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Station Rotation with Gamification Approach to Increase Students' Engagement in Learning English Online

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Abstract
Students in non-native English-speaking countries like China showed low engagement in English learning. To foster student engagement, educators have adopted different teaching strategies like Blended learning to improve the effectiveness of English classrooms. The station rotation model in the blended classroom has the potential to enhance students' engagement. However, there is still a need to make learning more exciting to retain engagement, especially when the classes are conducted entirely online in a pandemic. The study aims to identify the effectiveness of the Station Rotation and a Gamification approach to improve students' engagement in online learning English. Two research questions are involved in the study. 1) What features of the Station Rotation and a Gamification approach can be integrated into LMS to improve students' engagement in English vocabulary learning? 2) What effect do the station rotation and gamification approach have on students' engagement in English learning, including cognitive, emotional, and behavioural engagement? The methodology chosen is qualitative research with data triangulation using observation, self-report and interview. The findings revealed significant effects on improving students' learning engagement in three dimensions, enhancing students' interests, boosting motivation, and fostering engagement. The findings offered several implications and recommendations for further research and contributed to the literature by sharing practical ways to incorporate the Station Rotation and a Gamification approach.
Keywords: blended learning, gamification, station rotation, students' engagement, English learning online

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Introduction

The rapid development of the Internet has become an indispensable part of online education, so the learning model is gradually changing. It is also proven that digital technology has dramatically affected students' learning by integrating teaching approaches and educational technology. Educators continuously seek opportunities to find effective ways to enhance students' engagement in online English learning because in non-native English-speaking countries like China, English learning (EL) as a second language for vocational college students can be considered to be challenging. Most students showed low engagement (Meirovitz et al., 2022) in EL. Learners mainly point out some factors that will be obstacles to English learning, like tedious remembering English vocabulary activities (Lei & Cai, 2020). Moreover, education experts illustrated that students behaviorally, cognitively, and emotionally involved in English learning could successfully engage in the study and make achievements (Hutain & Michinov, 2022).

Educators have been using Internet facilities to improve students' engagement and achievement to create a better learning environment and enhance students engagement and participation in English Learning. Scientific literature suggests that gamified environments for English learning could increase learners' motivation (Fredricks et al., 2016) and engagement and offer them more confidence in their education (Ying et al., 2021). Many educators also emphasized that games in teaching have remarkable motivational power that can potentially improve learning (Musa & Fojkar, 2019).

Despite the benefits of gamification in education, studies have shown that gamification is not fully applicable to teaching (Domínguez et al., 2013). According to Bellotti (2010) and Cohen (2011), some games cause addiction due to learners' poor time management. To explore digital gamification support to English learning, the researcher integrated gamification into the station rotation model. which is of blended learning model. Because some studies have shown that gamification should be supported with a blended learning mode (Hishamuddin et al., 2018), integrating gamification into Blended learning (BL) can help students take ownership of their learning, increases student motivation, and provides measurable evidence of mastery (Mese & Dursun, 2019).

The Station Rotation model allows students to rotate through stations on a fixed schedule, where at least one is an online learning station (Staker & Horn, 2012). This paper examined how engaging students in the learning process can be achieved using station rotation and gamification approaches in English learning facilitated by a LMS . It will be helpful for educators who want to improve their students' engagement in an online classroom for their English learning.

Upon completing this study, it is hoped that teachers can incorporate Station Rotation with gamification into the curriculum and teach them explicitly to their students. Also, it is hoped that researchers can conduct further research to explore the impact on student achievement in the following fields of study at different stages in a Chinese context. Therefore, this study investigates how this innovative teaching model can improve students' engagement in English learning while working in groups. The researcher used three methods to collect data. Interviews were conducted with students to determine their points of view about their engagement in the classroom. Students self-report is a way to help them stimulate their reflections and increase their cognitive control over their learning. The researcher carried out observations to gain insight into what occurred while students were working on assigned tasks. Two research questions will be involved in the study. 1) What features of the Station Rotation and Gamification approach can be integrated into LMS to

improve students' engagement in English vocabulary learning? 2) What effect do the station rotation and gamification approach have on students' engagement in English learning, including cognitive, emotional, and behavioural engagement? Further, this paper reviews various studies and suggest strategies for exploiting station rotation and gamification in English vocabulary learning through an LMS.

