

# The Role of Playing Video Games in Mastering English as a Foreign Language among Children in Saudi Arabia during the COVID-19 Lockdown

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**How to cite this paper:** Albaqami, R. (2022). The Role of Playing Video Games in Mastering English as a Foreign Language among Children in Saudi Arabia during the COVID-19 Lockdown. *Open Journal of Modern Linguistics*, 12, 238-264. <https://doi.org/10.4236/ojml.2022.122019>

**Received:** March 23, 2022

**Accepted:** April 26, 2022

**Published:** April 29, 2022

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## Abstract

Nowadays children are highly exposed to video games. The number of hours that children spend playing digital games has rapidly increased throughout the COVID-19 lockdown. A survey was conducted in this study to determine whether playing online video games has an impact on English proficiency and whether online gaming positively contributes to foreign language development. A total of 62 parents of online video gamers (42 males, 20 females) aged between 5 and 13 years responded to a variety of questions on the number and quality of their children's disclosure to digital games. The findings point to considerable progress and suggest that online games have a significant influence on foreign language development. Areas of the greatest improvements were lexicon and speaking. Going deeper, the findings suggest that extended exposure to online video games during the COVID-19 lockdown played a big part in mitigating anxiety and enhancing confidence and motivation toward learning the target language. The findings demonstrate that online video games offer a positive stimulating authentic environment, which plays a vital role in mastering the target language effectively.

## Keywords

Anxiety, Children, Confidence, COVID-19 Lockdown, English Language, Online Gaming, MMORPGs, Motivation

## 1. Introduction

The coronavirus (COVID-19) pandemic which hit the globe in the early months of 2020 posed a serious threat to public health, as well as entertainment. While cinemas and other forms of entertainment closed to attempt to prevent the

spread of the virus, individuals were commanded to remain at home and hence they turned to home entertainment. Empirical evidence has indicated that lockdowns following the COVID-19 breakout have led to largely increased involvement in video games since the digital world is considered an alternative for physical contact e.g., (Amin et al., 2020; Balhara et al., 2020; King et al., 2020). While under stay-at-home instructions, playing video games for social interaction are offering a desirable method to socialize with acquaintances, and also strangers who have some interests in common.

Parents have long questioned the influence of playing video games on their children. Recently, emerging evidence suggests that playing video offers an engaging environment that may develop communication skills (Gee, 2007; Reinders, 2012; Reinders & Wattana, 2015). People have turned to technology to provide a natural setting in which foreign language learners can regularly practice the target language in a real scenario, in which they have the opportunity to communicate with real language speakers (native or other learners) (Krashen et al., 2016). Massive Multiple Online Role-Playing Games (MMORPGs, more commonly MMOGs or MMOs), for instance, offer interactional environments and numerous opportunities for gamers to participate in original communications in the chosen language (Rama et al., 2012). Implementing video games in classroom contexts has enlarged because they allow learning with high engagement (Anderson et al., 2008).

In the United States, for instance, almost all teenagers (97%) play video games routinely (Granic et al., 2014). The findings of a survey that was conducted in March 2020 in the United States indicate that gamers spent 45% more gaming during the lockdown than pre-COVID-19 (Statista, 2020). Balhara et al. (2020) attribute the growth in the rates of gaming among children and young individuals to the fact that gaming could help in lessening stress during lockdowns. Echoing the same finding, Picton et al. (2020) suggest that young individuals find playing video games helpful in building social networks both in real and virtual contexts. They claim that deeper communication and social networks result in enhanced well-being. They concluded that video games lend a helping hand to people to cope with or escape from negative feelings including stress and depression and that it might be chiefly beneficial during COVID-19 lockdowns.

In Saudi Arabia, the online gaming community enlarged by 10% last year, and the number of time gamers spent gaming enhanced by 50% due to social distancing and the strict measures following the COVID-19 pandemic (Al-Khudair, 2021). Similar to other affected countries by the COVID-19 across the world, the government in Saudi Arabia sets firm social distancing measures. All individuals were legally prohibited from physically interacting with others including close friends. Individuals in Saudi Arabia, including children, find online gaming an appropriate entertainment option and an effective method to socialize with others during the COVID-19 lockdown. Having in mind the fact that Arabic learners of English in Saudi Arabia suffer from the lack of natural authentic environ-

ments in which they are offered an opportunity to informally practice the target language. To lower their anxiety while communicating, enhance their motivation as well as expand their readiness to communicate in English, Arabic learners of English must have access to such environments where they can extensively practice the target language without the fear of undesirable evaluation. The digital world and video games in particular largely offer such an environment. For instance, fantasy-themed MMORPGs allow countless virtual platforms that are inhabited by countless native speakers of English as well as other learners from around the world.

A large number of studies recognize the significance of technology in general and online gaming in particular in mastering a foreign language and promoting language development as rich and natural foreign language learning environments that result in the development of receptive and expressive skills (Purushotma, 2005; Turgut & Irgin, 2008; Peterson, 2011; Da Silva, 2014; Theodorsen, 2015; Elyas & Al-Jifri, 2017). The effect of playing online games on foreign language development has been investigated extensively in recent decades. However, the existing body of research on the role of online gaming in facilitating foreign language learning was mostly conducted on technology-enhanced learning or game-based learning, or “gamified” classes (Deterring et al., 2011). Several lines of evidence suggest that learners typically experience reduced confidence, high anxiety, low perceived proficiency in communicating in the target language, and low willingness to communicate. Reinders & Wattana (2015) argue that a noticeable and substantial development, with participants experiencing high confidence, low anxiety, high motivation, and more wanting to share in the target language. They claim that careful involvement of tasks that implement online games may have a positive influence on foreign language development.

