

CHAPTER 2

LITERATURE REVIEW

This chapter presents a brief explanation of some theories that support the study. The theories are related to online learning, behavior engagement, digital game-based learning, Kahoot, and Kahoot in English learning and teaching context.

2.1 Online Learning

Online learning, a transformative educational approach fueled by technological advancements and digital connectivity, has revolutionized the way knowledge is disseminated and acquired in the modern world. It has become a familiar concept, particularly in the wake of the global pandemic, which compelled countries worldwide to seek technological solutions for the educational sector amidst its far-reaching impact. Habibah et al. (2020) defines online learning as a learning process carried out using pedagogy or educational tools. Besides, their definition is further elaborated by Sa'diyah et al. (2022) and Sulistyawan (2021), who both emphasize the use of the internet and digital devices for knowledge transmission, with Sulistyawan highlighting the flexibility and accessibility of this mode of learning. The media used in this learning process generally depend on information technology and the availability of internet networks. Furthermore, online learning allows students to become acquainted with many types of technology that may aid in the learning process.

In this regard, there are two basic interactive models of online learning, namely, synchronous and asynchronous learning. Fitria (2021) states that synchronous learning is concerned with time-limited structures and activities given via face-to-face web conferencing. It is a type of online learning that has a structured environment, which means students attend live lectures with real schedules. There are real-time interactions between teachers and students, and there is a possibility of instant feedback. On the other hand, asynchronous learning occurs when there is no defined period for learning that learners may study from any place and at their speed (Malik et al., 2017).

It has a free environment, not bound to a place, time or structure, which means students can access the learning material anytime and anywhere but they will only have little to no instant feedback. There will be a lack of direct interaction except for using text and messages (Dhawan, 2020). In conclusion, both models cater to different learning preferences and needs, contributing to the versatility and accessibility of online education.

The success of online learning is closely tied to its remarkable impact on student motivation. The concept of online learning relies heavily on two crucial factors: the active participation of students and the ability of teachers to create an engaging virtual classroom atmosphere, ensuring the maintenance of students' motivation (Efriana, 2021). As highlighted by Gustiani (2020), students' motivation is closely related to the success in online learning during the pandemic. The role of the teacher still cannot be replaced by technology. With the online learning process, teachers must continue to do their best to be able to facilitate learning even at a distance (Efriana, 2021). Thus, the combined efforts of enthusiastic students and dedicated teachers are essential in cultivating a thriving and productive online learning experience.

2.2 Behavioral Engagement

The term engagement is familiar and common whenever it involves students and education. Student engagement is commonly perceived as comprising three distinct yet interconnected dimensions: cognitive, emotional/affective, and behavioral (Fredricks, Blumenfeld & Paris, 2004). One the most popular and easiest to detect is behavioral engagement. Behavioral engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education (Fikrie & Ariani, 2019). Another expert, Cappella et al. (2013) stated that behavioral engagement refers to students' participation in academic activities and efforts to complete academic assignments, a visible act of students being involved in learning. In short, these perspectives shed

light on the multifaceted nature of behavioral engagement and its crucial role in fostering a conducive and dynamic learning environment.

Behavioral engagement plays a pivotal role in the success and effectiveness of learning activities. Fredricks et al. (2004) found three dimensions of positive behavioral engagement. First, positive behaviors such as adhering to rules and norms, asking questions, contributing to discussions, and paying attention; second, active participation in academic activities; and third, participation in extracurricular or non-academic activities within the educational institution. Research indicates behavioral engagement is directly and strongly associated with academic performance (Archambault et al., 2009; Hughes et al., 2008). In other words, when students actively participate and demonstrate interest and involvement in their learning activities, it positively impacts their academic achievements and overall performance in their studies. The theory used behind behavioral engagement is a social capital theory and systems theories of social processes (Cappella et al., 2013). Student involvement is becoming more widely recognized as crucial to tackling issues including low achievement, boredom, and alienation, as well as high dropout rates (Fredricks et al., 2004; Suárez-Orozco et al., 2009). Indicators of student engagement are discussed as the participation in school activities, achievement of high scores, time spent to do homework and quality homework. Meanwhile, non-engaged students in school usually manifested in the form of withdrawal or lack of attention to school activities, have poor abilities, engage in problematic behavior and ultimately lead to an increase in dropouts. This is supported by the result of research from the high school survey of students which explains that students often experience boredom at school and are not able to take advantage of their study time when being inside or outside the classroom (Fikrie & Ariani, 2019). Furthermore, Chapman (2003), Lee (2008), Alias and Tukiran (2010), Cassar and Jang (2010) develop behavioral engagement into some indicators as follow:

Table 2.1 *Indicators of Behavioral Engagement*

Positive	Negative
Pay attention to class	Yawning/ sleeping in the class
Asking questions voluntarily	Wasting time when a teacher allots a class assignment
Responding voluntarily	Disruptive behavior
Responding only when the teacher poses questions	Wasting time (playing with headphone, candy, stationary, face, etc)
Interacting with classmates	Looking outside
Writing down notes	Daydreaming
Giving opinions freely	Looking at watch
Submitting class assignment on time	Needs to be reprimanded
	Withdrawn, uncommunicative
	Talks with classmates too much

Behavioral engagement is also crucial in online learning because it directly impacts students' participation and active involvement in the learning process. In traditional or offline classrooms, this engagement is evident through physical presence, body language, and verbal interactions. Similarly, in online learning, behavioral engagement becomes paramount as it directly influences the level of student interaction, responsiveness to assignments, and contributions to virtual discussions. However, online learning poses a challenge for teachers in directly observing students' learning behaviors in real-time. Nevertheless, the online learning system captures learning data, enabling teachers to assess and analyze students' online learning behaviors (Li, Yu, Hu & Zhong, 2016). These data provide valuable insights into students' behavioral engagement within the online learning environment.

2.3 Digital Game-Based Learning

In the not-so-distant past, the concept of digital game-based learning was relatively unfamiliar to many individuals due to the seemingly contradictory nature of combining games, often associated with entertainment, with the serious pursuit of education. However, nowadays, with the rapid development of technology that also improves the world of digital games, the term digital game-based learning slowly spread throughout the educational field. Digital game-based learning

(DGBL) is a student-centered learning approach that utilizes digital games so as to support educational purposes such as teaching and learning (Perrotta, Featherstone & Houghton, 2013). DGBL is a dynamic and effective approach that replaces traditional learning methods, engaging students in the learning process (Yasir, 2021). It is also recognized as a potential pedagogical approach in media education, with a focus on the development and factors influencing learning performance (Ishak et al., 2023). In conclusion, DGBL is an educational approach that integrates video games or digital games into the learning process to enhance students' engagement and facilitate the acquisition of knowledge and skills through interactive gameplay experiences.

Games actually compromise the process of cognitive disequilibrium and resolution. However, the success of this process is determined by whether students are engaged. Interacting with a game requires a constant cycle of hypothesis formulation, testing, and revision. This process happens rapidly and frequently while the game is played, with immediate feedback. Games that are too easily solved will not be engaging. Good games constantly require input from the learner and provider (Eck, 2006). In this case, the subtle connection between games and learning, the digital game-based learning comes to merge the two different fields. Digital game-based learning is an innovative way for students nowadays to learn without feeling pressured by combining games and learning materials. Combining games and learning material also push teachers to be more creative, not just entertaining the students. This is an approach to make learning as a fun and entertaining activity, by combining the game and learning process (Erhel & Jamet, 2013).

Digital game-based learning is also a competitive activity in which students set educational goals intended to promote knowledge acquisition. The game used in the process can be designed for promoting learning (making learning interactive) or incensement of cognitive skills. Other than that, the game can also be designed for a virtual learning environment through simulation learning (Erhel & Jamet, 2013). DGBL started out as an instructional strategy that can be embodied through both computer and mobile-based applications (Taufik, Hilmun, Sabella, & Sabrina,

2020). DGBL has been reported to have a significant impact on students' motivation and engagement.