Literature review

Engagement theory

The study is anchored by the theoretical support of Kearsley and Schneiderman's cutting-edge mastering theory known as Engagement Theory (1994--1999). This theory has many attributes that preserve that learners should actively engage in learning activities through fruitful interactions with others. Kearsley and Shneiderman state that Engagement Theory can provide some features in theoretical frameworks. Mainly it includes the activities from students that "involve cognitive processes such as creating, problem-solving, reasoning, decision-making, and evaluation" in which students are "motivated to learn due to the meaningful nature of the learning environment and activities" (Kearsley and Shneiderman 1999). Kearsley and Shneiderman also illustrate that the technology used can improve engagement which is not easy to achieve (Kearsley & Shneiderman 1999).

Moreover, they emphasize the differences in interaction in online learning and the effect of technology referred to in theory to foster engagement. They demand that technology provides an online learning environment to help improve students' interaction and engagement. Adopting online meeting platforms and audio or video conferences primarily enhances the extent of communication between instructors and learners. Many software tools adopted for task design, problem-based projects, and presentations can make students complete more complicated work.

Based on the Engagement theory from Kearsley and Schneiderman (1999), they used a standard categorization to distinguish three dimensions of students' engagement. According to Fredrick Swell and his colleagues (2004), students' engagement is featured by behavioural (e.g., attendance and participation), cognitive (e.g., investment in one's activities and appreciation of challenges), and emotional (e.g., positive reactions, including enjoyment and sense of belonging). In his study, the main point of the three dimensions is to be read by data surveyed and assessed in an online classroom, which offers the ways of data collection in the present research. Combining the three dimensions in the Engagement theory extended by Fredricks et al. (2004), the researcher improved students' engagement by measuring their behavioural, emotional, and cognitive engagement (Baragash & Al-Samarraie, 2018). Engagement theory has a solid relation to technological use. It has been a framework for technology-based teaching and learning for many studies. Research in technology education suggests that educators should try to solve the difficulty in English learning by adopting blended learning and integrated face-to-face and online learning (Wilson, 2002). There are some advantages, as Nagel (2010) claims, that blended learning is now a welcomed model in education, and colleges worldwide are making efforts to offer more flexible, more personalized, and greater learner engagement (Fredricks & McColskey, 2012). Rymanova et al. (2015) demand that blended learning with technology is a more effective pedagogical practice to engage students. Therefore, blended learning must also be integrated into English learning, incorporated with educational technology development to seek an innovative teaching model and genuinely engage students according to the Engagement theory.

