way to increase their interest in studying (Primamukti & Farozin, 2018a). Students are drawn to the usage of media that can deliver text, photos, video, music, and animation. Since they prefer text-based media, students are highly motivated to study through interactive media (Saputri et al., 2018). The presence of text, graphics, music, video, visual effects, and sound effects, in addition to interactivity, makes multimedia that is interactive recognizable (Saputri et al., 2018). These tools help teachers deliver content in class and make it simpler for pupils to understand English-language activities. Using the EdPuzzle app, educators can select movies and modify them to meet the needs of their students’ classes. Including assessment-focused films with questions, audio tracks, audio notes, and comments (Ipek & Ustunbas, 2021b) the effectiveness of distance learning can be improved by utilizing interactive media like EdPuzzle (www.edpuzzle.com), which can persuade instructors that learning is taking place. Because quizzes may be given at various points in the video, teachers can add audio comments and track their students’ progress, and videos can be shared with others, this is made possible (Abou Afach et al., 2018).

Fig. 1. Digital Interactive Media EdPuzzle Application

The results of the study conducted by Silverajah & Govindaraj, (2018) revealed that the use of Edpuzzle had a good effect on the chemistry learning of students in the AUSMAT program at Sunway College in Malaysia. Due to the use of Edpuzzle, students were better able to strengthen their independent study skills and chemical knowledge, according to these findings. The entirety of Edpuzzle offers a learner-centered learning environment tailored to certain individuals’ requirements, particularly underachievers. Because, it might change to reflect the times during the fourth industrial revolution in terms of context and substance. (Fadillah et al., 2021) indicated that the researcher’s ultimate conclusion was that Edpuzzle might dramatically increase students’ critical thinking skills in writing. According to Primamukti & Farozin, (2018b) the use of interactive technology in the classroom can influence students’ learning results. The findings of the three studies demonstrate that the use of cooperative media might impact students’ motivation and academic results.

Use of various interactive media formats: Exercises preliminary to the Edpuzzle vocabulary-learning process are performed first. The instructor is a facilitator during the first activity by providing directions for the day’s learning scenario and stressing the value of developing English language abilities. Previously, the instructor supplied pupils with a link to download the interactive media application Edpuzzle. The link’s address is communicated to students via the WhatsApp group for the lesson. During the observation phase, the process is in its most basic setting. Students devote their attention to seeing the accessible shows on the available videos. Students then begin their assignments, which require them to pick verbs and actions appropriate for the video’s characters. In addition, the instructor will need pupils to view the film while engaging in fundamental learning activities. After the hard study, students will conduct an informative investigation and assess the offered narratives. The pupils analyze the similarities and differences between the two themes. The results of the analysis are discussed in the conversation. Activities for independent study are the next category. Following examination, investigation, and evaluation of the tales, individual or group self-study focuses on examining and debating the application’s content and questions. On the Edpuzzle interactive media platform, a number of question-based tasks are given to the students. The purpose of these tasks is to encourage analytical thinking and other higher-order
thinking skills. They receive an automated grade via the teacher’s account once the results. The last step is the performance evaluation. Evaluation can take place both during and after the learning process. The teacher conducts the evaluation by moving around the classroom and watching the pupils’ behavior and mental processes. Concurrently, questions designed to assess students’ higher-order thinking skills and analytical thinking skills were administered. In addition, daily tests are administered to evaluate the results. After the course, the instructor will guide students in reaching a consensus on certain discoveries. (Rahayu & Bhaskoro, 2022)

Based on the concerns and previous research findings, vocabulary-learning for teaching vocabulary, techniques utilizing interactive media, such as EdPuzzle, were significant. In light of this, this study aimed to illustrate how junior high school students use the interactive medium EdPuzzle to acquire vocabulary. This was done so that the research questions may be stated as follows: how to employ EdPuzzle in vocabulary learning?

