Educational Gaming: The Influence of Video Games on ESL Students’ Writing Skills

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Abstract: - In Malaysia, English is learnt as a second language for most learners and there have been many researches conducted to determine the best approach for ESL teaching and learning. This paper presents the results of a study on the influence of video games on students’ writing skills and their perception on the incorporation of video games in teaching writing. It focused on two specific skills which are vocabulary acquisition and narrative skills. Data were collected via questionnaire surveys among ESL students in a local university followed by semi-structured interviews with selected respondents. One of the findings of the study was that the majority of students felt that video games enriched their vocabulary and that those words learnt were applied in their English writing tasks. Regarding narrative skills, video games helped enhance students’ imagination, character-building, generating and organizing ideas besides also influencing their choice of writing texts.

Key-words: - ESL, video games, vocabulary acquisition, narrative skills, writing skills, perceptions

1 Introduction
Many researches have shown the increasing hours spent by teenagers nowadays on video games. Recent findings of the Entertainment Software Association [1] showed that 72% of American households play computer and video games. More interesting is the fact that 82% of gamers are 18 years of age or older. These results suggest a great influence of video games on the 20th-century youth. Prensky [2] stated that by the time an average American turns 21, he or she will have spent 10,000 hours playing computer games. Similarly, closer to home in Malaysia, it was also reported that playing computer games was teenagers’ most popular activity [3]. Since they are so engaged in the virtual world, these “digital natives” may not be very impressed by the traditional black or whiteboard teaching.

Rather than arguing the negative effects video games could bring on students’ academic achievement, it is worth looking at the possible way of manipulating this technology to assist their learning instead as ICT was found to contribute to the enhancement of the teaching and learning process [4]. Various efforts have been made in designing games that contain academic content which can be used in classrooms [5] [6] [7]. There have also been numerous studies that prove the capacity for video games to affect students’ language development positively. In addition, students themselves have a positive attitude towards using ICT to learn English [8]. Games generally have several characteristics that make them potentially useful for the teaching of writing [9], whereby the elements in games are similar to those in the writing process [10]. A study conducted by Warren et. al. [11] on the effects of a curriculum-based, 3D learning environment on students’ standardized writing achievement resulted in the improvement of the students’ writing measures in just seven treatment periods. However, they argued that there was little research on the use of games as a support or practice for learning to write.

The aim of this paper is to present the results of a study on the influence of video games on Malaysian ESL learners’ writing skills. Methods of collecting data were through surveys and interviews with students on: a) their interaction with video games, b) the influence of playing video games on their writing skills, and c) their perception on incorporating video games in teaching writing.
2 Learning Theories and Approaches in Using Games in Language Learning

Learning through games occurs through trial, action, and experience. Lewin, Dewey, and Piaget came up with three separate models of learning theories that support the role of experience in the learning process, cited in Kolb [12]. In experiential learning, Kolb [12] concluded from the aforementioned models that learning: 1) is a process, not merely outcomes, 2) is a continuous process grounded in experience, and 3) involves transaction between learners and the environment. The experiential learning theory explains how learners construct their own learning through experiencing new situation and knowledge.

In his study, Kolb [12] mentioned that learning, by nature, is a tension- and conflict-filled process. This fits the theory of incidental and informal learning perfectly, which explains the unconscious and self-directed learning condition. It is often integrated in daily routines and linked to learning of others; it is always occurring with or without our consciousness [13]. The fact is that students play games after school hours, with their primary intention being to enjoy and not to learn. However, the educating elements in video games somehow provide informal learning opportunities for the students while being fun at the same time.

Gamers are forced to integrate all their cognitive as well as psychomotor senses, thus requiring a gamer to be a multi-tasker and multi-literate. Good games have high potential for learning [14] that encourage cognitive development and foster problem-solving skills [15]. Games create opportunities for leadership, competition, teamwork and collaboration. A central hallmark of game play is that users do not stop after completing the first round of a game, but play it over and over again. In fact, a young person engaged in a computer game may often have to be told to turn off the game or to stop playing [16]. The more they play, the better the grasp they have on these skills, which enables games to be an instructional tool to promote language skills.