In this regard, motivation corresponds to the set of physiological processes that influence the direction, vigor and persistence of behaviors (Erhel & Jamet, 2013). DGBL is also considered to be able to provide an environment that is fun, motivating and uplifting creativity. The application of digital game-based learning uses a lot of educational games that are simple, easy to manufacture and operate, accessible for free, and can also be used for assessment. Some types of digital educational games that are widely used in learning are Kahoot, Quizizz, and Adobe flash (Wati & Yuniawatika, 2020). In that research, the primary focus of inquiry was on Kahoot, a dynamic platform recognized for its interactive approach to learning. This platform was scrutinized with meticulous attention to detail, aiming to ascertain its influence on behavioral engagement and its impact within the educational sphere.

2.4 Kahoot

According to Kahoot's official website, Kahoot was found in 2012 by Morten Versvik, Johan Brand, and Jamie Brooker who are in a joint project with the Norwegian University of Science and Technology (NTNU), teamed up with Professor Alf Inge Wang, and were later joined by entrepreneur Åsmund Furueth. The technology is based on research conducted by Kahoot co-founder Morten Versvik, a student of Professor Wang's at the time, for his Magister degree at NTNU. Kahoot was then launched in private beta in March 2013 at SXSWedu. The core program and theme of Kahoot has always been targeting learning, whether in educational field or other fields that still involve learning. To start, instructors or teachers register for a free account through going to <https://create.kahoot.it>. Once registered, educators can pick out from hundreds of thousands of free public games and adapt them as necessary, or create their own. The process is convenient and straightforward (Oktaria et al, 2021) as shown in figure 1 below.

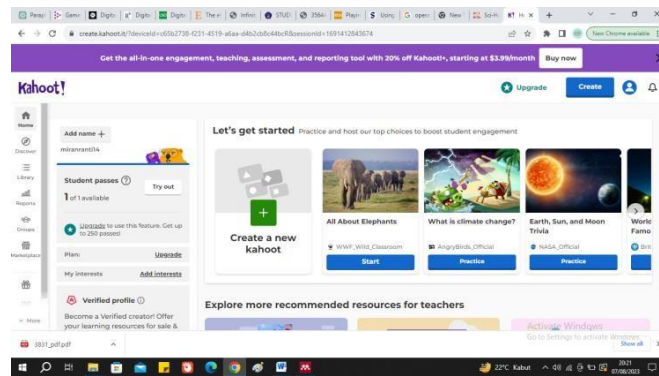


Figure 1 Kahoot interface on teacher's screen

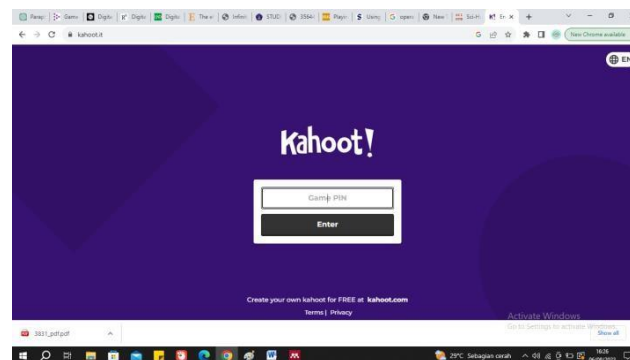


Figure 2 Kahoot interface on student's screen

This platform is free for each teacher and students, and actually requires a multimedia tool to take part. This platform only needs a cellphone, laptop, or Chromebook for scrolling the website. Teachers are able to create quizzes for more than one desired question introduced in a game-based structure to students. Learning more about Kahoot, it contains questions that have up to four possible choices, and questions can incorporate more than a few multimedia contents such as images or movies, which is suitable for any types of interaction.

