



Impact of Digital Games on Incidental Vocabulary Acquisition of Pakistani High School Students

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Abstract

Extramural English (EE) activities that involve learner-initiated activities in a non-instructional setting outside the classroom with or without an intention to learn the language such as playing digital games (Sundqvist, 2009) have been found to have a positive impact on vocabulary size and English language proficiency test scores of the learners (Sundqvist & Sylvén, 2012). The study maps out the gaming habits, experiences, and perceptions of Pakistani high school students regarding incidental English vocabulary acquisition through online multiplayer video-games. The data collection tools consist of an online questionnaire and semi-structured interviews with selected participants. 88 Pakistani high school students responded to the online survey while 23 students volunteered to take part in the interview out of which five students were selected based on their responses to the survey. The survey data has been quantitatively analyzed and supplemented by thematic narrative analysis of the interview data. The findings show a consensus on the positive role of video games in incidental vocabulary acquisition due to the pressure-free context, increased attention and engagement, and transition from incidental learning to incidental self-directed learning. The interview students reported

the expansion of vocabulary, real-life interactions in English, and increased awareness of teenage culture and vocabulary as the most effective English language learning outcomes of their involvement in the games. Future research can employ vocabulary tests to further explore the conclusions drawn from this study.

Keywords: *Extramural English, Incidental Vocabulary Acquisition, Perceptions, Experiences, Motivation, Young Language Learners, Gaming Habits, Multi-player Digital Games*

Introduction

Nowadays, English has become a globalized language spoken by people from different cultural and linguistic background particularly after the tremendous advances in technology (Alzeebaree & Yavuz, 2017, as cited in Alzeebaree & Hasan, 2020). Too many Pakistani, most of their English is learnt in both informal settings and classroom environment. English is the major medium of entertainment and world media, which implies that Pakistanis have direct accessibility to a wide variety of music, films, television channels, social media and news in English.

Since the practice of dubbing TV and films in Urdu is almost nonexistent, most Pakistanis have been exposed to prevalent English input. Furthermore, everybody has convenient access to the internet these days and English media is always available to people wherever they go with their mobile devices. Such receptive and productive prevalence of English inevitably results in informal language acquisition. The prevalence of electronic devices offers a wide variety of other opportunities for informal English learning including video games. For this paper, I use the word "extramural English" (EE), coined by Sundquist (2009), as "English that learners come in contact with or are involved in outside the walls of the classroom(p. 24).

Usage of video games varies from other EE practices as they provide greater incentives for effective use of languages and result in more adaptive learning than any other application. Sundqvist states that successful activities (games, internet, and blogging) such as listening to music, watching TV and reading news, are superior to receptive behaviours (Sundqvist, 2009). Video games allow the users to select the language or to even add written or oral content, in addition to the textual or audio input. Enhanced online access and playing video games are often combined to create multiplayer situations in which players use shared (usually English)

languages to negotiate during playing a game in order to solve challenges or simply for the sake of social interactions posed by a game.

This study contributes to the investigation into the scope of video games for fostering second language vocabulary acquisition. This investigation is limited to the online dual or multiplayer role-playing games (MMORPG) targeting its multiplayer mode and multilingual dependency, which allow gamers multiple opportunities for interaction during playing these games. Many MMORPGs, such as World of Warcraft, Second Life, Blade and Soul, Guild Wars, and PUBG have thousands of participants from diverse age groups, social and linguistic backgrounds. What unifies all these people is the need to use English to communicate during playing. These gamers generally play MMORPG for the benefit of having stress-free social interactions and in most cases; they do not realize their involvement in MMORPGs with their language learning advancement. In other words, the gamers are not consciously aware of the language learning side benefit of playing. Nevertheless, their linguistic ability may be — involuntarily — influenced by numerous linguistic elements in the games they are engaged in, such as game orientation and storyline, instant messaging with other gamers, and game instructions and quest logs.