Remarkably, online gaming, including MMORPGs, has some undesirable outcomes including video games addiction (Petry & O’Brien, 2013). Nevertheless, MMORPGs can also offer gamers profits including feelings of accomplishment (Sublette & Mullan 2012), and potentials for learning implementations that may help in expanding the knowledge of the target language (Cordova & Lepper, 1996; González-González & Blanco-Izquierdo, 2012). Furthermore, they allow ingress to a delightful social environment, further amusement, disclosure to the new lexicon, and rich chances to practice the target language. MMORPGs allow gamers to access theme-based computer-generated spheres with greatly engaging social interaction via text chats complimented with verbal interaction tools, allowing role-playing. Gamers can access a vastly diverse authentic community and can interact with other gamers including a broad range of mother-tongue speakers in certain language from different countries across the world (Peterson, 2012).

Emerging evidence suggests that gamers’ proficiency in the target language may be boosted by simultaneous online communication with friends and narratives and/or instructions implanted in the MMORPGs (Godwin-Jones, 2014). The gamers aim to be rewarded so they can advance the game hierarchy by ac-

completing missions known as *Quests*, which are tasks that gamers are challenged to complete to gain points and proceed, intended to boost partnership and interaction, typically with the support of game-based associations called as *Guilds*, which allow beginners to get their gaming abilities indorsed through contact with more expert gamers (Peterson, 2012). In guilds, skilled gamers confer strategies both during playing and throughout chat forums. These groups also offer beginners opportunities to advance their gaming abilities through playing and partnership with more proficient gamers. **Figure 1** shows a tab with an in-game typed chat at the bottom left of the user interface facilitated by *World of Warcraft* (WOW) (Blizzard Entertainment, 2007), one of the most popular MMORPGs. This facility allows gamers to view, join and interact with peers and receive feedback.



**Figure 1.** A screenshot of *WOW* (Blizzard Entertainment, 2007) with a chat window on the bottom left of the user interface.

Since the outbreak of the COVID-19, the majority of studies that have been conducted on the impact of the COVID-19 lockdown was largely done to investigate the mental health and wellbeing impacts of lockdown, especially on children and young individuals since they are one of the most affected groups. Emerging evidence suggests that the majority of children and young individuals have likely suffered from isolation (i.e. lack of physical, social, and educational interaction) during the lockdown and especially, been influenced by social distance and lack of physical interaction with their peers, and the frustration linked with a lack of all the activities they have been used to be involved in. Only a few studies have been conducted to explore the consequences of isolation during the COVID-19 lockdown for children's language development and a few of them

were mainly conducted on first language development. To the best knowledge of the researcher, no study was carried out in the context of foreign language development in Saudi Arabia. Thus, this study closely examines the possibility that time spent on online video games can reduce anxiety and increase confidence and motivation among young learners and offer them chances to practice the certain language in real-time and accordingly expand their language proficiency. This study, therefore, endeavors to advance our understanding and expand our knowledge of the effect of playing digital games on foreign language development among children in Saudi Arabia.

## **2. Previous Studies on the Role of Online Gaming in Mastering Foreign Languages**

The potential usefulness of video games in language development among children remains controversial for several decades, e.g. (Haugland & Wright, 1997; Cordes & Miller, 2000). Video games have been criticized over a wide range of serious issues including negative impacts on behavior such as prompting violence and triggering other undesirable behavior such as being socially isolated in addition to other negative impacts on physical health such as their vision. Nowadays, emerging evidence suggests video games have also facilitated foreign language development, nevertheless, learners and especially young learners should have a reasonable balance between online video games and physical activities (Turgut & Irgin, 2008).

Video games, generally, allow a beneficial escape from the real world, especially during stressful periods such as the lockdowns following the COVID-19 pandemic. MMORPGs such as *WOW* by Blizzard Entertainment (2007), became popular among children, teenagers, and adults compared to other types of video games. MMORPG is a video game that includes facets of an enormous bulk of the player online game and a role-playing video game. It includes spaces in which the gamer interacts with characters, with some missions and challenges they have to undertake. As gamers play, they uncover a storyline from what others say, how other characters respond to them, and what they do in response.

MMORPGs can be useful online platforms for continued learning, delivering plentiful profits for gamers while keeping them safe indoors. MMORPGs generate amusing learning atmospheres intended to keep gamers physically disconnected at home, while still being social and enduring to learn. MMORPGs have many advantages for foreign language learning including repetitions. They allow users to hear the same words over and over again in an unconscious attractive and effective way. Further, MMORPGs allow the gamer to practice more than one skill at the same time: e.g., listening, reading, and writing altogether. This helps in mastering new vocabulary as well as mastering a variety of grammatical structures. MMORPGs are considered valuable platforms to meet speakers (native addresser and other learners) of the certain language around the globe and practice the target language in a virtual exciting way via engaging dialogues and online forums which are platforms where players can discuss issues related to

video games including looking for solutions from their peers (Da Silva, 2014).

Learning a foreign language is a vast exit from learners' comfort zones; i.e. learners usually get anxious and self-conscious in classroom settings. Scholars define this as an "affective filter" which stands for fear of making a mistake which influences how far a learner gets involved in the learning process (Du, 2009). Emerging evidence suggests that MMORPGs help in preventing someone to be self-conscious. Gamers have to communicate with others immediately, without any preparation for what they will articulate, or to worry about how to speak flawlessly. This experience might look frightening for foreign language learners. Glover (2013) suggests that learners generally experience a high rate of extrinsic motivation while gaming. As learners chase up the hierarchy, getting bonuses and rewards. Consequently, they become better communicators so they can advance faster. Learners frequently repeat levels numerous times, so that they become better performers, one of the several advantages as mentioned earlier. According to Gass & Selinker (2001), video games such as MMORPGs allow gamers to master the target language in a natural setting. They pointed out that the natural repetition facilitated by games gives gamers the opportunities to be regularly disclosed to the particular language and offers other choices for language development to take place.