Garris et. al. [16] presented an input-process-output model of instructional games and learning that highlights the process of engagement that underlies game play, whereby it is a repeating cycle of user judgements, behaviour and feedback. They also claimed that, paired with appropriate content, video games can motivate students to achieve learning objectives.

2.1 Games in Teaching Writing

Previous studies have described educators of English incorporating game play in language classes, specifically in the teaching of writing class. Warren et. al. [11] studied the incorporation of the Anytown Multi-User Virtual Environment (MUVE) in an English teaching writing class.

The narrative context of Anytown situated learners in the role of cub reporters investigating a series of mysterious events: vandalism, a burning building, and strange lights emanating from the town’s river. It makes them want to seek answers thus inducing cognitive conflict within students to think more critically to solve their quest and adequately respond to the writing task required as solutions [11]. This game also allowed the teacher to take the role of editor of the newspapers and provide feedback to the students’ writing task. Furthermore, Anytown provided 22 possible free-choice writing tasks that increased in difficulty over time, which were intended to engage students in higher-order thinking skills and grant them the opportunity to gain competency with developmentally appropriate writing.

Results of the study indicated that students in the treatment group completed more than 20 voluntary (free-choice) writing activities while none of the students in the comparison group completed any of the prepared activities. On top of that, students in the Anytown digital environment had shown improvement on writing measures in just seven treatment periods. This is an indicator of the efficiency of game play in influencing students’ motivation to write and most importantly, its potential in enhancing students’ writing skills.

2.2 Influence of Video Games on Students’ Writing Skills

2.2.1 Narrative Skills
Most video games are developed based on their own unique story lines which make them distinct. That is one of the strongest elements of a game that draws intrigued gamers. Students playing the Anytown MUVE game, for instance, will have to place themselves as a reporter that requires them to write stories. This could promote imaginative skills that at the same time contribute to skills in narrating stories [11]. There are also many activities educators can generate from a single video game to promote narrative skills [9].

2.2.2 Vocabularies
Since most video games use English as their language of operation, they expose students to a substantial amount of vocabularies, especially ESL learners. According to Sorensen and Meyer [17], languages, especially English, have always had to be learned and used by children to engage and participate in games. Uberman [18] proposed several conditions for effective vocabulary learning—learning in context, practice and revision. Considering the cyclical relationship between gamers’ continuous engagement with the games, as illustrated in Garris et. al.’s [16] model, Uberman’s [18] idea of effective vocabulary learning appears to take place through game play.

3 Method
The researchers used a mixed-method design in the study. The first section of the questionnaire elicited respondents’ background information and their interaction with video games. The second section focused on the influence of video games on their ESL writing skills particularly vocabulary acquisition and narrative skills. Three of the respondents were interviewed to gain their perceptions on the use of video games in teaching ESL writing. The results are shown in the third section. The study involved 30 students (30% male, 70% female) from a Malaysian public university, with a 100% return rate.

4 Results
4.1 Students’ Interaction with Video Games
Table 1. Starting age to play video games

<table>
<thead>
<tr>
<th>Item (Age)</th>
<th>Percentage of Students (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten (4-6 years)</td>
<td>40</td>
</tr>
</tbody>
</table>

From the table, most respondents (40%) started playing video games since kindergarten years (4 to 6 years old). 33% started playing video games during their primary school period (7 to 12 years old). There were 17% who engaged in video games play during secondary school period (13 to 17 years old) while the other 10% of respondents only started when they were in higher institution (19 to 20 years old).

