

# Teachers' and Learners' Perceptions Towards Digital Game-Based Learning in ESL Classroom

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## Abstract

Technology is being used in teaching environments to engage students and teachers effectively in the classroom context and building their interest to explore the versatile phenomenon of learning. Digital game-based learning has become a new learning experience that enhances students' and teachers' motivation to achieve competencies. The present research explores the perceptions of teachers and students about digital game-based learning in ESL classrooms. The researcher draws on the relevant literature to demonstrate and support the study's findings. The research is investigated quantitatively by administering a questionnaire to measure the perspectives of ESL teachers and the foundation-year students at King Abdulaziz University, Kingdom of Saudi Arabia. The quantitative data gathered from students and teachers were analyzed through SPSS software. The findings indicate that a significant number of respondents prefer using technological devices for better outcomes in the teaching and learning process. It also shows that using digital games had positive impact in relation to three main variables; engagement with learning and teaching, acceptance of DGBL and the effects of DGBL to learn the English language. This also helps participants to gain learning experience in their environment at any time and from anywhere.

**Keywords:** Digital Game-Based Learning (DGBL), Students' Perceptions, Teachers' Perceptions, Self Determination Theory

## 1. Introduction

In an age of information technology, English language teaching and learning tends to utilize from digital tools that might enhance the learners' outcomes. The digital-based learning opportunities which affect students' achievements by social interaction and support for the use of digital technologies for learning is an example of these tools which will be investigated at this study. Moreover, both students' and teachers' perceptions about the effectiveness of using digital-based learning at English language learning and teaching and its influence on their performance positively in language, reading and science will be taken into consideration at this study. Students, with different English course levels, have been found to take interest and engage in learning via Digital Game-Based Learning (DGBL), in the classroom context, because it creates multi-dimensional outcomes in terms of educational gains, enjoyment and confidence in learning a language (Gamlo, 2019).

Digital game-based learning is also getting much attention in modern educational settings because it has creative modes of self-expression in the language learning environment. Studies prove that in order to encourage students to learn a language, teachers should introduce interesting strategies such as the use of electronic tools of learning, which can improve students' knowledge and engagement in the learning process as well as the development of mental capabilities (Mohamad et al., 2019). However, teachers should be aware of which e-games suit learners' level and help to foster and refine the information obtained in the educational context effectively.

Digital Game-Based Learning (DGBL) in this study will focus on its relationship to learners' autonomy and how far does this tool promotes learning autonomy since it gives learners an opportunity by choosing suitable styles and methods that are more effective for them (Mohamad et al., 2019). Teachers are also observed to include DGBL in ESL classrooms to engage students in generating new ideas and giving feedback which reflects in the successful implementation of their knowledge (Bradbury, Taub, & Azevedo, 2017). The present study aims to investigate the effects of digital game-based learning on ESL learners' performance and the perceptions of both teachers and students regarding this method.

## 2. Literature Review

### *2.1 Motivational Benefits of DGBL*

Digital game-based learning has gained enormous attention in educational settings. The positive relationship between Digital Game Based Learning (DGBL) and motivation has shifted educators' attention to obtain these techniques as an alternative to the traditional ones (Alsawaier, 2018). For instance, Iten and Petko (2016) conducted empirical research on the relationships between the fun of games, learners' motivation and test scores. The findings reported a positive correlation between enjoyment and motivation of games in the educational context. In the same way, a study demonstrated the effect of digital games on ESL learners' achievement. The students had become more engaged in the classroom during the games (Smith, 2018).

## *2.2 Students' Perceptions of DGBL*

Digital game-based learning enhances students' focus in studies by giving them opportunities to learn with joy. Digital Game-Based Learning was implemented on ESL students. It showed students' positive attitude towards digital games since it increases concentration in learning and provides enjoyment at the same time (Wang & Lieberoth, 2016). Thus, it is a strong predictor of engaging students actively in lectures.

Applying digital games in education also depends on students' acceptance of this technique, which forms the basis of its long-term use. A study was conducted by Fithriani (2018), on 30 EFL learners who were attending an extra English course that relies on technological resources. It revealed the positive attitude of students with DGBL, especially in teaching grammar. In addition, Gamlo (2019) implemented a study on foundation-year students at King Abdulaziz University to find out the role of DGBL on students' motivation to learn English. Over a period of seven weeks, the students noted that digital game-based learning increased their motivation and improved their performance too. Similarly, it was noted that using educational games such as Kahoot in the ESL context foster learners' engagement and decrease distraction in the classroom (Licorish et al., 2018). Therefore, students prefer educational technologies in contrast to the traditional ways of learning.

## *2.3 Teachers' Perceptions of DGBL*

Digital game-based learning can be beneficial for teachers to plan their lessons effectively and assess students in terms of their learning progress. Wang and Lieberoth (2016) reported that DGBL is helpful for teachers because it motivates students to participate in class activities and improves their learning performance. So, teachers can use digital games as a reflective tool to check students' learning and enhance their learning achievement. It was also stated that Digital games help students stay active and energetic in class while attending lectures (Licorish et al., 2018), thus leading to the creation of a successful learning environment.

