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Improving the Grade 9 Students' Engagement in Online Synchronous Classes in English Through Interactive Games

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ABSTRACT

This classroom-based action research aimed to improve the Grade 9 students' level of engagement in online synchronous classes in English through games. The participants of the study were the 39 Grade 9 students who were officially enrolled at the Mariano Marcos State University – Laboratory High School, Batac Campus, for the School Year 2021-2022. The data on students' level of engagement were gathered using the survey questionnaire patterned after the Student Engagement Survey by Singh, Srivastava and Singh (2014). Frequency, percentage distribution, means and mean difference were used to treat the data. Findings reveal that the Grade 9 have varied levels of engagement before and after the application of the intervention. Likewise, there is a significant change on the students' pre-survey and post-survey scores. Moreover, this study found that the use of games such as Four Pics One Word and Deal or No Deal was effective in improving the students' level of engagement in their online synchronous classes in English.

INTRODUCTION

Students' engagement is an important factor in the success of the teaching-learning process. High engagement is a manifestation of an interactive, engaging and motivating classroom environment. Low engagement, on the other hand, is a result of uninteresting and boring classroom situations which can result in low performance or achievement.

While it is true that online distance learning has been implemented as a temporary substitute for the face-to-face teaching and learning, there have been many problems experienced by the students such as lack of engagement in class discussions. During our Field Study courses Field Study courses such as Observation of Teaching-Learning in Actual School Setting and Participation and Teaching Assistantship, we have monitored several classes under different teachers and we have observed that there is an underlying problem on the engagement of students. When the teacher would ask questions regarding their topic, the room would then be silent because no one wanted to answer. The teacher even tried to call some names but no one would respond and some of them would automatically leave the Google Meet. On the other hand, some students would leave the meeting once the attendance is finished and some only would join the meeting when the class would nearly end. There may be a lot of underlying reasons regarding these actions of students. One thing that is certain is that they have low engagement in their online synchronous classes.

Thus, it is necessary for us to look for ways on how to improve students' engagement in English during our practice teaching. These ideas, observations and results of studies about the use of games in teaching prompted us to improve the Grade 9 students' engagement in their online synchronous classes in English.

This study sought answers to the following questions:

1. What is the students' level of engagement before the application of the intervention?
2. What is the students' level of engagement after the application of the intervention?
3. Is there a significant change on the students' level of engagement before and after the application of the intervention?

Games as Intervention in Improving Students' Engagement

According to Skinner & Belmont (1993), engagement characterizes the emotional involvement and passion for participating and accomplishing learning activities. With this, Davis & Mcpartland (2012) contented that the combination of strong motivation and high task engagement enables a successful learning experience. Likewise, Hamari et al. (2016) regarded engagement as the simultaneous occurrence of concentration, interest, and enjoyment encapsulating the experience of flow.

In the same vein, learner engagement refers to the effort the learner makes to promote his or her psychological commitment to stay engaged in the process of learning in order to acquire knowledge and build his or her critical thinking (Rajabalee et al., 2019).

Considerably, Saprudin et al. (2019) stated that one strategy that ensures the increase of students' engagement in a meaningful way is through games. Likewise, Sailer et al. (2017) posited that games were a part of human societies throughout history. They have been a source of fun and enjoyment for many years and will remain the same for the future.

Consequently, several studies have been conducted to determine the effectiveness of gamified approach to teaching and learning. Kim (2012) argued in his study that students are posited to be more productive and more engaged in a gamified context. Saprudin et al. (2019) conducted a study titled "The Effectiveness of Using

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Digital Game toward Students' Academic Achievements in Small and Large Classes: A Comparative Research." Based on the results of their study, they concluded that there is a positive correlation between students' game scores with an increase in students' academic achievement. They further concluded that the use of a digital game can be one alternative solution in overcoming problems related to the reduction of student engagement in the learning process, especially in large classes. Moreover, the use of a digital game in large classes can significantly increase the students' academic achievement compared to students in small classes.

Likewise, Naji (2020) explored in his thesis titled "Enhancing the Student Learning Experience With Gamification: The Case of "GRH, Mondialisation Et Innovation" course" the potential of gamification to enhance the student learning experience in a higher education setting. Consequently, he concluded that the game elements used in the experiment improved the overall student experience. At different levels, the attitude of students towards game mechanics used in the study is favorable. Gamification fostered the students' motivation and engagement.