Research studies on the merits of using video games to promote L2 vocabulary acquisition have rendered interesting findings. One study, for example, found a positive impact of videogames on learner affect and vocabulary retention, and learners' ability to recall new in-game vocabulary was supported (Hitosugi, Schmidt, & Hayashi, 2014). The impact of involvement in simulation games, furthermore, has been found to promote long-term retention of target language vocabulary (Franciosi, Yagi, Tomoshige, & Ye, 2016). A study by Maior (2016) targeting incidental vocabulary acquisition, for example, found that initially receptive vocabulary items by playing MMORPG World of Warcraft can occur unintentionally within a short period of time (2-4 hours), and that acquisition was found to be highly encouraged by the in-game abundance of word frequency exposure, visual representations of individuals, in-game monsters, and locations (Maior, 2016). However, most of these studies investigated L2 learning at large; a limited number of studies targeted vocabulary acquisition in particular (Saragi, Nation, & Meister, 1978; Schrader & McCreery, 2008; Steinkuehler, 2010; Bischoff, & Gilliland, 2015). In addition, researchers mostly examined video-games in an L2 educational program, where the setting can be quite formal and acquisition far from incidental (Zheng, Bischoff, & Gilliland, 2015). This is unlike the present study which aimed to explore incidental vocabulary acquisition in a non-academic setting. Furthermore, no substantial or notable

research has been carried out on the attitudes and experiences of the users in the Egyptian context. The focus of this study is on extramural English and its impact on students' English proficiency particularly the relationship between gaming and vocabulary, hence, the study builds on the knowledge gained from previous studies in different contexts and forms an overview of an informal process of English vocabulary learning in Egypt. This research aims to investigate young adult, Egyptian gamers' perceptions of second language learning at large and vocabulary acquisition in specific in MMORPGs utilizing an online survey, and by conducting informal interviews with a few Egyptian MMORPG gamers.

To investigate the effect of involvement and interaction in MMORPG on incidental vocabulary acquisition the present research is intended to answer the following questions:

1. What are young adult gamers' perceptions of vocabulary acquisition in MMORPGs?
2. How does playing digital games in English impact English vocabulary of high school students?
3. What is the relationship between the times spent playing digital games and English vocabulary?

Inspired by earlier research by Sundqvist and Sylvén (2016), the study combines qualitative and quantitative research approaches. The researcher could extend the data resources and accentuate the validity of findings (Johnson & Christensen, 2009; Onwuegbuzie & Johnson, 2006) by implementing this mixed-methods design. To have both the qualitative and quantitative methods represented in my research I chose to use the following methods:

1. Questionnaires – for all student participants. (*Quantitative*)
2. Vocabulary test – for all the student participants. (*Quantitative*)
3. Interviews with five participants (*Qualitative*)

The scope of this study is thus limited to game-enhanced investigation. In addition, the study aims to explore incidental vocabulary acquisition in non-instructional settings in an attempt to fill the gap in the existing literature which majorly investigated incidental vocabulary acquisition in formal educational settings (Ghanbaran & Ketabi, 2014; Bytheway, 2015; Zheng et al., 2015; Sundqvist et al., 2015; Chen & Lee, 2018)

Literature Review

Incidental vocabulary acquisition has enjoyed a great deal of attention by scholars in linguistic and educational disciplines with the rise of modern communication media. Defined by most linguists as an efficient method of learning vocabulary from context, incidental

vocabulary acquisition is achieved when learners have no intention of learning vocabulary (Day, Omura, & Hiramatsu, 1991; Jenkins, Stein, & Wylsocki, 1984; Nagy, Herman, & Anderson, 1985; Saragi, Nation, & Meister, 1978; Zemni & Alrefaee, 2020; Medriano & Bautista, 2020). From an interactionist viewpoint (Vygotsky, 1978), online video games provide a proper setting for social interaction which has been found to play an influential role in learning and acquisition.

Extramural English

In the present day, there are plenty of opportunities to come across English outside of school and hence many extramural English activities learners can engage in. Sundqvist and Sylvén (2016) define numerous types of extramural English activities, some of which are: reading, watching TV, browsing the web and playing games. This study explores the connection between the habits of students for playing digital games, the effect of their conversation in English language and vocabulary development process.