One famous digital game being used in the educational context is Kahoot which serves as an aid in language learning and teaching. Plump and LaRosa (2017) said that "Kahoot" is a digital game, which assists teachers and students. This is used for students to know their comprehension level of language learning concepts. Besides, it found that Kahoot is also considered as an important assessment tool among EFL university students. It could be used in key English language skills such as vocabulary, to support long-term memory (Boulaid & Moubtassime, 2019).

## *2.4 Learner Autonomy*

Learner autonomy was defined as the ability of a learner to be responsible of his/her learning process (Holec, 1981 as cited in Boyadzhieva, 2016). Digital game-based learning provides learners with some curricular decisions and control over their learning process (Majdoub, 2016). Involving learners in the syllabus design or even in choosing the styles and methods they prefer does not negate the role of teachers in developing learner's autonomy.

Moreover, Digital games can enhance autonomy in learning because students can operate games on their mobile or computer devices (Wang & Lieberoth, 2016). As a result, concentration and a sense of control are increased in an optimal learning environment. Trinder (2016) examined the self-directed use of technology enhances students' language skills especially listening and vocabulary. The students can take part by participating in a "game show" and respond to the questions keeping in view the time limit, hence using self-regulation and a self-directed approach. Therefore, when their points appear on the scoreboard, they are motivated to reach the top level.

In addition, DGBL improves learners' critical thinking since it enhances cognitive skills which are regarded as a crucial strategy in facilitating the learning process (Majdoub, 2016). Applying cognitive strategies in this situation helps second language learners make a connection between previous knowledge, in tune with the current ones. Thus, DGBL is a method that promotes learner autonomy.

### *2.5 Self Determination Theory*

The main emphasis in the literature review of digital game-based learning DGBL is on motivation and engagement which is also the principal focus of the self-determination theory of human motivation (SDT). According to Alsawaier (2018), the theory consists of three major rules: autonomy, competence and relatedness. The first factor i.e. autonomy is related to the choice-making and problem-solving abilities of learners' actions. On the other hand, competence is relevant to motivation which in turn helps learners to achieve success and resolve different learning problems. The last factor is Relatedness which is about establishing social connections i.e. the social status of learners with others in order to gain mutual respect and interdependence (Alsawaier, 2018). For this purpose, both teachers and students' role are essential to promote or hinder technology integration in teaching and learning (van Roy & Zaman, 2019). Overall, the sum of these factors can easily be achieved in a digital game-based learning environment.

Several studies have recently addressed either students' or teachers' perceptions of the effects of DGBL on ESL learners as presented in the current literature review. As a result, this study is going to cover both perceptions of teachers and learners simultaneously.

In this respect, the research questions of the study can be seen below:

**Q1:** How does Digital Game Based Learning explain the interest and motivation of foundation year students and teachers in the ESL classroom?

**Q2:** To what extent is Digital Game Based Learning accepted by foundation year teachers and students in ESL classrooms?

**Q3:** In what ways does the use of E-learning games influence students' and teachers' engagement towards ESL?

**Q4:** How does the use of E-learning games enrich teaching and learning experience of English as a Second Language?

**Q5:** What are the relationships between engagement with learning and teaching, acceptance of DGBL, and the effects of DGBL on foundation-year students and ESL teachers?

### **3. Research Methodology**

The quantitative method was used in this research through administering online questionnaires to both ESL students and their teachers.

#### *3.1 Participants*

The ESL foundation year students and their teachers were the target participants of this research, at the English Language Institute (Eli) at King Abdulaziz University Saudi Arabia. The teachers and students were randomly chosen according to their voluntary acceptance for this research. The sample size of this study was 35 students and 21 teachers. The students' level ranges from (A1 to B2) based on the Common European Framework of Reference (CEFR), aged 18-20 years old. They attend either Science or Arts/Humanities track. The method of teaching the English courses is face-to-face.

#### *3.2 Instruments*

The research instrument used in this study was a questionnaire to quantitatively investigate students' and teachers' perceptions regarding the effects of digital game-based learning in ESL classrooms. The questionnaire is adopted from the survey conducted by the Colorado Community College System in collaboration with JVA Consulting (Bradley, 2014) to better understand how to improve student learning and success. The questionnaire was modified to meet the study requirements. There were two questionnaires (one each for the teachers & students) with 15 statements for each questionnaire. Both questionnaires based on the 5-point Likert scale that varies from strongly disagree, disagree, neutral, agree and strongly agree. A questionnaire is quantitative, and thus allows easy analysis of results. Also, the students' questionnaire translated into Arabic to avoid any confusion.

