English Learners' Perceptions of Video Games as a Medium for Learning and Integration into the English Curriculum[1]

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Abstract

This study explores L2 learners' perceptions of different dimensions of current commercial video games as a medium to foster English learning. Moreover, it looks into L2 learners' attitudes toward the integration of gaming into the English curriculum. To that end, a quantitative approach to data collection and analysis was employed. Responses were elicited using an online questionnaire that consisted of 29 items from 101 Arabic speaking students enrolled in an English and Translation bachelor program at a Saudi public university. The findings of the descriptive statistics (means and standard deviations) indicate that the participants positively perceive English learning through the medium of video games. According to students' views, several factors and elements conducive to English learning are recognized in commercial video games. These include knowledge of some aspects of English that are not taught in educational settings, predisposition to use English, more opportunities for practicing English, long-term retention of encountered-then-learned language points, independent learning, motivation to learn and deal with English, a comfortable environment for using English, and familiarity with vernacular Englishes. Meanwhile, the findings reveal that learners have positive attitudes toward the integration of gaming into the English curriculum, and they sanction the place of gaming in formal education, provided that current commercial video games need modifications to render optimal L2 learning outcomes.

Resumen

Este estudio explora las percepciones de los estudiantes de L2 sobre las diferentes dimensiones de los videojuegos comerciales como medio para fomentar el aprendizaje del inglés. Además, analiza las actitudes de los estudiantes de L2 hacia la integración de los juegos en el plan de estudios de inglés. Con ese fin, se utilizó un enfoque cuantitativo para la recopilación y el análisis de datos. Las respuestas se obtuvieron mediante un cuestionario en línea que comprendía 29 elementos aplicado a 101 estudiantes de habla árabe matriculados en un programa de Licenciatura en Inglés y Traducción en una universidad pública saudí. Los resultados de las estadísticas descriptivas (medias y desviaciones estándar) indican que los participantes perciben positivamente el aprendizaje del inglés a través de los videojuegos. Según las opiniones de los estudiantes, en los videojuegos comerciales se reconocen varios elementos que favorecen el aprendizaje del inglés, incluido el conocimiento de algunos aspectos del inglés que no se enseñan en entornos educativos. Estos incluyen una predisposición a usar el inglés, más oportunidades para practicar inglés, retención a largo plazo del idioma encontrado y luego aprendido, aprendizaje independiente, motivación para aprender y lidiar con el inglés, un ambiente cómodo para usar el inglés y familiaridad con el vernáculo. Además, los hallazgos revelan que los estudiantes tienen actitudes positivas hacia la integración de los juegos en el plan de estudios de inglés, y aprueban el lugar de los juegos en la educación formal, si los videojuegos comerciales son modificados para obtener resultados de aprendizaje óptimos en L2.

Introduction

Research into the acquisition of a second language (L2), has been widely engaged in endeavoring to scrutinize a multitude of methods, mediums, factors, aspects, and processes as well as to discover alternative and viable resources, techniques, strategies, and materials that might have the potential for more effective learning and can expedite L2 acquisition. Among these is game-based learning, precisely, language learning and acquisition through video games or the so-called Digital Game-Based Language Learning (DGBLL). The notion of the feasibility of DGBLL to render a positive environment and outcomes in L2 learning has received considerable attention. Researchers have contended that the integration of video games in educational settings has a potential to promote learning and interaction in the learning process (Gee, 2004; Golonka et al., 2014; Shaffer & Gee, 2005; Van Eck, 2006). Research has signified a possible contribution of video games to enhance learning and aspects conducive to effective language learning (Al-jifri & Elyas, 2017; Cam & Tran, 2017; Lin & Lan, 2015). Gee (2003) listed and explained 36 learning principles that can be found in what he labeled as *good* electronic games. According to Gee (2009), video games are tools that encourage progressive learning and lead to ultimate learning gains through enjoyment.

Moreover, Gee (2003) noted that electronic games could promote implicit learning. He emphasized that *good* electronic games stimulate players to go through several elements in the game one by one, which result in gathering electronic game-related information leading to subconscious acquisition of knowledge.

Furthermore, research has found several advantages of playing video games that can be exploited in education including providing a context where risk-taking behavior is tolerated, comprising tasked-based learning and interaction, and turning learning into an active and critical activity compared to a passive one (Gee, 2007).

Learning an L2 through gaming can be stimulated by learning through entertainment, which is grounded in several theories, namely, *Interest Stimulation* theory, *Arousal* theory, and *Short-Term Gratification* theory (Seels et al., 1996). According to Marshall (2002), the theories mentioned above can help explain how engagement in gaming practices—those that lead to entertainment—can foster cognitive processing, focus an individual's attention, and aid in internalizing content displayed by such exciting media.

Playing video games is commonly perceived as an out-of-class activity. These out-of-class activities can represent opportunities that have merits and can potentially promote effective L2 learning (Benson & Reinders, 2011). Young et al. (2012) pointed out that unlike several existing methods and mediums that have failed to provide authentic environments for L2 learning, massive multiplayer online games (MMOGs) can be used as authentic environments for learners. That is, the natural use and occurrence of L2 can be considered authentic in MMOGs since L2 in this context is utilized in a real-life activity with, sometimes, many L2 native speakers communicating with other players.

Based on *newzoo.com*, video games is a popular activity among people in several countries, including Saudi Arabia—ranked 22nd for top revenues of digital games sales worldwide according to the 2018 report. Thus, it might not be surprising that many people, including university students, are often engaged in such a recreational activity. Therefore, exploring university students' perceptions of gaming and L2 learning in formal and informal educational settings can provide further insight into the potential of commercial video games to enhance L2 learning.

Objectives and significance of the current study

As can be seen from this discussion, the merits of gaming in language education have been advocated by many scholars and researchers, therefore this study attempts to investigate how L2 learners in an EFL context perceive the utility of video games, as a learning environment, on L2 learning. Furthermore, it seeks to identify L2 learners' attitudes toward the notion of an English curriculum that is supported by video games-enhanced language learning.