Gaming as a medium for EE learning

According to Sylvén and Sundqvist (2012), gaming is an activity that is most commonly associated with teenagers, but in reality, people of all ages play games. Internet access has become common and Henry (2013) claims that in 2010, 61 percent of 9 to 16-year-olds have a computer in their bedroom, meaning that even younger children have opportunities to be online and/or play games. Sylvén and Sundqvist (2012) point out that the default language of interaction in many games is English, which can be challenging to anyone who does not have English as their L1. As a result, they form a hypothesis: "...those successful and frequent players of such games who do not have English as their mother tongue acquire some of their English L2 proficiency in the activity of gaming" (Sylvén & Sundqvist, 2012, p. 3). The results of their research co-relate with this hypothesis, since both Sundqvist (2009) and Sylvén and Sundqvist (2012) found a clear connection between playing games in English and the development of English vocabulary. In her study, Sundqvist (2009) observed that the two most influential EE activities on a learner's vocabulary were playing video games and surfing the internet.

Incidental vocabulary acquisition through games

Incidental learning is defined as the process of fetching new information without conscious efforts; it refers to the unintended adaptation while attempting to focus on another (Richards & Schmidt, 2002). Regarding vocabulary acquisition, incidental vocabulary acquisition is taken to be an effective method of new vocabulary items learning out of a specific context (Day, Omura, & Hiramatsu, 1991; Jenkins, Stein, & Wycsocki, 1984; Nagy, Herman, & Anderson, 1985; Saragi, Nation, & Meister, 1978).

A quick review of the literature shows that entertaining and fun approaches of learning have been majorly limited and affiliated to the learning of children. Hromek and Roffey (2009) promote using games for teaching children by explaining that there is a “natural affiliation between children, play, and the desire to have fun which makes games an ideal vehicle for teaching” (p. 626). The investigation of vocabulary learning from online video games proposed indispensable explorations to the ways MMORPGs render themselves as language teaching environments (Prensky, 2001), and suggested socio-cultural and psycholinguistic dimensions of MMOs (Peterson, 2010). They also emphasized the entertaining, learner-centred quality of online games and their merit in stimulating motivation (Gee, 2003). Moreover, vocabulary retention through online games in an instructional setting has been found to be more effective when compared to retention of vocabulary acquired through textbooks (Hitosugi, Schmidt, & Hayashi, 2014). Therefore, it is hoped that the findings of the subject research will help us to seal the gaps in literature by offering insight into how online games are perceived as language learning environments in Egypt, and the potential benefits of involvement in MMORPGs in non-instructional settings. It is also hoped that the study will offer new findings on young-adult age group involved in online gaming.

Methodology

Qualitative and quantitative research designs have been employed in this study. All results and conclusions drawn from the research are based on a methodical data collection and all the data has been correctly examined to access its validity. The questionnaire has been designed by taking Dörnyei (2007) methodology as a research framework. I designed the questionnaire in English by taking a lead from several studies that deal with the learning of English language from the video games (Kirppu 2014; Sundqvist 2009; Uuskoski 2011; Chen, 2015). The final questionnaire had three sections: In the first one deals with the contextual statistics of participants, such as age, gender, and whether and for how long they have lived

abroad; the second and the largest section, questions 1- 10, was about the perception of the participant in video gaming, such as; habits, and the resulting learning of English vocabulary. The last section contained a small vocabulary test of ten words. The questionnaire was done by all the 88 students participating in the study. The vocabulary test was designed to test whether the students knew common gaming words. These words are commonly used in different types of games and usually not taught in school. Game-specific words were deliberately chosen as they do not reflect the students' overall English vocabulary knowledge. This small vocabulary test was meant to indicate some parallels between the times spent gaming and vocabulary proficiency.

The qualitative part of the research consists of semi-structured interviews with 5 participants out of 23 volunteers who remarked in the questionnaire that they are habitual of playing English computer games, and they think it is helpful for them in English learning. I contacted the interviewees through social media or email to arrange the interviews with them individually. Interviews were conducted in English. The interviews with the participants took around ten minutes and consisted of eight questions. The interviews were recorded on phone. The interview recordings were complemented with the Google forms document since it provided with the opportunity to make notes directly during the interview and have these available online for later reviewing.

The present study is an intrinsic case study, An intrinsic case study is defined as Croker and Heigham (2009) reported . as a study that is intended to get an understanding of a particular phenomenon under consideration (i.e. the study of the students' video gaming perceptions and habits). Such studies are not an attempt to mark generalizations or associations to other studies (Croker & Heigham 2009, pp. 69–70).

