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Research paper

Anxiety and Game-Based Formative Assessment Platform Performance among Tertiary Level Students

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Abstract

Kahoot is a gamification which embarks on the initiative of learning through play. In this study, personal achievements are often focused on when the respondents participated in a series of Kahoot. However, it neglects anxiety as a contributing factor to one's performance. Therefore, this study was aimed to investigate the role of anxiety among tertiary level students. The Kahoot formative evaluations were conducted among Year 3 Teaching English as a Second Language (TESL) students. There were 46 students of them, aged between 20 to 24 years old. A 20-item questionnaire adapted from Test Anxiety Inventory was used to report the effects of anxiety to students' physical, mental and emotional construct. The findings indicate that majority of the respondents had an after-feeling that they could have performed better if they revised the lecture notes and other related materials prior to the Kahoot session. The respondents also believed that they could perform at par with the others if they could manage their test anxiety level. The major implication derived from this study is teachers need to be made aware of their students' feelings especially anxiety in integrating Kahoot as a formative assessment in English as a second language classroom.

Keywords: *Anxiety, Kahoot, Teaching of Writing, Teaching English as a Second Language, Test Anxiety Inventory*

1. Introduction

Anxiety is a typical reaction to stressful situation [1]. It is considered as a normal part of children's developmental process and can be equally present in teenagers and adults too. Nevertheless, some people may experience more anxiety than others, over events that do not deserve excessive fear or worry. Students, in particular are vulnerable to anxiety in learning especially second language learning [2]. Uncontrollable worry about future, extreme concern about performing adeptly and significant self-consciousness are characterization of anxiety in learning [3]. Students with anxiety often have negative views about their ability to cope with stressful academic situations, especially when taking an assessment [3,4]. Assessment anxiety can be an important reason for students' underachievement, low self-esteem and loss of motivation in school tasks [5]. The students' anxiety could be reduced if they enjoy the learning activities [6]. As the current students are of Z and Alpha generation which are interested in the usage of ICT, educators should integrate the usage of ICT in language learning to reduce their anxiety level [7]. Due to this reason, the researchers integrated the usage of ICT in a blended learning platform in the teaching of Writing Skills in an ESL Context to Year 3 TESL students from Universiti Kebangsaan Malaysia (UKM). One of the ICT usage applied in this course is gamification. Gamification is a type of classroom respond system. As such, gamification has been increasingly gaining its niche in teaching and learning activities [8]. Many studies have indicated the benefits of gamification namely Kahoot as a formative assessment in language learning [9]. Gamification has been regarded as a tool for students to demonstrate application of their knowledge, skills and thinking [10]. Therefore, more educators are turning to gamification to incorporate academic tasks including student assessments [11]. The researchers introduced the usage of gamification as a formative assessment in this course. This study was carried out to determine Kahoot's effectiveness in particular to improve students' writing skills. Another aim is to identify whether Kahoot is a language activity that is able to provide fun learning in language learning. According to Krashen's theory, learning is effective if the students enjoy themselves during the language activities and their anxiety level is minimal [6]. The researchers carried out this study with the attempt to find the answers to the following research questions: (1) Why TESL Year 3 students' felt anxious in using Kahoot? (2) What are the effects of Kahoot towards TESL Year 3 students' anxiety? and (3) How did TESL Year 3 students overcome their anxiety in using Kahoot?

2. Literature Review

Kahoot is an example of gamification that incorporates elements of learning, assessment and fun to enhance motivation and engagement of students. Founded by Johan Brand and Jamie Brooker, Kahoot was officially launched in 2013 and currently managed by Kahoot AS team in Oslo, Norway. According to the chief executive officer (CEO), Kahoot is a student-centred learning approach using games. As of January 2015, 30 million users of Kahoot was reported, making it as one of the trusted application of gamification. Educators are able to create a variety of fun learning games in Kahoot using multiple choice questions that they generate on their own or simply by adapting to millions of ready-made templates available. These games are known as 'Kahoots' which can be made more interesting with addition of videos, images and diagrams.