The motivation for conducting this study is twofold. First, according to Reinders and Benson (2017), L2 learners' engagement with L2 learning outside the classroom is an area that has not received due attention. They added that research into this field might discover how learners become involved in a language learning experience as an individual effort beyond the realm of formal educational settings and how it can contribute to the dimensions of learning beyond the classroom theory. Furthermore, they maintained that language learning might occur in several contexts such as video games and that, though it is initiated directly, indirectly, consciously, or non-intentionally by L2 learners, it might be fruitful and productive. Understanding how learners approach L2 learning in such a context might provide insight into exploiting and maximizing any potential of video games for the improvement of L2 learning and acquisition. Furthermore, Reinders and Benson (2017) noted that L2 learners' emotions and perspectives of language learning beyond the classroom are important as they might further stimulate the learning endeavors and influence their attitudes toward learning. They also pointed out that instructors need to find a connection between learning in and beyond the classroom to have learning experiences geared toward the learners. Learning in the classroom might not be the pivotal point for acquiring L2; learning beyond the classroom might be as important or as effective as formal language education. Therefore, research that can shed light on language learning beyond the formal setting of schooling is warranted. Second, much of the research that has scrutinized gaming and L2 learning and acquisition employed predetermined plans and preselected games and activities for the participants. That is, researchers had control over the choice of particular games that the participants played in experimental designs, and directed research focus to measure pre-assumed hypotheses relevant to gains in L2.

The scope of the present study is to explore learners' perceptions and attitudes toward the potential of video games for L2 learning and their integration into the English curriculum. Having played games of their own choice and approached L2 learning in a manner that is more based on their needs, learners' responses can shed light on relevant and significant dimensions of gaming and L2 learning that stem from learners'

extensive individualized experiences rather than the structured experiences designed by researchers. In particular, the aspects of gaming and L2 learning that this study explores are EFL learners' gaming preferences and its association with L2 behavior, learning L2 culture through gaming, familiarity with different varieties of English, language retention, language learning motivation, willingness to communicate and L2 practice, language practice environment, L2 autonomous learning, L2 self-assessment, knowledge of informal English, L2 learning and game difficulty, and learners' level of satisfaction at the status of current video games for L2 learning purposes.

Review of Literature

Several studies have indicated the potential of video games to improve learning outcomes in foreign language teaching and learning (Rankin et al., 2009; Struppert, 2010; Sykes, 2008). Gee (2007) maintained that *good* electronic games comprise principles pertinent to learning in a general sense, and they include several design elements that strongly pertains to language learning (Gee, 2012). The practice of utilizing video games in L2 teaching and learning has been widely accepted and used as it has been growing progressively over the last few years (Baierschmidt, 2012).

Young et al. (2012) reviewed more than 300 studies on the effect of gaming on language learning and noted that interaction-based video games have the potential to render fruitful outcomes. Second language acquisition theories accentuated that interaction is a crucial factor facilitating L2 learning (Long, 1996). Research has indicated that the gaming environment could facilitate comfortable interaction because of players' anonymity statuses, resulting in lower levels of communication anxiety (Reinders & Wattana, 2014, 2015). Additionally, Sykes et al. (2010) noted that massively multiplayer online role-playing games (MMORPGs) provide ample opportunities for L2 improvement through experiencing various versions of the target language while playing.

Wagner (2008) pointed out that MMORPGs include the aspect of social learning, and De Silva (2014) also argued that current digital games provide social environments and not just tools for enjoyment. Rama et al. (2012) noted that some MMORPGs can steer individuals' attention toward communicative competence, and can stimulate learners to improve their intercultural competence (Guillén-Nieto & Aleson-Carbonell, 2012; Struppert, 2010). Vickers (2010) likewise pointed out that MMORPGs can lead to a possible improvement in L2 communicative competence.

Moreover, utilizing video games in the English classroom was suggested to help students by increasing their willingness to improve pragmatics (Yang & Zapata-Rivera, 2010), and MMOGs can aid learners in improving their pragmatic competence (Palmer, 2010). Furthermore, gaming can enhance concentrating attention and inductive reasoning abilities (Sardone & Devlin-Scherer, 2009). Garris et al. (2002) argued that learners' attention increases when they learn through a game. Additionally, gaming has the potential to improve cognitive function (Green & Seitz, 2015) and problem-solving related strategies (Gros, 2007).

Several researchers noted the decisive role of video games in vocabulary learning (Levine & Gershenfeld, 2011; Smith et al., 2013; Sundqvist, 2013; Young & Wang, 2014; Yudintseva, 2015), vocabulary retention (AlShaiji, 2015), and incidental vocabulary learning (Huang & Yang, 2012; Sylven & Sundqvist, 2012). Other research has identified possible improvement in L2 proficiency (Peterson, 2012; Sundqvist, 2011) and linguistic competence (Sylven & Sundqvist, 2012) as a result of playing video games. Green et al. (2011) and Liu and Chu (2010) pointed out that video games support the improvement of the main language skills. Moreover, video games were suggested to enhance listening comprehension skills (Reinders, 2012; Yudintseva, 2015) and reading comprehension skills (Levine & Gershenfeld, 2011; Reinders, 2012). Rogers and Johnson (2016) investigated the recurrent patterns of behavior of a small number of video gamers who were studying the English language abroad, and whether gaming would aid their L2 acquisition. Their findings showed that most of the participants reported taking pleasure in gaming, and games helped them to learn English words. Moreover, the participants reported that they greatly benefited from video games and improved several L2 main skills. The findings also noted the advantage of communicating with native speakers of English through playing video games.