MacIntyre et al. (1998) refer to "willingness" to speak in a foreign language is described by as "preparedness to engage into the conversation at a given particular instant of time person or group of people, using an L2" (p. 547). Willingness to get involved in communication in the particular language and self-assurance is the focus because they are assumed to be promoted by a non-threatening context such as video games. According to Reinders & Wattana (2015), foreign language beginners may experience more or less willingness to interact for several causes. Anxiety and shyness have been observed as significant emotional aspects for decades and has been reported to have a crucial effect on promoting or decreasing the ability to speak in the foreign language (Yashima, 2002; Clément et al., 2003). Anxiety-related to foreign language learning has been reported to promote reduced levels of willingness to communicate (McCroskey et al., 1991; MacIntyre et al., 1999). Putting it differently, learners who are exposed to high rates of anxiety about communication in a foreign language are likely to stay uncommunicative and are less willing to contribute to it. Furthermore, existing empirical evidence e.g., (Yip & Kwan, 2006; Sørensen & Meyer, 2007; Wu et al., 2011; Ashraf et al., 2014) suggests that online gaming greatly advances learners' language development, especially in vocabulary, confidence, and motivation.

Several lines of evidence e.g., (Prensky, 2001; Mitchell & Savill-Smith, 2004) suggest that implementing video games in conventional class is normally triggered by the idea that video games prompt learners. Emerging evidence e.g., (Zhao & Lai, 2009; Peterson, 2010b, 2011; Voulgari, 2011) reported that learners involved in MMORPGs look more slackened and self-assured with the specific language, two key variables stimulating rates of willingness to communicate. Thorne (2008) examined more than one lingual conservation between a Russian

addresser in Ukraine and an English addresser in the United States while playing the MMORPG “WOW”. The subjects’ feedback was very encouraging; they keep up with that video games enriched their entertainment and inspiration for language learning. Furthermore, chat logs permit authentic correspondence in the foreign language and opportunities of access to knowledgeable sources with relation to language-related explicit adjustments, calls for help, among numerous others.

Recently, [Picton & Clark \(2020\)](#) have interviewed 4626 people aged between 11 and 16 from across the United Kingdom. The results suggest that more than 35% of gamers think they become better at reading by reading something relevant to gaming. [Picton & Clark \(2020\)](#) attributed this improvement to the way that several video games include better narratives than the stories in classrooms. Such interactive story games let gamers make choices and decisions that influence the rest of the game. Furthermore, all readings the gamers do may also be helping in developing their writing. Approximately 62.5% of young gamers likewise write something relevant to gaming, their writing ability enhances accordingly. Moreover, it is noteworthy to mention a review research done by [Klimova & Kacet \(2017\)](#) in which they investigated the effect of video games on language development and summarized its benefits and disadvantages for foreign language development. The findings suggest that video games, especially the instructive ones, are efficient in mastering jargon during foreign language development. Besides, other benefits of implementing video games in conventional classes include sufficient exploration of the specific language and enlarged cooperation among students.

More recent attention has been attracted to implementing MMORPGs in foreign language learning. [Bytheway \(2014\)](#) claims that foreign language learners engaged in MMORPGs seem less restless and more influenced to share with friends and/or guidelines. According to [Kim et al. \(2013\)](#), gamers outperform their peers who attend ordinary classrooms achieving better language proficiency. Authentic evidence e.g., [\(Rama et al., 2012\)](#) suggests that MMORPG-based interaction was helpful in foreign language development. [Peterson \(2011, 2012\)](#) likewise argues that the MMORPG-based interaction trigger gamers’ productive response, by which foreign language growth might be boosted. During social contact, gamers ordinarily use polite terms to expand interpersonal organizations and became progressively positive regarding language learning accordingly.

Furthermore, [Turgut & Irgin \(2008\)](#) have observed the effect of MMORPG on boosting gamers’ certain foreign language abilities. Previous research suggests that mastering vocabulary in foreign language learning can be advanced by game-based interaction especially the educational ones, i.e. serious games ([Smith et al., 2013](#); [Ashraf et al., 2014](#); [Bytheway, 2014](#); [Shokri & Abdolmanafi-Rokni, 2014](#); [Zheng et al., 2015](#)). In contrast, [deHaan et al. \(2011\)](#) reported a negative effect of playing a videogame on mastering vocabulary. [Milton et al. \(2012\)](#) concluded that vocabulary development is challenging without the edu-

cator's role in the game-based interactive activities. Several studies e.g., (Aghlara & Tamjid 2011) have revealed that lexicon learning and other abilities including interaction, sentence structure, and reading (Peterson, 2010a; Yang & Hsu, 2013; Dourda et al., 2014) can be advanced instantaneously by gamers' correspondence in game-based teaching. Moreover, Huang and Yang (2014) examined the effects of gaming on mastering English vocabulary in MMORPGs and concluded that lexicon was perceived more by beginners with average gaming knowledge, and was extra noticed by beginners with advanced competence. Da Silva (2014) argues that digital games give to spontaneous foreign language development including advancing receptive abilities like listening and reading and productive abilities like speaking and writing. Generally speaking, a large part of the current literature e.g., (Colby & Colby, 2008; Turgut & Irgin, 2008; Lai & Wen, 2012; Berns et al., 2013) established the constructive role of MMORPGs on enhancing other language abilities including listening, speaking writing and communicative competency.

MMORPG-based communication entails players negotiating meaning in a foreign language to improve their foreign language proficiency (Rama et al., 2012). Players frequently communicate with the addresser and/or detailed direction and they might receive a significant response to progress if the implanted messages are appropriately comprehended. Remarkably, when realizing those messages, players may habitually consult their friends (Dourda et al., 2014). Therefore, a considerable amount of literature has been published on MMORPGs' role in advancing foreign language development from a socio-historical standpoint that approaches Vygotsky's Zone of Proximal Development (ZPD) (Peterson, 2012; Sundqvist & Sylvén, 2012). Vygotsky's (1978) defines ZPD as "the disparity between someone's current developmental stage and one's prospective developmental stage as measured by solving problems underneath adult guidance or in partnership with more capable peer" (p. 86). They claim that game-based social contact can help with foreign language acquisition by allowing less experienced gamers to negotiate meaning with more experienced gamers, hence enhancing their foreign language learning.

