#### Savor a Kahoot!-Licious Classroom: Embodying Gamification in a Business School as a Recipe for Innovation Among the Digital Natives

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#### Abstract

Innovative teaching intends to create a resonant enhancement of learner competency and competiveness. This research intends to find whether the spice of innovative teaching has gone far enough to be carefully chopped, marinated, and blended for the digital natives. One of the main contributing factors for the learning benefits of technology is gamification which is used to facilitate classroom management and collect immediate feedback from the teaching process. It turns the teaching and learning processes virtual because it is compatible with every digital device, so that the creation of Kahoot! came as a godsend to the classroom. Therefore, the purpose of this research was to reveal how the behavioral and attitudinal mindset among adult learners learning business English was affected because of the implementation of Kahoot!. This study was carried out in a business school during the pandemic. A total of two Business English Training courses were examined. These courses were taught by the same instructor using a uniform textbook. Kahoot! was incorporated into these courses at the end of a teaching session when a unit was finished. A questionnaire consisting of a total of 18 items, grouping under categories on learning environment, applications of Kahoot!, and anticipation of gamification, was distributed at the end of the semester. Descriptive statistics was conducted to summarize the learning experiences. Responses identified that Kahoot! has a positive impact and further assured the engaging attributes of gamification.

Keywords: Kahoot!, Gamification, Innovative Teaching, Digital Natives

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#### Introduction

To maximize learning effectiveness, innovative teaching spreads across a wide range of disciplines in higher education. Innovative teaching is hinged on different levels of implementation on teaching strategies or materials. Innovative teachers apply a wide range of strategies for student engagement and motivation (Busson & Cubukcu, 2021). In consequence, an increasing need for technology supports in business education could be fulfilled among the millennial generation.

Millennials are digital natives having plenty of interactions with technology. Technology has embedded virtually in every aspect of their lives so that its effect is unmeasurable. They generally pick up technology faster than that of digital immigrants. And for some reason, this generation inclines to receive quick rewards or fast accesses because of the prevalence of digital aids. Therefore, effective technology-related tools should be created to sharpen learners' skills (Gündüz & Akkoyunlu, 2020). Compatible and adaptable teaching strategies are to be identified to best fit students from Business Schools. Business English education, especially, should evolve along with the ever-changing trends.

## The Application of Mobile Device

When paired with teaching and learning, technology has opened many windows for tracking and diagnosing learning progresses. It facilitates learning in a remote and feasible way. To call for this need, suitable measures should be adopted to respond to the new normal. One of the main contributing factors for the learning benefits of technology is smart phones. Smart phones are ubiquitous among college students. Having one or more of them has become so unremarkable when comparing to the past.

The advance of smart phone ushers and facilitates learning experiences in higher education mentality (Elkhamisy & Wassef, 2021; Owen & Licorish, 2020). Lahlafi and Rushton (2016) posited that using smart phones in class does motivate learning. In a sense, smart phones serve as a platform to provide ever-present learning opportunities (Gündüz & Akkoyunlu, 2020). The proliferation of smart phones improves learning experiences and makes teaching easier (Martínez-Jiménez, Pedrosa-Ortega, Licerán-Gutiérrez, Ruiz-Jiménez, & García-Martí, 2021). It is worth noting that the introduction of gamification results in upskilling. What sets apart smart phones from other learning platforms is that the using of it ensures learner engagement (Gündüz & Akkoyunlu, 2020), fosters intrinsic motivation (Iaremenko, 2017), and promotes retention (Elkhamisy & Wassef, 2021; Owen & Licorish, 2020).

This idea of gamifying learning is growing fast and attracts a group of faithful teacher fans because it is designed as a synchronous interactive learning device. The application of gamification generates more student engagement (Koppitschn & Meyer, 2021; Martín-Sómer, Moreira, & Casado, 2021; Owen & Licorish, 2020), comparing to the teacher-centered approach in traditional classrooms. This digital medium also encourages classroom dynamics (Elkhamisy & Wassef, 2021) that attentive learners are exposed. The reduced interaction could be compensated to some extent for experiencing sounds and graphics along the way (Owen & Licorish, 2020). Kauppinen and Choudhary (2021) pointed out that for those who actively participated in gamification have a higher tendency to succeed in the future.