#### *3.3 Procedure*

The researcher received the ethical approval from the English Language Institute at King Abdulaziz University to collect the data from the foundation year students and their ESL teachers. The students' questionnaire was translated into the Arabic language by the researcher and checked by an expert in English-Arabic translation from KSA because the learners vary in English proficiency levels, and in order to avoid any confusion and difficulties in understanding the items. Next, a pilot study was conducted on a convenient sample which consisted of 15 participants for each questionnaire to ensure the efficiency of the questionnaire. After that, the questionnaire was administered to the 36 students and 21 teachers to fill out the online form. According to Merriam (1995), the reliability of research instruments concern with the score or degree to which results are consistent during a period of time, and if the outcome of an investigation can be produced again, then the instrument (questionnaire) is acknowledged to be reliable. The reliability coefficient of the 21 teachers is .919 Cronbach's alpha, and of the 35 students is .784 as demonstrated in Table 1. Thus, the reliability score of both questionnaires

indicate the internal consistency of the instruments to be appropriate for the study goals (Dörnyei & Csizér, 2012). The participants got confidentiality about their identity to volunteer in this study. After receiving responses, the data were transferred into Excel to modify the items and translate them into English before beginning the data analysis on the Statistical Package for the Social Sciences (SPSS).

Table 1. The reliability of both questionnaires

	Number of Items	Cronbach's Alpha
Teachers' questionnaire	15	.784
Students' questionnaire	15	.919

### 3.4 Data Analysis

The quantitative data collected from the respondents were analyzed via SPSS to analyze the available data. The participants' responses were utilized to describe students and teachers' perceptions of improving second language acquisition through digital games. The results were used to understand the research problem. The analyzed data is presented through charts divided into three main variables; engagement with learning and teaching, acceptance of DGBL and the effects of DGBL. In addition, Pearson Correlation Coefficient used to investigate the relationship between the variables of DGBL.

## 4. Results

The data of the participants were computed using (SPSS). The results are derived from the responses of students and teachers were based on the 5-point Likert scale to examine their perceptions towards digital game-based learning in the teaching of the English language.

### 4.1 The Results of Students' Perceptions towards DGBL

Figure 1 (See appendix A) represents the students' perceptions about engagement with learning through digital game-based learning for learning the English language. According to the statement "Digital Game-Based Learning improves my language learning skills", 54.3% of the total sample agree with this view. Besides, similar percentages are in evidence for the questions "Digital Game-Based Learning improves problem-solving skills in learning language", and "Digital Games enable students to learn anytime and from anywhere". So, most students consider DGBL as an important tool for solving language-related issues, as well as being convenient with regards to time and place. While examining how learning language through playing enables students to stay engaged actively and consciously in classrooms, about half of the students, with 51.4%, were agreed on this point. This means DGBL approach eases the learning process while being fun at the same time. However, there were varied students' responses to the question which examined whether Digital Game-Based

Learning wastes the time and capabilities of students, with 20% strongly disagree, 28.6% disagreed, 31.4% were neutral, 17.1% agree and 2.9% responded with strongly agree.

Figure 2 (See appendix A) shows the acceptance of Digital Game-Based Learning ESL classroom. Nearly 60% agreed that DGBL strengthens students' skills to use electronic tools in learning language. In contrast, almost 54.3% disagreed that digital games are only a source of fun and entertainment. About improving attitude towards college learning through DGBL, 42.9% were neutral, i.e. they are not sure yet about its effectiveness at the university level. Knowing about using DGBL for future classes, 42.9% of students prefer to use this method in their future classes by responding with 'agree'. So, we can conclude that students have a positive attitude towards the implementation of DGBL in further classes.

Figure 3 (See appendix A) represents the effects of DGBL on students. Most students agree with its positive effects on the learning process, which is revealed in the items of "increase students' participation", "creates fun while learning language", "provides competitive learning environment" and "learning course concepts efficiently" with 37.1%, 48.6%, 57.1% and 48.6% respectively. Thus, this approach is a way to motivate students to take part in class activities while learning the English language. On the other hand, more than half of the students disagreed that digital games have a negative impact on learners. Overall, DGBL reflects positive influences on ESL learners.

#### *4.2 The Results of Teachers' Perceptions towards DGBL*

Figure 1 (See appendix B) shows the perceptions of teachers towards engagement with teaching through DGBL. To know the effectiveness of DGBL in improving teaching methodologies and skills, 47.6% strongly agree. For 42.9% of the teachers agree that DGBL improves their problem-solving skills in teaching the English language. Regarding "E-learning and teaching through DGBL at any time and from anywhere", 52.4% of the teachers chose to agree with it. To know whether DGBL engages students actively and consciously in classroom, 47.6% strongly agree and 38.1% agree. So, the large proportion is in favor of supporting DGBL for better classroom engagement. Most teachers did not support the idea of DGBL as a source of wasting time and capabilities, by replying either disagreed or strongly disagreed, with 47.6% and 33.3% respectively.