Nevertheless, the motivating behavioral, as well as neural process of MMORPG-based foreign language development, received little attention (Zhang et al., 2016, 2017). Because players are highly influenced to communicate with colleagues in MMORPGs' circumstances than they are in the conventional classroom-based situations (Shahriarpour & Kafi, 2014). Emerging evidence e.g., (Pierce et al., 2003; Ang & Zaphiris, 2008) suggests that rewarding the gamers enlarged motivation. Filsecker & Hickey (2014) claim that rewards (e.g., badges) have a positive role in enhancing learners' motivation and accordingly language proficiency. In the same vein, Cruz et al. (2015) claim that gamers may consider virtual rewards as triggers that motivate them in game-based contexts. Thus, rewarding is a vital factor in triggering foreign language beginners to get occupied in the MMORPG-based interplay.



A large number of studies e.g., (Hickey et al., 2010; Bourgeois et al., 2015) have recognized the positive role of rewards on attention allocation and have found that stimulants linked with rewards may bias attentional selection. Moreover, social rewards including positive words can help in determining attentional bias (Anderson, 2015). Le Pelley et al. (2016) draws our attention to reward effects attention to reward-related stimuli. Reward-related stimulants can vary from several particular gaming abilities to interlink with MMORPG-implemented manuscripts and friends that can result in a sense of achievement rewards. MMORPGs gamers may gain both monetary rewards (e.g., badges) and non-monetary rewards such as social rewards (e.g., a praise), which trigger them to favoritism notice and assign consequent assets on the way to all the rewards-associated signals that occurred (For further review on the behavioural and neural mechanisms underlying MMORPG's instructive role in foreign language development refer to the work of Zhang et al. (2016, 2017)). To exemplify, consider **Figure 2** which represents two images taken from *WOW* (Blizzard Entertainment, 2007), which provides gamers with thousands of quests, detailed instructions, and different rewards upon completion.



**Figure 2.** Screenshots of *WOW* (Blizzard Entertainment, 2007) with quests, instructions, and rewards.

### 3. Statement of the Problem

Considering all of the aforementioned evidence, the current study is driven not only by the noticeable gap in the relevant literature but also by personal interest. Interestingly, I noticed that my 7 years old daughter started to speak a little English six months after the lockdown following the COVID-19 pandemic although she has not been introduced to the target language in the school yet. English curriculum is not introduced in general schools in Saudi Arabia before the age of 10. Starting from 2021 academic year, English has been introduced to students from first grade in primary school in Saudi Arabia. Despite the early stages of her interlanguage, she could deliver the meaning properly. She seems more confident and less anxious when speaking or asking about how to say this and that in English. This drives the question of whether other parents have experienced the same thing with their children. Do children in Saudi Arabia advance their knowledge in the target language due to extended exposure to online video games during the COVID-19 lockdown? The lockdown seems a worthy opportunity that would enhance our understanding of the role of online gaming in advancing foreign language development.

### 4. The Experimental Study

#### 4.1. Research Objectives

To examine the impact of online video games on English-language proficiency among children in Saudi Arabia, a survey was completed by 62 parents of online gamers aged between 5 - 13 years old.

#### 4.2. Research Questions

The current study is guided by the following questions:

RQ1: What kind of impact do online video games have on English language proficiency among children in Saudi Arabia during the COVID-19 lockdown?

RQ2: Do online video games help in lowering anxiety and improving confidence and learning motivation among children in Saudi Arabia during the COVID-19 lockdown?

#### 4.3. Research Hypothesis

##### Null Hypothesis and the Alternative Hypothesis

H<sub>0</sub>1: Online video games have no impact on English language proficiency among children in Saudi Arabia during the COVID-19 lockdown.

H<sub>0</sub>2: Online video games don't help in lowering anxiety and improving confidence and learning motivation among children in Saudi Arabia during the COVID-19 lockdown.

H<sub>1</sub>1: Online video games have an impact on English language proficiency among children in Saudi Arabia during the COVID-19 lockdown.

H<sub>1</sub>2: Online video games help in lowering anxiety and improving confidence and learning motivation among children in Saudi Arabia during the COVID-19

lockdown.

#### 4.4. Research Methodology

To evaluate the effect of online video games on the learners' English language, the key instrument used was a questionnaire administered online through Google forms and it was sent using emails. The questionnaire was completed by parents of 62 children (47 males, 20 females) ages 5 to 13. It intends to get some information about her/his perceptions of her/his youngster's willingness to use the target language, as well as their self-confidence, language anxiety and observed communicative competence in the English language. All members were native Arabic speakers. A big part of them around half go to government-funded schools, 43.5% go to private schools and simply 4.5% go to an international school. In terms of their English proficiency, 58.1% rated their children as beginners, 19.4% intermediate, and 22.6% advanced. Just two of them had experience living in an English-speaking country while their children were as yet young (less than 2 years old). Every one of them had previous experience with online video games, including MMORPGs, using English which helps to turn on their language learning involvement. They were additionally relatively homogenous regarding game-related practices and experience with online video games.