Innovative educators apply game-based learning in business education (Busson & Cubukcu, 2021) to simplify the learning process. To gain the upper hand, gamification should also work

in tandem in language learning (Iaremenko, 2017). Kahoot! in particular, serves as an innovative teaching tool in business education (Martínez-Jiménez et al., 2021) which has been gaining market acceptance in the past few years. Teaching materials can be constantly reinforced and tailored via Kahoot! (Martínez-Jiménez et al., 2021).

#### Advantages of Kahoot!

It is grounded on the previous ideas that Kahoot! benefits learning (Elkhamisy & Wassef, 2021; Lee, Hao, Lee, Sim, & Huang, 2019). By playing games of knowledge, Kahoot! has made a profound impact on creating enjoyable learning environment (Gündüz & Akkoyunlu, 2020; Toma et al., 2021). To stay ahead of traditional teaching environment, it is also treated as one of the principal modes of teaching innovation (Ali, Askary, Mehdi, Khan, Kaukab, & Qamar, 2021). The application of Kahoot! is on the rise particularly for the sake of motivating and inspiring the learning process (Alawadhi & Abu-Ayyash, 2021).

A number of research has corroborated the finding that Kahoot! facilitates teaching (Alawadhi & Abu-Ayyash, 2021). As a game-based platform, Kahoot! creates a learner-centered environment in which learner engagement is enhanced and motivated (Camerona & Bizo, 2019). It also facilitates teacher-student interaction (Castro et al., 2019). Obviously, it has become a productivity tool in the classroom for the past few years. It could be used in every class (Gündüz & Akkoyunlu, 2020). It especially motivates learning when it is implemented in the beginning of a class (Gündüz & Akkoyunlu, 2020) or at the end of a learning session (Martín-Sómer et al., 2021; Owen & Licorish, 2020). It is better applied weekly or biweekly to maximize learner engagement (Kauppinen & Choudhary, 2021). Castro et al. (2019) adopted Kahoot! when their four-unit teaching cycle was finished. Even though Kahoot! was not practiced in every session, the researchers proved it eminent and influential. It is believed that Kahoot! is adopted in a satisfactory manner which celebrates learning expeditions (Kohnke & Moorhouse, 2021; Toma, Diaconu, & Popescu, 2021). This is an entertainment where knowledge building is the major reward.

The pinnacle of Kahoot! is that it makes learning interesting by turning it into a collaborative (Kohnke & Moorhouse, 2021; Mays et al., 2020) and interactive (Khalilian et al., 2021; Iaremenko, 2017) game show. Thanks to its interactivity, competiveness is developed (Kohnke & Moorhouse, 2021) because of its ranking board (Castro et al., 2019). One of its best dispositions to maximize the learning effect is its repetitive practices of the content (Akkus, Ozhan, & Cakir, 2021). It can be adapted to a wide range of subjects (Iaremenko, 2017) with images to choose from (Toma et al., 2021).

Apart from its benefits within teaching and learning, Kahoot! features several digital advantages which may bring possibilities to the fingertips. It is a free medium (Iaremenko, 2017; Kohnke & Moorhouse, 2021) in promoting digital literacy (Toma et al., 2021). It provides instant feedback (Martínez-Jiménez et al., 2021; Toma et al., 2021) and real-time self-assessment (Toma et al., 2021) that these perks may be difficult to filled by conventional ways of teaching. It is user-friendly (Kohnke & Moorhouse, 2021) because it offers opportunities for later reviews (Akkus et al. 2021; Owen & Licorish, 2020). In addition, a pause section is found after every question so that explanation could be made and mistakes addressed to facilitate learning (Martínez-Jiménez et al., 2021). It serves as an attention getter (Owen & Licorish, 2020) so that learners may understand to-be-taught content easily (Ali et al., 2021; Camerona & Bizo, 2019; Toma et al., 2021). The immersive angle of Kahoot!

refines cognitive skills (Elkhamisy & Wassef, 2021) and encourages critical thinking (Castro et al., 2019).

## Kahoot! for Learning Diversity

Kahoot! caters to different age groups. According to Toma et al. (2021), using Kahoot! does not require any digital skills, especially during assessment periods; therefore, when it is adopted, it takes learners of all ages on an infinite journey of learning (Kohnke & Moorhouse, 2021). For example, the modality of it was proved to offer elementary schools pupils (Mays et al., 2020; Toma et al., 2021) and junior high school students (Lee et al., 2019) learning supports. It also unleashes the possibilities in college learners (Alawadhi & Abu-Ayyash, 2021; Camerona & Bizo, 2019; Castro et al., 2019; Elkhamisy & Wassef, 2021; Gündüz & Akkoyunlu, 2020; Iaremenko, 2017; Martín-Sómer et al, 2021; Owen & Licorish, 2020). To that end, the burden and stress of learning can be relived among learners from different ages.

The possibilities of learning are immense in a wide range of subjects. In the light of this, Kahoot! was practiced in learning business management (Martínez-Jiménez et al., 2021), database management systems (Akkus et al., 2021), marketing (Koppitschn & Meyer, 2021), entrepreneurship (Kauppinen & Choudhary, 2021), English (Iaremenko, 2017; Mays et al., 2020; Medina & Hurtado, 2017), management and administration of nursing (Castro et al., 2019), animal science (Camerona & Bizo, 2019), geography (Toma et al., 2021), earth science (Lee et al., 2019) and information science (Owen & Licorish, 2020).

Kahoot! starts to gain ground in language learning. It might not stop at a certain threshold to some degree; however, it is treated as a must in classrooms (Iaremenko, 2017; Medina & Hurtado, 2017). It facilitates instructors of language to create intriguing learning experiences (Kohnke & Moorhouse, 2021). A stupendous effectiveness has found in the learning of vocabulary (Iaremenko, 2017; Medina & Hurtado, 2017) and grammar (Iaremenko, 2017; Khalilian et al., 2021).

Using Kahoot! as assessments is a new wave to revolutionize the academics. It is easier to apply than pen-and-paper tests (Toma et al., 2021). Exam questions could be implemented in synchronous courses in which students are capitalized on informal assessment (Medina & Hurtado, 2017), formative assessment (Elkhamisy & Wassef, 2021; Martín-Sómer et al., 2021; Toma et al., 2021), summative assessment (Martínez-Jiménez et al., 2021), and standardized assessment (Toma et al., 2021). It also gains considerable advantages by leveraging the teaching-learning-assessment (Toma et al., 2021). It may be an alternative to Kahoot! as one of the assessment tools in different disciplines, because learners' mental ability is triggered (Ali et al., 2021) and learning feedback is received (Lee et al., 2019).

Kahoot!, a learning booster, promotes academic performances (Elkhamisy & Wassef, 2021; Kohnke & Moorhouse, 2021). In terms of the learning outcomes, grades are improved (Toma et al., 2021). When more questions are added to each playing session, a better learning results can be obtained (Akkus et al., 2021). Passing rates become higher when Kahoot! is implemented in a classroom (Martínez-Jiménez et al., 2021), which pinpoints a more sustainable acquisition of knowledge. Those who received higher scores in Kahoot! may achieve better academic performances (Martínez-Jiménez et al., 2021), even better future performances (Kauppinen & Choudhary, 2021). Martín-Sómer et al. (2021) further confirmed about the efficacy of Kahoot! indicating that when it is practiced regularly, learners' test

scores were highly related to their final exam scores. It is suggested that Kahoot! serves as an indicator of disclosing a higher or lower score in achievement tests.

#### Kahoot! and Learner Perception

With respect to the effectiveness of Kahoot!, it increases learning interests, enhances understanding of the learning materials; and ultimately, retains the knowledge (Elkhamisy & Wassef, 2021; Martín-Sómer et al., 2021). Being an alternative method of learning, Kahoo! has made the process interesting. Students value positively on the process of learning (Camerona & Bizo, 2019; Gündüz & Akkoyunlu, 2020; Iaremenko, 2017; Medina & Hurtado, 2017; Owen & Licorish, 2020).

Kahoot! users reported that they became attentive learners (Camerona & Bizo, 2019; Lee et al., 2019) because of its user-friendly and straightforward interface (Kohnke & Moorhouse, 2021; Medina & Hurtado, 2017). Students also revealed that Kahoot! encourages participation (Akkus et al. 2021; Iaremenko, 2017; Martínez-Jiménez et al., 2021) and alleviates anxiety (Lee et al., 2019) during the class. It is especially interesting that students are into the "three-person podium" ranking which further shapes their desire to outclass their peers (Toma et al., 2021). With a view to this, Kahoot! promptly paves the way for a competitive learning environment in promoting learning effectiveness (Toma et al., 2021). Furthermore, students acknowledged the implementation of Kahoot! because it helps to clarify misconceptions (Elkhamisy & Wassef, 2021) and facilitates concept-building (Martín-Sómer et al., 2021). They believed that it may be better if Kahoot! is used continuously (Elkhamisy & Wassef, 2021) or regularly (Martín-Sómer et al., 2021).

#### Side Effects of Kahoot!

It is suggested that the implementation of Kahoot! does not promise a higher grade in the summative assessment. Castro et al. (2019) incorporated 20 percent of final exam questions from previously-practiced Kahoot! questions. They discovered that the expected high achievers did not get correct answers, even in the easy questions. Academic performances are not significant (Alawadhi & Abu-Ayyash, 2021; Camerona & Bizo, 2019; Lee et al., 2019), so does the motivation level (Castro et al., 2019; Lee et al., 2019). For instance, learners do not think highly of the motivation drive of Kahoot! for reviewing contents and having debates (Castro et al., 2019).

Furthermore, playing Kahoot! is time-consuming and distracting (Owen & Licorish, 2020) because most time spent in the gamification results in "winning the game," instead of learning something (Koppitschn & Meyer, 2021). Playing it means "stealing class time" that may interrupt the overall instruction (Akkus et al. 2021). The competitive nature of it did not trigger further engagement for college learners. According to the survey of Owen and Licorish (2020), freshmen learners particularly pointed out that the playing time should not last for more than six minutes in a one-hour session. In a sense, class sessions should contribute more to lectures in lieu of playing games.

Even though learners became very competitive in playing the game, they may spend less time thinking about correct answers (Koppitschn & Meyer, 2021). Learners usually do not receive sufficient time thinking of correct answers (Elkhamisy & Wassef, 2021). Whether a full coverage of the learning materials could be covered became a huge concern, especially for the freshmen (Owen & Licorish, 2020). Kahoot! is treated as a supplementary tool to the

traditional learning (Castro et al., 2019; Owen & Licorish, 2020) and it may not replace lectures on PowerPoint slides (Owen & Licorish, 2020). It is helpful for theoretical courses (Akkus et al. 2021) and may not be feasible for other hands-on ones. On the contrary, Castro et al. (2019) proposed that when Kahoot! is practiced in theory-based courses, it arouse minimum student motivation. Therefore, the learning outcome is unsatisfactory (Koppitschn & Meyer, 2021).

In Lee et al.'s (2019) experiment, they intended to examine if Kahoot! benefits learning achievement. A pre- and post-test was implemented to see if there are any significant differences in leaner motivation. No significant difference was found on the learning performance on homework and exam before and after the application of Kahoot!. The interpretation of the findings, according to the authors, attributes to the learners' losing interest. The students were interested in completing exercises in Kahoot! in the beginning and they discovered a regular pattern of playing Kahoot! games as time goes by, so that the learning turned out to be relatively static.

## Methodology

This study was carried out in a business school in Taiwan during the pandemic. A total of two Business English Training courses using a uniform textbook and taught by the same instructor were examined. There were 48 students including 28 females and 20 males. All of them had their own smart phones with wireless connection when in-class gamification activities were practiced.

Kahoot! was incorporated into these courses at the end of a teaching session when a unit was finished. By default, a total of 10 test items were found in each Kahoot! game. Half of them were multiple choice questions while the rest of them were either true or false or puzzle. The students were provided with 20 to 30 seconds to respond. The response time was decided according to the length and difficulty of the questions. A questionnaire concerning the efficacy of using Kahoot! was distributed when this course is finished.

## **Survey Design**

To see the effectiveness of Kahoot!, the students were asked to fill out a questionnaire at the end of the semester. Questions on learning efficiency of Kahoot! were adapted from that of Martín-Sómer et al.'s (2021). This questionnaire consists of a total of 18 items. To be specific, a total of 2 items targeted on learners' perception on language usage from the learning environment category, 10 items on learners' perception (on a five-point Likert scale) after using Kahoot! under the Kahoot! application part, and 6 items on learners' preference of using Kahoot! in the anticipation of gamification section.

The research design adapted the frame work of Martín-Sómer et al.'s (2021). Their original design was: (1) Kahoot! was implemented at the end of a teaching session; (2) A control group was not found; (3) A total of ten Kahoot! question types, including multiple choice and true-false, were practiced; (4) Two surveys, containing six questions, were carried out. Changes were made for this research from Martín-Sómer et al.'s (2021) were: (1) Kahoot! question types expanded from two to three types, puzzle questions were added; (2) Survey questions expanded from six to 18; (3) Survey answers on students' learning perception about Kahoot! were expanded from four (strongly agree, agree, disagree, and strongly disagree) to five (strongly agree, agree, neutral, disagree, and strongly disagree), using a five-point Likert

scale; (4) Two surveys were downsized to one. In addition, two of the survey designs adapted from that of Martín-Sómer et al.'s (2021) remained the same in this research, they are: (1) Kahoot! was conducted when each teaching session is finished, and (2) There were no control group.

## **Data Collection**

Data analysis was performed by SPSS 22.0. Descriptive statistics was conducted to summarize the learning experiences. Data collection was performed through a survey at the end of a semester.

#### Results

The results collected from the questionnaire are discussed as follows. Table 1. highlights learners' perception on language use. More than 85% (n=41) of the students think "fluency" is the most important element in using English. Others indicate that "appropriateness (8.3%)" and "accuracy (6.3%)" are the most crucial one in using the language. However, when asked about if Kahoot! will be helpful in supporting accuracy, fluency, or appropriateness of the language, a small fraction (n=4, 8.3%) of the answers agree on Kahoot!'s promoting "fluency." More than 70% of the students (n=34) indicate that Kahoot! provides more advantages on "accuracy" than "appropriateness" in using English.

Table 1. Language usage

| Language Usage                    |                 |        |       |
|-----------------------------------|-----------------|--------|-------|
|                                   |                 | n = 48 | %     |
| Which of the following elements   | Accuracy        | 3      | 6.3%  |
| is the most important one in      | Fluency         | 41     | 85.4% |
| using English?                    | Appropriateness | 4      | 8.3%  |
|                                   |                 |        |       |
| Which of the following advantages | Accuracy        | 34     | 70.8% |
| will Kahoot! provide in using     | Fluency         | 4      | 8.3%  |
| English?                          | Appropriateness | 10     | 20.8% |

Table 2. shows learners' perception, on a five-point Likert scale, after using Kahoot!. The mean score on "I feel engaged and develop a sense of participation from Kahoot!" is the highest (4.23), whereas "Kahoot! may be beneficial and helpful for my midterm or final exams" is the lowest (3.46). In general, features on Kahoot!'s "easy application (4.19)", "completion with peers (4.10)", "engagement (4.23)", and "learning from mistakes (4.04)" appear to have higher mean scores than "attention (3.52)", "more familiarity with content (3.75)", "frequency of application (3.73)", "application to other classes (3.77)", "learning motivation (3.88)', and "midterm/ final assistance (3.46)."