Table 2. Hours spent on playing video games daily

<table>
<thead>
<tr>
<th>Item (Time)</th>
<th>Percentage of Students (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 minutes to 2 hours</td>
<td>50</td>
</tr>
<tr>
<td>3 hours to 5 hours</td>
<td>47</td>
</tr>
<tr>
<td>6 hours to 8 hours</td>
<td>3</td>
</tr>
<tr>
<td>9 hours to 11 hours</td>
<td>0</td>
</tr>
<tr>
<td>More than 12 hours</td>
<td>0</td>
</tr>
</tbody>
</table>

According to the analysis, most of them (73%) agreed that they were easily addicted once they started playing. However, they did not show a high allocation of time on gaming daily. Only 3% of them spent 6 to 8 hours playing video games per day. 50% spent 5 minutes to 2 hours each day while 47% spent 3 to 5 hours daily on this activity.

Another item drawing on students’ perceptions on the motivating role of video games in English language learning showed positive results. 80% agreed that video games motivated them to learn the English language while the remaining 20% disagreed.

4.2 The Influence of Video Games on Students’ Writing Skills
4.2.1 Vocabulary Acquisition
Respondents were asked to indicate on a four-point Likert scale how much they agreed with statements on the influence of video games on their vocabulary acquisition. General analysis of this section gave positive findings where the majority of them (73.86%) agreed that playing video games helped their English vocabulary acquisition while the other 26.14% disagreed with the statement.
From Table 3 above, for the first item, 90% of the respondents gave positive responses that playing video games does enrich their English vocabulary while only 10% showed a negative response. Results for the second item proved that the majority of students (87%) did apply new words they learnt from video games in their English writing while only 13% did not.

### 4.2.2 Narrative Skills

In this part, students were required to indicate their responses on another four-point Likert scale. The overall findings for this part showed 76.5% of the participants with positive attitudes and the other 23.43% with negative responses towards video games enhancing their narrative writing skills.

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought about the video games’ story lines</td>
<td>3</td>
<td>53</td>
<td>37</td>
<td>7</td>
</tr>
<tr>
<td>Became more creative</td>
<td>17</td>
<td>66</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Enhanced imagination</td>
<td>23</td>
<td>57</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Construct character building</td>
<td>20</td>
<td>60</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Generated more ideas</td>
<td>23</td>
<td>57</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Learnt to organize ideas</td>
<td>13</td>
<td>67</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Preference of the types of text</td>
<td>3</td>
<td>74</td>
<td>20</td>
<td>3</td>
</tr>
</tbody>
</table>

A significantly high level of agreement on the influence of video games on students’ narrative skills was shown on all items listed, ranging from 56% (thought of story lines in video games while writing) to 83% (became more creative). 80% of the students said that video games helped in enhancing their imagination, character-building, and generating and organizing ideas. 77% of them agreed that it also influenced their choice of texts.

### 4.3 Students’ Perceptions on Incorporating Video Games in ESL Teaching Writing Class

This section presents students’ perceptions on the use of video games in teaching ESL writing. To get the data, an interview with three respondents was conducted. One respondent said, “…interesting because you can learn many new words and also can encourage learning process because you will look in the dictionary for meaning…but must use games that is appropriate to the students’ level.” (Respondent A) She believed that video games can encourage her learning process and enrich her vocabulary. However, she added that the games must suit students’ level so they can interact at the students’ level of thinking.

Respondent C also agreed on the effectiveness of using video games in teaching writing:

…”I think it would be interesting and it helps students to get a better overview of the writing process later because sometimes students need something else that could help them to boost their interest in writing…writing could be slightly boring…” (Respondent C)

However, another interviewee stated that the use of video games was not really effective for students as it could distract students from the learning process. He claimed that, “…it is not very good because most of the students will only think about the fun during playing video games…” (Respondent B)