Research participants

The informants of the present study are secondary school (SS) students from Egypt. I chose SS students for some practical reasons. The first and foremost reason is that they are more likely to capable to identify their follow-up with cognitive learning of English language comparable to that of younger ESL learners – how they have acquired it, how they use it and how they see English as a language. Secondly, it was convenient and frank to deal the young learners to gather online data for the present study. The sample for the present study was conveniently selected from the general public. Participants' selection criteria were to be Egyptian, to use English as their L2, and their age range should be between 14 and 18 since the

study is targeting secondary school gamers. This could be achieved by contacting local friends who were MMORPG gamers and whose age and nationality were known. The sampling process conformed to snowballing; the researcher first approached acquaintances that fit the criteria, and then they were asked to invite their circle of connections who match the selection criteria of the research. Overall, participants were preferably active video games, with preference for MMOs.

Results

The survey results are being presented under two different titles. The first title covers the results connected to the perceptions and gaming habits of the students. The second one contains results from the ten words vocabulary test. For the first research question, data collected from the questionnaire and the interview would provide insight into its answer since it investigates perceptions of gamers regarding language acquisition in MMOs. Secondly, the online survey rendered young adult gamers responses about the impact of online games on their vocabulary through a vocabulary test. Thirdly, the questionnaire and semi-structured interviews data elaborates gamers' perceptions of their L2 vocabulary acquisition in relation to the time spent playing online games.

Questionnaire results

A total of 88 participants responded to the survey. The participants fell in the 16 to 18 age group who represented 64.5% of respondents, while 35.5% of participants' ages were between 14 and 16. All the participants of the study were male for several anticipated reasons such as males' preference for action-based games and the first-person shooter genre of MMOs unlike the majority of female gamers who prefer MMOs that simulate social activities - such as Second Life or The Sims - as has been reported earlier by Sundqvist and Sylvén (2012, 2014).

Participants preference

When participants were asked to select their most favourite MMORPG, all participants selected PUBG as one of their favourite online role-playing games, and 36.4% of participants listed Fortnite as another favorite MMORPG, whereas League of Legends had only 27.4% of respondents choose it. This supports the participants' preference for MMORPGs that have an online interactive mode, unlike Fortnite that can be played offline. Surprisingly, World of

Warcraft had only 9% of participants listing it as one of their favorite MMORPG (only 8 respondents) despite reaching around 5 million players worldwide in 2019 (Statista, 2019). This can be due to many factors. For one, WoW is only available for computers and laptops and cannot be played on mobile phones. PUBG -on the other hand- gained its huge fame because of its availability on mobile phones as well as other devices.

How long participants have been playing MMOs

Regarding the time they had been playing an online game, 46.5% of respondents said they have been playing the game for less than a year, while 12.5% indicated having been engaged in these games for 5 years or more, and 41% of participants stated playing these games for 1 to 2 years. This provides insight into the MMORPG gamers' dedication as they continue to play the same game for an extended period. For the number of hours spent per week playing online games, 24.5% of respondents stated playing for 10 hours or less, while 52.5% said they played for 10 to 20 hours per week, and only 23% of participants indicated playing online games for 30 to 40 hours per week.

English Language Level

When participants were asked about their English language level, 33% of them said they were at an intermediate level, whereas 47% stated being at an advanced level, and only 20% (18 participants) indicated being at a beginner's level of English. However, participants had more in common when they were asked about using English in non-instructional settings; 42% of participants stated that they use English in social media platforms like Face book, Twitter, Instagram. etc., while 45% of respondents said they use English in video games, and only 13% of participants indicated using English in family gatherings.

Dependence on English

A little more than half of the participants (54%) believed that it is possible to level up (advance from one level in the game to the next) in online games without using English, while 22% agreed that it is not possible to go through advance levels without using English, 11% of participants strongly disagreed that English was necessary to make progress in the game, and 13% of respondents strongly agreed that it was not possible to go through the games without English. When participants were asked about understanding the game instructions, 62% of them said that they understand all given instructions, whereas 17% of respondents stated that

sometimes they need to look up unfamiliar words, and only 21% said that at first, they did not understand everything in the game instructions, but that they later on did. None of the participants indicated that they asked other gamers about things that they did not understand. As for the questionnaire item stating, 'I think that playing online games has improved my English', 42% of participants disagreed with this statement, and 9% strongly disagreed. On the other hand, it was significant to find that around 39% of participants generally agreed that playing online games has improved their English language where 10% of respondents agreed with this statement, and none of them strongly agreed with it.

Incidental Vocabulary Acquisition

A total of 56% of respondents stated that there are some words in English that they did not know their meaning before they started playing PUBG, while 44% of participants disagreed with this statement. More interestingly, 59% of participants said that they learned some expressions in English from interacting with other native English speakers (Americans, English, Australians, and Canadians) who played the game with them, while 41% of respondents stated they had not had such an experience.

When participants were asked if they used many of the words that they had learned through playing online games in their day-to-day lives, 48% of respondents confirmed that they sometimes used words from online games. Only 34% said that they always used words they learned in games. On the other hand, 18% of the participants stated that they never used the words that they have learned in the games in their real-life interactions. As for the frequency of visiting external websites (like Face book pages) or discussion forums, 40% of participants confirmed visiting external websites; where 19% stated that they sometimes visited these websites, while 13% said they visited these pages very often, and 18% confirmed that they rarely visited such pages. Only 10% of respondents negated visiting any external pages whatsoever.

The majority of participants (87%) preferred team playing mode over solo mode, while only 13 % said they preferred to play in single mode. This is an interesting finding since predictions about teamwork and collaboration among gamers can be made. It also supports the merit of MMORPG in promoting effective collaborative environments for learning (Voulgari&Komis, 2011). Related to this questionnaire item, participants were asked about their perceptions of using online games in an instructional setting, 45% of respondents said that they would be very pleased and interested if their teacher asked them to play an online game

as part of a course assignment, while 16% of participants believed that it would be okay to use online games in a course assignment, 10% said they were not sure about how they felt in such scenario, and 29% stated that they do not think using games can be helpful for their course grade or education. When participants were asked about how they felt regarding using English in online games, 60% of respondents indicated that they felt relaxed about using English in the games, 24% said they felt confident about using English in the games, and 16% stated that they felt challenged using English in the games. The last item on the second section of the questionnaire asked participants if playing online games made them consider learning other languages, 76% of them acknowledged that playing online games made them think about learning languages, while 24% stated that playing online games did not make them consider learning other languages, however, it made them want to improve their English language.

Vocabulary Test

The last questionnaire section aimed to assess the participants' acquisition of specific vocabulary items that are quite abundant in the game. The participants were asked to define or explain the meaning of a list of 10 words that the researcher posed. The words that were included in the questionnaire were: twitch, uncharted, ping, loot, overwatch, watchdog, travel, flipping, mode, n00b. Out of these 10 words, only three words had less than 80% correct answers. These three words are twitch, loot, and n00b. The word with the fewest correct answers was loot with an accuracy rate of 72%. In second place was twitch with 75% correct answers. In third place is the word n00b with an accuracy rate of 78%. The answers to the other 6 words had an average accuracy rate of 88%, the word that had the most correct answers was continue with 90% of the students choosing the appropriate answer.

Digital Games and vocabulary proficiency

The purpose of the questionnaire was not only to examine the playing habits of students but also to see if there is any relationship between the time spent on an EE activity – gaming and the vocabulary proficiency level. Therefore, possible connections between the time that the students spent on digital games and the number of correct answers on the vocabulary test were examined by dividing the percentage of the correct answer to the vocabulary test by how many hours the students play English games.

The results show that the least amounts of mistakes were made by the students who played English games for 30 or 40 hours a week. Best scores belong to the student who played

10 hours or less and the least correct answers came from the students who played 10-20 hours. It is interesting to observe that the students who spent 10 hours or less playing online games outperform these who spent more than 10-40 hours. Out of the 10 words tested, the answers from students who played 10 or fewer hours weekly had 10 words with staggering 100% correct answers. In comparison students who played 10-20 hours only had 9 words with an accuracy rate of 100%. A possible explanation can be that there are only 24.5% of students claimed to play 10 hours or fewer a week while 52.5% of students claimed to play games for 10-20 hours. The increased number of students who play for 10-20 hours might give more room for typos and mistakes, in case some of the students were in a hurry and did not take the time to read the questions. Even though the results of this observation are not conclusive; as it is done on such a small scale, there is a clear tendency that the students who play digital games more are inclined to have better vocabulary understanding.

Interviews

Findings from the interviews conducted with five participants who also took part in the online questionnaire provide more insight into the different learning strategies employed by the gamers; their perceptions of their language usage in the online games are in line with that of the questionnaire. When the interviewees were asked about the length of the period during which they had been involved in the online games, their timelines averaged between 6 months as a minimum and 2 years as a maximum. Moreover, the majority of interviewees confirmed that they had encountered non-Arabic speakers in the game matches. The nationalities of these gamers included American, British, Indian, Russian, and Japanese gamers.

Interestingly, interviewee no.2 clarified that he had not encountered any non-Arabic speakers in the game because of using the auto-match option. He further elaborated that this option enabled him to match with other gamers based on his language preference. So, if – for instances- he selected Arabic as his preferred language, then the game system will automatically match him only with other gamers who have selected Arabic as their preferred language. Therefore, exposure to L2 is highly possible in these matches where gamers will either be exposed to L2 by other non-Arabic speaking gamers, or they are situated in a game circumstance that would oblige them to use L2 in order to communicate. The presence of the auto-matching option is a possible implication that will be further discussed in the discussion section.

When the interviewees were asked about the servers which they chose to access the game, they all confirmed choosing the Europe server as the best or most favorite server, followed by North America. Their reasons varied however; for interviewee no.1, he stated that he used the Europe server because it was the first server to play on by default. As for interviewee no.2 and no.3, they explained that they did not actively select the Europe server, but that they joined it since all their friends were already on that server. On the other hand, interviewee no.4 had an interesting justification for preferring to play on the Europe server. He emphasized that he actively selected to play on either Europe or the North America servers because of the potential of making new friends, finding other gamers who speak English, and because he was disturbed by acts of verbal harassment that were usually done by other native speakers of Arabic.

In conclusion, the findings and analysis of data collected through the questionnaire and interviews could provide answers to the research questions to a significant extent. Survey data shows that majority of participants had positive perceptions about their L2 development utilizing an online game. Analyzing interviews further illustrated how young-adult video-gamers in Egypt perceived their linguistic interactions and assisted in gaining insight into their methods of acquisition and the level of accuracy of their in-game acquired vocabulary items.

Discussion

This study attempted to answer the research questions inquiring about the perceptions of secondary school gamers of their vocabulary acquisition in MMORPG. The study mainly targeted incidental mode of vocabulary acquisition given the nature of online video-games where individuals are essentially gamers pursuing entertainment without intending to learn new vocabulary items in the process of gaming.

The responses of the gamers participating in this study showed an overarching consensus on the merit of MMORPG in L2 vocabulary acquisition. According to their responses to the online survey, a substantial number of them had a positive perception of their L2 usage in the game. This particular finding parallels the findings of Reinders and Wattana (2014) who found a statistical decreased sense of anxiety and increased confidence in using English in an online game activity played in an instructional setting (classroom). Relevant to this, the small percentage of participants, a skeptic about utilizing games in formal education (10%), can encourage educators and researchers to venture into including this advanced genre of gameplay in curricular activities. In addition, considering the number of hours that gamers

spend per week playing digital games ranging from 10 hours to 40 hours, as a teacher and a researcher, one can only wonder about the potentials of having language learners who -willingly- spend these valuable hours being exposed to and using a target language without intending to do so.

Some of the participants pointed out during the interviews that it is so hard to specify what they had learnt in a specific situation. They felt that they had accumulated the vocabulary from multiple EE activities. For example, from the computer games, they most often come across with contextual or jargon based vocabulary and they learned specific terms, codes and nouns used in spoken interaction. Learning vocabulary from watching television is strongly signified in the findings. Whereas the advancement of other language skill indicators is more difficult to link to specific EE activities. One of the most useful EE activities is the interactive nature of several online computer games that allow gamers to communicate with other players. Taking into account earlier studies, the participants of the present study emphasize the importance of interaction and actively use games to effectively informal English learning. Hence we can say that playing computer games is more expedient EE activity than many others, and it is because of the interactive nature of the games.

