Gamification in ELT: Students' perspectives

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Abstract

Traditionally, games have been utilized in English language teaching (ELT) as one of the ways to facilitate language learning. With recent technological advancements, digital games have also been developed and used in education. Studies report that such use encourages learners to engage in classroom activities using their target language, and contributes to increase learners' motivation. While such benefits have been reported about the use of games, little has been confirmed in terms of the learners' perception of their use. This study aims to discuss the incorporation of gamification in ELT and explore the learners' experience and their perception toward the application of both traditional and digital gamified activities as a means of a questionnaire survey. Based on the findings, this paper discusses the necessary considerations for incorporating the games or digital apps with gamified elements in teaching.

Introduction

Along with the recent advancement of technology, digital games are being increasingly utilized in educational contexts in order to facilitate language learning (Connolly, Boyle, MacArthur, Hainey and Boyle, 2012). Such application of games in non-game contexts can be described as 'gamification'. According to Reinhardt (2019: 183), it refers to when an 'instructor applies game elements intentionally in ways and contexts that are not normally used'. Moreover, Kapp (2012a:10) defines gamification as the use of 'game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning and solve problems'. Kapp (2012 a: 15-16) further notes that gamification involves 'a carefully considered application of game thinking to solving problems and encouraging learning using all the elements of games that are appropriate.'

Recent research into the use of digital game-based learning (DGBL) in education suggests that such application can be effective in enhancing learners' learning experience and increasing their learning motivation (e.g.

Chen, Zou, Kohnke, Xie, & Cheng, 2021; Randel, Morris, Wetzel & Whitehill, 1992). One of the main advantages of applying digital materials in teaching and learning is that they often have the function to offer immediate feedback to the learners. As Kapp (2012b) notes, "feedback is a critical element in learning. The more frequent and targeted the feedback, the more effective the learning". Nadeem and Falig (2020) also report that gamified elements in e-quiz system (i.e. *Kahoot! Quizzes*) contributed to facilitating their students' self-regulated learning (SRL). In particular, they found that the function of being able to provide immediate and effective feedback consequently had a constructive effect in enhancing students' SRL skills, which are necessary for enabling them to learn autonomously. In addition, gamification often has the function of rewarding students' efforts or achievements, which can also contribute to increasing learners' motivation and engagement in classrooms (Lee and Hammer, 2011). It can be said that such functions (i.e., providing rapid feedback and rewarding learners' effort) are related to individual learning, and they are likely to assist learners to become self-regulated and autonomous learners (Li, Xia, Chu, and Yang, 2022).

Moreover, several studies report that incorporating the game elements into pedagogical contexts can promote learners' engagement and their learning in meaningful contexts. Another important benefit of such use in language education lies in the game features that encourage interactions among participants, which contribute to the learners' use of the target language in an authentic and meaningful way (Pasfield-Neofitou, 2014). As research suggests, well-designed games often share certain features found in task-based approach (Reinhardt & Thorne, 2020) which promotes the use of target language and encourages the learners' engagement in L2 discourse (Reinhardt & Thorne, 2020; Ibrahim, 2017).

As can be seen above, recent research regarding the application of gamification in education tends to focus on the use of digital games in educational contexts (e.g., Chen et, al, 2021). However, the incorporation of non-digital games or gamified activities have long been utilized in traditional language teaching context (Lombardi, 2015, Nicholson, 2015), and the integration of game-based teaching can also be seen in language classrooms with young learners (Ortega, 2003). It can be said that gamification has been widely utilized in enhancing students' learning and promoting their motivation regardless of learners' age or levels (Randel, Morris, Wetzel & Whitehill, 1992).