Furthermore, video games provide extensive exposure to L2 (Cruz, 2007; deHaan, 2005; Purushotma, 2005) and facilitate autonomous and interactive learning (Lin & Lan, 2015). MMOGs also can increase a positive attitude toward learning an L2 (Zheng et al., 2006). Lee et al. (2008) carried out a study that examined the impact of commercial-off-the-shelf digital games on college students' attitudes toward utilizing

digital games to learn another language. The findings indicated that the participants held positive views toward such a resource for L2 learning and considered digital games to be supportive. Moreover, the results showed that the accumulative time (years) of playing might have an impact on students' attitudes toward the utility of commercial games for language learning. Interestingly, it is noted from the findings that game type does not affect students' attitudes toward learning through digital games. Another study conducted by Alsayegh (2016) looked into the impact of gaming on university students' L2 learning, whether there were any obstacles that would prevent learning through such a medium, and students' perceptions of the inclusion of video games into the target language curriculum. The findings identified some issues, including improper content of some games. Furthermore, the students showed positive attitudes toward the employment of video games in formal English language learning.

Several studies such as Reinders' (2017) and Ruggiero's (2015) suggested that video games include elements that influence affective variables that can trigger and increase motivation (Peng, 2004). Furthermore, Ushioda and Dörnyei (2017) pointed out that video games are designed around the aspect of motivation. Dodgson (2014) and Smolčec and Smolčec (2014) argued that MMOGs have the potential to induce higher levels of predisposition and motivation to communicate in English. Connolly et al. (2011) explored the variable of motivation in video games and its association with foreign language learning. The study included playing the *Tower of Babel* video game that included several foreign languages. The findings revealed positive perceptions of the game, suggesting that it contributed to motivating the participants to learn foreign languages. Furthermore, the findings reported that the participants noted some gains and development of some skills from playing the game, such as working in groups. Additionally, the researchers pointed out that most of the participants indicated their predisposition to play the same game for an extended time as a component of a class in which a foreign language is taught. Al-jifri and Elyas (2017) conducted a study to explore any possible relationship between digital games and English language acquisition. The researchers found that gaming had a positive impact on the improvement of English learning and production. Furthermore, the findings indicated that participants acquired English naturally, which was caused by the aspect of internal motivation involved in the participants' gaming as a recreational, optional activity.

The scope of aforementioned studies (Alsayegh, 2016; Connolly et al., 2011; Lee et al., 2008) that examined L2 perceptions and attitudes' toward learning through video games was relatively similar as it was geared toward exploring L2 learners' attitudes, motivation, and willingness to engage in L2 learning through video games. However, their focus differed in terms of the context in which games are utilized. For instance, Alsayegh (2016) and Connolly et al. (2011) investigated learners' attitudes toward the utility of using video games in the language classroom. The latter authors used Alternate Reality Games (ARGs), where the central aspect of the games was a narration of stories that can be influenced by how players play the games. On the other hand, Alsayegh (2016) paid considerable attention to particular cultural issues that might hinder the utility of gaming in L2 learning. In addition, Lee et al. (2008) and Alsayegh (2016) targeted college students, whereas Connolly et al. (2011) explored the attitudes of high school students.

The above-cited research clearly shows that video games have the potential to foster L2 learning. Nonetheless, many of the conducted studies in this area were experimental, and learners' attitudes were investigated in terms of particular gains following the experimental sessions. Therefore, a feasible assumption is that learners' attitudes in much of the cited literature might have been influenced by the particular games that learners played in those experimental sessions. That is, several research reports might not have reflected L2 learners' attitudes toward learning L2 via video games in general. Moreover, it could be postulated that learners might show positive attitudes toward gaming as a popular activity among young generations; however, it might not be the case for the integration of video games in their current status into the English curriculum. Therefore, learners' attitudes in this regard are crucial, as they might suggest their acceptance and willingness to embrace such a change in the language classroom culture. According to Cornillie et al. (2012), it cannot be assumed that all learners are gamers, and it cannot be expected that all of them would show positive attitudes toward the integration of games into learning. Therefore, if the target participants' responses in the demographic section do not indicate adequate engagement in gaming and a recurrent and frequent activity of gaming, they might fail to establish valid findings of learners' attitudes toward learning through gaming and the integration of video games into the English curriculum.

Learners' attitudes toward gaming in general and their integration in the language curriculum might pave the way for exploring other relevant areas that have not received due attention in previous gaming and L2 learning research such as learners' preferences of particular genres of video games and their reflections on engagement in L2 learning. In several settings, there might be an observed gap between learners' enthusiasm in learning and their passion for engaging in gaming activities outside an educational context. This gap, according to Yazzie-Mintz (2007), is a result of learners' low motivation and involvement in several aspects of formal education, as it tends to have a less enjoyable and interactive atmosphere. Moreover, research has shown that not all teachers have been involved in employing modern technological tools in their classrooms (Prensky, 2007), and Kramarski and Michalsky (2015) noted the slow process of utilizing advanced tools in teaching. However, research has also suggested a correlation between technological tools influence on students and instructors' predispositions to modify and improve their teaching approaches (Selim, 2007). Therefore, when learners show positive attitudes toward accepting and embracing a change in the classroom culture, it might also contribute to encouraging language teachers to attempt new language teaching approaches that are informed by students' needs and interests. It might be argued that L2 learners' attitudes toward the potential of video games to improve L2 might be reflected in their attitudes toward employing games in the language classroom. According to Marquis's (2011) expectations, in the near future, video games might form an essential component of university education. Unless curricula at that level of schooling start integrating and embracing gaming, they might fail to live up to students' interests and expectations.

Having reviewed research and several studies conducted in this area, and attempting to explore how L2 learners perceive video games as a medium for English learning, this study sought to answer two research questions:

RQ1. What are EFL learners' perceptions of the potential of video games for English learning?

RQ2. What are EFL learners' attitudes toward the integration of video games into the English curriculum?

Methodology

Participants

The sample of this study consisted of 101 Arabic-speaking English majors enrolled in an English Language and Translation bachelor program at a public university in Saudi Arabia. The participants were attending core and elective classes taught by the researcher. Selecting such a sample was based on its suitability for the study objectives. That is, the assumption underlying the selection of English majors was that they are well equipped with language knowledge and skills that enable them to provide more knowledge-based responses than non-English majors in an EFL setting. It is mainly due to the level of exposure and practice of English skills as well as the involvement in studying several English language and linguistic courses that influence how learners view and perceive language learning and acquisition. Therefore, English majors' abilities and training can effectively enable them to accurately judge, assess, and evaluate different mediums that they have experienced for L2 learning, including the gaming environment. Thus, they can provide more precise and informative experienced-based responses compared to non-English majors.