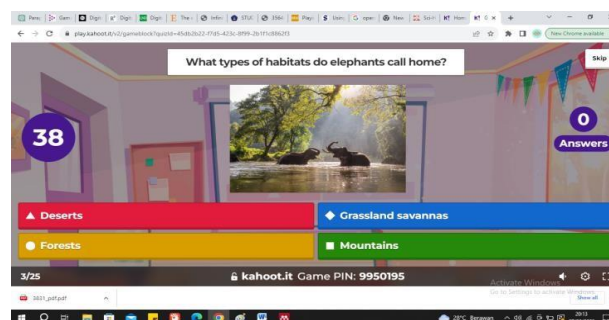


Figure 3 Kahoot quiz question on teacher's screen

Kahoot's first prototype is called Lecture Quiz and experiments with the early prototypes showed that Lecture Quiz increased student motivation, engagement, and perceived learning through entertaining social learning activities (Wang & Tahir, 2020). The program itself revolves around classroom learning but now has expanded to other learning fields with its own motto as a fun-learning platform.

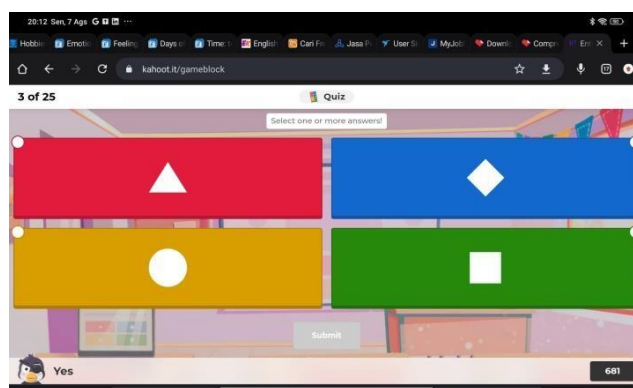


Figure 3 Kahoot quiz question on student's screen

Kahoot offers several features designed to engage and interact with students in a fun and educational way. Some of the key features available on Kahoot include; Quizzes allow educators to create interactive quizzes with multiple-choice questions. Students can answer these questions in real-time using their devices, such as smartphones or tablets. The platform turns quizzes into game-like experiences, where students compete against each other to answer questions correctly and earn points. This gamification element increases student engagement and motivation. Teachers also can incorporate images, videos, and diagrams into their quizzes to enhance the learning experience and make it more visually appealing. Next, Kahoot Studio feature enables teachers to access a vast library of pre-made quizzes and games on various subjects, saving time in content creation. Next, Team Mode allows students to collaborate in teams, fostering a sense of camaraderie and teamwork during the learning process. Reports and Analytics, after each session, Kahoot provides detailed reports and analytics, allowing teachers to assess individual and class performance, identify areas of strength and weakness, and tailor their instruction accordingly. In Challenges feature, teachers can assign

Kahoot! challenges for students to complete outside of class, encouraging self-paced learning and providing additional practice opportunities. Next, Time Constraints feature allows instructors to set time limits for each question, encouraging quick thinking and preventing students from overthinking their answers. Overall, Kahoot provides a dynamic and interactive learning environment that encourages active participation, fosters healthy competition, and helps reinforce knowledge and understanding of various subjects.

2.5 Kahoot in English Learning and Teaching Context

Considering Kahoot's background and purpose, it is crafted as an educational resource for collaborative learning, extending beyond traditional educational settings to encompass businesses, academia, and various other learning environments. Kahoot has been well recommended for large-size classes, in which student-student and student-teacher interactivity is difficult to stimulate because the first target of Kahoot is indeed classrooms. It spreads wide and far, not only to offline classrooms but also online classrooms. It is now common to employ this platform in distance learning. Nowadays, the platform has been well utilized in a variety of subjects, from science to social studies (Oktaria et al, 2021). They further stated that the use of Kahoot has also exhibit positive impact in language teaching and learning.

Kahoot has emerged as a dynamic and engaging tool in the realm of English Language Learning and Teaching (ELLT). With its interactive and gamified approach, Kahoot captivates students' attention, fostering active participation and enhancing language acquisition. According to a study conducted by Arikan and Kisadi (2020), the integration of Kahoot in ELLT not only promotes a learner-centered environment but also cultivates a sense of friendly competition, thereby motivating students to interact with English content more confidently. Putri (2019) stated that teaching English using media such as Kahoot is one effective strategy that makes students enjoy the teaching and learning process. Moreover, Kahoot facilitated students' active engagement and participation in the process of learning a language, while educators employed Kahoot to establish a language learning

experience that was both more profound and rewarding for their students (Kaur & Nadarajan, 2020). Thus, Kahoot proves to be a valuable asset for ELLT, leveraging technology to establish immersive language learning encounters.