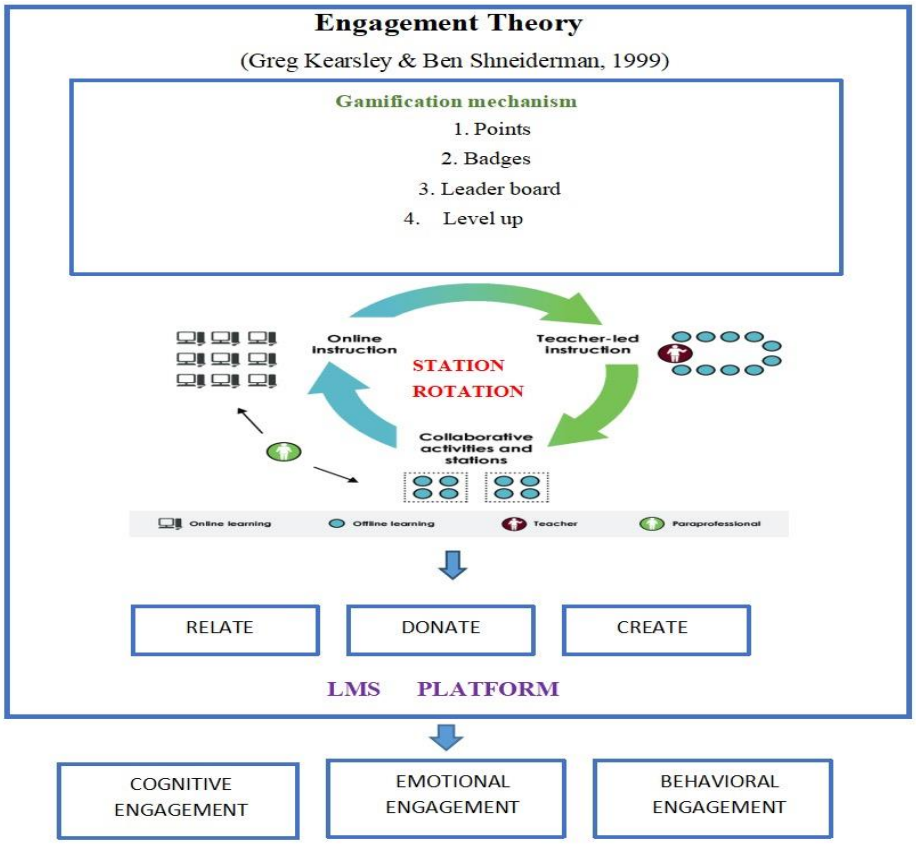

Figure 1. The theoretical framework of the study

Station Rotation Blended Learning Model

In the decade, blended learning has been considered an innovative and meaningful educational tendency. Studies on blended learning are entirely new and are connected with every field in education, like teaching methods, educational technology, computer-based learning, distance education and even digital learning (Heilporn et al., 2021). Bond et al. (2020) illustrate that blended learning integrates traditional face-to-face teaching with digital-based instruction. Govindaraj and Silverajah (2017) indicate that blended learning is developed from face-to-face education to a distance learning model, from a traditional classroom to online learning. Staker and Horn (2012) presented four widely used models in the classrooms. They are the Rotation model, the Lab Rotation model, the Flex model, and the Flipped Classroom Model. Based on the previous studies on Blended models, the Rotation model is better suitable for English learning (Albiladi & Alshareef, 2019). Moreover, it is found that many Rotation Models of blended learning happened in offline classrooms. Compared with these Rotation models, station rotation is a targeted teaching model for online English learning in this research.

In a traditional station rotation model, students rotate among four stations based on the instructor's classroom schedule (Lim, 2015). The stations must involve at least one station for online learning, while other stations might include activities such as group tasks, individual education, collaborative activities, and offline assignments (Staker & Horn, 2012; Tucker. C, 2015). Considering the advantages of synchronous and asynchronous learning, some scholars have shown their interest in the potential of station rotation blended learning to foster students'

engagement and researched to understand students' engagement by making full use of digital technologies in blended learning contexts (Moskal et al., 2013; Vasbieva et al., 2016; Malissa, 2018). Maxwell and White (2017) state the advantage of the Station Rotation model is to be more flexible for instructors in working with students (Staker &Horn, 2012). Tucker (2015) also illustrates that teachers using the Station Rotation model will have the energy to facilitate the learning strengths of the individuals in each group. And She pointed out that the station rotation model divides the class into different parts instead of teaching a lesson to all students simultaneously. Using station rotations to provide personalized or individual practice with the newly introduced technology and provide students extra learning support to each group, the remainder of the class remains engaged at their stations. Made and Skolastika (2020) considered that students move on to the next station, even if they are at home able to participate in a virtual, small-group station organized by instructors, and shift students quickly into asynchronous instruction depending on the schedule and stations. Educators are able to combine offline and online stations to promote student interaction and cooperation to build community and offer peer support (Tucker, 2015).

Based on the previous studies on Station Rotation Model, the Station Rotation Model has many advantages integrated or adopted in English education settings to improve effective classroom teaching. However, some researchers reveal weaknesses of the Station Rotation Model in education. Ayob et al. (2020) stated that Station Rotation Model could permit learners to rotate in different stations to engage them in other activities. Still, when the contents in a particular station are too tricky, they will be disengaged because the educators cannot instruct them and give them prompt feedback immediately. Hamida (2021) illustrates that some students can complete the stations within a limited duration because of their proficiency in English. Still, some students with lower proficiency in English who cannot meet all the rotation tasks may not be engaged in their learning. She also stated that educators could solve this problem with more accessible and exciting lesson content to engage these students. Despite the Station Rotation Model being considered one of the famous and influential teaching models in facilitating different classroom activities, Station Rotation does not promise excitement in education (Mese& Dursun, 2019).