The questionnaire comprised 32 questions related to the amount and nature of exposure to online video games and their effect on English language development. To establish the correlation between exposure to online video games and English language development, the respondents were asked with regards to the effect of online video games on the child's English language. The questionnaire was divided into three sections: background questions (1 - 8), questions related to the amount and nature of exposure to the target language (9 - 24), and at last short 5-point Likert rating scale questions (25 - 32) (see Appendix I). The last part endeavors to explore the extent to which they (dis)agree with the statements revealing confidence, anxiety, and communicative competence rates. Responses on a 5-point Likert rating scale were anchored with "1 = I strongly don't agree" and "5 = I strongly agree". The middle choice entitled "I can't decide" was comprised to trigger honest responses from respondents who might not have had previous experience in or clear attitude towards a specific experience.

Firstly, they were asked a few questions related to the child's background such as age, gender, type of school, language s/he commonly use while playing video games, the amount of time s/he spends playing video games during the COVID-19 lockdown. Besides asking about the amount of time the child spends on online video games, the parents were also asked to rate the impact of video gaming on the child's performance in the English language from their point of view. Likewise, they were asked to rate the impact of online video games on the child's anxiety, confidence, and motivation towards learning the target language. Finally, they were asked to assess the overall impact of online video games on the child's English language? The following examples (1 - 3) demonstrate questions from the three sections, respectively.

Ex1: Which form of school does your child go to?

- Public  Private  International

Ex2: If you have noticed an improvement, which part of her/his English language has been improved the most?

- Grammar  Vocabulary  Pronunciation  Comprehension  
 Others

Ex3: My child feels embarrassed when s/he makes mistakes in English.

- I strongly don't agree  I don't agree  I can't decide  I agree  
 I strongly agree

Data were collected anonymously. The online questionnaire was pilot tested. Participants who were willing to take part in the survey were assured about the confidentiality of all the information they shared and the purpose of the research was briefly described to them. Participants had the option to respond in Arabic or English. The aim of having two versions of the survey and including the Arabic version was to increase the involvement rates as the target sample may be more comfortable with their mother language and also to minimize any misunderstanding. The survey approximately took between 5 and 10 minutes to complete.

Since the term MMORPGs might not be well known to all people, the researcher decided to use the term “online video games”. According to the data obtained, not all the subjects continually play MMORPGs, some of them prefer playing MMO (stands for Massively Multiplayer Online) such as *PUBG* and *Fortinet*. However, although these games are not categorized as massive as other games that include thousands of players, they were not excluded in the current study since *PUBG* and *Fortinet* meet two of those criteria, they include multiplayer even if they are not massive and they are online games.

The data was statistically analysed by using SPSS (Statistical Package for the Social Sciences).

## 5. Findings

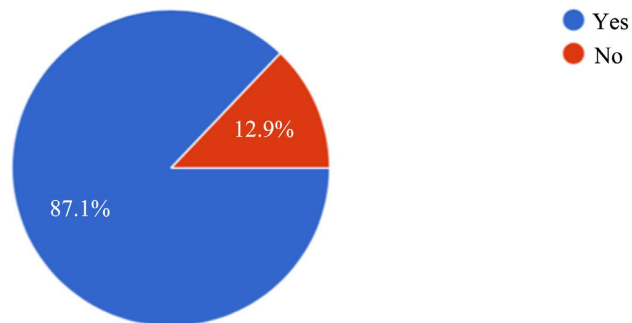
### 5.1. Impact of Online Gaming Have on English Language Competency

This study was designed to provide answers to two main questions including the following:

*RQ1: What kind of impact do online gaming have on English language proficiency among children in Saudi Arabia during the COVID-19 lockdown?*

Descriptive analysis showed that the positive impact on a child's English language caused by playing online video games was relatively high ( $M = 3.77$ ,  $SD = 0.95$ ). The majority of the participants (87.1%) reported that their children's overall English proficiency has largely improved by playing online video games during the COVID-19 lockdown as **Figure 3** shows. Likewise, approximately 80.6% of the participants agree with the statement *playing online video games has a positive impact on my child's English language*. Therefore, the null hypothesis was rejected in favor of the alternative hypothesis—concluding that there

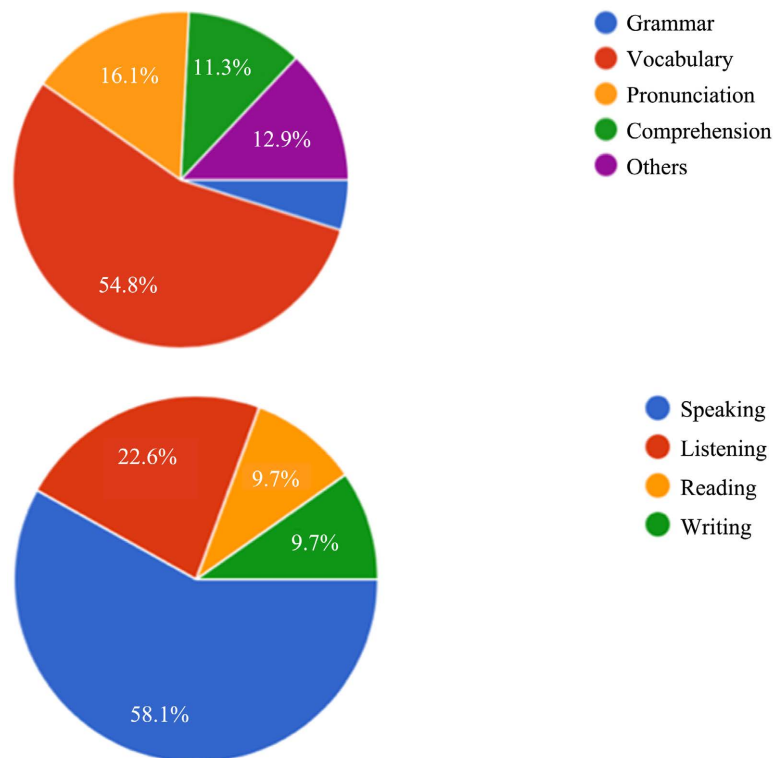
is a positive impact of online gaming on English proficiency. This finding supports previous research including Gass & Selinker (2001) who argue that video games allow gamers to master the target language in an authentic setting as it offers more opportunities for language development to take place.