As the literature on the current state of 'gamification' in language learning and teaching show, incorporating games or gamified activities is believed to be one of the effective ways of promoting learners' language use, engagement and motivation. However, despite the popularity and benefits reported, the perceptions from the learners' side are still somewhat under-researched. Moreover, as Peterson and Jabbari (2023:1) suggest, the gaming culture is a phenomenon found globally and 'its influence is increasingly felt not only in youth culture but also in the social, economic and educational realms' (Reinhardt and Sykes, 2012 cited in Peterson and Jabbari, 2023: 1). It can be argued that the incorporations of both gamification of traditional and digital ones in language learning are expected to continue, and their influence in education cannot be ignored. Therefore, it is worth discussing the learners' perception and the perceived efficacy on the gamified activities in language teaching.

This study aims to find out the learners' perceptions towards their experience of participating in both traditional and digital gamified activities and gamification in their learning of English, and discusses implications and necessary considerations for incorporating such activities or tools in education. The following section presents the methods and results of a survey. Based on the findings of learners' perceptions towards the use of gamified activities, it also discusses the considerations practitioners or material designers should bear in mind when planning the game elements in activities or teaching materials.

Methods

The questionnaire survey was designed to find out the participants' experience and perception on the use of traditional gamified activities and digital applications. The questionnaire contained four main sections which included statements and questions related to the following:

1) participants' experience of learning English;
2) participants' experience of the gamified activities in their learning;
3) participants' perception on the use of gamified activities in general; and
4) participants' perception on the use of digital learning apps with game features (if any) and evaluation of the functions available in those apps.

The statements included in the questionnaire were related to the main topics above, and the participants were asked to choose the closest one to their answer for each statement from the five options (i.e., five-point Likert-

scale ranging from 1 = "strongly disagree" 2= "disagree" 3 = "neither" 4 = "agree" and 5 = "strongly agree"). A comment section was provided for each section in which participants could provide more information or state their opinions. In order to see the relationship between certain items, Pearson product-moment correlation coefficients were calculated for each question.

The participants are all majoring in English at 4-year university in Western Japan, and most of them had over ten years of experience in learning English (min. ten to max. twenty years). On this basis, it can be assumed that they have experienced attending various English lessons so far, thus suitable as the subjects of the study. The survey yielded a 98 % of response rate, receiving 52 responses (n=52) out of the 53 distributed questionnaires. The following section reports some of the main findings and discusses their implications.

Results and Discussion

Learners' experience of gamified activities

The first section of the survey asked about participants' experience of participating in gamified activities in their learning of English. In terms of their experience in participating in any gamified activities (Item 2.1), all the respondents (100 per cent) answered that they experienced some kind of activities utilising games in their learning. Concerning the periods of experience, 25 per cent responded that they experienced such activities only when they were young learners (i.e., pre-school and primary school), 3.8 per cent indicated from pre-school to junior high only, and 7.7 per cent indicated in junior and senior high schools only. While the timing of their experience showed some differences, 63.5 per cent of the respondents answered that they experienced game-based activities in every stage of their learning so far (i.e., from pre-school to university). The results indicate that while the experience of game-oriented activities appears to be commonly used during pre-school to primary school, for most of the learners, their use has not been restricted to certain stages of their learning.

Learners' perception on the gamified activities

The following table shows the descriptive statistics for the items concerning the participants' perception on the use of games or gamified

activities they experienced in their learning.

Table 1. The descriptive statistics for the items concerning the use of gamified activities

No.	Item	M	S.D.	Response (%)				
				5. strongly agree.	4. agree.	3. neither.	2. disagree.	1. stongly disagree.
				5.	4.	3.	2.	1.
3.1	*I enjoy English lessons with game-based activities.*	4.65	.51	67.3	30.8	1.9	0.0	0.0
3.2	*I participate more actively when games are involved in the activities.*	4.58	.60	63.5	30.8	5.8	0.0	0.0
3.3	*Through game-based activities, I become interested in the content (English) taught in lessons.*	4.27	.74	40.4	50.0	5.8	3.8	0.0
3.4	*It is easier to communicate in English in game-based activities.*	4.40	.56	44.2	51.9	3.8	0.0	0.0
3.5	*Games with competitive elements increase learners' participation.*	4.25	.78	38.5	53.8	3.8	1.9	1.9
3.6	*Games with competitive elements promote learners' motivation.*	4.06	.93	30.8	55.8	5.8	3.8	3.8
3.7	*Through game-based activities, I can learn English effectively.*	4.27	.59	34.6	57.7	7.7	0.0	0.0
3.8	*Game activities tend to obscure the learning objectives.*	2.69	.91	0.0	23.1	30.8	38.5	7.7