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2.1 Anxiety

Accoding to Emanuel [12], anxiety refers to the response against unrecognized factor, either in the environment or in the self. Anxiety is characterized by tension, worried thoughts and physical symptoms, such as sweating, trembling, dizziness or a rapid heartbeat [13]. Kazdin further elaborates that severe anxiety impairs one's daily functioning and decreased work productivity of individuals. In regards to learning, anxiety could reduce students' motivation and concentration on a range of tasks including reading, writing, listening and speaking. It blocks students' normal thinking process and interfere with their memory, attention, and concentration. Such blocks can lead to poor understanding, loss of self-confidence and resulted in poor results. Anxious students are often lack of confidence and fail to engage actively with the learning materials, thus fail to internalize concepts successfully. Anxiety is also associated with a general sense of incompetence. In the long run, eventually, the insecurity builds upon itself leading the students to feel demotivated to proceed with their learning [14].

2.2 Anxiety and assessment

It is common for students to feel anxious before or during an assessment. A moderate amount of anxiety enhances motivation, focus and productivity [15]. However, as anxiety becomes increasingly high, it starts to impose more negative impacts on students' performance. Assessment anxiety affects students in the field of assessment and evaluation of their abilities and achievements. Assessment anxiety involves negative self-perceptions and expectations, which cause students to experience worry and fear in situations such as examinations [16]. These interfere with the students' ability to perform adequately and prevent them from demonstrating their skills and knowledge during an assessment. According to Zeidner [17], students experiencing assessment anxiety are easily distracted and face difficulty in responding to simple instructions, organizing and recalling relevant information during the assessment. As such, they often end up with poor grades in their assessments.

2.3 Anxiety and gamification

Gamification is a movement arose to defend the extension and application of elements normally present in video games to the real world and in areas far from just entertainment. The gamification corresponds to the use of gaming-oriented mechanisms to address practical problems or to develop engagement among specific audiences [18]. According to Kapp [9], gamification is the use of the concept of games and game mechanics to engage users. In the same line of reasoning DomíNguez et al. [11] state that gamification is the use of game play elements and game design techniques in non-gaming contexts to engage people and solve problems. Game-based learning is a newly embraced phenomenon. Kahoot is one of the many options of gamifications that are commercially available. It incorporates gaming features in learning and have been reported to reduce anxiety among students [19]. Nevertheless, little measures have been taken so far to address the role of anxiety in students' performance using Kahoot. Thus, the researchers attempt to discover Why TESL Year 3 students' felt anxious in using Kahoot? (2) What are the effects of Kahoot towards TESL Year 3 students' anxiety? (3) How did TESL Year 3 students overcome their anxiety in using Kahoot?

3. Methodology

This research used a mixed-method approach in which the researchers gathered both quantitative and qualitative data using a survey questionnaire, face-to-face interview and field notes.

3.1 The Respondents

The respondents for the questionnaire consist of 46 undergraduate Teaching English as a Second Language (TESL) Year 3 students of Universiti Kebangsaan Malaysia. Their age range is between 21 to 24 years old. Majority of the respondents were female students. There were 39 females and 7 males. Their English proficiency level is high intermediate. They have enrolled in the course, Teaching of Writing in ESL Context. All the students of this course were selected as the respondents as they had undergone the experience of using Kahoot as one of the formative assessment tools in this course. Only 5 of these students volunteered to be interviewed. They were given pseudonyms and labelled as S1-S5.

3.2 The Setting

Teaching of Writing in an ESL context is a core course for Year 3 TESL students. The course of Teaching of Writing in an ESL Context aims to acquaint learners with writing techniques necessary for effective teaching of writing in English. By the end of this course, students should be able to:

1. understand the theories and approaches required for effective teaching of writing,
2. teach students to write grammatically correct English,
3. utilize appropriate writing techniques essential for the teaching of ESL writing.

The respondents were required to read the notes and completed the tasks uploaded in the MOOC prior to participating the Kahoot sessions. This module consists of eight units. It covers the theory of writing in first language and second language that assist learners to understand what is involved in the writing process and the teaching process. Moreover, they were also introduced to writing approaches, writing strategies, and mechanics of writing. In the end, they were able to identify strategies to teach writing for different level of their own future students and assessing writing skills. They could also design lesson plan and find out resources for varieties of materials to be used in writing.

The integration of Kahoot is a form of formative assessment which was conducted throughout the semester which consists of 14 weeks. There were six different formative assessments on each topic covered in the course - Teaching of Writing in an ESL context. Kahoot was created and conducted as a formative assessment after each topic was delivered. The total percentage for Kahoot is 10 percent of the total marks for this course. The students were divided into small groups of 4-5 students. Each group was asked to construct 10 questions based on each topic. Kahoot activities was given to the students as a measure to evaluate students' comprehension and to ensure that they were listening attentively during the lessons. Each lesson was 2 hours. The Kahoot activities were only 15 minutes at the end of the two-hour lesson. The questions for each Kahoot activity were based on that previous lesson. It was conducted on the next lesson as to encourage the students to revise their lessons individually.