**Figure 3.** The participants' responses to the question "do you notice any improvement in your child's English Language?".

## 5.2. Areas of Improvements

This positive impact included different aspects of the target language. The results showed that participants had noticed that their children have largely improved in English especially in vocabulary (54.8%) and speaking (58%) as Figure 4 demonstrates. Whereas, grammar (4.8%) and writing (9.7%) were the smallest areas of improvement according to the parents' points of views as Figure 4 also



**Figure 4.** The subjects' areas of improvement in the target language.

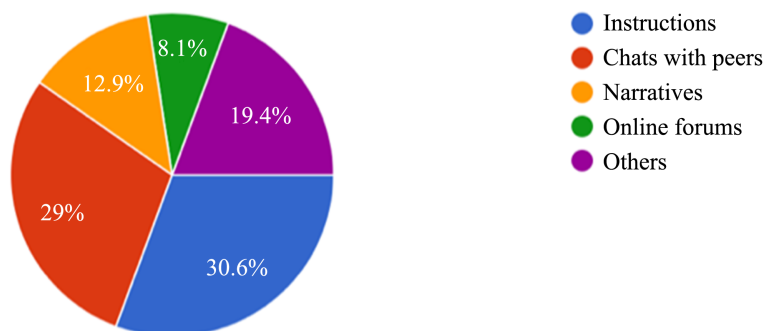
shows. The participants reported that their children had learned plenty of new words and sentences from playing online games such as: *game over, let's try again, I won, gg, cover me! He shot me, I don't see him, seek help, take out the gunman, I want to use the scar, noob, pro, console, controller, Xbox..., etc.*

The findings support previous work (Colby & Colby, 2008; Turgut & Irgin, 2008; Lai & Wen, 2012; Berns et al., 2013, Picton & Clark, 2020) which concluded that online video games positively contribute to spontaneous foreign language learning including advancing expressive abilities like speaking. The findings additionally support Huang & Yang (2014) and Klimova & Kacet (2017) who claim that video games are efficient in mastering vocabulary during foreign language development. The findings are in line with the ends drawn by Yip & Kwan (2006) and Sørensen & Meyer (2007) who claim that online gaming is an effective device which contributes to learners' boosted inspiration and enhanced performance during the process of foreign language learning, especially in vocabulary. The findings additionally accord with Da Silva (2014) who argues that video games contribute to spontaneous foreign language learning including advancing receptive abilities, for example, reading and listening and expressive abilities like writing and speaking.

### 5.3. Parts of Online Gaming That Positively Influence Child Language

The majority of participants reported that their children prefer playing games such as *action/adventure* (22.6%), *creative* (19.4%), and *shooters* (16.1%), amongst others. Surprisingly, a large number of participants reported that their children play games rated **M** (Mature) for mature players over 18 years old. The most common online games by children are *Fortnite* (29%), *Roblox* (9.7%), *Minecraft* (6.5%), *PUBG* (4.8%), respectively.

The improvement in children's language noticed by parents is possibly caused by different parts of online video games. About 30.6% of participants find instructions embedded in online games more beneficial in learning English and 29% of them reported that chatting with peers is also advantageous in learning English as **Figure 5** demonstrates. The majority of participants reported that



**Figure 5.** The subjects' mean of part of the games they think have positively influenced her/his child language

game-embedded narratives and instructions are helpful tools for enhancing and their children learn new words and structures from chatting with other gamers. This supports the findings of Godwin-Jones (2014) who concludes that gamers' proficiency of the target language may be boosted by instructions implanted in online gaming and simultaneous online communication with peers. This finding is also consistent with existing empirical evidence e.g. (Rama et al., 2012) which suggests that MMORPG-based interaction was helpful in foreign language development.

#### 5.4. Amount of Time Children Spend on Online Games

The results suggest that about 61.3% of the children play online video games on daily basis and 79.1% spend between 1 - 4 hours per day on online video games. The improvement in children's language noticed by parents is possibly caused by the increased amounts of time spent by children playing video games. The majority of participants (87.1%) had reported that the amount of time their children spent playing online games had increased which, in their opinion, result in a noticeable improvement in the target language accordingly as Figure 6 shows. Owing to the COVID-19 restrictions including social distancing and staying indoor for extended periods, the parents reported high exposure to online gaming during COVID-19 lockdowns.

Furthermore, to determine if there is a significant difference between how much time children spent playing online games before and after the COVID-19 lockdown, a one-sample T-test was conducted. The results show that there was a significant increase in how much time children spent playing online video games after the COVID-19 lockdown ( $M = 4.73$ ,  $SD = 2.52$ ) compared to how much time children spent playing online video games before the COVID-19 lockdown,  $t(62) = 14.75$ ,  $p < 0.001$ . Figure 6 shows the sharp increase in how much time was spent playing online games after the COVID-19 lockdown. This perhaps represents the considerable improvement in children's language reported by their parents.



**Figure 6.** The participants' mean of the amount of time spent playing online video games before and after the COVID-19 lockdown.

## 5.5. Impact of Online Gaming on Anxiety, Confidence and Learning Motivation

Furthermore, the study answers the second question:

*RQ2: Do online video games help in lowering anxiety, improving confidence, and enhancing learning motivation among children in Saudi Arabia during the COVID-19 lockdown?*

To answer the second question, an independent sample *t*-test was conducted to compare between parents ( $n = 50$ ) who reported that playing online video games had a positive impact on their children English language (Yes: for noticeable improvement) and other parents ( $n = 12$ ) who reported that playing online video games did not have a positive impact on their children English language (No: for no improvement) as **Table 1** shows.