The participants were males whose ages ranged from 20-26 (M = 22.27, SD = 1.28). Of the total number of the participants, 16% were in the second year at the university, 54% in the third, 19% in the fourth, 9% in the fifth year, and 2% had been studying at the university for six or more years.

Research design and procedures

The present study used a quantitative approach to data collection in which responses were elicited using an online questionnaire that consisted of 29 items. The survey was prepared and developed using the *Google Forms* platform. The researcher provided a link to the survey through a virtual learning environment (*Blackboard*) that was easily accessible to all the participants, as it was provided for all courses in which the they were enrolled. The participants were introduced to the survey questionnaire and were invited to participate in answering the questions, and they voluntarily participated and submitted their responses. Analysis of the data was performed using SPSS v. 24, and descriptive statistics (means and standard deviations) were used to answer the two research questions.

<u>Instruments</u>

Following an extensive review of relevant literature (for example, deHaan, 2005; Gee, 2007; Peterson, 2010; Peterson, 2012; Rankin et al., 2006b; Rankin et al., 2009; Reinders & Wattana, 2015; Thorne, 2008) and consultation with an expert in the field, the survey questionnaire was designed and developed by the researcher. The questionnaire consisted of three sections (Appendix): section (1) collected demographic data (9 items), and general information associated with gaming and L2 learning (3 items); section (2) was geared toward investigating learners' perceptions of the potential of video games for English learning (12 items); section (3) explored learners' attitudes toward the integration of video games into the English curriculum (5 items). The questionnaire was piloted with a number of participants to test the face validity and reliability of the items. Feedback received from the participants was taken into consideration, and necessary modifications were made to enhance the questionnaire items. Furthermore, the questionnaire was reviewed by experts, and their comments and feedback were taken into account, and all necessary modifications were made. The internal consistency was measured using Cronbach's alpha; analysis indicated sufficient reliability ($α$ =.73) of the questionnaire items. Answers to the questionnaire used mainly a five-point Likert scale with 16 items (from Strongly Agree = 5 to Strongly Disagree = 1), and item (5) in section (3) was a multiple-choice question.

Findings

<u>Gaming frequency, behaviour, preferences, and L2</u>

The results, as Table 1 shows, indicated the popularity of the gaming activity among the participants, as the majority of them had been playing for more than five years. Furthermore, a large number of the participants play for 1-3 hours daily, and more than half of them preferred English language when gaming. The results showed that the most popular medium for playing video games was consoles. Moreover, the analysis of the preferred genre of video games revealed that action games were the most popular. Additionally, for half of the participants, the primary reason for playing video games was both to enjoy themselves and to improve English.

Furthermore, when the learners played video games in English, many of them attempted to concentrate on both language meaning and form. The results suggested that most of the participants perceived that video games made learning exciting, and they provided a safe and comfortable environment for learning. Moreover, the findings showed that the majority of the participants engaged in playing and communicating with other players in MMOGs.

Item	Response	n	%
Playing video games	Started years ago and still playing	90	89.1
	Only in the past	10	9.9
	Started playing recently	1	1
	Never	0	0
Duration of playing	More than 5 years	82	81.2
	3-5 years	9	8.9
	1-3 years	6	5.9
	3 month - 1 year	4	4
	Less than 3 months	0	0
Duration of playing (hours)	1-3 hours per day	31	30.7
	More than 3 hours per day	25	24.8
	Not regularly	20	19.8
	A few hours per week	15	14.9
	A few hours per month	2	2
	1 hour per day	0	0
Popular medium for gaming	Consoles	94	93.1
	Phones	72	71.3
	PCs	54	53.5
	Browsers	34	33.7
	Tablets	20	19.8

Preferred language for playing	English	54	53.5
	Both Arabic & English	43	42.6
	Arabic	4	4
	Others	0	0
Preferred genre of video games	Action	92	91.1
	Sport	71	70.3
	Adventure	66	65.3
	Shooting	47	46.5
	Mystery	36	35.6
	Strategy	34	33.7
	Horror	25	24.8
	Others	14	13.9
	Simulation	7	6.9
	Educational	1	1
Primary reason(s) for playing video games	Enjoy	56	55.4
	Enjoy & improve English	51	50.5
	Other reasons	8	7.9
	Practice of specific English skills	7	6.9
	Improve English	4	4
Language focus during play	Language meaning & form	38	37.6
	More on meaning	36	35.6
	Neither meaning nor form	17	16.8
	More on form	10	9.9
Video games	Make language learning exciting	69	68.3
	A safe & comfortable environment for language learning	64	63.4
	Make language learning easier	48	47.5
	Expedite language learning	33	32.7
	Not effective in language learning	1	1
Online playing and communication with players	With players and communicate with them	81	80.1
	Alone	16	15.8
	With players and do not talk with anyone	4	4

Table 1: Gaming frequency, behaviour, preferences, and L2

L2 Learners' Perceptions of the Potential of Gaming for English Learning

The results of the descriptive statistics of the responses to the items in section 2, as shown in Table 2, revealed that the learners had positive perceptions of the contribution and potential of video games to facilitate English learning. It can be noted from the high mean scores that among the twelve items, there are nine items with high mean scores above 4.0, indicating a high level of agreement with most of the statements in this section. The four highest mean scores among all items are items 11, 6, 10, and 3, respectively. That is, learners agree the most with *playing video games enables me to know things about English that might not be taught in schools and universities* (M = 4.49); *playing online video games with other players makes me willing to use English to communicate with them* (M = 4.38); *video games provide me with many opportunities to practice English outside schools and universities* (M = 4.33); and *English that I learn while playing video games is easy to remember even after a long period of time* (M = 4.32). On the other hand, the item that has the lowest mean scores is item 12 with (M = 2.94), indicating the highest disagreement among all items in this section as learners disagree with *It is difficult to focus on learning English while playing video games since I would be overwhelmed with the challenges in the game itself.*