Gamification

Gamification is often referred to as using game elements in non-game situations to create enjoyable, fun, motivating, and engaging students' learning experiences. It was invented in 2002 and appeared in educational technology literature in 2008 (Sailer & Homner, 2020). Gamification has positive impacts on student engagement from various aspects. The gamification elements often implemented in teaching and learning activities in the reviewed studies are points and rewards, leaderboards, and digital badges. Experts also carried out the adoption of gamification elements in non-game settings, including the field of foreign language learning (Urh et al., 2015). Gamification can improve students' engagement and participation in an offline and online environment (Hew et al., 2016). Points, badges, leaderboards, challenges, even prizes, and rewards are some excellent examples of how game-like techniques are now being used in their learning by gamification. According to Dindar et al. (2021), gamification can give students a sense of achievement in finishing assignments or tasks with gamified elements. It has also been proven to boost engagement with badges that can be as simple as virtual ribbons, stickers, or prizes that learners earn to complete modules or tasks within the game assigned by the instructor in the classroom. Rodrigues et al.(2019) stated that points help players identify how far they are progressed through

a gamification experience. Badges can be used as virtual rewards for recording students' academic achievements in LMS and be received by an effort or achievement through content (Manzano-León et al., 2021). A leaderboard is a list of top scorers in a game for students to see their position instantly in gamified settings. It offers players a chance to social interaction in discussions around the game and the high scores (Rodrigues et al., 2019).

Gamification can transform tedious or difficult content into engaging and exciting learning experiences, letting students feel a sense of achievement and enjoyment in completing assignments or tasks with gamified elements (Hew et al., 2016). Hsu (2022) concludes that Gamification elements can encourage friendly competition among members, which continuously engages learners to join the activities depending on a series of gamified challenges and tasks, even if some students are not good at or have lower skills in learning. When students are willing to participate in the learning activities their teacher designs during the lesson, they can obtain joyful study experiences and outstanding engagement in learning. Students can surpass a goal, earn points, medals, ranking positions, and new challenges, or get other forms of recognition and reward to improve their engagement in learning. The gamified learning environment does not make well-performed students play happily, but engages all learners involved in the activities, including students with lower skills in learning. Gamification integrated into the Station Rotation Model is not a simple joy but to obtain deep engagement from learning.

Methods

Participants

The study participants were from one of the vocational colleges in the Heilongjiang province of China, named Heilongjiang College of Construction, in the second semester from March to August 2021-2022 academic year. The participants were chosen randomly from two classes the researcher taught, consisting of 32 students in the same major and with the same admissions criteria administration. During one semester of implementation with the new teaching model, the researcher, as a participant observer, can be better involved in the activities to observe learners with checklists or by LMS. According to the generalization model introduced by Firestone (1993), the population in the survey can be case-to-case transferability generalization because the researcher can provide detailed descriptions that allow readers or other researchers to make inferences about extrapolating the findings to different settings.

Research questions

To fulfill the objectives of the current study, the researcher proposed the following research questions:

1. What features of the station rotation and gamification approach can be integrated into LMS to improve students' engagement in English learning?
2. What effect do the station rotation and gamification approach have on students' engagement in English vocabulary learning?

Data Collection and Analysis

Based on the research questions, the researcher will use observation, students' self-report, and interviews as the research methods. First is self-report; students will be provided with items reflecting different dimensions of engagement and select the response that best describes them. Self-report methods are beneficial for evaluating emotional and cognitive engagement, which are

not directly observable and need to be observed from their behaviors. One problem with self-report measures is that students may not answer honestly in some conditions, and self-reports may not reflect their actual behaviors (Lİ, 2021; Alotumi, 2021). To minimize the weakness of self-report, the researcher will also conduct observation and interviews to see overall student engagement. Observation is helpful to researchers in a variety of methods, which can offer the researchers different ways to examine students' behavior, participation in the tasks, time on the assignment or their nonverbal expressions. Third, an open-ended interview is conducted online through the ZOOM meeting cloud and offline classroom. The researcher will interview three categories of participants who are not performing, usual, and acting in this experimental group. Since these participants are the ones who have been experiencing Station Rotation with the Gamification model, which is generally a topic that the students enjoy talking about their feelings, satisfaction, and perception, it makes sense that they would be the ones interviewed in this study. For data analysis, the findings were triangulated with students' views discussed earlier in the first and second research questions for in-depth results. Students' answers and learning patterns were coded and categorized into themes related to the research questions.