Figure 2 (See appendix B) represents the perception of teachers according to the acceptance of DGBL. When asked about the strengthening of skills in using electronic tools for teaching language, 52.4% strongly agree which reflects more than half of the teachers in the sample. In response to, "DGBL as a source of fun and entertainment", most teachers disagree with it by 42.9%. To know whether DGBL improves attitude towards college teaching, 28.6% were both strongly agree and agree, i.e. more than half of them tend to support that digital games has a positive impact on attitudes. Also, 61.9% of the ESL teachers prefer to use DGBL in their future classes. This highlights the level of acceptance on DGBL by the teachers.

Figure 3 (See appendix B) illustrates the effects of DGBL on teachers. The first statement about motivating students to participate in class, 52.4% strongly agrees, 42.9% agree, which shows the highly positive impact of DGBL. The statement of “DGBL is a way of teaching through fun”, 57.1% of the teachers being strongly agreed. When teachers were asked whether DGBL has any negative effects on students, 47.6% showed a neutral stance. According to the competitive teaching methodology, 42.9% strongly agree with its effect in this respect. Regarding whether DGBL is distracting students from focusing on studies, 42.9% were neutral, and an equal percentage of 23.8%, was for strongly disagree and disagrees. Concerning teaching English concepts, 38.1% agree with the role of DGBL in this regard. Overall, DGBL has positive effects on teachers to aid them in their teaching techniques.

#### 4.3 The Results of the Correlation between Variables of DGBL

To confirm whether significant correlations have existed among utilized variables of DGBL on EFL students and their teachers, Pearson correlation analysis was conducted in this study.

Table 2. Correlation between students’ engagement with learning, acceptance of DGBL, and the effects of DGBL

		Effects of DGBL	Engagement with learning	Acceptance of DGBL
Effects of DGBL	Pearson Correlation	1	.682**	.650**
	Sig. (2-tailed)		.000	.000
	N	35	35	35
Engagement with learning	Pearson Correlation	.682**	1	.565**
	Sig. (2-tailed)	.000		.000
	N	35	35	35
Acceptance of DGBL	Pearson Correlation	.650**	.565**	1
	Sig. (2-tailed)	.000	.000	
	N	35	35	35

\*\* . Correlation is significant at the 0.01 level (2-tailed).

As depicted in the Table 2, The variables are measuring students’ engagement with learning, acceptance of DGBL, and the effects of DGBL on foundation-year students at King Abdulaziz University. The mean value of these responses utilized to find the correlation between them. The results of this study indicate significant and moderate positive correlations found among the effects of DGBL and engagement with learning ( $r=.682$ ,  $p=.000$ ). Similarly, significant and moderate positive correlations between the effects of DGBL and acceptance of DGBL ( $r=.650$ ,  $p=.000$ ), engagement with learning and acceptance of DGBL ( $r=.565$ ,  $p=.000$ ).

Table 3. Correlation between teachers' engagement with teaching, acceptance of DGBL, and the effects of DGBL

		Engagement with teaching	Acceptance of DGBL	Effects of DGBL
Engagement with teaching	Pearson Correlation	1	.693**	.874**
	Sig. (2-tailed)		.000	.000
	N	21	21	21
Acceptance of DGBL	Pearson Correlation	.693**	1	.610**
	Sig. (2-tailed)	.000		.003
	N	21	21	21
Effects of DGBL	Pearson Correlation	.874**	.610**	1
	Sig. (2-tailed)	.000	.003	
	N	21	21	21

\*\* . Correlation is significant at the 0.01 level (2-tailed).

As revealed in the Table3, the variables of ESL teachers' questionnaire showed a significant and strong positive correlation among the effects of DGBL and engagement with teaching ( $r=.874$ ,  $p=.000$ ). Besides, significant and moderate positive correlations between acceptance of DGBL and engagement with teaching ( $r=.693$ ,  $p=.000$ ), as well between acceptance of DGBL and the effects of DGBL ( $r=.610$ ,  $p=.000$ ).

## 5. Discussion

The present study examined the effects of digital games in learning and teaching in ESL classrooms. The data was analyzed to know the perceptions of students and teachers in the acquisition of English language skills through the digital game-based learning method. The questionnaire results revealed that in general, the participants evaluated DGBL positively.

Digital game-based learning is found to improve the teaching and learning skills in ESL. These results are supported by Petko et al. (2017) who found that there is a strong connection between educational technology and students' positive performance in the classroom context. Digital devices and digital games encourage students to develop an interest in their classroom tasks because they are motivated by their teachers with the help of the digital games approach. The learners' expectation that learning through games would be easy and informative laid the foundation of for successful learning and teaching outcomes which reflect their good scores in class performance. Wang and Lieberoth (2016) also highlighted that students' concentration is increased in the learning process due to applying digital games. So, it indicates the positive effects of educational games regarding better achievements.