Statement	M	SD
1. Playing online video games with other players helps me to recognize and learn the culture(s) of native speakers.	3.99	.781
2. Playing online video games with other players helps me to recognize and identify different varieties of English.	4.09	.801
3. English that I learn while playing video games is easy to remember even after a long period of time.	4.32	.677
4. Playing video games motivates me to learn English because I need to know the language in order to proceed in the games.	4.28	.709
5. Playing video games motivates me to learn English because I enjoy learning English while playing.	4.09	.896
6. Playing online video games with other players makes me willing to use English to communicate with them (e.g., to solve a problem while playing or to win the game).	4.38	.705
7. Online video games with other players provide a comfortable environment to practice English without feeling anxiety, even when I make language mistakes.	4.16	.821
8. Video games enable me to become independent, as I can practice and improve my English skills by myself.	4.20	.648
9. Playing video games enables me to know and assess my abilities, competences, strengths, and weaknesses in English.	3.96	.824
10. Video games provide me with many opportunities to practice English outside schools and universities.	4.33	.665
11. Playing video games enables me to know things about English that might not be taught in schools and universities (e.g., slang, video games-related words, etc.).	4.49	.626
12. It is difficult to focus on learning English while playing video games since I would be overwhelmed with the challenges in the game itself.	2.94	1.165

Table 2: L2 learners' perceptions of the potential of gaming for English learning

L2 Learners' Attitudes Toward the Integration of Video Games into the English Curriculum

The results of the descriptive statistics of responses to the items in section 3, as indicated in Table 3, showed that the learners had positive attitudes toward the integration of video games into the English curriculum. The results suggest that the majority of the learners were in favor of utilizing games as an activity in and out of the English classroom. This can be noted in the high mean scores. Precisely speaking, item (3) has the highest mean scores (*M* = 4.08). That is, the learners agree the most with *using video games play as tasks in or out of class time or as assignments in courses make lectures more enjoyable and exciting*.

Statement	M	SD
1. I would like the courses I take at the university to have tasks or assignments that I should do through playing video games.	3.93	1.151
2. I would like the lessons in the courses I take at the university to provide tasks where I play video games in class time.	3.90	1.063
3. Using video games play as tasks in or out of class time or as assignments in courses make lectures more enjoyable and exciting.	4.08	1.017
4. Video games should be used in particular courses or to improve specific skills and not in all classes since the latter would make education less serious.	3.95	1.052

Table 3: L2 learners' attitudes toward the integration of video games into the English curriculum

Descriptive analysis indicates that although learners had positive attitudes toward the integration of video games into the English curriculum, the majority of them (73%) perceived available commercial video games as suitable but needed alterations to become more effective in English learning. On the other hand, 15% of the learners perceived available video games to be suitable without alterations, and 11% perceived the games as not appropriate, with (M = 1.96, SD = .511).

Discussion

The findings of the demographic information and general questions about gaming and L2 shed light on gaming frequency, preferences, as well as behaviors pertinent to the relationship between gaming and L2 learning. The findings show that gaming is a popular activity among the participants. Their responses indicate that their preferred genres of video games were action, sport, and adventure, which is in harmony with Alsayegh's (2016) findings concerning the preferred genres of video games played by EFL university students. These findings might inform DGBLL-based instructional approaches, as they suggest a motivational aspect of those genres. That is, as those types are the most favored among the learners, it can be argued that integrating gaming into L2 learning should take into account the nature of those types, as potentially increasing the level of engagement posed by such models might increase the level of involvement in learning L2 within those genres. Interestingly, it is noted from the findings of Lee et al. (2008) that game type does not affect students' attitudes toward learning through digital games. This might be explained by other influential factors reported in their study such as gender, accumulative time (years) of playing, and L2 proficiency, as affecting learners' attitudes toward the utility of different types of video games on L2 learning.

Both enjoyment and learning English is one of the major reasons that motivate the participants to spend time on gaming. This might suggest learners' awareness of the educational gains that can be harnessed from leisure activities such as gaming. Additionally, it might suggest the attitudes and readiness of L2 learners to engage in language learning beyond the language classroom. Moreover, the findings indicate excitement in the gaming experience and recommend gaming as providing a comfortable environment in which both factors are conducive to English learning. Furthermore, the findings indicated that the majority of the participants had engaged in playing and communicating with other players in online multiplayer video games, which might not be surprising due to MMOGs current popularity. These findings might provide insight into how motivation for language learning can be increased by such enjoyable, comfort-provoking, and popular activities, as they can suggest potential effectiveness of integrating gaming into the language classroom.

The findings show that when engaged in gaming, the learners were not in agreement as to whether their focus was geared toward language form or meaning; a third of the participants indicated a greater focus on language meaning, whereas another third concentrated on both language form and meaning. This might reflect the level of engagement in L2 learning while gaming, as focusing on one or the other might signify the real aim of playing—for mere enjoyment or both entertainment and L2 learning. Moreover, these findings might suggest the influence of video games genres on language focus. In reference to the findings described above regarding the most favored genres of video games, focus on meaning and form might be determined by the nature of language presentation and its facilitative role in those games. That is, some types of games might direct the focus toward form, meaning, or both. For instance, it can be argued that sports and shooting games might not require much attention to language form, as instructions and objectives in those games are limited, to some extent. On the other hand, adventure and stories-based games, with a multitude of conversations and cut scenes are loaded with language that players need to decode to proceed successfully in the games. Thus, the latter type demands intensive and extensive engagement in language form to comprehend the meaning, resulting in attention to both form and meaning. In terms of attention to language meaning, Franciosi (2017) argued that utilizing digital games to focus on language meaning can be fruitful and productive as it can help learners to transfer the encountered language points to other settings.