The study was based on engagement theory and adopted a station rotation model, but the researcher did it online and incorporated gamification. The research designed four stations: a game station, a listening and speaking station, a collaborative station, and an offline/independent station. Students need to rotate and participate in the four stations for English learning. The researcher designed different topics supported by additional activities with gamification to engage students in English learning. The activities in the four other stations are designed and involved in Relate, Create and Donate. A collaborative station is developed due to Relate, and the independent station is organized in terms of Create.

Moreover, the listening & speaking and game stations are designed according to Donate. one group rotates among the four stations within 20 minutes and joins the learning activities with gamification. In the listening and speaking station, students are expected to hear more, enjoy these attractive listening materials and complete the assignment within 20 minutes to exercise their listening skills. Students who regularly achieve their tasks successfully and thoughtfully in this station are rewarded with points. In the collaborative station, students can work in a specific app to practice their spoken English, like dubbing for an actor or dialogue with a machine. They've got badges to encourage them to let it go. Students can do a "Words-Cut" game for vocabulary learning in the game station. When students quickly cut the correct word to match the image, the accent, or the meaning, they will get points. Students who earn the highest points can win the game and can be listed on the leaderboard. An independent learning station is for students' offline and independent study. A teacher offers students group discussion, a passage reading, or a writing assignment in the offline station. To correct their writing instantly in an offline station, a kind of software named Pigai can be a good assistant that can help students mark the paper and make it right immediately. As a participant observer, the researcher observed students online and their behaviors and checked other data like their assignments by LMS.

Findings

Table 1. *Features of the station rotation and gamification approach integrated into LMS to improve students' engagement*

Codes	Sub-themes	Themes
Paper-based reading method	Variety of learning activities	Multisensory learning
Movies clips enjoyed	Visual and auditory design	
Listening to English songs		
Using soft wares to memorize words		
Sense of competition		
Don't like independent station	Learning style preference	Personalized learning
Like listening station		
Notes are given in the software		
Having habits of memorizing words		
Self-learning		
Discussions with group members	Interactive learning	Promote ownership
Connection easily		
Get help from others		
Text with people in different stations		
Ask questions on the screen		
Felt relaxed and freedom	Recognition improved	Motivation boost
Autonomy study		
Enhance my enjoyment and interests		
Obtain confidence		
Satisfaction		
Points	Instant evaluation	Assessment richness
Medals		
Test score ranking		
Leader board		
Level up		
Rotate easily		
Software learning is convenient		

Table 1 provides the features of this innovative learning model, " What features of the station rotation and gamification approach can be integrated into LMS to improve students' engagement in English learning? " Many themes emerged from their replies while summarizing the features, although students reported in different ways. The parts are concluded as Multisensory learning, Recognition boosts motivation, Promote ownership, and Leaning style preferences. At the same time, Table 2 provides some codes showing students' engagement in three aspects like behavioral, cognitive and emotional engagement.

Table 2 *Examples of codes showing students' engagement in three aspects*

Codes	Student Engagement
"I've never been absent in every activity"	**Behavioral engagement**
"When I am involved in the task, I concentrate on myself."	
"I work hard to do my best in the lesson."	
"I start to use technology to assist my study."	
"I want to learn as much as I can, not only in the online"	**Cognitive engagement**
"I often set study goals based on the software to engage in the plan."	
"I can make full use of the learning methods after class."	
"I would like to practice English every day."	
"Points and badges changed my learning attitude."	
"Learning is fun because I improve myself on something"	**Emotional engagement**
"I was excited when I won one point for my group."	
"I felt delighted and confident."	
"I can text the question on the screen anytime."	

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Table 3. *Effects of the Station Rotation and a Gamification approach integrated into LMS to improve students' English engagement*

Effects on	Sub-themes	Themes
Behavioral engagement	Participation Involvement in the task Persistence Technology integration	Autonomy boost Great achievements Mobil learning competence
Cognitive engagement	Attention Time on tasks effort and persistence goal orientation	Cognitive energy Willingness to exert effort Relevance
Emotional engagement	Interests improved Confidence and satisfaction Happiness and Enjoyment Interactive feedback	Enthusiasm boost Self-efficacy Communicative competence

Table 3 is related to the second research question about the effects of this new learning model. "What effects do the station rotation and gamification approach have on students' engagement in English vocabulary learning, including students' cognitive engagement, emotional engagement and behavioral engagement? " From the interview, students reported their feelings and achievements to answer the second research question. By implementing station rotation with a gamification learning approach, students improved their engagement in English learning and felt interested, curious, and satisfied. In addition, students could rotate and be involved in the listening, speaking, reading, and writing activities quickly.