The results of the present study show that the respondents feel at ease to use this approach in the classroom because of its great benefits (see Appendix A). In the same vein, Fithriani

(2018) also supported this concept because of its long-term effect. The technological revolution proves to be a successful aid for students and teachers to focus on their subject matter and enable them to achieve their goals. DGBL can help ESL learners to overcome their anxiety by providing a relaxed atmosphere that enhances creative activities. Licorish et al. (2018) stated that students and teachers can remain focused and relevant to their study tasks through educational technologies used in the classroom. Teachers can plan their lessons effectively by managing their classroom time efficiently and focusing on their students. The efforts of teachers and students cannot go astray because technology provides them with the best ways to utilize time and resources for better outcomes.

The most essential factor in the teaching and learning process is the engagement. The present study explored whether DGBL helps teachers and students to engage with the teaching and learning process. Licorish et al. (2018) discussed the advantages of using digital games and explained that students develop an enthusiastic attitude towards learning concepts through digital games. They remain focused and actively engaged in class activities. Teachers can use digital games to achieve this goal of getting students engaged in class while assessing them at the same time. According to Boulaid and Moubtassime (2019), different language skills can be taught easily through this method by keeping students focused. Teachers can also judge the students' performance while teaching them through class participation. The results of the present study also show that teachers and students found digital games to be the best tools for being engaged in classroom tasks and directing their attention in the right way.

The results of the current study also show that digital game-based learning enriches the teaching and learning experience of English as second language. Trinder (2016) focused on the use of technology in the learning environment because it can enhance students' communication skills. Students can learn to collaborate with their fellows and teachers by implementing this technique in learning. (Majdoub, 2016) said that the cognitive skills of students can be increased through this method because digital games encourage students to employ certain crucial mental strategies. The responses from the present study also supported the concept that digital games enhance students' and teachers' cognitive domain in a better way to excel in the teaching-learning process.

## **6. Conclusion & Limitations**

The present study contributes to finding out the perceptions of teachers and students about digital game-based learning in ESL classrooms. It aims to show how digital games enhance students' motivation and engagement in the learning process, unlike the spoon-feeding method of teaching. One limitation of the study is that there is a small sample of students and teachers due to which the findings are difficult to generalize. However, to gain more accuracy, research can be carried on a larger sample size to discover the effect of digital games in teaching and learning ESL concepts. The study investigated the perceptions of learners and teachers regarding digital game-based learning effects on the foundation-year students. This research was conducted using a questionnaire to measure teachers' and students' perceptions of digital game-based learning. Due to the unforeseen circumstances, using online

questionnaires were regarded as a suitable researching tool. As a result, data collection from teachers and students by future researchers could be conducted through different research tools such as classroom observation and quasi-experiments (pre and post-tests).

According to the Saudi Vision 2030, learners need to be aligned with local and international demands to achieve competencies that pave a path for bright futures. In this respect, technological resources could facilitate and accelerate second language acquisition. By Digital Games-Based Learning, English teachers could increase students' motivation, overcome anxiety, enhance cognitive skills and support long-term memory. ESL teachers could use digital games in teaching vocabulary, grammar as well as listening and reading comprehension interestingly and effectively. However, educational authorities should provide training sessions in using advanced educational technologies as well as incentives to encourage educators to apply these techniques.