2. METHOD
The study's methodology incorporated both quantitative and qualitative techniques. With this methodology, the researcher does not test the hypothesis but instead explains the factors they have identified, including EdPuzzle and other digital interactive media. The researcher will deliberate the outcomes of utilizing digital interactive media for vocabulary learning in the new norm, such as EdPuzzle. This necessitates the existence of a research tool. Questionnaires and observation sheets were the main tools used in this trial. While the first two tools were used to provide an overview of the implementation of the use of digital interactive media, the questionnaire and observation sheets were the main tools used in this trial. While the first two tools were used to provide an overview of the implementation of the use of digital interactive media, the questionnaire was designed to determine the students’ viewpoints on the usage of interactive media in the classroom. Using EdPuzzle to learn new words.

2.1. Research Design
A quantitative approach for a descriptive study presumes that a manifestation may be classified. This is owing to the researcher’s singular focus on the use of interactive media EdPuzzle for vocabulary learning. In this instance, the researcher explained or specified how vocabulary acquisition was implemented using EdPuzzle. The proposed technique is to explain the object of inquiry using as-collected data or samples, without analysis or reaching generally accepted conclusions. (Sugiyono, 2013).

2.2. Population and Sampling
The population of this study comprised 297 eighth-grade students at SMP Muhammadiyah 1 Kebumen. SMP Muhammadiyah 1 Kebumen encourages students with unique educational needs to enroll. Data collection was conducted using a process known as purposeful sampling. The sample class used was intended to be a part of the peer teaching program in the school field introduction program. Hence the sampling technique was used. The sample was taken from an eighth-grade first-period class in the 2020–2021 academic year that included students with exceptional needs. There were 33 students in Class IX, including 18 males and 15 females. In the classroom, there were 18 male pupils and 15 female students.

2.3. Instruments
Because the educator who oversaw teaching critical thinking abilities via interactive media EdPuzzle was also a researcher, the observation sheet served as the main tool for gathering data for this study. Participant observation characterizes the researcher’s position as a teacher in this setting. Through participant observation, the researcher could examine occurrences that the informant may not have been able or willing to disclose (Nkengbeza, 2016). As a result, the researcher solicited assistance from other individuals in order to observe them utilizing the interactive media supplied by EdPuzzle in the classroom.

The researcher used the observation sheet to record what happened as interactive EdPuzzle media was incorporated into vocabulary learning. The following traits have been noticed: 1) Preliminary acts that were observed included whether the teacher welcomed the students, explained the scope of the material, and motivated the pupils. The description of the activity was also seen. The main activities evaluated included learning resources, information on using interactive media like EdPuzzle, and exercises for using EdPuzzle in the classroom. In the context of the learning materials, the activities assessed included identifying if the teacher presented the
information using Powerpoint, if she did so sequentially, and if she questioned the students after they submitted the materials. Next, the information part of using EdPuzzle interactive media consisted of assessing whether or not she made a point about the value of using internet media. Whether or not she instructed the group to join and whether or not she explained how to use the EdPuzzle interactive media. The latter part of the main activity, EdPuzzle, was on how the instructor used EdPuzzle as an interactive media tool. In this regard, it was looked into to see if she gave out films with EdPuzzle interactive media and if she gave pupils homework of interactive EdPuzzle app. The last activity was how the teacher and students used the interactive media EdPuzzle to conclude about the subject and whether or not the teacher conducted a process evaluation.

A student who participated in SMP Muhammadiyah 1 Kebumen activities aimed at introducing students to the field of education served as the study's collaborator. At the eighth and first grade levels of SMP Muhammadiyah 1 Kebumen, the collaborator directly observed the English teaching and learning process. The study's findings can be deduced from the experiment's findings and the behavioural changes students underwent after the researcher fully engaged in one class in EdPuzzle. Because no information needed their presence, students in grades 8 through 1 were unable to participate in any of the offline vocabulary learning activities conducted in the classroom during the new normal. Despite some drawbacks, such as the fact that only six students, professors, and collaborators participated in vocabulary learning activities through the WhatsApp group application, more students participated in online learning activities. Similarly to this, data collecting at home involves watching the students' movements. The collaborator used the WhatsApp group application to observe the researcher's classroom behaviour in order to gain insight into the stage of the learning process. Despite the restrictions on using interactive media to execute vocabulary acquisition, the collaborator persisted in watching the kids' actions and challenges when learning the language. Using the WhatsApp group application, students engaged in online learning at home received a learning video linked to an interactive media EdPuzzle about the descriptive text. Seven visits were scheduled for the therapies, each lasting forty minutes and addressing a different subject. The text includes descriptions of people, animals, and other people. Students need to become fluent in all areas of language, including vocabulary. Comparing vocabulary resources via EdPuzzle's interactive media revealed parallels and differences in vocabulary and enhanced text comprehension. The investigation has three components of teaching-learning: activity before teaching, activity during teaching, and activity after teaching. There are pre-teaching activities, during-teaching activities, and post-teaching activities.