| No. | Statement  | Grading        |       |           |          | Mean              |                 |
|-----|--|----------------|-------|-----------|----------|-------------------|-----------------|
|     |  | Strongly agree | Agree | Undecided | Disagree | Strongly disagree | (sd.)           |
| 1   | It's easy to apply<br>from my mobile<br>device.                                  | 22             | 20    | 2         | 1        | 3                 | 4.19<br>(1.065) |
| 2   | I may compete with my peers.   | 19             | 21    | 5         | 0        | 3                 | 4.10<br>(1.036) |
| 3   | I feel focused and<br>attentive when<br>answering<br>questions from<br>Kahoot!.  | 13             | 15    | 8         | 8        | 4                 | 3.52<br>(1.288) |
| 4   | I feel engaged and<br>develop a sense of<br>participation from<br>Kahoot!.       | 25             | 16    | 3         | 1        | 3                 | 4.23<br>(1.096) |
| 5   | I am more familiar<br>with the content<br>after playing<br>Kahoot!.              | 16             | 16    | 7         | 6        | 3                 | 3.75<br>(1.229) |
| 6   | I can learn from my<br>mistakes after<br>playing Kahoot!.                        | 20             | 19    | 3         | 3        | 3                 | 4.04<br>(1.148) |
| 7   | I hope Kahoot! can<br>be applied more<br>often in this class.                    | 15             | 16    | 10        | 3        | 4                 | 3.73<br>(1.216) |
| 8   | I hope Kahoot! can<br>be applied to other<br>classes as well.                    | 15             | 17    | 10        | 2        | 4                 | 3.77<br>(1.189) |
| 9   | Kahoot! triggers my learning motivation.   | 18             | 15    | 10        | 1        | 4                 | 3.88<br>(1.196) |
| 10  | Kahoot! may be<br>beneficial and<br>helpful for my<br>midterm or final<br>exams. | 9              | 19    | 10        | 5        | 5                 | 3.46<br>(1.220) |

Table 2. Learners' perception after Kahoot!

As shown in Table 3, 41 students (85.4%) reported that they like Kahoot! being implemented as part of the learning method. However, while two students (4.2%) disagree with such opinion and five students (10.4%) preferred to stay neutral.

When asked about the reason why students like the implementation of Kahoot!, the majority of the students (85%) consider "learning from playing" as one of the benefits of implementing Kahoot! to the class, whereas 72% think highly of Kahoot! because it "highlights learning weakness." Nearly half of the students favor the competitiveness in using Kahoot!. Only 21.3% of them appreciate the picture and sound effect of Kahoot!

When students were asked about the drawbacks of using Kahoot!, 70.8% mentioned about the insufficient answering time, 64.6% on not being able to change answers, 20.8% on rankings being shown, 16.7% on the stimulating picture and sound effect, and 6.3% on their preferences of using paper-based practices.

The students were also asked about their preferred question types. The data revealed that multiple choice (n=41, 85.4%) is the most preferable one, while puzzle (n=2, 4.2%) is the least. A small portion (n=5, 10.4%) reported their preference on true or false questions.

Moreover, students were asked about the frequency of applying Kahoot! in the classroom. More than half (n=26, 54.2%) consider having it when a unit is finished, some (n=17, 35.4%) on a weekly basis, others (n=3, 6.3%) reveal to practice it when two units are finished, and still others (n=2, 4.2%) claim that it should not be practiced at all.

The last question asked the students if Kahoot! trigger learning incentives in English learning. The majority of the students (n=36, 75%) think positively, three students (6.3%) oppose this view, and nine students (18.7%) stay neutral.