MATERIALS AND METHODS

The intervention used in this study is a lesson inspired by game-based approach. It incorporated games which we believe can improve the students' engagement in English synchronous class with the topic, "Validity: Factors to Consider in Checking the Validity and Reliability of Information." The games used in this study are the modified Four Pics, One Word, and Deal or No Deal. Four Pics One Word is inspired from a mobile game application titled, 4 Pics 1 Word. The objective of the game is for the players to identify the needed word from the four pictures that serve as clues.

We integrated this application for the learners to have an initial knowledge about what they will be learning during our online synchronous sessions. We believe that it could be an effective way to motivate them, to hook their interest, and to grab their attention. Thus, this game was applied before diving in into the discussion part of the lesson. With this, the students are able to warm their mind up before jumping into the more complex discussion of the lesson. In this intervention, there are four pictures presented in every set. The learners are tasked to identify the needed words that are related to our topic, using the four pictures as clues. In addition, a twist was added to this classic game by providing several letters in the given boxes as another clues for the students to come up with the correct words. To be able to answer each set, they should be able to compete with one another by tapping the raise-hand button as fast as possible, so we can recognize them. The student who taps the raise hand button first has the chance to give his/her answer or his/her guess. He/she can guess the best word that fits the set of pictures. Finally, he/she must answer the corresponding question related to the set of pictures

orally.

Another game incorporated in the lesson is the modified Deal or No Deal. Deal or No Deal is inspired from a reality game show called by the same name. We modified the game to make it plausible for their online synchronous classes. This game is done to foster active engagement even after the discussion and at the same time to assess what they have learned in the lesson discussed. Thus, it serves as their assessment activity.

The game starts by asking a volunteer from the class. We then show 20 brief cases. Each brief case contains a picture which the student needs to explain by telling whether the flashed picture is valid or not. The student then gives pieces of evidence to prove his/her point. The student who volunteers has the chance to say Deal or No Deal before the brief case is opened. If he/she picks deal, then the brief case is opened and he/she starts to explain his/her claim and prove his/her point. On the other hand, if he/she chooses no deal, he/she needs to choose among his/her classmates to be the one to tell whether the image is factual or not then explain his/her claim. The person chosen by the student to answer automatically obtains the points, provided that he/she can explain well his/her stand. We chose this intervention because we believe that it can initiate active engagement in our discussions since the students have to apply what they can learn about the topic, "Factors to Consider in Checking the Validity and Reliability of Information."

This study involved a survey questionnaire patterned after the Student Engagement Survey by Singh, Srivastava and Singh (2014). Some of the items were modified to fit in with the mode of learning when the study was conducted. The questionnaire consists of 14 items which measure the students' level of engagement. The instrument is a 4-point scale self-assessment survey and uses the following descriptive interpretation:

Scale	Descriptive Interpretation
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Agree

Likewise, this study used pretest and posttest. Although these are not part of the study, these were administered to support the findings on the students' level of engagement. We, the researchers, constructed a 20-item pretest-posttest which was aligned with the topic "Factors to Consider in Checking the Validity and Reliability of Information." The pretest and posttest were facilitated through the use of Google Forms. This study used the results of the pre-survey and post-survey with regard to the students' level of engagement before and after the application of the intervention taken from the Grade 9 students who were officially enrolled at MMSU – LHS, Batac Campus, Ilocos Norte, Philippines, for the school year 2021-2022, as our respondents. The purposive sampling technique was used since the study considered all the Grade 9 students in the said school as research participants. Therefore, thirty-nine (39) students were involved in this study. The data

were gathered from the said 39 students in terms of their responses on the modified Student Engagement Survey by Singh and Srivastava (2014).

Prior to the conduct of this study, we, the researchers, followed a definite procedure in gathering the data needed. When we had our observation of classes in our Field Study 1 and 2, we have already identified the problem on the students' engagement in online synchronous classes, as well as the grade level to take in our study. With this, we looked for an intervention that could help address the identified problem. During our practice teaching, we asked permission from the principal of the Laboratory High School so we could already start conducting our study. Next, we administered the pre-assessment on the students' level of engagement using the modified Student Engagement Survey by Singh and Srivastava (2014). Likewise, we facilitated the pretest to support the results of the pre-assessment. After we gathered the results of the survey questionnaire and pretest, we designed lessons focusing on the topic "Factors to Consider in Checking the Validity and Reliability of Information" since this was the current topic as prescribed by the curriculum during our practice teaching. Inspired by game-based approach, we incorporated games in our lessons which served as the intervention in our study. In our lessons, games such as the modified Four Pics One Word and Deal or No Deal were used in our online class discussions with the students. The lessons and the activities integrated in the plan were linked with the content standards, performance standards, and learning competencies found in the curriculum guide. After the application of the intervention, we administered the post-assessment on the students' level of engagement and the posttest about the topic discussed. The posttest is the same as the pretest with the same context. This test served as a support to the results of the post-assessment on students' level of engagement. Finally, the data obtained from the survey questionnaire were interpreted, analyzed and compared. Likewise, the results of the pretest and posttest were used to further validate the data gathered from the students' level of engagement. The students' level of engagement was described using the following range of scores with their corresponding descriptive interpretation:

Range Scale	Descriptive Interpretation
3.26-4.00	Highly Engaged
2.51-3.25	Moderately Engaged
1.76-2.50	Slightly Engaged
1.0-1.75	Not Engaged

To determine the significant change on the students' level of engagement before and after the implementation of the intervention, mean difference was used.

RESULTS AND DISCUSSION

This chapter presents the results and discussion on the data gathered in improving the Grade 9 students' engagement in English games. It includes the results of the pre-survey and post-survey which were used to measure the students' level of engagement.

Students' Level of Engagement Before the Application of the Intervention

The first concern of the study is to determine the students' level of engagement before their exposure to the intervention which is reflected in Table 1. Before the application of the intervention, the item number 6 (*I ask questions during online synchronous meetings*) got the lowest mean score of 1.67, described as Not Engaged. This implies that the majority of the students were not engaged to asking questions during online synchronous meetings. This can be attributed to the modality of teaching and learning the students are involved in. Since they are not in a physical classroom, they are less interested and less motivated to ask questions about the topic. Because of the learning modality they are in, these students are less likely becoming passive learners during their online synchronous process. It is interesting to note that the students obtained the highest mean score of 3.13 in item number 9 (*I enjoy learning new things in class.*) described as *Moderately Engaged*. This implies that even before the application of the intervention, most of the respondents enjoy to learn new things. This can be attributed to the students' eagerness to explore new things about their lessons even the modality has shifted to online. Likewise, their teacher facilitates engaging activities which can make them excited to experience new things in their online class. As what Nguyen et al. (2021) claimed, students whose synchronous classes include active-learning techniques (which are inherently more social) report significantly higher levels of engagement, motivation, enjoyment, and satisfaction with instruction. Considerably, the students are also Slightly Engaged (2.13) in communicating freely with other students in classes. This finding can be attributed to the students' level of closeness with one another. Since the students have not seen one another for a long time, their communication has been affected unlike during face-to-face that were still strongly attached with one another. It can also be noted that the students obtained a mean score of 2.23 in item number 5 (*I think learning is not boring*) which is described as Slightly Engaged. Although learning is not boring, students are still slightly engaged since they are less connected to the teacher and the topics they are learning because online learning hampers them to fully grasp the important ideas and concepts about their lessons. In addition, the sudden shift of education may have influenced the emotional, social, physical, and mental aspects of students. It could be gleaned from the same table that the students obtained a mean score of 2.49 in item number 7 (*I contribute to class discussions*) which is described as Slightly Engaged. This finding can be attributed to the students' interest and motivation in learning. Likewise, poor internet connection and noisy environment can hamper them to get involved in class discussions. The table also shows that the students are *Moderately Engaged* in most of the items such as *I am confident that I can learn the basic concepts that are being taught* (3.10); *I am certain that I can understand the most difficult*

lessons discussed (2.85); I am very interested in learning (2.87); I participate in class (2.82); I like what I am learning (2.79); When I work on something in class, I do not feel discouraged (2.77); I can relate to the models and concepts during class discussions (2.72); I am engaged in the learning process (2.64).

In general, before the application of the intervention, the

Table 1: Mean scores on the students' level of engagement before their exposure to the intervention

Indicators	Mean	Descriptive Interpretation
1. I participate in class.	2.82	ME
2. I am engaged in the learning process.	2.64	ME
3. I am very interested in learning.	2.87	ME
4. I like what I am learning.	2.79	ME
5. I think learning is not boring.	2.23	SE
6. I ask questions during online synchronous meetings.	1.67	NE
7. I contribute to class discussions.	2.49	SE
8. I can relate to the models and concepts during class discussions.	2.72	ME
9. I enjoy learning new things in class.	3.13	ME
10. When I work on something in class, I do not feel discouraged	2.77	ME
11. I can freely communicate with other students in classes.	2.13	SE
12. I can freely communicate with the teacher in classes.	2.03	SE
13. I am certain that I can understand the most difficult lessons discussed.	2.85	ME
14. I am confident that I can learn the basic concepts that are being taught.	3.10	ME
Overall Mean	2.60	ME

Legend:	Range Scale	Descriptive Interpretation
	3.26-4.00	Highly Engaged(HE)
	2.51-3.25	Moderately Engaged(ME)
	1.76-2.50	Slightly Engaged(SE)
	1.0-1.75	Not Engaged(NE)

students' engagement obtained the total mean score of 2.60 with a descriptive interpretation of *Moderately Engaged*. When we look at the research into survey distribution methods, we can see that the total online survey response is 2.60 which correspond to moderately engage. This finding implies that these learners are not engaged during the pre-assessment since it is reflected in the survey that these learners are passive during online synchronous class. To support this claim, the results of the pretest as shown in Table 2 reveals that the majority of the students were able to obtain a score ranging from 6-10 which implies that majority of the students are familiar with some of

the concepts related to their upcoming lesson. While some students obtained scores ranging from 11-15 which is interpreted as *Satisfactory*. This implies that some of the students were able to come across some concepts of the topic. On the other hand, few students got scores ranging from 16-20 which is interpreted as *Very Satisfactory*. These students were familiar with most of the concepts than the rest of the class. Nonetheless, the result of the pretest revealed that none of the students obtained a score ranging from 0-5 which can be interpreted that all of the students are familiar with the concepts related to their upcoming lesson however, the level of their knowledge on the concepts vary.

Students' Level of Engagement After the Application of the Intervention

Another concern of the study is to determine the students' level of engagement after the application of the

Table 2: Distribution of the students according to their pretest and posttest scores. (n=39)

Scores	Description	Pre-test		Post-test	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
16-20	Very Satisfactory	10	26.64	33	84.62
11-15	Satisfactory	12	30.77	6	15.38
6-10	Fair	17	43.59		
0-5	Poor				
TOTAL		39	100.00	39	100.00
MEAN		13.15		18.69	

intervention as reflected in Table 3. After the application of the intervention, the table shows that item number 4 (I like what I am learning) attained the highest computed mean score of 3.56, with a descriptive interpretation of Highly Engaged. Because of the use of games in the teaching and learning process, students were more involved in the online classroom which made them like and appreciate what they were learning. Thus, the game-based activity used in this study made them like the lessons they needed to learn.

It could also be gleaned from the table that the engagement indicator stating "I can freely communicate with

the teacher in classes" obtained the lowest mean rating of 2.97 which is described as *Moderately Engaged*. The online setup could be a factor why most of the students cannot freely communicate with their teacher during classes. With online modality, students experience interruptions on their internet connection which can hamper them to communicate well with their teacher. Likewise, students are hesitant to interact to their teacher since they have not met him/her personally and have not established good relationship with one another. As what Aparajeya (2016) asserted that because of hesitation, students often shut down, isolating themselves out of fear or embarrassment.

Table 3: Mean scores on the students' level of engagement after their exposure to the intervention

Indicators	Mean	Descriptive Interpretation
1. I participate in class.	3.46	HE
2. I am engaged in the learning process.	3.28	HE
3. I am very interested in learning.	3.38	HE
4. I like what I am learning.	3.56	HE
5. I think learning is not boring.	3.10	ME
6. I ask questions during online synchronous meetings.	3.05	ME
7. I contribute to class discussions.	3.18	ME
8. I can relate to the models and concepts during class discussions.	3.36	HE
9. I enjoy learning new things in class.	3.44	HE
10. When I work on something in class, I do not feel discouraged	3.44	HE
11. I can freely communicate with other students in classes.	3.13	ME
12. I can freely communicate with the teacher in classes.	2.97	ME
13. I am certain that I can understand the most difficult lessons discussed.	3.23	ME
14. I am confident that I can learn the basic concepts that are being taught.	3.41	HE
Overall Mean	3.29	HE

Legend:	Range Scale	Descriptive Interpretation
	3.26-4.00	Highly Engaged(HE)
	2.51-3.25	Moderately Engaged(ME)
	1.76-2.50	Slightly Engaged(SE)
	1.0-1.75	Not Engaged(NE)

Students sometimes feel they are taking up too much of a teacher's time with frequent communications. Likewise, the study of Alawamleh et al. (2020) found that there is a decrease in communication levels between the students and their teachers, and there is an increase of feeling of isolation caused by online classes.