This online platform is also proven to be able to grow students' intrinsic motivation. It can also be used as an assessment tool. As a free, real-time, game based, Web 2.0 learning platform, it is widely accepted for use in formative assessment (Plump & LaRosa, 2017). Between formative and summative assessments, formative assessment is mainly conducted to drive learning through providing feedback. Meanwhile, summative assessment is usually conducted at the completion of course/module, which displays the level of achievements of the learners (Taras, 2005). This assessment tool offers convenient feedback to help students in improving their motivation in learning (Nurhadianti & Pratolo, 2020). Moreover, Sofyana, Faridi, and Shakiyya (2020) stated that using Kahoot in English formative test have encouraged enjoyment and described students' achievement. They further stated that students can actively participate on the test and get the result directly from the teacher after they finished the test. The comprehensive adoption of Kahoot thus illustrates its multifaceted role in enhancing students' learning engagement, performance, and overall educational experience.

Kahoot's myriad benefits have been prominently demonstrated within formal educational settings. However, its influence has now transcended these boundaries, permeating into informal institutions as well. Beyond being confined to scholastic environments, Kahoot's offerings have expanded to encompass a broader spectrum. This expansion is exemplified through the establishment of Kahoot Business, Kahoot Academia, and its engagement in diverse sectors of informal education. Regardless of the learning context, Kahoot remains steadfast in its commitment to infuse learning with an element of enjoyment and engagement. Nevertheless, the extent of Kahoot's impact within informal institutions is still underexplored, as there is a scarcity of comprehensive records documenting its utilization and effects within this domain. Despite this, Kahoot's versatility and potential to revolutionize learning experiences in both formal and informal settings remain a driving force, promising to keep learning engaging and enjoyable.

2.6 Study of the Relevant Research

Before the researcher decided to do this research, the researcher had studied previous research on the use of Kahoot. Furthermore, the previous studies will be described as follow:

A study conducted by Plump and LaRosa (2017) investigated the use of kahoot in the classroom to create engagement. This study examined students' engagement in using Kahoot with two types of participants aimed at the higher-level education– graduate students and undergraduate business course students. Findings showed that graduates and undergraduates in two different business courses welcome and support the use of this game. Overall, there was 88.7% positive response rate. Students enjoyed the game (98.2%), it was easy to use (92.9 %), and helped the students with conceptual understanding (86.5%). Moreover, all students agreed that it made the class more interactive (100%).

Another study conducted by Muhridza, et al., (2018) from Malaysia investigated the use of Kahoot on ESL students in the classroom. This study examined the student's level of engagement while using Kahoot. The study involved qualitative research with 29 undergraduate students. The data was collected through interview and observation which is then analyzed descriptively. The study's result showed that Kahoot was useful in initiating and fostering students' engagement in language learning activity.

Kurnia et al., (2020) investigated Kahoot as media to comprehend a narrative text. The research aimed to assess students' behavioral engagement in reading comprehension through Kahoot and to ascertain its associated benefits. The study involved seven students from a Vocational High School in Karawang as participants. The findings revealed multiple forms of behavioral engagement exhibited by students when using Kahoot, including attendance, active participation, interaction, compliance, as well as challenges and difficulties encountered. Notably, the advantages of employing Kahoot included enhanced understanding of the subject matter, effective time management, and heightened enjoyment during quiz participation.

The three studies above investigated the use of Kahoot related to students' engagement in classroom and did not investigate Kahoot's use in online class, not to mention in an informal institution. However, the researcher's study will involve both online class and an informal institution, completing what the previous studies has not investigated yet because there are really close to no previous research about students' behavioral engagement in online informal English course.