The descriptive research design starts with activities that foster critical thinking skills and uses a quantitative methodology. The topic of the discussion was descriptive text. The instructor deployed EdPuzzle as interactive media during Activities for learning critical thinking abilities. To determine whether or not interactive media was used, EdPuzzle helped students understand the terminology used in the descriptive text about animals and humans much more quickly and easily.

2.4. Data Analysis

A descriptive analysis of the data generated by the observation sheet equipment was done. In contrast, descriptive statistics in the form of a percentage and a questionnaire instrument were used to analyze data in the form of student opinions regarding the use of interactive media, such as EdPuzzle, in the learning process for critical thinking abilities. The questionnaire tool was used to collect both sets of data. Knowing what proportion of students appreciates EdPuzzle's interactive media while learning new vocabulary would be helpful.

The following procedures were used to handle survey data, starting with selecting data, creating data tables, and determining potential responses: The researcher distinguished between useable and useless data throughout the stage of picking data. The researcher entered each potential answer and each respondent for each question item in the second phase, which involved creating a data table. The frequency of each alternative
response to each question was then estimated. In the final stage, the percentage of respondents who responded to each question relative to the total respondents multiplied by 100% was used to compute and process the frequency of each alternative response to each question.

3. RESULT AND DISCUSSION

The observations made by the collaborator during the critical thinking skills process using the WhatsApp group application led to the following results. Six students, teachers, and coworkers were all in attendance. The instructor deployed EdPuzzle, a sort of interactive media, as part of the normal operating process for employing interactive media. Adopting interactive media commenced with the instructor presenting the content to be reviewed in an organized format using PowerPoint media. The instructor then led the students in comprehension exercises by posing questions about the subject matter. Through various EdPuzzle-based activities, the instructor emphasized the significance of grasping the information offered in online media. The instructor then took the class through learning vocabulary with interactive media using EdPuzzle by offering examples until each student understood how to use the media successfully. The instructor then divided the students into many distinct groups. To get the best results, each group is given an interactive EdPuzzle movie about the topic now being discussed. The instructor assigned EdPuzzle tasks to each group with the expectation that they would be completed using the software.

Seven meetings were devoted to using the EdPuzzle interactive media, including exercises to analyze student needs for the subject matter to acquaint students with it throughout vocabulary learning in the new norm. This was done so that students could prove they understood the new standard. In each subsection, students are given practice problems on vocabulary equations and opposites and questions that test their understanding of the subject. The teacher can monitor students’ responses to practice questions by logging into each student’s account on the teacher’s dashboard. Additionally, the teacher will remark on the students’ tasks and judge the course material after the learning activities.

Utilization of interactive media constitutes At the seventh meeting, students utilizing EdPuzzle could comprehend the material and complete vocabulary exercises without difficulty. These observations suggested that using interactive media in the process of vocabulary acquisition causes students to be more enthusiastic about learning and enjoy the learning process. Using the interactive media platform EdPuzzle, students could collaborate with their study group members to complete their assignments. The interactive material supplied by EdPuzzle facilitated the process of acquiring a larger vocabulary (Gaynor, 2014).

3.1. Result of Questionnaire

Following the completion of the learning process, the students were given questionnaires to complete. As a result of the conditions in the new normal period, educators use Google Forms to disseminate questionnaire links through WhatsApp groups as part of the educational process. Based on the following graphic, it can be deduced that 54% of the 33 students who participated in the study believed that using interactive media such as Edpuzzle to learn vocabulary can make students happy, find it easier to recall language and become enthusiastic about the process of learning. It proved that the use of interactive media such as Edpuzzle to teach English vocabulary is highly successful for pupils. 42% of students agreed vehemently with this statement. Through the interactive media platform Edpuzzle, students displayed a significant desire to increase their vocabulary. Students enjoyed learning new terms and thought the information was easy to understand to EdPuzzle’s interactive approach. Students who correctly answered up to 4% of the questions said they had no trouble using the interactive media Edpuzzle and didn’t get bored. Most eighth- and first-graders at SMP
Muhmmadiyah 1 Kebumen viewed EdPuzzle as an engaging vocabulary-teaching tool. One could therefore conclude that the majority of these pupils shared this viewpoint.