The results revealed that the incorporation of gamified activities was generally positively perceived by the participants. For instance, 98.1 per cent of the participants agreed that the use of games helps to make learning enjoyable (Item 3.1, M= 4.65, SD=.51) and 94.3 per cent also agreed that their use increases learners' participation (Item 3.2: M= 4.58, SD=.60). It was also shown that most of the participants (90.4 per cent) agreed that learning through games makes them interested in the content being taught (Item 3.3, M= 4.27, SD=.74.). In addition, 95.1 per cent of the respondents thought that the interaction is naturally encouraged through the use of games (Item 3.4, M= 4.40, SD=.56). Regarding the learning effectiveness (Item 3.7, M= 4.27, SD=.59), 92.3 per cent of the participants agreed that the use of games helps learners to learn the target language effectively.

Games often have a competitive feature by having a win-lose setting or ranking system based on scores, which is reported as one of the factors contributing to promoting learners' engagement, and willingness to participate (Burguillo, 2010). Items 3.5 and 3.6 asked whether such features promote participation (Item 3.5) or increase their motivation (Item 3.6). In response to Item 3.5, 92.3 per cent of the respondents agreed (M= 4.25, SD =.52). On the other hand, for Item 3.6 (M= 4.06, SD=.93), which asked whether having such competitive features contributes to increasing their motivation, 85.8 per cent of the participants agreed. While most of the participants agree with the effectiveness of using games with competitive features, Item 3.6 had a slightly higher proportion of negative responses

compared to other items. As pointed out by Sailer, Hense, Mayr and Mandl (2017), certain game designs can affect learners' motivation more than others. Judging from the result, it can be said that, for some people, competitive features may not always be related to increasing their motivation. Werbach and Hunter (2012) note that certain competitive features have the potential of encouraging learners when they are close to achieving their goals. However, they also point out that such function should be treated with caution as it can also work as demotivator if the learner is far behind compared to other learners. This finding also reminds us of the importance of varying types of games employed in language classrooms, not just solely focusing on the competitive elements in enhancing the students' participation.

One of the criticisms of gamified activities or gamification would be that learners might focus more on having fun rather than the learning itself. Item 3.8 asked whether they think the learning objectives tend to become ambiguous when using games. The result (i.e., Item 3.8, M= 2.69, SD=.91) shows the proportion of participants who agreed with the statement was not high, and it can be assumed that most of the learners feel the learning objectives of the gamified activities were clear. Moreover, in order to see the relationship between participants who enjoy learning through games (Item 3.1) and participants' impression of learning objectives in game-based activities (Item 3.8), Pearson product-moment correlation coefficients were calculated. The results showed that participants who reported learning through games is enjoyable in Item 3.1 (M= 2.69, SD=.91) tended to disagree with the statement in Item 3.8 (Item 3.8, r = -0.30 p =.034). In other words, learners are aware of the learning objectives of the game-based activities while enjoying learning through gamified activities. Moreover, several comments were observed indicating learners are aware of the importance of recognizing the learning objectives of activities they take part in.

- *The goal is to learn English after all and we should not lose sight of the original purpose.*
- *I think it is important to clarify the purpose of using the game so that it does not become just playing the game.*
- *It is important to be conscious of the purpose of learning.*
- *In games where we have to talk with classmates, we don't always use English and we might just be enjoying the game.*
- *In the games I played, when I was in junior and senior high school,*

some people wanted only answers without using English because their goal was to finish the game. I think it is important to have clear learning objectives and they should be shared with students in advance.