It can also be noted that the students are *Highly Engaged* in most of the items such as *I am engaged in the learning process* (3.28); *I can relate to the models and concepts during class discussions* (3.26); *I am very interested in learning* (3.38); *I am confident that I can learn the basic concepts that are being taught* (3.41); *I enjoy learning new things in class* (3.44); *When I work on something in class I do not feel discouraged* (3.44); and *I participate in class* (3.46). This finding shows that the intervention has an effect on the engagement of students in their synchronous classes. This proves that through the use of digital games in online synchronous classes, the students find learning more interesting, engaging, relatable, and enjoyable. This makes them more comfortable in learning new concepts that are being taught. Relatedly, Lynch (2020) stated that playing games is much more fun than sitting behind a desk and listening to somebody talk. A game-based learning experience enables the students to engage with the class and the teacher- this is a much more effective and enjoyable teaching method, he added. It is also necessary to note that item number 6 (*I ask questions during online synchronous meetings.*) which gained the lowest mean score in the pre-assessment improved after the implementation of the intervention. It gained a mean score of 3.05 which is described as *Moderately Engaged* in the post assessment. This shows that although it obtained a *Moderately Engaged* as its descriptive interpretation, it reveals that there is an improvement on the level of engagement of the students during their online synchronous classes with the help of the intervention.

The total mean score of the students' engagement in the

post-assessment is 3.29 described as *Highly Engaged*. This finding proves that using games in online synchronous learning can encourage the students to engage in class discussion and to find learning fun yet meaningful. This finding can be linked to what Juraschka (2019) posited that games help students pay attention in class, improves their overall understanding of fundamental concepts, and helps students stay interested in what they are learning. Overall, teaching the topic "Validity: Factors to consider in checking the validity and reliability of information" through digital games Highly Engaged students in learning. As cited in the study of Serrano (2019), De Freitas (2018) found in a literature review written to analyze research and determine whether games are effective learning tools, that the reviewed research studies substantiated the premise that using educational games in addition to quality game design and elements can positively impact student engagement.

To support the results on the students' level of engagement after the application of the intervention, the posttest as shown in Table 2 reveals that 33 (84.62%) of the students obtained the score 16-20 rated as *Very Satisfactory*, while only 6 (15.38%) of the students scored 11-15 rated as *Satisfactory* as a total of 100%. Interestingly, none of the students obtained fair and poor scores, respectively. This is an indication that the intervention used in the implementation of the study is effective since the majority of the learners obtained the highest scores in the post-test and none of the students obtained scores lower than 15. In connection to the results, in the study conducted by Senol (2007), games were integrated unto vocabulary teaching and it was observed that they had a positive effect on student success.

Significant Change on the Student's Level of Engagement Before and After the Application of the Intervention

This study also determined the significant change on the students' level of engagement before and after the application of the intervention. Table 4 shows the mean difference on the students' level of engagement in their pre-survey and post-survey scores. It could be gleaned from the table that the students obtained an overall mean

score of 2.60 described as *Moderately Engaged* in their pre-survey scores, while they obtained an overall mean score of 3.29 interpreted as *Highly Engaged* in their post-survey scores. Likewise, it can be deduced from the table that the overall mean of the students in the post-survey is 0.69 higher than their overall mean score in the pre-survey. Moreover, the mean difference implies that the students' level of engagement improved after the application of the intervention. This can be attributed to the features of the games used in the online synchronous class discussions which made the teaching and learning process more engaging and more interactive.