Video games for English learning

The first question aims to explore L2 learners' perceptions of commercial-off-the-shelf video games for English learning. The findings show that learners have positive views regarding the potential of video games to foster English learning. Similar results were reported by Lee et al. (2008), who found that the participants held positive views toward digital games for language learning and considered them to be supportive.

Moreover, their findings showed that accumulative time (years) of playing might have an impact on students' attitudes toward the utility of commercial games for language learning.

The findings in the present study might explain the positive views in terms of learners' awareness of the extent of exposure to the target language mediated by gaming activities, as video games provide much exposure to L2 (Cruz, 2007; deHaan, 2005; Purushotma, 2005). In addition, considering the possible assumption of the participants' different cognitive styles, such a high level of positive attitudes toward learning L2 while gaming might reflect the potential effectiveness of video games on various cognitive styles.

In reference to reasons for playing video games, the results might suggest the blended formula of excitement and natural language learning, which takes place in gaming and stimulates such perceptions toward the effectiveness of video games as a medium for L2 learning. These findings are in harmony with Al-jifri and Elyas' (2017) findings, as they suggested that the participants acquired English naturally, which was caused by the factor of internal motivation involved in the participants' gaming as a recreational, optional activity. Kirriemuir and McFarlane (2004) pointed out that a more exciting and appealing learning experience occurs in a natural context. That is, when learning occurs in contexts simulating real-life situations such as communicating with other players for game-related purposes, the target language might receive more attention as it occurs in authentic and interesting settings.

The findings illustrate that the learners acknowledge that gaming provides opportunities to extend their knowledge of some L2 aspects that are not typically taught in L2 educational contexts, including gaming terminology and slang. This might occur through noticing and attention given to game-related concepts assigned by other players, or by exchanging games-related information with other players. Moreover, the findings indicate that MMOGs increase learners' familiarity with different versions of English and provide support for expanding knowledge about the culture of native speakers. Learners' responses might explain their awareness of the considerable attention given to the formal English in L2 classrooms; also, they show learners' interest in the target language beyond learning the formal English to which they are exposed in the language classroom. These findings are in congruence with one of Peterson's (2012) results in which communication events in MMOGs provide EFL learners with opportunities to encounter new L2 words that are not typically learned in formal educational contexts. It has been well established that some types of video games can provide learners with exposure to informal English, which might lead to an improvement in L2 (Sykes et al., 2010). Furthermore, Guillén-Nieto and Aleson-Carbonell (2012) and Struppert (2010) maintained that gaming could increase L2 learners' motivation to improve their intercultural communicative competence. These findings might suggest a gap between two different settings, namely what learners learn and encounter in formal language education and what they learn and encounter beyond the classroom. Additionally, it might signify the lack of instructional attention to language aspects—informal L2 and cultural aspects—that seem interesting when learning a target language. Reinders and Benson (2017) pointed out that instructors need to find a connection between learning in the classroom and beyond classroom to have learning geared toward the learners, as learning in the classroom might not be the pivotal point for acquiring L2; learning beyond the classroom might be as important or effective as formal language education.

The findings suggest that gaming motivates learners to exert efforts to deal with the English language as it helps them to proceed in the games. This is analogous to what Chik (2011) found in which MMOGs induce dealing with language to accomplish in-game missions. Moreover, the findings show that playing MMOGs can encourage learners to use English to communicate with other players, and it is perceived to occur in a comfortable environment conducive to using English. This is in line with Horowitz's (2016) findings informing the strong association between long-term exposure to MMOGs and higher levels of willingness to communicate in L2 and lower levels of communication apprehension; it is also in harmony with Peterson (2011) and Reinders and Wattana's (2014) findings that reported the interplay between MMOPRGs and increased L2 willingness to communicate. By the same token, Dodgson (2014) and Smolčec and Smolčec (2014) pointed out that MMOGs can increase motivation and willingness to communicate in English, as the MMOGs genre is conducive to interaction among gamers (Zhao & Lai, 2009; Zheng et al., 2009). One of the motivating reasons for communication in this environment, according to Reinders and Wattana (2015), is that MMORPGs have the potential to reduce anxiety since gamers' identities are unknown. It might be argued that online multiplayer video games can, sometimes, have the potential to encourage learners to use L2 more than language classrooms in which communication apprehension might be at a higher level; thus, hindering learners' attempts to communicate in L2.

The participants held the view that video games facilitate autonomous learning of English, and they provide a rich context for improving and practicing English outside the language classroom. This finding supports those of Lin and Lan (2015), suggesting that video games foster autonomous learning. Furthermore, independent learning through video games could increase self-awareness of L2 abilities and competences. This is supported by a learning principle found in *good* electronic games, according to Gee (2003), in which those games promote players' recognition of self-abilities, strengths, and weaknesses. These findings might be attributed to the fact that successfully playing some video games demands ample attention to the encountered language in the games; as players successfully deal with L2 and proceed in the games, there is a sense of self-efficacy and effective autonomous learning that learners perceive of themselves and their learning experiences; thus, learners become more confident in their L2 abilities. This might suggest the level of engagement in the task (gaming), as probably leading to more exposure to L2, given that the task is enjoyable and exciting.

The participants indicated that attending to both language learning and playing does not pose a challenge, which is in line with Alsayegh's (2016) findings that EFL learners are in favor of learning English through video games. Nevertheless, this finding diverges from the conclusions of some previous studies such as deHaan (2005) that reported the difficulty of concentrating on both language and gameplay conjointly. Such discrepancy might be interpreted in terms of the perceptions of game difficulty of exciting game genres. That is, despite such pressure, the enjoyment factor induces engagement in L2 learning.