|                             | Table 3. Learners' preference      |    |       |
|-----------------------------|------------------------------------|----|-------|
|                             |                                    | n  | %     |
| Did you like Kahoot! when   | Yes                                | 41 | 85.4% |
| it was implemented          |                                    |    |       |
| as part of the learning     | No                                 | 2  | 4.2%  |
| method in the class for     |                                    |    |       |
| this semester?              | Neutral                            | 5  | 10.4% |
|                             |                                    |    |       |
| Why did you like the        | Learning from playing              | 40 | 85.1% |
| implementation of Kahoot!?  | Highlighting learning weakness     | 34 | 72.3% |
| Explain your reasons.       | Competing with peers               | 23 | 48.9% |
|                             | Stimulating sound/ picture effects | 10 | 21.3% |
|                             | Others                             | 0  | 0.0%  |
| Why didn't you like the     | Stimulating sound/ picture effects | 8  | 16.7% |
| implementation of Kahoot!?  | Rankings are shown                 | 10 | 20.8% |
| explain your reasons.       | Insufficient answering time        | 34 | 70.8% |
|                             | Not being able to change answers   | 31 | 64.6% |
|                             | Paper-based practices are better   | 3  | 6.3%  |
|                             | Others                             | 5  | 10.4% |
| Which kind of test question | True or false                      | 5  | 10.4% |
| types do you prefer from    | Multiple choice                    | 41 | 85.4% |
| Kahoot!?                    | Puzzle                             | 2  | 4.2%  |
| How often should Kahoot!    | Every week                         | 17 | 35.4% |
| be applied in class?        | When 1 unit is finished            | 26 | 54.2% |
|                             | When 2 units are finished          | 3  | 6.3%  |
|                             | Never                              | 2  | 4.2%  |
| Will Kahoot! trigger your   | Yes                                | 36 | 75.0% |
| incentives in learning      | No                                 | 3  | 6.3%  |
| English?                    | Neutral                            | 9  | 18.7% |

## Discussion

The findings of this research have provided insight into the application of Kahoot! among EFL graduate school learners in the learning of Business English. Gamification is engaging and practical for the digital natives that creating a Kahoo!-licious learning environment does trigger learning incentives. This study confirms positive results on learning efficacy from that of Martín-Sómer et al.'s (2021), implying that Kahoot! is significant for adult learners when it is practiced at the end of a learning session; yet, contradicted with their results on Kahoot!'s facilitating achievement tests. According to the survey of this research, students were asked whether or not Kahoot! may be beneficial

for their midterm or final exams. Most answers were not in favor of its capability of acing achievement tests.

Even though a large number of students found it easy to apply from their mobile device and receive instant feedback, many of them do not appreciate the time limit in answering Kahoot! questions. This finding is in line with Castro et al.'s (2019), pointing out the insufficient answering time. They set a 20-second time limit for each multiple choice questions; however, their participants mentioned that more time should be allowed in choosing the correct answers. According to the design of the questions from this research, students had 20 to 30 seconds to respond; however, these time limits may not be enough for them. This may relate to the distraction of the sound effects, anxiety of playing the game, internet connection, non-native-like reading speed, or difficulty of reading if seated at the back row of the classroom. This study has demonstrated a positive impact of Kahoot!, but future studies may further verify a desirable response time for its users.

## Conclusion

Kahoot! has made learning in a streamlined manner. Although Kahoot! has gained momentum among college education, the investigation of into the Business English sector is sparse. This study provides an overarching framework which allows language instructors to maintain classroom dynamics in a graduate school setting. Digital aids may be seen as a prerequisite for learner participation, and as a part of learning process in graduate studies during the pandemic. They should be a tool to temper enthusiasm into language classrooms.

The pandemic has changed the scenario of Business English learning to a certain extent. Learning losses during the pandemic should not be accumulated or compounded, but could be mitigated or compensated with the help of digital devices. These devices render learning with more possibilities. Therefore, this research dedicates to acknowledge the critical role technology plays to the new normal shaping the business education in Taiwan. Gamification does trigger motivation and engagement among Business School learners.

## Limitation

The results described are only valid in an EFL setting for some graduate students at a business school. This study was conducted on only two classes which made it difficult to estimate the validity of the data. The sample of this research was relatively insufficient to address an overall learning outcome. Since Kahoot! is not mandatory in every educational curriculum, whether or not it will build learners' anticipation may be vague. Further research may be conducted to explore how the behavioral and attitudinal mindset among graduate students learning business English is affected.

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