This finding can be linked to Juraschka (2019) claimed that games help students pay attention in class, improves their overall understanding of fundamental concepts, and helps students stay interested in what they are learning. To support this finding, it can be deduced from Table

Table 4: Results of the mean difference on the students' level engagement in their pre-survey and post-survey scores

	N	Mean Score	Description	Mean Difference
Pre-survey Scores	39	2.60	Moderately Engaged	0.69
Post-survey Scores	39	3.29	Highly Engaged	

5 that the students obtained an overall mean score of 13.15 described as Satisfactory in their pretest, while they obtained an overall mean score of 18.69 interpreted as Very Satisfactory in their posttest. It is interesting to note that the students' overall mean score in the posttest is 5.54 higher than their overall mean score in the pretest. This is an indication that there is a significant change on the students' level of test performance as evidenced by their overall mean score in the posttest after the application of the intervention. This implies that the intervention was not only effective in improving their level of engagement but also their level of test performance. This finding can be linked to the study of Saprudin et al. (2019) which recommended that game can be one of the positive solutions in overcoming problems related to the reduction of student engagement in the learning process, especially in large classes. Moreover, the use of games in large classes can significantly increase the students' academic achievement compared to students in small classes. Furthermore, the findings of this study support the study of Yurdaarmagan et al. (2015) which claimed that game-based learning can improve the performance and motivation better than the traditional teaching method. When we asked the Grade 9 students through an interview about their impression on the games used

Table 5: Results of the mean difference on the students' pretest and posttest scores

	N	Mean Score	Description	Mean Difference
Pre-survey Scores	39	13.15	Very Satisfactory	5.54
Post-survey Scores	39	18.69	Satisfactory	

during the class through an interview, all them claimed that the games such as 4 Pics, 1 Word and Deal or No Deal are exciting and engaging as reflected in their responses:

(Student A) It was exciting sharing my thoughts regarding our lesson through the game four pics one word since it added some twist to the discussion of our teacher.

(Student B) I was afraid to express my ideas in the class because my answers might be wrong, however, when there was already the involvement of the game in our class, it felt like I'm just having a game with my classmates.

(Student C) The game was really enjoyable and I learned a lot.

(Student D) Our class was interactive and almost all of us participated during the game. I hope we'll have a game every class discussion.

(Student E) The class was not boring. It was not just engaging but it offered adequate information about our lesson that we can learn from.

The responses of these students proved that the intervention used created excitement and ease which made them engage themselves to the class discussion. Fleishchmann & Ariel (2016) stated that games encourage high engagement time and there is high motivation and goal orientation, even after failure. It can also be noted that the games were enjoyable and at the same time they provide stimuli to their learning process that shows remarkable benefits to learning. Likewise, according to their study, games provide personalized learning, where it ensures providing learners with cue, hints, and partial solutions to keep them progressing through learning. All in all, these responses indicate that the intervention used during the class was engaging. In accordance to this finding, Gareau & Guo (2009) claimed that games can help to attract and maintain attention to instruction. Games can be relevant to the learners' needs and wants as long as games can promote the learning of relevant content. Games can help to increase learners' confidence by helping to promote the learning of important content. Finally, games can help to promote satisfaction among students by helping to make instruction more enjoyable and fun.

CONCLUSION

In the light of the findings, it can be concluded that the Grade 9 have varied levels of engagement and test performance before and after the application of the intervention. Likewise, there is a significant change on the students' pre-survey and post-survey scores, and pretest and posttest scores, respectively. This study further concludes that the use of games such as Four Pics One Word and Deal or No Deal was effective in improving the students' level of engagement and test performance in English. Based on the limitations, findings and conclusions drawn, the researchers suggest several recommendations. The implementation of games such as Four Pics One Word and Deal or No Deal in teaching can be extended to other topics under the English curriculum,

and other areas. The games can be used in teaching the Junior High School as well as in the Senior High School. The utilization of games can also be used to measure other dimensions of engagement and participation in class including measuring the students' macroskills such as reading, writing, speaking and listening. Similar studies can be conducted such as implementing digital games in teaching other topics and disciplines. Seminars, workshops and trainings for teachers regarding ICT integration in teaching should be conducted to improve the instructional materials considering the demands of 21st century education. Moreover, necessary trainings and seminars in creating and conducting digital games is a must to boost the learners' engagement and participation in class since the education system makes use of different learning modalities. For a more reliable data, we recommend other teachers to use the intervention on a longer time frame while also focusing on a certain macro skill. Further, the study is also necessary to involve other respondents to verify whether the digital games have an impact on students' engagement and performance.

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