3.3 Research Instruments

There were three research instruments being employed in this study. They are survey questionnaire, interview responses and field notes. The questionnaire items are adopted from the Test Anxiety Inventory [20]. One expert in TESL had validated the

content of the questionnaire items. The expert has 20 years of teaching experience in the same field and hold a PhD in TESL. The researchers have made amendments based on the expert's feedback. The survey questionnaire consists of 20 items. All the items are placed on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" (1- strongly disagree, 2-disagree, 3-neutral, 4-agree, 5 strongly agree). In order to obtain richer data for this study and for triangulation purposes, individual semi-structured interview was carried out. The 5 interview questions were based upon the three abovementioned research questions. The field notes consist of the researchers' observations on the respondents' behaviours, performance, interests, involvement and the researchers' feelings.

3.4 Research Procedure

The researchers carried out six observations and produced field notes after each observation. All the six observations were carried out during the Kahoot activity. The individual interview sessions of approximately 15 minutes were carried out in the beginning of the following semester. The interview session was not carried out at the end of the semester because the respondents were reluctant to be interviewed as they were very busy with their assignments and final exam preparation.The questionnaire was distributed to the respondents in the following semester. The respondents were given only two days to respond to the questionnaire which was uploaded via Google Form. All the respondents had answered and returned all the survey questionnaire.

3.5 Data Analysis

The questionnaire was administered in Google Forms. Google Forms automatically stores data in spreadsheet format, so no-paper-to-electronic data transcription was necessary. Nevertheless, the researchers used SPSS version 20 to process respondents' responses to find the frequencies and percentages in order to answer the research questions.

3.6 Research Ethics

There are a few measures that had been taken by the researchers in order to adhere to the research ethics. All the interview responses were transcribed in verbatim. One of the research ethics which the researchers have embraced was member checking. The interview transcriptions were returned to the respondents to check the contents. They made corrections and added new information to the transcripts after checking the accuracy. The field notes were returned to some of the participants to check, make further amendments and approve the contents. In order to embrace qualitative research ethics, the participants were given pseudonyms. The respondents were labelled as S1-S5.

4. Results and Discussion

4.1 Students' perceptions on the anxiety of using Kahoot

In general, the respondents' feedbacks on their anxiety level of using Kahoot as a formative assessment tool at a tertiary institution in Malaysia is high. From Table 1, 2 and 3 interestingly majority of the respondents' answers are inclined to 'agree' and 'strongly agree' to all items. Most respondents perceived anxiety as a contributing factor to their Kahoot performance. In this context, the reasons, effects and ways to overcome anxiety are discussed in the findings.

4.2 Analysis of Questionnaire Responses

This section presents the findings with regards to the research questions (RQ):

1. Why TESL Year 3 students' felt anxious in using Kahoot?
2. What are the effects of Kahoot towards TESL Year 3 students' anxiety?
3. How did TESL Year 3 students overcome their anxiety in using Kahoot?

The Reasons of Anxiety

The first section of the questionnaire is to obtain the data to answer the reasons of anxiety which is in RQ (1) - Why TESL Year 3 students' felt anxious in using Kahoot? Table 1 summarizes all responses in the form of percentages and can be seen as below:

a. Having low self-esteem prior to, during and after participating in the assessments

Table 1. The reasons of anxiety

No	Items	SD (%)	D (%)	N (%)	A (%)	SA (%)
1	Thinking about how much brighter and intelligent are some other assessment-takers are, before or during Kahoot session.	2 (4.3%)	7 (15.2%)	5 (10.9%)	15 (32.6%)	17 (37.0%)
2	Concerned about how others view me if I do poorly in the Kahoot session.	3 (6.5%)	2 (4.3%)	4 (8.7%)	15 (32.6%)	22 (47.8%)
3	Worrying about how well I will perform in Kahoot interferes with my preparation and performance on Kahoot.	2 (4.3%)	6 (13.0%)	6 (13.0%)	12 (26.1%)	20 (43.5%)
4	Knowing that my future depends on the Kahoot performance upsets me.	0	7 (15.2%)	6 (13.0%)	14 (30.4%)	19 (41.3%)
5	I never seem to be fully prepared to take Kahoot as a formative assessment.	1 (2.2%)	10 (21.7%)	7 (15.2%)	11 (23.9%)	17 (37.0%)
6	Often, I feel I could have done better than I actually did,	0	2 (4.3%)	6 (13.0%)	13 (28.3%)	25 (54.3%)