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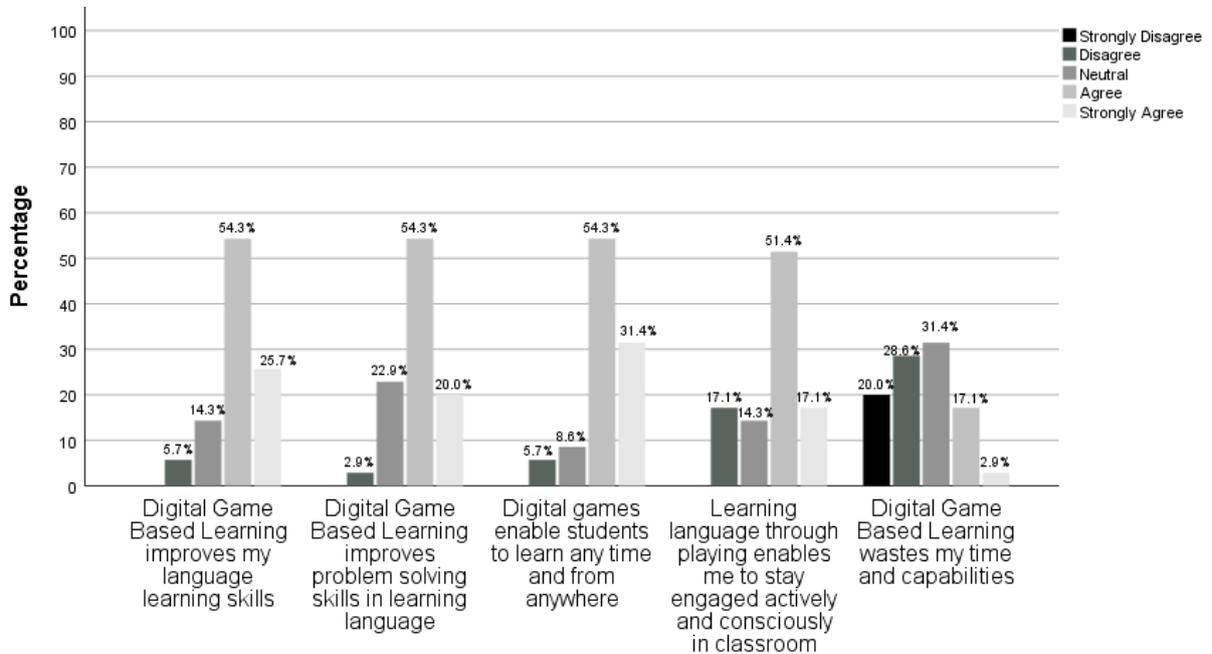
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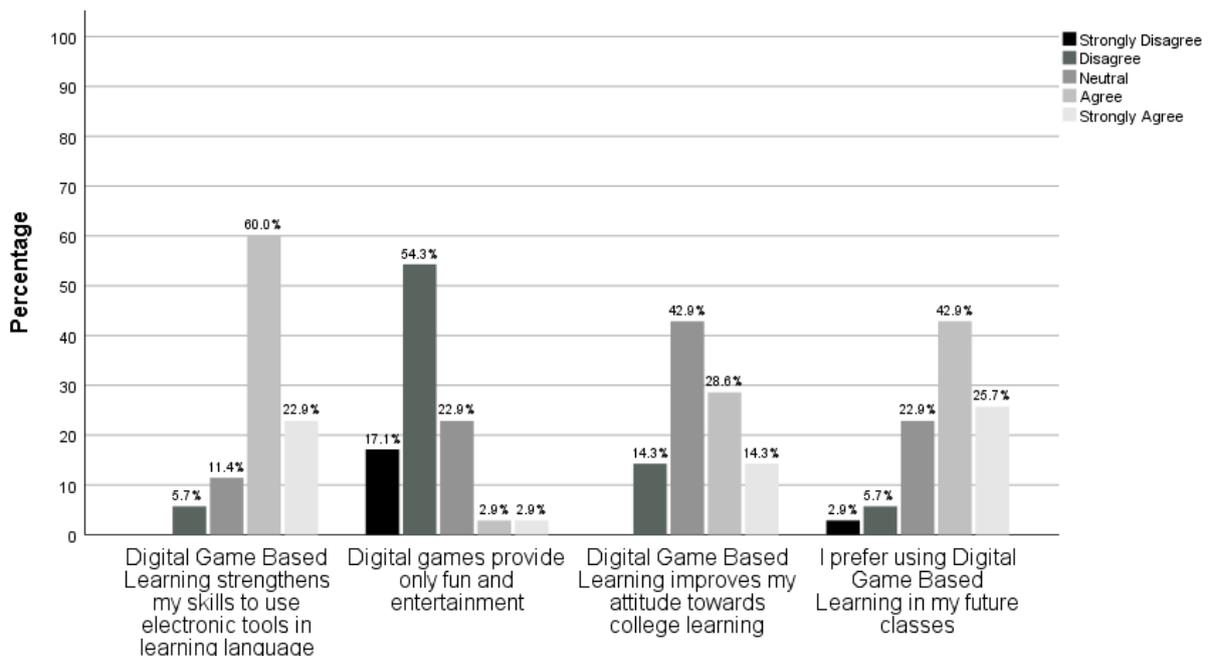
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**Appendix**

Appendix A. The results of students' perceptions towards DGBL:



**Figure 1. Engagement with Learning**



**Figure 2. Acceptance of DGBL**

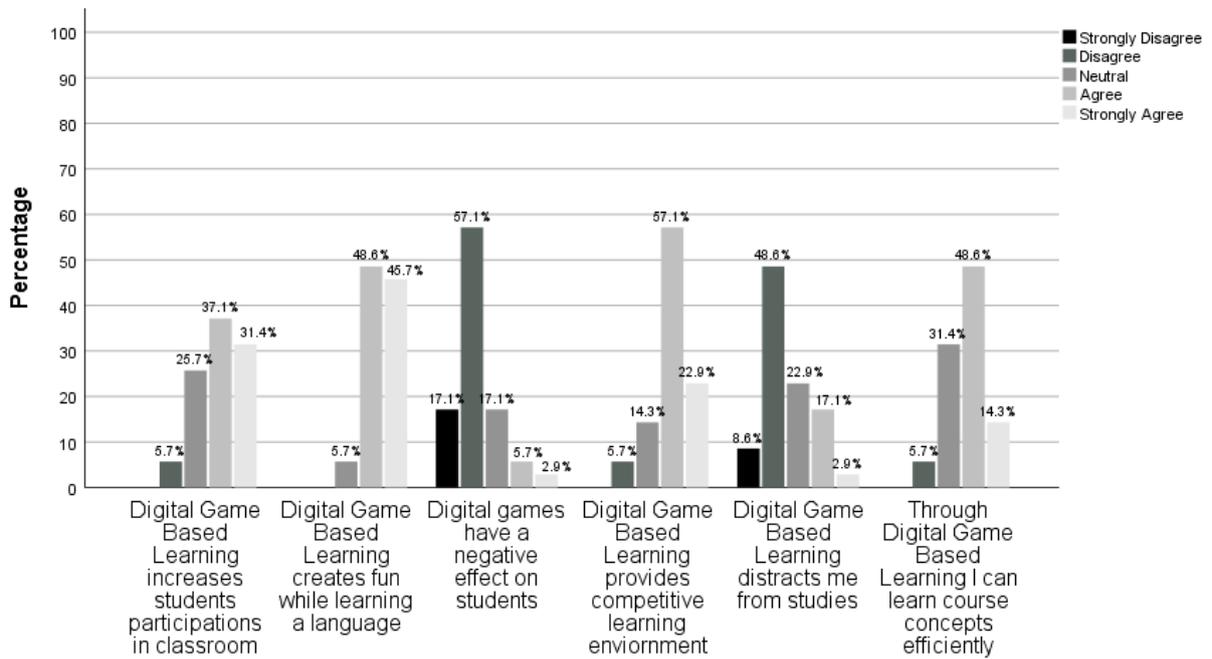


Figure 3. Effects of DGBL on students

Appendix B. The results of Teachers' Perceptions towards DGBL:

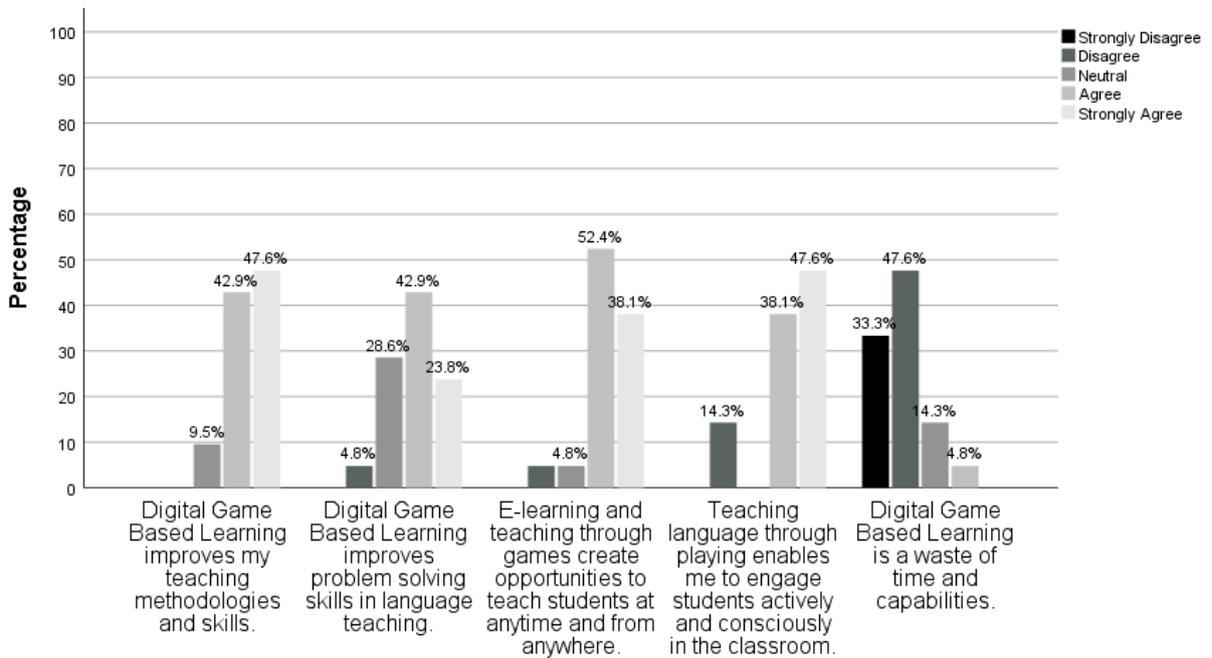


Figure 1. Engagement with teaching

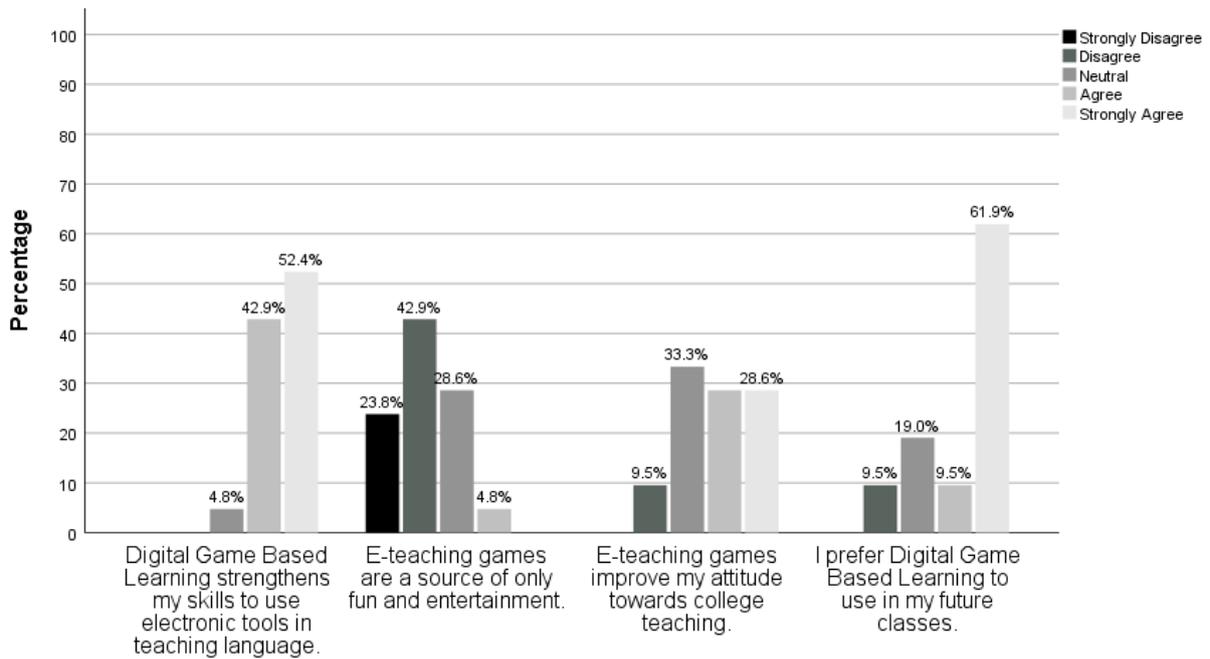


Figure 2. Acceptance of DGBL

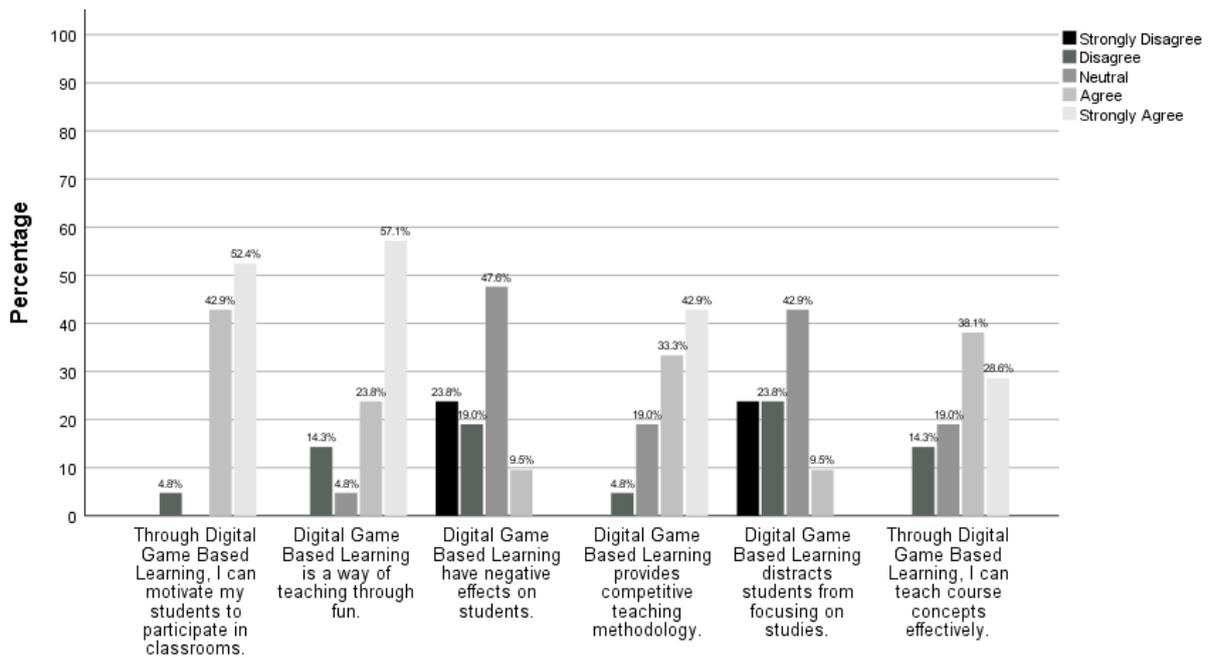


Figure 3. Effects of DGBL on teachers

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