The findings that indicated increased retention of the encountered-then-learned language points through gaming are in congruence with one of AlShaiji's (2015) results, suggesting enhanced vocabulary retention due to exposure to L2 while gaming. This might reflect the link between retention/memorability and enjoyable activities. As mentioned earlier, learning through entertainment is grounded in interest stimulation theory, arousal theory, and short-term gratification theory (Seels et al., 1996). These theories establish, according to Marshall (2002), that entertaining activities and media can be influential in terms of promoting learning processes, as they can foster cognitive processing and focus individuals' attention. That is, when learning occurs in an enjoyable environment, it can render fruitful outcomes. According to the participants' views, L2 learning trough gaming does occur, and the entertaining aspect of gaming is conducive to learning.

<u>The integration of video games into the English curriculum</u>

The second question looks into L2 learners' attitudes toward the integration of commercial-off-the-shelf video games into the English curriculum. By and large, the learners have positive attitudes toward the inclusion of gaming (as a class activity and an extramural activity), as it can render classes more enjoyable and exciting. Similar findings were reported by Alsayegh (2016) in which EFL learners showed positive attitudes toward the employment of video games in formal English language learning. Moreover, these findings are in harmony with Connolly et al. (2011) that found learners' predisposition to play a video game for an extended time as a component of a foreign language course. However, the findings in this study do not suggest the highest levels of satisfaction at what current video games offer L2 learners. The majority of the participants are in favor of such integration, provided that games undergo some modifications to render more effective English learning outcomes. It might be suggested that some learners perceive a sense of inappropriacy of the integration of gaming into formal education. This might be partially due to some issues including inappropriate content of some games that Alsayegh (2016) identified, as such issues might impact learners' attitudes toward the potential of video games to enhance language learning.

Many participants hold the view that the benefits of gaming can be harnessed in specific L2 courses, and using video games in general can make formal education less serious. This might be ascribed to the recognized benefits of gaming from learners' own experiences, such as enhancing L2 vocabulary and increasing aural input in particular, compared to other skills that might not be refined by frequent gaming. Moreover, these main findings might signify the following: (1) the learners' awareness of the strengths and weaknesses of some games in terms of language focus/learning due to the design of the games, as lacking appropriate presentation of the target language; (2) the core playful aspect of video games that results in some negative attitudes toward games, as not suitable to be integrated into a formal educational setting; and (3) the fact that the teacher should exercise caution when attempting to incorporate gaming into the English curriculum, since it cannot be assumed that all learners are gamers, and it cannot be expected that all of them would show positive attitudes toward the integration of games into learning (Cornillie et al., 2012).

Pedagogical implications

The findings in this study suggest that gaming induces L2 learning because it occurs within an enjoyable activity. This is in line with what Gee (2005) contended that playing digital games leads to felicity and learning, and also with Prensky (2002), who emphasized that enjoyment is a huge factor that leads to frequent and recurrent practices and spending time on activities. These findings indicate the impact of higher levels of motivation induced by video games. Higher motivation to involve in the action itself, gaming, led to the higher motivation to tackle the presented language within the games, as one of the requirements to maintain playing. As a result, learners enjoy and learn L2. Several studies such as Reinders's (2017) and Ruggiero's (2015) indicated that video games comprise elements that influence affective variables that can trigger motivation, and they can increase motivation (Peng, 2004). Furthermore, it was pointed out by Ushioda and Dörnyei (2017) that video games are designed around motivation. Therefore, the findings signify the crucial role of teaching approaches that take into account appealing and engaging learning environments, as to increase learning motivation, which, to a large extent, seems an integral aspect of L2 learning through gaming.

On the other hand, L2 teachers who intend to use video games in and outside of classes need to exercise caution as they might be intrigued by the extent to which the games are enjoyable, motivating, and supportive in terms of language learning. However, taking deHaan's (2005) findings into consideration, the use of some video games might be counterproductive, as difficulty might direct learners' attention away from the learning objective(s), resulting in merely proceeding in the games.

The harmony between the present study findings and previous research suggest that learners can compensate for the lack of opportunities to communicate in L2 in EFL contexts. The findings indicate that online video games, and those that provide opportunities for communication among players, have the potential to: (1) extend EFL learners' knowledge of various versions of Englishes, (2) set a balance among the levels of language formality through familiarizing EFL learners with informal English that is frequently encountered in authentic life settings, and (3) increase language practice beyond the classroom setting. According to De Silva (2014), current digital games provide social environments and not just tools for enjoyment. Furthermore, it might be argued that the online gaming environment facilitates practicing of L2 production skills at learners' own pace more than the restricted settings and limited time of language classroom. According to Thorne et al. (2014), online games communities present extended opportunities for practicing L2 more than the confined learning and practice in the formal setting of schools. Therefore, the gaming environment might have a potential, as a tool for teachers, to promote autonomous learning and lower language production apprehension that can be clearly observed in language classes.

By and large, the findings show that EFL learners are likely to be well acquainted with the environment of gaming. On that account, it can be argued that careful inclusion of gaming for L2 learning inside and outside the classroom might be timely and proper as EFL learners' familiarity with video games can facilitate language teachers' integration of gaming into the English curriculum. Researchers have contended that the integration of video games in educational settings has a potential to promote learning and interaction in the learning process (Gee, 2004; Golonka et al., 2014; Shaffer & Gee, 2005; Van Eck, 2006). Nonetheless, video games should not be utilized as a part of the English curriculum merely because they provide extensive exposure to L2 (deHaan et al., 2010). The decision for employing commercial video games should be informed by whether they lead to improved L2 learning outcomes, and how supportive and constructive they are in the learning process. This demands increased teachers' awareness of when to use video games, what commercial video game(s), and for what purposes. L2 teachers' involvement in designing video games that are geared toward optimal English learning might not be feasible. However, L2 teachers who intend to use gaming for learning purposes can familiarize themselves with different genres of video games, content within video games, and the multitude of possibilities of designing learning tasks within the realm of gaming that take into account learners' needs, interest, motivation, and achieve the intended language learning objectives.