Discussion

The study aimed to shed light on the features and effects of the station rotation with a gamification model to improve students' engagement in English learning. The following themes were extracted for developing such an innovative learning model: "Multisensory learning," "Personalized learning," "Promote ownership," "Motivation boost," and "Assessment richness." Based on the results, multisensory learning is a significant theme with two sub-themes of "Variety of learning activities" and "visual and auditory design". While providing answers to the first research question, "What features of the station rotation and gamification approach can be integrated into LMS to improve students' engagement in English learning?" Students provided multiple points of view. First, when questions were asked like "What do you like the most about this teaching model?" Most students showed their preference and what they have learned in the online English class when participating and rotating the different stations. From their reporting, we can see the learning model can make students do multisensory learning. They can learn better with additional simulations, which aligns with the results of other studies, which showed that using appropriate images and visual clips or auditory materials is essential for improving students' engagement (Rabiman et al., 2020). Considering the following replies, students enjoyed the visual and auditory material in different stations, which might result from their multisensory learning.

S1: "I think that the paper-based reading method is better, and I can also draw on it, improving my answering questions."

S2: "I like listening to English songs and watching English movies, so I enjoy myself at the listening station."
S3: "Using the software Baicizhan will arouse my interest and push me to play the games and learn vocabulary."
S4: "Funny English dubbing can significantly enhance my enjoyment of learning English."

When discussing questions like "Are these activities beneficial in supporting your learning process?" To answer research question one and find the features of this learning model. Standard replies from the participants are that they felt motivated and engaged in English learning, especially when they won the points and got a ranking under the gamification. They got satisfaction. "This new learning model makes me feel very novel, and I am very curious to complete these tasks." Other replies viewed this learning model as a beneficial one. "I think it is very beneficial. The four stations can make me more motivated to study." From their responses, we see students get the recognition boost their motivation. At the same time, as we all know, autonomy learning is more precise because it can be learned and improved upon as a cognitive and metacognitive ability by having specific knowledge and getting proper instruction (Hu & McGeown, 2020). Teachers need to lead students to boost their autonomous power in English learning. Both good skills and strategies are associated with English learners. One student shared, "For me, this learning method makes me more self-control and more motivated to learn." Most students felt relaxed, autonomous, and enjoyed. The data describes that recognition boosts students' motivation. Twenty-seven times, they mentioned that they felt interested and engaged in this blended learning model. They thought they obtained knowledge, fun, and confidence. Some of the responses are from participants' viewpoints:

When interviewing the participants combined with the observation, students showed their different interests in taking vocabulary quizzes, watching movies, and listening to songs or independent stations. In their words, some students liked to join the oral station to dub a video or participate in the listening station to enjoy a song. Other students preferred to play games in the vocabulary station. Students have preferences in the station rotation with the gamification learning model. However, most participants stated that "digital activities" are cool and funny.... gaming in the vocabulary is fantastic. In the response category, some students replied that they liked and engaged in participating the activities in listening stations. One student stated: "I personally like listening stations because it is fascinating to be able to complete listening comprehension questions while listening to songs." Some considered "I think vocabulary station can help me develop the habit of memorizing words. When using the software Baicizhan, it will not be very boring." However, few students showed their dislike in the read station, but they engaged in other stations. "I like this teaching method very much. It is divided into four sections for me to learn, which can make me study with high interest. This method is not boring. Despite the challenging reading station, I still love to rotate in different stations."

Additionally, most participants agreed that the activities and materials in different stations were easily accessible during the time and in their location. One student shared that "staying at home and doing rotation study is so cool and relaxed. when I have a question, I can ask the questions on the screen randomly or ask group members for help, and I can text my teacher to get the solution." Moreover, as a participant observer, I found that students had the flexibility to choose the materials offered in the stations because they could choose different topics and tasks with varying levels on the mobile platforms suggested by the instructor. Students' qualitative responses

provided additional proof of these findings, with 26 students stating that they could connect with the stations, classmates, and teacher freely and efficiently to complete the tasks. For example, one student commented, “It’s not difficult for me to rotate among the online stations, and I am excited to see what activities I will challenge”.