With an elevated percentage of participants (60%) acknowledging that they felt relaxed and confident about using English in online games, the significance of employing games in L2 development is asserted given how MMORPG offer young adult individuals a relaxed, friendly environment where they are not apprehended by making linguistic errors nor they feel threatened by possible negative feedback from a teacher, a finding that successfully resounds the affective filter hypothesis (Krashen, 1982). The findings of this study also underline the significance of online interaction in the use of L2, and this further emphasizes the potentials of trending technologies in providing tools for exposure to L2 or what I would call ‘virtual immersion,’ inspired by the new methods that the researchers at Rensselaer Polytechnic Institute and IBM are currently innovating to teach Mandarin utilizing immersive scenes, and artificial intelligence that resembles the realms already established in MMORPG(“Virtual Immersion: Using AI to teach Mandarin”, 2018).

The analysis of some interview data revealed another crucial feature of the online game -which is the auto-matching. Given that one of the gamers stated that he actively selects his L1 (Arabic) as the language of preference for the auto-matching option in order for him to play with gamers who only speak Arabic, researchers, language teachers, and language learners can

benefit from this option by opting for English or any other target language through the auto-matching. This way, users will guarantee encountering speakers of their target language and opportunities of exposure to L2 or the target language are maximized.

Since it is an inherent case study (Stake, 1995), the main aim was to investigate and not so much equate a concept with other works, making generalizations based on this research unfounded. Even if I wished, the sample size and the fact that all participants are less than 100 high school pupils make these regional findings negligible. It would be important to see exhaustive research on informal English learning in Egypt, if not strictly pedagogically useful. The use of casual instruction in schools will be important from the viewpoint of an English teacher. Such programs would be particularly useful if high school English were to be important and meaningful for advanced students.

Conclusion

Language and technology are essential and ever-evolving tools of communication between individuals and societies, and our duty as linguistic researchers is to continue with investigations that would further promote, facilitate and modernize the ways by which individuals can better communicate. In this study, the perceptions of an unexplored age group on their linguistic acquisition have been investigated through different instruments and it was concluded that young adult gamers in Egypt – and possibly in South Asia – seem to agree on the beneficial outcome of playing a popular online role-playing game on their L2 vocabulary acquisition. By being actively involved in the game's plotline, missions and matches, gamers have unintentionally learnt vocabulary items which they might not have otherwise encountered or learnt through formal instructional settings.

It is hoped that the findings of this study would encourage educators to take online video gaming as a learning tool more seriously and not lend it a blind eye merely because of the more commonly known medically-based drawbacks of playing video games. Advocating involvement in video-games is not the target of this research; the question to ask is why do educators spend a lot of time and effort in trying to gamify their educational content when they can instead, and by means of collaborating with game developers, transform the content of already existing, popular, and extremely entertaining games to an educational one or one that matches the curriculum? This study does not undermine the importance of instructional setting in teaching language, but rather it aims to explore ways that can complement the learning process outside the classroom. Imagine if teachers were to assign in-game missions for their

students or learners to accomplish at home, would there be any doubts about their motivation to work on their assignment? Would they perform poorly were they given a quiz or a test in the following class that aims to assess their understanding of vocabulary items that were part of their video-game?

Recently, educators all around the world are in support of going paperless in our education, but somehow it seems that papers are simply being replaced with virtual, on display papers or Word Document. Perhaps going paperless is needed on a deeper sense of the world where content is delivered through vivid, reality-simulating, virtual representation and not electronically mirrored and magnified paper-based content on a classroom board.

More modern approaches to language learning and tools/media that can be used should therefore be introduced in the teacher training program and courses on how to improve the English teaching in a classroom should be available for the professional development of active teachers.

In the future, I hope there will be more research on how EE activities impact students in lower grades. Further research in this field should be of great importance for students, active teachers and the board of education, as I believe both lesson plans/contents and the curriculum has to room for improvement.

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