These results point out the importance of clarifying the learning objectives of the gamified activities. It is also important to have certain rules and they should be shared with the learners before they start the activities with game features.

Learners' perceptions of digital learning tools or applications

The survey also investigated the participants' perception on the use of digital tools or apps with game features that they experienced in their learning. All the participants answered that they experienced using digital learning tools or applications so far (Item 4.1). The following table (i.e., Table 2) summarises the descriptive statistics for the items concerning digital learning materials with gamified elements. Nine items (Items 4.3.1-

Table 2. The descriptive statistics for the items concerning the use of digital apps

No.	Item	M	S.D.	Response (%)				
				5. strongly agree.	4. agree.	3. neither.	2. disagree.	1. stongly disagree.
				5.	4.	3.	2.	1.
4.3.1	*By using digital apps, I can learn English while having fun.*	4.13	.73	30.8	55.8	9.6	3.8	0.0
4.3.2	*By using digital apps, I can learn English effectively.*	4.04	.81	28.8	51.9	13.5	5.8	0.0
4.3.3	*It is helpful to receive rapid feedback (e.g. scores etc.)*	4.48	.72	55.8	40.4	1.9	0.0	1.9
4.3.4	*My motivation increases when I see my achievements displayed.*	4.19	.83	36.5	53.8	3.8	3.8	1.9
4.3.5	*My motivation increases when I see other learners' achievements displayed.*	3.65	1.09	25.0	34.6	25.0	11.5	3.8
4.3.6	*Reward system (e.g. badges, points etc.) increases my motivation to learn.*	3.88	.89	23.1	51.9	17.3	5.8	1.9
4.3.7	*The digital apps are suitable for vocabulary learning.*	4.04	.78	26.9	55.8	11.5	5.8	0.0
4.3.8	*The digital apps are suitable for learning conversation.*	3.35	1.02	11.5	38.5	25.0	23.1	1.9
4.3.9	*I like studying English by using apps and other digital materials.*	3.71	.88	13.5	55.8	23.1	3.8	3.8
4.4.1	*The display of rapid feedback or scores, etc.*	4.37	.59	42.3	51.9	5.8	0.0	0.0
4.4.2	*Comparing your progress with that of other learners*	3.60	1.04	21.2	36.5	25.0	15.4	1.9
4.4.3	*Reward system (e.g., points, medals, badges) based on your achievements*	4.04	.78	30.8	44.2	23.1	1.9	0.0
4.4.4	*Self-paced learning (You can study at your own pace.)*	4.38	.65	48.1	42.3	9.6	0.0	0.0
4.4.5	*Learning contents can be automatically adjusted to your level.*	4.58	.57	61.5	34.6	3.8	0.0	0.0
4.4.6	*Repetitive learning (You can study the contents repeatedly.)*	4.60	.53	61.5	36.5	1.9	0.0	0.0
4.4.7	*Information (texts, sounds, images etc.) can be displayed simultaneously.*	4.56	.50	55.8	44.2	0.0	0.0	0.0
4.4.8	*Competitive features (You can compete with other learners).*	3.69	.93	17.3	48.1	23.1	9.6	1.9

4.3.9) are related to finding out how the participants feel about the learning experience using digital applications in particular. Moreover, the survey also included eight items (Items 4.4.1- 4.4.8) regarding the functions of digital learning apps.

Regarding the item which asked whether digital learning apps make learning enjoyable (Item 4.3.1, M= 4.13, SD=.73), most of the participants (i.e., 86.5 per cent) feel that that they enjoy learning using digital apps, a small number of them (i.e., 3.85 per cent) disagreed, and 9.62 per cent chose "neither". This is the item that exclusively asked about the feature of digital apps with game features, and compared to Item 3.1 (M= 4.65, SD =.51), the number of participants who agreed with the statement slightly decreased. This result may indicate that some learners enjoy traditional in-person gamified activities more than through digital apps.