In this new normal era, offline vocabulary study is no longer viable, and the class attendance rate is relatively low. There are only six people in all. Despite this, the deployment of vocabulary learning through the use of interactive media EdPuzzle via the WhatsApp group application is still being observed. The application of EdPuzzle is done methodically, starting with the preliminary activities, continuing with the core activities, and ending with the conclusion activities (Ipek & Ustunbas, 2021b); (Fadillah et al., 2021). The gap was caused by the lack of communication between teachers and students in the new normal, according to Sevilen and Amaliah, previously quoted. It can be addressed by implementing a technology-based learning medium.

The instructor encouraged students to understand the value of employing technology-based learning media during the introductory activity before introducing the interactive media from EdPuzzle. Afterward, the instructor started including the crucial exercises from EdPuzzle, an interactive learning tool, in each class session. Over the course of seven sessions, the interactive media EdPuzzle for vocabulary learning was implemented to analyze descriptive texts about people and animals. These meetings included activities to evaluate the students’ subject-related needs. Participation in interactive media-based practice questions is compulsory for all students. Antonyms, synonyms, and understanding of the given paragraph are all included in EdPuzzle. Students become more accustomed to using technology-based instructional tools the more often they use interactive learning media to increase their vocabulary, like EdPuzzle.

Observations done by collaborators throughout seven learning sessions revealed that introducing interactive media such as EdPuzzle might transform a scenario in which pupils were originally uninterested. Still, they believed that language acquisition was enjoyable. The observations’ findings demonstrated that using EdPuzzle could alter the learning environment. Utilizing interactive technology in the classroom facilitates language learning for kids. As a result of the students’ regular use of EdPuzzle’s interactive media, their enthusiasm for the platform improved (Dakhi & Fitria, 2019b); (Fadillah et al., 2021). According to Prastiyawati and Asrofin’s research findings, choosing a suitable educational medium is the key to helping students develop a deeper appreciation for the studied topic.

Changes in students’ perceptions and emotions resulted from their participation in interactive media-based vocabulary instruction. EdPuzzle emerged as the obvious frontrunner during the survey’s investigation. The difference between students who agreed with the statement and those who strongly agreed with the statement was minimal. 54% of students agreed, with 42% strongly agreeing, that vocabulary acquisition through technology-based learning media, specifically interactive media, was good. 33 students agreed. EdPuzzle was an excellent tool for enhancing children’s language acquisition and comprehension. Students learned more eagerly because they were already familiar with critical thinking skills from the text’s main body and learning new words was more enjoyable. The questionnaire’s findings asked participants about their interactions with interactive media.

A study by Primamukti found that the use of interactive media impacted students’ learning outcomes, and the puzzles were consistent with their findings. Concerning the usage of interactive media like EdPuzzle in the classroom to teach vocabulary, prior research supports the idea that doing so helps pupils learn the material more quickly. EdPuzzle.

4. CONCLUSION

The three levels of learning preparatory, core, and culminating remain constant for instructors who utilize EdPuzzle interactive media to teach vocabulary. The analysis and study findings support these conclusions. Media that are interactive EdPuzzle was mostly used for core workouts. Using video examples, the students investigated the usage of synonyms and antonyms in descriptive prose about people and animals. In these texts, both people and animals appear. It will take a lot of practice using interactive media to master vocabulary and get children used to technology-based learning materials. The regular use of technology-based media during
learning activities, such as the interactive media EdPuzzle, increases students’ enthusiasm for learning vocabulary because they believe that learning vocabulary using technology-based media is more entertaining. Therefore, it is reasonable to conclude that eighth-grade students at SMP Muhammadiyah 1 Kebumen report feeling more passionate about learning. The class is more enjoyable when they acquire vocabulary through the interactive media EdPuzzle.

REFERENCES