Furthermore, over 24 students preferred to stay in their own space to join the lesson and do interactive learning with their group members because they felt relaxed and didn’t get much pressure. From their responses, it is clear that gamification elements include points, medals, or leaderboards. One student shared, “My progress is the driving force that encourages me to move forward.” Instant evaluations from the software can assess individuals fast and give them quick feedback. One student demanded, “When I finish the oral practice with the robots, the system can give me feedback instantly, then I can follow the standard and authentic English pronunciation can also improve my oral English.” A common problem encountered by students when completing the activities has to do with the reading activities. They faced plenty of vocabulary or words that appeared on the screen together. In one repose, a student suggested a solution to this problem. He asserted, “I hope the teacher can submit the reading materials before the lesson, it’s free for us to print or not. Because I got seriously near-sighted, reading on the mobile is difficult.” However, this might be helpful in the classroom. Also, having a physical problem is another problem. One student stated that “he got high near-sighted, and he felt headaches due to many online classes during the pandemic.” The researcher allowed him to read the materials when his eyes felt comfortable.

In attending to the second research question, “What effect do the station rotation and gamification approach have on students’ engagement in English vocabulary learning, like students’ cognitive engagement, emotional engagement, and behavioral engagement?” The present study’s finding are consistent with those of (Hew et al., 2016; Govindaraj & Silverajah, 2017), who found that station rotation and a gamification positively impact students’ engagement. The following themes were extracted for the effects of station rotation with gamification approach in improving student engagement: “Autonomy boost,” “Better achievements,” and “Mobile learning competence” for students’ behavioral engagement “Cognitive energy,” “Relevance,” and “Willingness to exert effort” for students’ cognitive engagement, “Enthusiasm boost,” “Self-efficacy,” and “Communicative competence” for students’ emotional engagement. Based on the findings, these major themes are fundamental and present the effects (Huang et al., 2022). According to the results, “autonomy boost” is the essential theme with two sub-theme of “participation” and “involvement in the task,” indicating that the students must participate in all activities and show their concentration in the lesson. Otherwise, it is not appealing and autonomous in the process of learning. The results are consistent with those of the study by Sahni (2019). He investigated the importance of participation and completing the tasks independently to show autonomy in learning. From two responses, “I’ve never been absent in every activity.” and “When I am involved in the task, I concentrate.” Halverson and Graham (2019a) stated that the indicators of behavioral engagement were considered as the sub-themes “involvement in the task.” Students' self-reports, “I work hard to do my best in the lesson.” and “because the interesting activities involved me.” also reflected students’ important involvement in the task and their autonomy learning were boosted. Persistence in the importance of education was considered a lower position than enthusiasm and is also a factor that may be higher online than in traditional settings. Students’ replies like “These tasks with leader board as gamification in speaking station pushes me to persist and get better outcomes.” and “The funny games in vocabulary station keep me learning, and I

can't believe I remember so many words than before." which can be found in Leon's research. He stated persistence and effort were significantly related to students' academic achievements.

Additionally, technology like mobile learning and gamification elements integrated into the learning process enhanced students' behavioral engagement, which was proved by (Govender & Arnedo-Moreno, 2020). "I start to use technology assist my study" demonstrated students would like to use technology for their online and offline learning experiences. In the study, the researcher made full use of digital technology to foster students' engagement by using station rotation with a gamification approach and hoped learners could form modern learning methods in their English learning process.