As for the effectiveness of using digital learning apps for studying English (Item 4.3.2, M= 4.04, SD=.81), 80.7 per cent of the learners agree with the statement, but some learners chose "neither" (13.46 per cent) and "disagree" (5.77 per cent). Some qualitative comments were also found in terms of the effectiveness of using apps:

- *By using English learning apps with games, I think I can learn English in a fun and efficient way.*
- *I think it is practical to use app. By using app, I can easily check words on my smartphone and learn new words efficiently.*

Some negative opinions were also expressed regarding the effectiveness of learning through digital apps:

- *I used an e-learning app to memorise vocabulary, but I felt it was not very effective. I think one of the reasons is that the app itself was difficult to use.*
- *I was more focused on winning the competition on Quizlet and I only memorised the words to appear in the quiz.*

As can be seen above, the accessibility of digital apps and the design of gamification can affect learners' perception of their use. Since it is important for learners to have a sense of ownership or agency in their learning, it is necessary for leaners to have awareness of how they responded to certain apps or methods, so that they can evaluate their learning and find materials that suit them.

One of the characteristic features of digital learning apps is the function of providing rapid feedback. This rapid feedback can be categorised as a type of 'short-cycle' formative assessment (William, 2006:

285), which is 'interpreted in terms of learning needs and used to make adjustments to better meet those learning needs' (William, 2006: 285). Item 4.4.3 enquired about the function of displaying feedback in the digital learning apps, and the result showed that this function was positively evaluated by the majority of the participants (Item 4.4.3, M= 4.37, SD=.59). Related to the function of rapid feedback systems, Item 4.3.3 (M= 4.48, SD =.72) which asked its helpfulness for their learning, a few participants disagreed or chose 'Neither'. It can be assumed that the participants generally perceive the feedback function as a good function, but some learners may not find it helpful for their learning.

Similarly, regarding the reward system (Item 4.4.3) the results show that having the function itself has been positively evaluated (Item 4.4.3, M= 4.04, SD=.78). However, as the result of Item 4.3.6 (M= 3.88, SD=.89) shows, while getting rewards may encourage learners to some extent, it might not always be related to the enhancement of motivation. Moreover, having rewards (Item 4.4.3) may not encourage learners as intended, since the kind of incentives that works for learners' motivation may vary depending on individual belief or preferences.

Regarding the usefulness of apps, most of the participants agree that digital apps are useful for learning vocabulary (Item 4.3.7, M= 4.04, SD=.78) rather than conversation (Item 4.3.8, M= 3.35, SD=.1.02). In other words, most participants seem to think that the digital learning materials are suitable for working on vocabulary rather than developing their speaking skills. Overall, 69.3 per cent of the participants reported that they like learning English using digital apps (Items 4.3.9, M= 3.71, SD=.88).

Regarding the simultaneous display of information (i.e., texts, images, and sound) available in digital learning apps, all the participants evaluated this function positively (Item 4.4.7, M= 4.56, SD=.50). For digital natives, being able to access the multi-modal information simultaneously when using a digital device must be their everyday reality and such feature on digital apps is appreciated. While certain benefits exist in using digital learning apps, concern was also expressed about a possible distraction when using those apps on their digital devices:

- *There is a concern that it is easy to get distracted by other apps such as SNS or videos when we use apps on smartphones and PCs.*

As can be seen in Table 2, most of the participants positively evaluated the features of digital materials that enable self-paced learning (Item 4.4.4, M= 4.38, SD=.65), the function which automatically adjusts the

learning contents to each learner's level (Item 4.4.5, M= 4.58, SD=.57), and the function which allows the repetitive learning (Item 4.4.6, M= 4.60, SD =.53). These features are generally related to individual learning, and the results indicate that the participants feel the use of digital apps are suited for self-study. With regard to the usefulness of digital apps for their study, some qualitative comments are also found:

- *I feel that English learning apps are useful in improving my English skills as I can use them during my travels or breaks.*
- *By using English learning apps with games, I think I can learn English in a fun and efficient way.*
- *Using apps is good because it makes me want to learn on my own initiative.*
- *It is useful to use apps because I can study with them anytime.*
- *It is very convenient as apps can have various functions on a single device.*
- *It is easier to study for tests and reviews anywhere by using a vocabulary app.*
- *It's good that you can study at your own pace by using apps.*

Concerning individual learning, being able to track the learning progress is one of the features available in digital learning apps. Regarding this function, the result suggests that the display of their progress or achievements motivates learners (Item 4.3.4, M= 4.19, SD=.83). On the contrary, the results also show that being able to see the achievements or progress of others (Item 4.3.5, M= 3.65, SD=1.09) may not necessarily affect the learners' motivation as much as the case with their own progress (Item 4.3.4).

As well as learners' progress, some digital apps allow users to view their progress in comparison to others who are studying at the same level or a course. Regarding the functions of comparing progress with others (Item 4.4.2, M= 3.60, SD=1.04) and competing with others based on the achievements using digital apps (Item 4.4.8, M= 3.69, SD=.93), the number of negative responses increased. This result resonates with the one for Item 4.3.5 (cf. Item 4.3.5, M= 3.65, SD=1.09) mentioned above, which asked whether being able to see the achievements of others would motivate learners. The calculation of the Pearson conduct-moment correlation coefficients revealed that those who disagreed with Item 4.3.5, are likely to choose negative options for both items concerning the functions of competitive features: Item 4.4.2 (r = 0.740, p <.01) and Item 4.4.8 (r = 0.747,

p <.01). While there were generally positive responses received from the majority of students, it is important to analyse and understand the responses qualitatively. Some follow-up comments were included in relation to the competitive elements:

- *There is a risk of losing motivation to study by comparing oneself with other students.*
- *It is important not to compare too much with others.*

Others commented positively about functions with competitive elements:

- *Seeing the progress of other people motivated me, so it was good.*
- *Being able to compete with other friends motivated me to study English harder.*

While positive responses are also included in response to the competitive features in digital apps, it should be noted that some participants showed strong resistance toward the functions which allow comparing the learners' performance in relation to others.

Conclusion

This paper aimed at investigating the learners' perceptions on the use of gamification in English education. The survey revealed that all the participants had experienced some kind of games in their learning of English and reported that they enjoy learning through gamified activities. Moreover, it was found that most learners preferred when gamified activities were involved in language lessons. The survey results confirmed that the incorporation of gamified activities generally positively perceived by the participants, especially in terms of their effectiveness in enhancing participations and learning motivation. Regarding the experience of digital apps, features related to self-learning (i.e., progress, rapid feedback, and reward system) were also perceived positively by the participants. While the majority of the learners had the positive attitude towards gamifications using digital apps, the survey results also revealed some participants' resistance towards the competitive features or functions. Such results highlight that it is important for practitioners or material designers to be aware that the competitive features may not appeal to everyone, and balancing the kinds of activities is necessary in planning the both in-class activities or creating digital materials with gamified features.

One obvious limitation of this research is the sample size which may

not be enough to make any generalization about how gamification within ELT is perceived by learners. Indeed, more definite conclusions will be possible when we have more data from participants with similar learning backgrounds. Nevertheless, with the fact that all the participants in this study were experienced learners of English who received between ten to twenty years of English instruction, it can be argued that the finding thus points to some understanding of how gamified activities are perceived by EFL learners. It is believed that such information enables practitioners or material designers to better understand what and to what extent certain features of gamification may promote learners' learning and motivation. Such understanding would be of use when making decisions about the details of the functions to be included in digital applications or tasks involving gamified features. As Kapp (2012a: 10) describes, "[g]ame-based techniques or gamifications, when employed properly, have the power to engage, inform, and educate". It is clear that the ways in which gamification can be utilized or integrated effectively in classroom or within the design of digital applications require further research, which can be addressed in future study.

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