Conclusion

The current study set out to explore learners' perceptions and attitudes toward the potential of video games for L2 learning and their integration into the English curriculum. Specifically, it explores EFL learners' engagement in gaming, preferences in terms of L2 behavior, learning L2 culture through gaming, familiarity with different varieties of English, language retention, language learning motivation, willingness to

communicate and L2 practice, language practice environment, L2 independent learning, L2 self-assessment, knowledge of informal English, L2 learning and game difficulty, and learners' level of satisfaction at the status of current video games for L2 learning purposes. The findings indicate that L2 learners have positive views of the potential of video games to foster English learning. Such positivity toward gaming can be exploited to increase learners' motivation to learn L2 through gaming. According to L2 learners' perceptions, several elements and factors that are conducive to English learning and development can be found in gaming. Moreover, the findings reveal that L2 learners have positive attitudes toward the integration of gaming into the English curriculum, and they sanction the place of gaming in formal education, provided that commercial video games need some modifications to become more supportive and effective.

In this regard, it is essential to note some limitations of this study. First, the sample consists only of male English undergraduate majors due to the unavailable access to female participants. Second, directed by its scope, this study does not examine the participants' perceptions of the development of particular L2 skills through gaming. It is not geared toward looking into how video games contribute to enhancing and developing lower-level skills that feed into the amelioration of the main skills or subskills of English. Finally, the present study approaches the area of gaming and L2 learning from a quantitative standpoint only. Further examination of this area by utilizing qualitative approaches might contribute additional insight into L2 learners' perceptions, differences, and peculiarities when approaching EFL learning through gaming. Adding the qualitative component might also explicate learners' perceptions of the processes through which learning occurs in gaming. Furthermore, quantitative and qualitative observations of L2 learners' beliefs of their own experiences in gaming and possible developed L2 skills can be examined against learners' perceptions of the utility of gaming in L2 learning. Future research in this area may also examine the perceptions of female L2 learners and look into the similarities and differences across genders. Finally, scrutiny of particular genres of video games and their influence on L2 learning might provide insight into possible optimal gaming environments that can contribute more to L2 learning and acquisition.

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Appendix

Questionnaire: English Learning Through Video Games

Directions: Read the following questions and choose the answer that best represents you.

1. Age:

18 – 19 – 20 – 21 – 22 – 23 – 24 – 25 – > 25

2. Number of years in the English Department?

1 – 2 – 3 – 4 – 5 – 6 – > 6 years.

3. Have you ever played video games?
Never – only in the past – started playing recently – started years ago and still playing

4. Duration of playing video games:
less than 3 months   3 month –   1 year   1-3 years   3-5 years   more than 5 years

5. Duration of playing video games in hours:
1 hour per day   1-3 hours per day   more than 3 hours per day   a few hours per week
a few hours per month   not regularly (play from time to time)

6. Preferred language of video games: Arabic – English – both Arabic & English – others

7. Video games were/are played utilizing: *(choose all that apply).*

Consoles   PC   phone   tablets   browsers

8. Preferred genre of video games: *(choose all that apply).*

Action – adventure – sport – mystery – horror – strategy – shooting – simulation – educational – others

9. You have played/play video games for: *(choose all that apply).*

enjoyment
improvement and practice of English in general
both enjoyment and improvement/practice of English
improvement and practice of specific English skills
other reasons

10. When you play video games in English, you try to learn and focus on:

language form   language meaning   both form and meaning   neither from nor meaning

11. Video games are effective for learning and improving learners' English skills because they: *(choose all that apply).*

make learning easier
make learners learn faster
provide a safe and comfortable environment for learning
make learning exciting
Actually, are not effective for English learning

12. Do you usually play video games alone or with other players using the internet and attempt to communicate with them?

a. Alone
b. With players and do not talk with anyone
c. With players and communicate with them

Directions: Read the following statements and indicate if you (strongly agree (SA), agree (A), are neutral (N), disagree (D), or strongly disagree (SD) with each statement.

Statement	Degree of Agreement				
	SA	A	N	D	SD
1. Playing online video games with other players helps me to recognize and learn the culture(s) of native speakers.	SA	A	N	D	SD
2. Playing online video games with other players helps me to recognize and identify different varieties of English.	SA	A	N	D	SD
3. English that I learn while playing video games is easy to remember even after a long period of time.	SA	A	N	D	SD
4. Playing video games motivates me to learn English because I need to know the language in order to proceed in the games.	SA	A	N	D	SD
5. Playing video games motivates me to learn English because I enjoy learning English while playing.	SA	A	N	D	SD
6. Playing online video games with other players makes me willing to use English to communicate with them (e.g., to solve a problem while playing or to win the game).	SA	A	N	D	SD
7. Online video games with other players provide a comfortable environment to practice English without feeling anxiety, even when I make language mistakes.	SA	A	N	D	SD
8. Video games enable me to become independent as I can practice and improve my English skills by myself.	SA	A	N	D	SD
9. Playing video games enables me to know and assess my abilities, competences, strengths, and weaknesses in English.	SA	A	N	D	SD
10. Video games provide me with many opportunities to practice English outside schools and universities.	SA	A	N	D	SD
11. Playing video game enables me to know things about English that might not be taught in schools and universities (e.g., slang, video games-related words, etc.).	SA	A	N	D	SD
12. It is difficult to focus on learning English while playing video games since I would be overwhelmed with the challenges in the game itself.	SA	A	N	D	SD
13. I would like the courses I take at the university to have tasks or assignments that I should do through playing video games.	SA	A	N	D	SD
14. I would like the lessons in the courses I take at the university to provide tasks where I play video games in-class time.	SA	A	N	D	SD
15. Using video games play as tasks in or out of class time or as assignments in courses make lectures more enjoyable and exciting.	SA	A	N	D	SD
16. Video games should be used in particular courses or to improve specific skills and not in all classes since the latter would make education less serious.	SA	A	N	D	SD

17. If video games are to be used in schools and universities to improve English learning, I think:

The available video games are suitable to choose from, and there is no need to design specific games that target English learning.

The available video games are suitable to choose from; however, they should be modified to become more effective for English learning.

The available video games are not suitable for English learning, and there is a need to design specific games that target English learning.