### 5.5.1. Impact of Online Gaming on Confidence

The results of the independent sample *t*-test show that there was a significant difference ( $t(62) = 9.87, p < 0.001$ ) in confidence between children whose English has been improved and experienced higher confidence ( $M = 3.88, SD = 0.80$ ) compared to other children whose their parents have reported that online gaming did not have a positive impact on their English and have also reported that they experienced lower confidence in the target language ( $M = 1.42, SD = 0.67$ ) as **Table 1** shows. This suggests that playing online video games is more likely to help in improving confidence among children in Saudi Arabia during COVID-19 lockdowns.

### 5.5.2. Impact of Online Gaming on Anxiety

Furthermore, the results of the independent sample *t*-test also show that there was a significant difference ( $t(62) = 7.06, p < 0.001$ ) in anxiety between children whose English has been improved and have experienced lower anxiety ( $M = 5.66, SD = 0.72$ ) compared to children who did not show noticeable improvement and experienced higher anxiety ( $M = 7.25, SD = 0.62$ ) according to their parents' opinions (see **Table 1**). This suggests that online gaming is more likely to help in lowering anxiety among children in Saudi Arabia during COVID-19 lockdowns.

**Table 1.** Independent sample *t*-test to compare the impact of playing online video games on confidence, anxiety, and motivation.

Variables	Improvement	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Confidence	Yes	50	3.88	0.80	9.87	<b>0.000</b>
	No	12	1.42	0.67		
Anxiety	Yes	50	5.66	0.72	-7.06	<b>0.000</b>
	No	12	7.25	0.62		
Motivation	Yes	50	11.52	1.96	3.43	<b>0.001</b>
	No	12	9.08	3.09		



### 5.5.3. Impact of Online Gaming on Motivation

Moreover, the results of the independent sample t-test show that there was a significant difference ( $t(62) = 3.43, p < 0.01$ ) in motivation between children whose English has been having improved and have experienced higher motivation with the target language ( $M = 11.52, SD = 1.96$ ) compared to other parents who reported that their children did not show improvement in English and also reported that they experienced lower motivation ( $M = 9.08, SD = 3.09$ ) as **Table 1** demonstrates. The majority of the parents who noticed an improvement in their children's language have also reported that their children seem curious to learn new words and their meanings in English and highly motivated to practice using them constantly. This suggests that online gaming is also more likely to help in enhancing learning motivation among children in Saudi Arabia during COVID-19 lockdowns.

For further analysis, Pearson correlation analysis was conducted (see **Table 2**). The results showed that the children's confidence and their anxiety were negatively correlated,  $r(62) = -0.534, p < 0.01$ . This suggests that increased confidence is significantly associated with lowered anxiety. The results also showed that the children's confidence and their motivation of learning were positively correlated,  $r(62) = 0.361, p < 0.01$ . This suggests increased confidence is significantly associated with increased learning motivation. The results found that the children's motivation of learning was negatively correlated with language anxiety,  $r(62) = -0.290, p < 0.05$  which suggests lowered anxiety is significantly associated with increased learning motivation as **Table 2** demonstrates.

**Table 2.** Pearson correlation between the study variables.

<i>Variables</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Confidence</i>	<i>Anxiety</i>
<i>Confidence</i>	62	3.40	1.25		
<i>Anxiety</i>	62	5.97	0.94	<b>-0.534**</b>	
<i>Motivation</i>	62	11.05	2.40	<b>0.361**</b>	<b>-0.290*</b>

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

Taken together, the results demonstrate a statistically significant relationship between playing online games and improving confidence, enhancing motivation, and lowering anxiety towards communicating in English among children online gaming in Saudi Arabia during COVID-19 lockdowns. Therefore, the null hypothesis was rejected in favor of the alternative hypothesis—concluding that there is a positive impact of playing online games on confidence, motivation, and anxiety towards communicating in English. The findings support **Bytheway (2014)** who claims that foreign language learners engaged in MMORPGs seem less anxious and more motivated to interact with peers and/or instructions.

Furthermore, the findings support previous research (**Zhao & Lai, 2009; Peterson, 2010b, 2011; Voulgari, 2011; Bytheway, 2014**) that determine a relation-

ship between online gaming and enlarged confidence and decreased anxiety while using English among foreign language learners and claim that foreign language learners engaged in online gaming seem less anxious and more motivated to interact with peers. This also lends support to earlier studies e.g., (Zhao & Lai, 2009; Peterson, 2010b, 2011; Voulgari, 2011) that reported that learners involved in online gaming felt more relaxed and confident with the target language, two key variables stimulating rates of willing to communicate. Recalling that anxiety-related to foreign language learning has been reported to promote reduced levels of willingness to communicate (McCroskey et al., 1991; MacIntyre et al., 1999). Putting it differently, learners who suffer from high rates of anxiety about communication in a foreign language are more likely to stay uncommunicative and are less willing to contribute to it. The findings also lend support to Reinders & Wattana (2015) who claim that learners experiencing high confidence, reduced anxiety, and high competency are more willing to communicate in the target language. They claim that video games may have a positive impact on foreign language development.

Furthermore, the findings also support Glover (2013) who claims that learners generally experience high rates of motivation while gaming. Online gaming helps in preventing learners to be self-conscious and allows them to communicate with others immediately, without any advanced preparation for what they will say. The findings, moreover, support Thorne (2008) who concludes that video games are more likely to enrich the learners' entertainment and trigger them for language learning. It also supports existing empirical evidence e.g., (Sørensen & Meyer, 2007; Wu et al., 2011; Ashraf et al., 2014) which concludes that online gaming advances learners' language competency, confidence, and motivation.

## 6. Concluding Remarks

Playing online video games offers safe settings for foreign learners to practice their communication skills with high confidence and motivation and reduced anxiety. Thus, foreign language development can be advanced more efficiently. This study has examined this issue in the context of online gaming among children online gaming in Saudi Arabia during the COVID-19 lockdown. The results suggest a statistically significant relationship between online gaming and confidence, motivation, and anxiety, lending support to earlier studies that have determined a relationship between online gaming and enlarged confidence, enhanced motivation, and lowered anxiety among foreign language learners.