	after performing a Kahoot.					
7	I am upset if I score low for Kahoot, and that bothers me.	7 (15.2%)	8 (17.4%)	8 (17.4%)	9 (19.6%)	14 (30.4%)

SD- Strongly Disagree D-Disagree N-Neutral A-Agree SA-Strongly Agree

a. Having low self-esteem prior to, during and after participating in the assessments

Based on Table 1, it is apparent that having low self-esteem prior to, during and after participating in the assessments affected respondents' performance. This was observed in item 1 whereby 69.6% of respondents often think of how better the other assessment-takers are. This is further supported by S4 whom mentioned, ("*I often feel that in every Kahoot session, everyone is better than me and for that reason, it ultimately affects my confidence.*"). In each Kahoot session, everyone could view their ranking right after the quiz ended and on a similar note, 80.4% of respondents in item 2 were also concerned about how others would view them if they perform poorly. The researchers found that most respondents revised the lessons briefly before every Kahoot session. These students relied heavily on the statistics provided by the application and they often felt the need to perform better than their previous ones. Even so, their anxiety made them unclear of where they stood before they participated in the assessment which resulted in poor performance. As uttered by S2, she mentioned that, ("*Although I studied for the assessments, I still forget some of the points due to feeling anxious. In the end, I just answered what I think is right.*"). In this context, it gradually affects their level of preparedness and performance as claimed by 69.6% of respondents in item 3. In the same line of reasoning, there is a possibility that the respondents have lost their motivation to perform well and monitor their scores after each session. Deci & Ryan [21] claimed that intrinsic motivation should be the central element of a game, where it serves as the beacon of autonomy and interest to progress further. Gamification often orients intrinsic motivation of users as a way to encourage and to maintain engagement. Despite it all, in item 5, 60.9% of the respondents still never seem to be fully prepared in the Kahoot sessions.

Other than that, 50% of the respondents reported in item 7 that they felt unhappy with people who are amused when they received low score in the Kahoot session. Most of them felt insecure as they were worried of the perceptions that they would receive from other participants. According to a research conducted by Aryana [22], students with high academic achievement tend to feel more confident in contrast to those who lack confidence in them who achieved lowly. One of the respondents, S3 claimed that ("*I often feel like a loser in class and the fact that this assessment is important makes me even more anxious.*"). In relation to this statement, self-esteem definitely affects the students' thinking process, emotions, desires, values and goals [23] and this is agreed by 71.7% respondents in item 4 who felt anxious knowing that test performance would affect their future. It is also important to note that 84.8% of the respondents in item 6 felt that they could perform equally to others if only they could manage their anxiety.

The Effects of Anxiety

The second section of the questionnaire is to obtain the data to answer the effects of anxiety which is in RQ (2) - What are the effects of Kahoot towards TESL Year 3 students' anxiety? Based on Table 2, the findings can be seen as below:

a. feeling that participating in the Kahoot sessions is irrelevant and time consuming in terms of topic preparation
b. the vulnerability of the intense situation
c. the cognitive interference faced by students

Table 2. The effects of anxiety

No	Items	SD (%)	D (%)	N (%)	A (%)	S (%)
1	Having thoughts that I have nothing to do with Kahoot.	0	4 (8.7%)	5 (10.9%)	21 (45.7%)	16 (34.8%)
2	Getting a good score on one Kahoot does not seem to increase the score on other Kahoot sessions.	5 (10.9%)	10 (21.7%)	10 (21.7%)	10 (21.7%)	11 (23.9%)
3	I dislike this course as the lecturer of Teaching of Writing Skills in ESL context has the habit of giving Kahoot as a formative evaluation.	0	3 (6.5%)	18 (39.1%)	11 (23.9%)	14 (30.4%)
4	Having to face Kahoot the next day disturbs my sleep.	5 (10.9%)	5 (10.9%)	7 (15.2%)	8 (17.4%)	21 (45.7%)
5	I have a hollow, uneasy feeling before taking a Kahoot.	1 (2.2%)	3 (6.5%)	6 (13.0%)	19 (41.3%)	17 (37.0%)
6	Mentally freeze up on Kahoot sessions.	3 (6.5%)	10 (21.7%)	11 (23.9%)	13 (28.3%)	9 (19.6%)
7	Often feel the need to revise and cram before a Kahoot session.	5 (10.9%)	2 (4.3%)	9 (19.6%)	8 (17.4%)	22 (47.8%)
8	Anxiety about performing in Kahoot makes me want to avoid preparing fully, and makes me more anxious.	8 (17.4%)	7 (15.2%)	5 (10.9%)	13 (28.3%)	13 (28.3%)
9	Often I find my fingers tapping or legs	4 (8.7%)	3 (6.5%)	9 (19.6%)	13 (28.3%)	17 (37.0%)

	jiggling while doing Kahoot.					
10	Often I feel I could have done better than I actually did, after performing a Kahoot.	0	2 (4.3%)	6 (13.0%)	13 (28.3%)	25 (54.3%)

a. feeling that participating in the Kahoot sessions is irrelevant and time consuming in terms of topic preparation

The result of this research suggested that anxiety does play a key factor in terms of one's Kahoot performance. The analysis show that majority of respondents experienced various distractive thoughts during the Kahoot sessions; with 80.5% of the respondents who believed that Kahoots were not relevant to them due to the fact that the series of Kahoots were not real tests but regarded as a formative evaluation. This is also consented upon 45.6% respondents in Item 2 who expressed feeling indifferent on scoring high marks in a Kahoot session since acquiring the desired marks in one particular session would not ensure the same or higher marks to be obtained for the next session. The findings of a study by Sideeg [24] indicate that higher assessment anxiety level results in lower self-esteem of students. This could be associated to findings of current study in which the students felt that a good score in one assessment shall not increase their confidence in other assessments. It is highly depended on their preparation and performance on the particular topic(s) tested. Thus, the urge of outscoring the next Kahoot session is lesser since the students have the tendency to only want to score on the topics that they are interested in. Despite the fact that frequent Kahoot help students to keep up with the materials learnt as supported by Weinstein and Wu [25], the series of it, however, occurred at the end of a week after two class periods and typically addressed two readings in which they needed to cover more than one topic for a single Kahoot session. In the attempt to cover the topics, the students often sort to cramming as agreed by 65.2% of the respondents in Item 7. Perhaps the students prefer to do their course work during the week rather than worrying about taking a quiz by Friday night resulting in them to feel anxious.

b. the vulnerability of the intense situation

The vulnerability of the situation too has made them to feel stressful prior to participating in the Kahoot sessions as agreed by 78.3% of students in Item 10. This statement is supported by the interview responses uttered by S1, ("*I feel uneasy every time I have to sit for Kahoot quizzes and I could not help but to feel stressed out. I would want to learn and explore more but this has influenced me to feel slightly demotivated*"). In regards to learning, anxiety can reduce students' motivation and concentration on a range of task including reading, writing and listening. It blocks the normal thinking process and interfere with memory, attention, and concentration. Such blocks can lead to poor understanding, poor results and a loss of self-confidence [14]. Therefore, students' interest of wanting to learn more about this course is gradually plummeted as concurred by 54.3% of the students. In the same manner, on Item 8, the overwhelming feeling has led 56.6% of them to not preparing fully due to anxiety prior to preparing and covering the topics.