Another theme extracted in the present study to know the effects on cognitive engagement was "Cognitive energy." Considering this theme ensures that students' cognitive factors contained sub-themes entitled "Attention," "Time on task," "Effort and persistence," and "Goal orientation". This innovative learning model made learners pay more attention to the activities when rotating stations because it refers to the learners' interests. Students' attention is a crucial construct while learning. Learners' attention also plays an essential role in research on learning. Teachers must determine whether their students are attentive by considering visible cues. Based on their self-reports, "I am concentrated on the tasks in the vocabulary station due to the funny games," "Dubbing the videos in the oral station can attract my attention." "I am involved in listening to the music." Fredricks (2016)illustrated attention is one of the indicators showing students' cognitive engagement. The other "time on the task" sub-theme also presents students' cognitive engagement. The researcher also observed that most participants spent time on the tasks carefully to complete the content and the assignment; moreover, students made more effort in the learning experience based on their persistence. One student replied, "I didn't notice the time is up, and I feel the time is flying, especially when I am playing games in the vocabulary station." showing the effects on students' cognitive engagement. The findings are in agreement with those of the study by (Bergdahl et al., 2020), who investigated the essential and attractive functions used for promoting English engagement in a digital environment and found that the features of such learning model and technology used could influence the quality of the student's perception. The researcher combined interview data with observation to determine the effects of cognitive engagement. One student responded in the interview, "I can adopt this digital or mobile learning method after class." and another replied, "I want to learn as much as I can, not only online." and "I would like to practice English over one hour every day," which told us the other theme of cognitive engagement as "Willingness to exert effort." The last theme for the effects on cognitive engagement is "Relevance" presented by (Filomena & Maria, 2015), which means the learning process should show the usefulness of the content so that learners can bridge the gap between content and the real world. One participant answered, "I often set study goals based on the software because they can help me to engage in the plan." Other participants gave their responses like "I can use this learning method to learn as much as I can, not only online but also in offline, to engage myself.", which better proved students' cognitive engagement were improved due to "relevance."

For the effects of this learning model on students' emotional engagement, the theme "Enthusiastic boost" consisted of a sub-theme of "interests improved." This sub-theme indicates that the learning model attracted students' interests. Learners can adopt various methods and approaches suggested in the lesson to sustain their interest. Students' replies like "Learning is fun because I improve myself on something." "Now, I am interested in English learning," and

"Learning is fun and exciting, although it is full of funny challenges." can prove these points. As a participant observer, the researcher saw some students were interested in getting points, badges, and leaderboards. Still, two participants didn't show interest and are usually poor in English skills. For example, student A said he was not enthusiastic about having badges because he didn't care about getting points. He scored below the class average on the exam. Most participants offered their ideas like "I was excited when I won one point for my group" "When members applauded to me, I felt delighted and confident. I was motivated by getting the points or badges." "Points and badges changed my attitude and made me more engaged to join the activities." "confidence" and "satisfaction" are the two sub-themes of self-efficacy. This finding is consistent with the study by (Halverson & Graham, 2019b), who found the sub-theme "confidence" focuses on developing success expectations among learners, and success expectations allow learners to control their learning processes. Learners will be satisfied with the achievements they made during the learning process. For example, "When I won one point for my group, I felt satisfied and confident." and "I found an easy way to improve my English vocabulary, and I am confident in vocabularies learning." Based on the findings, "communicative competence" is another theme with the sub-theme of "enjoyment" or "happiness" and "interaction with peers or teachers." Support or guidance in the learning model allows the learners to resolve the problems they encounter in the activities of different stations on their own. They would like to ask questions or issues by the text chat box. Students' replies like "I can text the question on the screen anytime." "If I have a problem in understanding, I can text the question on the screen so that students and teacher who saw it can answer me." and "I am a shy girl so that I feel embarrassed when face to face asking questions, but for the online lesson, I can post them on the screen and I feel relaxed and happy." These findings are also emphasized in the study by (Tian & Zhou, 2020), who worked on the importance of interactive learning in improving students' emotional engagement.

Conclusion

This paper began by improving students' engagement in English learning in an online setting. The nature of blended learning and the diverse ways of combing educational technology-mediated instruction makes the ability to measure students' engagement under online station rotation with a gamification model. This paper reviewed students' engagement interventions and factors and found the features of this new learning model on improving students' engagement and the effects on the three dimensions. The research results were in line with many previous studies. They discovered many benefits of station rotation and gamification by learning management systems by the end of the 12 weeks learning experiment. Findings indicate that the proposed learning model improved students' English interests, boosted their motivation, and engaged students. Most participants were satisfied with this new learning model and anticipated using the offline classroom learning experience and increasing their learning skills to do their autonomous learning. It is recommended that English teachers incorporate gamification into the station rotation learning model by LMS to foster student engagement. But before doing that, teachers should be acquainted with the appropriate methods, apply these skills to the future classroom, and, most importantly, give students active and positive instruction to learn when they complete the activities in different stations. If teachers do so, students will feel more relaxed and satisfied with learning English more proficiently. Finally, it would be worthwhile for further research to be conducted to investigate the effects on students' achievement by using station rotation with gamification to improve students' engagement via LMS.

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