The findings of the current study suggest that there is a substantial connection between learning foreign languages and online gaming. The results indicated that children picked up new vocabulary and improved their speaking by spending more time on online video games. The results demonstrated that parents considered online video games beneficial in enhancing the children's foreign language proficiency and motivation owing to their stimulating design. The findings suggest that online video games can offer an advantageous environment to help

gamers promote their language development and their motivation towards it.

Gamers as foreign language learners should make the most of these virtual avenues and authentic environments in which learners can practice the target language. Playing online video games in general during lockdowns keeps children safe, engaged, connected, amused, and home schooled during such unusual circumstances. Even though online video games offer benefits that can enhance and even boost what is learned in real classroom contexts. However, the findings of this study do not encourage spending much time online gaming or replacing traditional classrooms with gamified classrooms for all language aspects. We need to consider the long-term effects and the negative impacts of video games, in general, on children's physical and mental well-being including changes in their eating or sleeping patterns, withdrawal from family gatherings, and any signs of violent behavior. Echoing earlier calls, we should pay close attention to these signs that can indicate depression or because of the extra stress of being detached from their routines.

However, aside from the commercial MMORPGs examined in the current study, the researcher encourages implementing the so-called educational MMORPGs known also as serious games (Sørensen & Meyer, 2007) to promote foreign language learning as they generate learning change and offer gamers rewards once they accomplish certain tasks. This technique will result in larger learning motivation and more fruitful learning concerning traditional methods. Nevertheless, to confirm the effectiveness of implementing online video games for foreign language learning, further longitudinal studies with larger randomized control samples and more sophisticated experimental tools, i.e. extended Linkert scale, are highly demanded. There is abundant room for further progress in determining the role of online gaming on foreign language development. This study was limited by the absence of a group of children who do not play online games nowadays to be compared to the existing groups. However, considerably more research is needed to provide more definitive evidence if accessing such a group is possible in the future.

### **Acknowledgements**

The researcher is deeply grateful to the families who agreed to participate in the current review.

### **Conflicts of Interest**

The writer declared no potential conflicting interests concerning the research, origin, and distribution of this article.

### **Ethical Approval**

This research was approved by the Ethical Committee for Scientific Research, the Deanship of Scientific Research at Taif University, Saudi Arabia (Application code: 42-70).

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## Appendix I

### Online Questionnaire

#### Part 1:

1. Does any of your kids play online multiplayer video games?  
 Yes  No
2. If yes, what is your child gender?  
 Male  Female
3. How old is s/he?.....
4. Which form of school does s/he go to?  
 Public  Private  International
5. Besides Arabic, do you speak any other languages at home?  
 Yes  No
6. Do any of you speak English to the child at home?  
 Yes  No
7. Has s/he been in an English country before? If yes, how long and what was the purpose of the stay? .....
8. Rate the level of your child's English proficiency.  
 Beginner  Intermediate  Advanced

#### Part 2:

9. What language does s/he usually use while playing online video games?  
 Arabic  English  Both  Others
10. What kind of online video games does s/he usually like to play?  
 Shooters  Creative  Racing  Sports  Action/adventure  
 Fighting  Puzzle  Simulator  Management  Fitness  
 Strategy  Narrative  Role-playing
11. Name some online video games s/he usually likes to play.  
 .....
12. How long (in years) has s/he been playing online video games?  
 1 - 2  3 - 4  5 - 6  More
13. How often does s/he play online video games?  
 Daily  Weekly  Monthly  Occasionally
14. Does the amount of time s/he spend playing online video games increase during the COVID-19 lockdown?  
 Yes  No
15. If yes, why do you think the amount of time s/he spend playing online video games has increased during the Covid-19 lockdown?
16. How many hours per time does s/he usually spend on playing online video games **before** the COVID-19 lockdown?  
 1 - 2  3 - 4  5 - 6  More
17. How many hours per day does s/he usually spend on playing online video games **after** the COVID-19 lockdown?  
 1 - 2  3 - 4  5 - 6  More
18. Do you notice any improvement in her/his English language?

- Yes  No
19. If you have noticed an improvement, which part of her/his English language has been improved the most?
- Grammar  Vocabulary  Pronunciation  Comprehension  
 Others
20. If you have noticed an improvement, which skill has been improved the most?
- Speaking  Reading  Writing  Listening
21. How many words has s/he learned from playing online video games?
- 2 - 4  5 - 8  9 - 10  More
22. Give examples of words or sentences s/he has learned from playing online video games.
- .....
23. Which part of the games do you think have positively influenced your child's language?
- Instructions  Chats with peers  Narratives  Online forums  
 Others
24. Are there any other resources you think that might help your child in enhancing her/his English language?
- Yes  No
25. If yes, what are these resources?
- TV  YouTube  Books  Mobile apps  Social media platforms  
 Others

**Part 3:**

To what extent do you agree with the following statements:

<i>no</i>	<i>Statement</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
		<i>strongly disagree</i>	<i>disagree</i>	<i>unsure</i>	<i>agree</i>	<i>strongly agree</i>
26	I correct my child when s/he makes mistakes while communicating in English?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	My child feels embarrassed when s/he makes mistakes in English.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	My child seems relaxed while s/he speaks English.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	My child seems confident while s/he speaks English.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	My child seems curious to learn new words and their meanings in English.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31	My child learns new words and structures from chatting with other gamers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Continued**

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- |    |   |                       |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 32 | My child learns new words and structures from game-embedded narratives and instructions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 33 | Playing online video games has a positive impact on my child's English language.        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
- 

Note: the Arabic version of this questionnaire is available upon request.