c. the cognitive interference faced by students

Additionally, the apparent effects could also be seen in one's cognitive interference. Anxiety is considered as "multidimensional" due to its relationship with several psychological constructs such as interference, emotionality, fear of failure, lack of confidence, and self-esteem [26]. As such, 78.3% of the respondents in Item 5 demonstrated the feeling of 'empty' or uneasy before participating in the Kahoot sessions. This statement is supported by S3 whom mentioned that, "*I feel nervous most of the times. I once had an anxiety attack while answering the Kahoot questions and to make matters worse, I no longer feel confident to continue the rest of the session*". Worse still, 47.9% of the respondents in Item 6 experienced panic or mental 'freeze' due to test anxiety. It is a universal belief that the nature of the Kahoot sessions as fast-paced. This has led students to feel anxious and under immense stress. Since each question requires fast response, the students needed to constantly keep up and compete with other classmates which led them to having anxiety. Besides, these too were equally agreed by S5 during face-to-face interview whom mentioned, "*My sleep is disturbed since I frequently recheck and reread my notes over and over again. I always feel that I have not prepared enough for Kahoot*", in regards to physical relaxation before a test, besides lack of sleep due to test anxiety that were reported by 63.1% of respondents in Item 4. Staner [27] stated that people with anxiety often experience sleep disorders, especially insomnia; while Grimes [28] reported the relationship between anxiety, sleep disorders and poor performance among college students, indicating that test-anxiety does not only affect students mentally and emotionally, but also physically. Finger tapping and legs jiggling was also reported in 65.3% of respondents in Item 9. According to Townsend [29], finger tapping and legs jiggling, apart from nail-biting, foot swinging, daydreaming and yawning are some of the coping behaviours that satisfy the need for comfort among students with test anxiety.

Ways of Overcoming Anxiety

The third section of the questionnaire is to obtain the data to answer the reasons of anxiety which is in RQ (3) - How did TESL Year 3 students overcome their anxiety in using Kahoot? Based on Table 3, the findings can be referred as below:

a. conducting Kahoot session in a less stressful environment
b. lifting up one's self-esteem

Table 3. Ways of overcoming anxiety

No	Items	SD (%)	D (%)	N (%)	A (%)	S (%)
1	Kahoot sessions should not be conducted in a formal and tense situation.	2 (4.3%)	4 (8.7%)	9 (19.6%)	14 (30.4%)	17 (37.0%)
2	Knowing that I could outscore most people if I get myself prepared.	1 (2.2%)	0	6 (13.0%)	12 (26.1%)	27 (58.7%)
3	Acing in Kahoot does not really show how much a student know.	1 (2.2%)	6 (13.0%)	5 (10.9%)	9 (19.6%)	25 (54.3%)

a. conducting Kahoot session in a less stressful environment

Apart from that, in item 1, 67.4% of respondents felt that assessment sessions should be informal and should not be conducted in a tense situation. This is due to the fact that, the seating arrangement whilst the Kahoot session is conducted is too formal which affected them in producing poor performance. In relevance to this issue, a research conducted by Wannarka and Ruhl [30], claimed that seating arrangements is important because they have the potential to promote positive academic outcomes. This statement is also supported by Chien et al. [31]. Despite all the other studies determined rows to be the most conducive in an assessment situation, providing a more relaxing and calming environment does help. Pavithran et al. [31] in regards to providing relaxing and conducive atmosphere for the students. This is also agreed by S1, whom mentioned that, "*I wish that I could participate the Kahoot sessions in a more calming environment. It makes me scared and anxious seeing everyone equally stressing out as I am".*

b. lifting up one's self-esteem

Besides, 84.8% of the respondents also agreed on item 2 that they were capable of outscoring other participants provided that they were well prepared. The sole reason that prevented them from performing better is anxiety which occurred in regards to emotional interference. Therefore, it is noticeable that the respondents have fear of failure due to assessment anxiety which could be the most possible reason for the researchers' observations. Students who develop worry and fear of their performance may not feel satisfied with the level of their preparedness for the Kahoot sessions as mentioned above. As such, they started to believe that other participants are way better than them, resulting in more anxiety and feeling like not doing anything. Additionally, as consented upon 73.9% of respondents in item 3, majority of them thought that doing well in the Kahoot sessions do not represent the actual knowledge of a person.

5. Conclusion

The study suggests that assessment-anxiety level could be a significant contributing factor towards students' performance in Kahoot. The self-reported manifestations of assessment-anxiety, which included physical, mental and emotional constructs of the students showed that they were mostly affected by self-doubt and negative perception of others. The findings have proven that the respondents have low self-esteem prior to, during and after participating in the assessments, feel that participating in the Kahoot sessions is irrelevant and time consuming in terms of topic preparation, feel vulnerable of the intense situation and facing cognitive interference. All in all, the findings from this study proves that by reducing one's level of anxiety, it indirectly helps to improve one's assessment performance which can be achieved by providing less stressful environment and lifting up their self-esteem. In the context of Kahoot, the researchers found that rather than using Kahoot as a form of assessment, it is highly suggested that Kahoot should be used as reinforcement activity at the end of the learning session in class. The implementation of this activity can help students to reduce their anxiety and gain better comprehension as well as mastery in their learning progress.

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