### 5 Discussion

#### 5.1 Video Games as Motivation to Learn English

The results obtained showed that the respondents involved had close and frequent interaction with video games. By referring to the analysis of their interaction with video games, it was notable that most of them had been exposed to video games since they were still children. This provided this group of students with more than 10 years of experience playing video games. The world of virtual games is neither alien nor tedious for them, which makes it a perfect platform for learning if it is manipulated accordingly. They admitted that they easily get addicted to it and would turn to video games to fill up their free time.
This supported the characteristics of Garris et al.'s [16] game model that highlighted the engagement and cyclical process experienced by gamers. The majority of the students (80%) also agreed that playing video games motivated them to learn English. These students might not have the direct intention to learn English by playing video games, but here is a clear sign of informal learning taking place [13]. Most of them read video games instructions and almost all of them (97%) rated instructions in video games as easy to be understood though they were presented in English. These findings are indicators of the ability of video games in promoting indirect voluntary language practice. Therefore, if it is manipulated for educational purposes, video games will be a great tool in helping English educators in their teaching.

5.2 Video Games and ESL Writing Skills

5.2.1 Vocabulary Acquisition
The direct item drawing on students’ perception on whether playing video games enriched their vocabulary resulted with a 90% agreement. Other disguised items aimed to elicit their perception on this issue also led to similar results. More than half of them (56%) said they looked for the definition of any new words they found while playing after the game. A large number of them also made assumptions to comprehend new words they found rather than totally ignoring them. This indicated that they did give attention to vocabulary aspects while they were playing. Surprisingly, 87% of them even applied new words they learnt from their game play in their English writing tasks. Notably, from the analysis, they also tend to discuss solving the challenges they were playing in the video games. Wright et al. [19] said that games can provide meaningful communicative language practice where language will be used for communication, exchange of information and expressing opinions. Other than resolving challenges with other learners, the discussion provided them with the chance to discuss and use vocabularies they found while playing, thus increasing their contact with them.

5.2.2 Narrative Skills
Narrative is not something easy for those who have limited ideas and often have no stories to tell. Creativity and experience are therefore crucial in narrating stories. Video games are usually developed with their own unique story lines, and start with a brief introduction or history, then development, the conflicts and so forth. They possess similar characteristics to a writing piece [10]. Responses on the influence of playing video games on students’ narrative skills in ESL writing appeared positive especially for creativity and character-building sub-skills. The nature of the virtual world allows wider space for creative construction of characters and story lines, and so contributes to the emergence of various unique genres of video games. Most of the participants believed that this helped in building characters for their narrative task. 80% of them agreed that game play enhanced their creativity and helped in generating more ideas while writing. Frequent encounters and engagement with games could have familiarized them with creative ways to generate and structure ideas in writing.

5.3 Perceptions on Incorporating Video Games in Teaching Writing Class
The analysis of the study showed that most of the respondents were highly motivated by the use of video games in learning English. Interviews with the respondents suggested that they saw the use of video games in the ESL writing class as a way to make the lesson more interesting. It was clear that these students did not favour the conventional way of teaching and learning writing in the ESL classroom. They need tools that will suit their style in order to make teaching and learning effective. This goes in line with the claim made by many that the new generation of students, or the “digital natives” [10], is different, thus needing new educational approaches [20]. However, one of them also pointed out that it might distract students from the actual learning process. Educators therefore have to choose suitable instructional games that will help to achieve their teaching and learning objectives in the ESL writing lesson.

6 Conclusion
The results of the study revealed the role of video games in Malaysian ESL students’ lifestyles. The students themselves agreed that video games can motivate them to learn English. In fact, the study showed positive correlations between gaming and students’ writing skills development. This study has also proven the positive side of video games in
boosting students’ vocabulary acquisition and narrative skills. It supported previous claims from researchers such as Gee, Prensky, Warren, and also proved the effectiveness of the game model suggested by Garris et. al. [16]. By understanding the model, Malaysian English educators can manipulate aspects of video games for educational purposes without losing their entertaining and addictive qualities.

Video games are indeed good platforms for experiential and informal learning opportunities. Despite highlighting good features of video games, Gee [14] stated that the success of the incorporation of these video games depends on how they are used and the sort of wider learning systems they are embedded within. It is now a challenge for educators to be able to choose the right game and to create an effective learning environment suited for our Malaysian setting in order to maximize the potential of video games as a tool for teaching ESL writing.

References: