

Qualitative Meta-Analysis: The Effectiveness Of Video Games In Second Language Acquisition

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ABSTRACT

The use of Computer Assisted Language Learning (CALL) in improving the capacity of language learners both for children and adults has been proved for the last decades. Each year new media has been designed to balance the development of technology especially in language educational aspect. The use of video games as the media in educational aspect has been started in 1970 and since then it keeps growing. Recent years, the appearing of video games in language learning and acquisition has been monitored. Though there was research that revealed some bad effects of video games for children, it was only applied for children that have no control over their game playing time. Also, it is not wise to look at negative effect of video games while we do not concern of its' good effect. The objective of this study is to explore the effectiveness of the research that used video games as its media to improve the language proficiency and skill of the participants. By listing out the characteristic of each subject of research, it is then analyzed based on what ways the video games affected the language proficiency of the participants and the effectiveness of the video games used in the research. Then, it is concluded to the facilitative features of the video games toward language acquisition based on the result of analysis. In the end, the limitations of the study are listed and also recommendations for future studies related to the use of video games in language learning

and acquisition are presented.

1. INTRODUCTION

In this era, technology has been growing rapidly. The advancement of technology brings us new way of implementing technology in almost every part of everyday life; from social aspect, economic, education, etc. The result of applying advanced technology in language education aspect is what most linguists called as Computer Assisted Language Learning (CALL). Lai & Kritsonis (2006) mentioned that technology has taken its part to be one of the main fundamental tool in educational process. Numbers of research have proved that computers as well as the use of CALL have positives effect on the achievement of second language learners (Lai & Kritsonis, 2006). Therefore, to be able to use technology in proper way means we could take lots of advantages and to use them effectively double the odds of the result.

The role of CALL has been improved to more advanced level. Educational entertainment or mostly called edutainment is one of the supreme examples of it. Okan (2003) mentioned that edutainment is a combination of education and entertainment that depend on the technology as the tool for teaching. In other words, it uses computer or any other technological device as it media to educate learners. The purpose of edutainment, as it name suggest is to educate and entertain learners. The use of vivid colors as well as enjoyable experience is the most reliable feature of edutainment to engage learners into educational process (Okan, 2003). Furthermore, with the latest form of technology the use of computer has growing even more not to mention in educational aspect, to take advantages of it means to use the technology to the fullest.

The use of video games in educational process is one of the forms of edutainment. Since 1970's video game has been used in education, whereas Oregon Trail helped students to learn about the life of American Pioneers as well as Geography (Gentile, 2011). Since then, the use of video game in education creeps into every field. In language skills, the use of video games as tools in educational process offer various features that every educator and learners could take advantage of it. As Griffiths (2002) stated in his paper, video games are able to provide such facilities in educational process e.g.; discussing and sharing, following directions (understanding prepositions etc.), giving directions, answering questions, and having a conversational topic with visual aides to share to other players. In addition, video game are not only merely tool where people use it to have fun but also can be used as medium in educational process.

The advantages and disadvantages of video games' usage in educational process have been debated over the last decades. Carnagey, Anderson, & Bushman (2007) mentioned that video game can cause behavior disorder that may lead to violent. However, such of act only appear to the players that has been exposed to violent video game for a great amount of time (Carnagey et al., 2007). Considering none of the parents or learners would like to experience such behavior, it is really important to choose which kind of video game that would be beneficial for educational environment. As Griffiths (2002) stated that, it is really important that

we continue to improve the positive effects of video games while remaining aware of future unintended negative effects when game content is not prosocial. Therefore, we cannot underestimate the negative effect of video games however; it is not wise to only look at video games from its negative effect while we do not pay attention or take care of its beneficial factors.

One of the most important factors in the second language acquisition is input. According to Smith (1993), input is how language learners process the information they got from a language. Video games expose players as well as learners to the infinite input that are available in the game. To be able to complete the task in the game and to follow the direction mean players would face continuous input from the game. In other words, Smith (1993) mentioned this as “language bath”, the condition where language learners are totally exposed to the language. Furthermore, video games is not only a medium to engage learners to the fun learning experience but also provide input that could entertain and intrigue them at the same time.

Given all of the researches of the past decade, video games in this era can no longer be considered just as the tool to have fun, or it could provide violence content, addiction to the players, and unsocial behavior but also could be seen as the new medium for teaching, engaging learners in educational process, and to provide a fun and enjoyable learning experience for language learners. De Aguilera & Mendiz (2003) mentioned that theories in supporting the importance of video games in cognitive aspect are based on a number of studies representing that many video games are contributing to the growth of specific skills e.g.; attention, spatial concentration, problem-solving, decision-making, collaborative work, creativity, and ICT skills. Hence, in regards of large amount of benefits that video games can offer in term of language education, the researcher would like to elaborate even more about the effectiveness of video games in second language acquisition.

Video Games as Technology in Education

Back in 1970's when video game gained its immense popularity through “Pong”, it is just a simple jukebox game platform. Atari Corporation founded by Nolan Bushnell began releasing “Pong” at the small tavern and since then it became a hit that even Bushnell himself could not ever think of (Kent, 2001). Nowadays, video game has become one of the most influential technologies in society. Thanks to rapidly growing technology we can see usage of video game in almost every aspect of field, from surgery simulation that was created to help surgeon perform a perfect surgery to airplane simulation used to help future pilot mastering their capability (Gentile, 2011). Furthermore, video game is always growing from time to time following the advancement of technology.

There are numbers of researches related to the negative effects of video games. Most of them suggested that video game may cause addiction, stress, and behavioral disorder that may lead to violence. However, Gentile (2011) stated that the contrast of what is “good” and what is “bad” in video game can only be determined by the specific dimensions of the video game itself. One may play a game that contain violence act like shooting or fighting and then try to apply that behaviors into real life situation, then that video game can be considered as bad video game. If the same game played by someone and one of the features of the

game including teamwork and strategy to complete a mission or quest in the game, that game can also be considered as good video game (Gentile, 2011). Therefore, there is no real substantial term can be applied to video game. It can be either good or bad depending on the dimension of the video game and also which aspects the person judging the video game stands.

According to Vahdat & Behbahani (2013), video games have huge amount of potential in educational aspects because of its virtual environment. In addition, Vahdat & Behbahani (2013) suggested that using video games in teaching and learning process proved to be effective because of the real life situational context is more vivid rather than the ordinary classroom situation. Looking at this various advantages that video game have, it also can be used in learning a language as Rankin, Gold, & Gooch (2006) suggested that video games have rich potential to increase students' language skill. Furthermore, the past years and decades have shown us how video games influence educational aspects especially in term of language learning.

To conclude it all, numbers of research and study has been conducted to see the influential effects of video games. One famous use of virtual video game is in medical education e.g.; Rosser et al. (2007) researched how video game assist surgeons to harness their laparoscopic surgical skill. In language learning, the amount of research and study about the use of video game in teaching and learning process has been increased in recent years e.g.; DeHaan, Reed, & Kuwanda (2010) researched music video game used to see the vocabulary recall of college students in Shizuoka University; Rankin, McNeal, Shute, & Gooch (2008) studied how Massive Multiplayer Online Role Playing Game (MMORPG) used as a design for second language acquisition; Thorne, Black, & Sykes (2009) analyzed about how online game used in second language as a socialization and learning tool for internet community; Korhonen (2014) researched the effect of video games for English language learning; Vahdat & Behbahani (2013) investigated the effect of video game on learner's vocabulary achievement; and some more research and studies that haven't been mentioned in this paper that show us the brilliant result of how video game implemented in teaching and learning process.

Video Games as Media Communication

Video games used to be played by people alone in their home and when they want to talk and discuss about it they probably had hard time conveying their ideas since they got no one to talk to. However, internet makes it all possible to communicate in any form of platform from using Consoles, Computers, or handheld devices. Morris & Ogan (1996) added that internet as well as computer-mediated communication fits perfectly into the theory of mass communication. Furthermore, thanks to the internet, video game could have its own community where game player from all over the world could come and discuss their subject matter about video game with other player and it is an advantage for English language learners to consider the game community as a medium to increase their ability in acquiring English.

As language communication media video game has its community both in and off the video game itself. Off the game, video game has its own community usually known as online gaming community. This online gaming community have a

forum which is created by the official game developer or people dedicated to make video game discussable to all people in the world. According to De Nooy & Hanna (2003), language learner could improve their target language by using forum but they have to participate by choosing topic that they like and give a comment or ask a question related to the topic. Therefore, English language learner could take an advantage by participating in the video game forum to ask or discuss about matter that they would like to know about the video game.

The advantages of this community for language learners are vary. It depends on which topic that learners would like to know more regarding the aspect of video game he or she would like to know. If a learner is curious about e.g. the class (a common method in RPG or MMORPG game of arbitrating the capabilities of different game characters) of the character in the game, the learner may check the class and rank topic that is available in the forum. This way, language learner may able to improve his English skills as well as gaining some excitement by understanding which class he or she would like to know more. Dufresne, Gerace, Leonard, Mestre, & Wenk, (1996) suggested that, when the teacher presented or revisited a demonstration it seemed to help harden the new knowledge for the learners. Though there is no real teacher here, the community moderator can be the teacher for the learner since they are most likely to guide the direction of the topic of discussion. Another member of the community can act like a classmate for the learners that must be willing to help the learner if they are having hard time understanding the topic being discussed.

Video games also have in-game community mostly called guild or clan. Guild mostly exists in online video game and it is the place where any players can join and do the entire task in the game together. It is a reliable place since guild can be players' social place where they can communicate and help each other in the game. De Nooy & Hanna (2003) stated that thriving participation of the internet forum relies on the cultural, mores, and the ability to work with each of the member in the forum. Most players in the guild are together because they have the same idea about the game they are playing. Whether it from the gameplay of the game, game content, or even for just some social activities like chatting. Nevertheless, this in-game community can be an advantage for English language learners to practice and learn especially if they are in the good guild that is willing to help in term of language acquisition.

As a conclusion, community is a good output medium for English language learners. In term of video game, both forum and guild are media that surely would help language learners in acquiring English as their second language. According to Warschauer & Kern (2000), language learning by using network based program does not speak on behalf of specific technique, method, or approach. It is a media in which learners could communicate by using network. Language learners could interpret and construct text, all for the sake of developing commitment in discourse community. Furthermore, by participating in community, learners would not only have the opportunity to express their idea about the game but also to socialize as well as enhancing their English language skill.

2. METHODS

This study applied qualitative meta-analysis research design that focused on video games used in research as media to enhance students' language skills. A meta-analysis is an analysis that combines the results of multiple scientific studies and useful for combining evidence to inform social policy or in other words it's a research based on research (Davis, Mengersen, Bennett, & Mazerolle, 2014). Video games in this study would be explained by the theoretical and conceptual views of second language acquisition theories. Timulak (2009) stated that qualitative meta-analysis is an attempt to conduct a rigorous secondary qualitative analysis of primary qualitative and quantitative findings. Its purpose is to provide a more comprehensive description of a phenomenon and an assessment of the influence of the method of investigation on findings and analysis. Therefore, the phenomenon is being studied by descriptions and complete elaboration of the matter being analyzed.

Meta-analysis often considered as systematic review; however both of these terms are differ from each other. Systematic review is a review of a clearly formulated question that use systematic and explicit methods to identify, select, and critically evaluate appropriate research and then collecting and analyzing the data from the studies that are included in the review (Siddaway, 2014). On the other hand, meta-analysis is the method that may or may not be used to analyze and summarize the results of the studies included in systematic review.

Data Collection

The data of this study were collected from Google scholar and other sources of journals and articles related to the use of video games in educational program, especially in language educational process and acquisition. Data were searched using technique called Boolean Operators. This terms are simple words including AND, OR, NOT or AND NOT used as conjunctions to merge or eliminate keywords in a search, hence the results are more focused and productive. The next step is searching for the articles and journals from the reputable database sites. For searching keywords, the researcher used 'video games in language learning' or 'the use of video game in language learning' or 'the use of video game to increase language skills' or 'video game to improve students' second language' or 'language acquisition by using video game'. Also, the researcher used the keywords of the studies that have been chosen as searching words.

Then, gathering the research and studies that has potential to be used in this study, the researcher selects the studies that have close relation to the use of video game in language teaching and learning. This result in a total of nine studies being included in this study. After that, these studies were divided into ESL (English as a Second Language) and EFL (English as a Foreign Language) field. In ESL field there are five studies that are selected and in EFL field the remaining six studies are selected. In addition, since all studies only used one type of video game for their studies, the numbers of video games that would be analyzed in this study is eleven video games.

Data Analysis

The data of this study has been analyzed qualitatively from a variety of theory and hypothesis of second language acquisition and theories of educational technology. Even though meta-analysis mostly focused on experimental research, it also can be applied to synthesize descriptive (Reynolds, Timmerman, Anderson, & Stevenson, 1992). Also, Davis et al. (2014) stated that meta-analysis is mainly useful for combining evidence to inform social policy. Furthermore, the result and discussion of this study have been elaborated in essay in regards to the effectiveness of video games in second language acquisition. The techniques of data analysis were; first, the researcher analyzed the characteristics of subjects of the study. Then, the specific characteristic of each of the study is categorized. After that, the researcher started to analyze in what ways video games affected the participants of the research in acquiring target language viewed from the second language acquisition theories. Next, the researcher analyzed the effectiveness of video game used in the study also viewed on the second language acquisition theories and theories of educational technology. Finally, the researcher analyzed the features of video games that facilitative toward the effectiveness of video games in language acquisition.

4. FINDINGS AND DISCUSSION

2.1. Video Games Affecting Second Language Acquisition

English as a Foreign Language (EFL) Field

English as a Foreign Language field has shown some of the interesting aspects of the video games that affected the participants from each of the research on their journey to acquire the target language. Repetition is the first term that would be elaborated more here. The research by J. W. DeHaan (2005) and Vahdat & Behbahani (2013) showed that repetition played an important role in giving the participants of their research a continuous input important for second language acquisition. Repetition was not a novelty if talking about language acquisition, Brown (1998) mentioned in her study that repetition provides a situation whereas language learners could take advantage of its analysis and use of verbs hence it can get the participants to be used to with the properties of the language. It is really important for the language learners to be used to with the target language since through repetitions the participants could positioned themselves in regards to what being said and done as well as in relation to other participants where the language production occurred (Silva & Santos, 2006). Also, recent study by Ghazi-Saidi & Ansaldo (2017) revealed that vocabularies earning through repetition occurred by increasing exposure to the stimulus, which favors automatic hence created faster and more accurate word processing. Therefore, repetition has suggested that in second language acquisition it is significant and important in order to make the participants familiar with the target language.

The next term of the video games that affected the participants in some of the research is the rich textual and aural language. This characteristic of the video game can be found in J. W. DeHaan (2005), J. DeHaan et al. (2010), and Anderson et al. (2008) research. This feature of the video game allowed the participants of each of the research to be continuously exposed to the target language by playing video game. Shahrokni (2009) explained in his findings that a combination of text and images resulted in significantly better incidental vocabulary learning and

acquisition. He also claimed that electronic devices and software that provide textual, contextual, and multimedia interpretation are element of technologies that support specific components of reading, especially incidental vocabulary learning and acquisition. Video games do not merely provide the element of text but also the element of images that is crucial for the participants to perceive the images in the game to what they have already possessed in their mind. In conclusion, the research in EFL field that used video game as the media to explore, increase, investigate, and enhance their participants' language proficiency has affected the participants in some ways; they are in repetition, virtual environment, interactivity, and rich textual language of the video game itself.

English as a Second Language (ESL) Field

The first major characteristic of English as a Second Language field is the linguistic content of the game. The linguistic content consists of several interesting aspect which can be a good reading material for the participants. In Rankin et al. (2008) and Rankin et al. (2006) research the video game used are similar which is *EverQuest II*. This kind of game provided the players with a unique fictional ancient story combined with enormous world and lots of content waited to be explored. On the other hand, research by Eskelinen (2012) provided the participants of his research with a comedic game with a lots of material to be read. Also, research by Ranalli (2008) that used *The Sims* as the medium for its participants has lots of task that need to be completed by the participants to sustain the life of their character in game. The entire content of the game mentioned above require the participants to read and as Day, Bamford, Renandya, Jacobs, & Yu (1998) mentioned in their book that reading extensively can have a significant part on the learners' second language development. Furthermore, reading is a good practice for the language learners to increase their understanding and development of the target language.

The next characteristic of the video games in ESL research that affected the participants is virtual feature of the video game. Virtual character of the research by Rankin et al. (2006) and Rankin et al. (2008) allowed the learner to feel less stressed and creating a situation where the participants did not have to worry about making mistakes thus they can more freely produce the target language. Reategui, Boff, & Campbell (2008) explained that by placing a virtual character in an interactive learning environment, it would have a strong positive impact on the participants' view of their learning and acquisition experience. Another virtual feature is the similarity of real life features in virtual environment. Research by Zheng et al. (2009) explained that through the video game story and culture, it helped the participants both native speaker and non native speaker to aid each other to understand it. The interaction of the participants from different culture changed the participants' perspective on certain concepts and it is also influenced by the *Quest Atlantis* culture and background story. Von der Emde, Schneider, & Katter (2001) stated that by creating spaces and identity in virtual learning environment, the participants can explore and begin to take steps about who they are, in which a process to gain self esteem. Also, by working on a condition from a different culture, the participants can develop critical thinking skills by using target language. Therefore, in virtual learning environment, the participants were not only interpreting the culture from

the video game or another participants' culture but also to produce the culture as well. In sum, research in ESL field has some interesting characteristic; they are linguistic content, interactivity, and virtual feature that was not only affecting the participants of the research in second language acquisition but also to increase the confident and self-aware.

2.2. The Effectiveness of Video Games in SLA

English as a Foreign Language (EFL) Field

The video games used in English as a Foreign Language field showed some promising effectiveness in term of language proficiency and acquisition. The most significant effectiveness comes from vocabulary acquisition where research from J. DeHaan et al. (2010), Vahdat & Behbahani (2013), and Berns et al. (2013) reported that their participants language proficiency especially in term of vocabulary acquisition have increased. Video games are media that excel in one aspect of material delivery and presentation especially for the players who would like to acquire the target language out of it. Video games rely on graphic and images combined with text and this combination are a good choice in improving vocabulary in target language. Kim & Gilman (2008) stated that participants learned vocabulary in a better way when they received visual text added with graphic or visual text combined with spoken text along with its instruction. Jones & Plass (2002) also added that language learners would remember words translation and recalled the passage in a better way when it combined with written and illustrative explanation while listening to it compared to no explanation or annotation at all. In addition, children would acquire more and better vocabulary if the vocabulary presented along with the word and its picture since it would develop and trigger their background knowledge (Beck & McKeown, 2007). In conclusion, vocabularies play a really important role in the participants' language proficiency. Video games that combined several elements into one functioned meaning make the most of the vocabularies learning and acquisition.

The next effectiveness of video games proved in the research in EFL field is in term of interaction and communication skill. The term interaction here is classified in both interaction with the media itself and interaction among the participants inside the video game environment. The research who claimed that video game was effective in increasing their participants interaction capability are J. W. DeHaan (2005), Reinders & Wattana (2011), and Berns et al. (2013). J. W. DeHaan (2005) claimed that the participant of his research was able to improve his listening comprehension through constant exposure of the target language uttered by the announcer in the game. Reinders & Wattana (2011) have their participants' ability in communication skill because of the interactivity feature in the game allowing them to chat to each other. Berns et al. (2013) created the environment in the game to make the participants could communicate in more purposive and elaborate manner. Gruba (2006) stated that by applying a literacy perspective the interactions of learners with digital media can extend and develop their proficiency in second language acquisition especially listening comprehension. Social interaction that available in most game of EFL field harnessed the motivation of the participants in communicating to each other. Communication in the media or in this case video

game, is categorized as one of the social process and not isolated rational actions (Yates & Orlikowski, 1992). Furthermore, the video games in research mentioned above were being the media that is helpful for the participants in expressing what they want to say or producing their own language.

English as a Second Language (ESL) Field

The effectiveness of the video game used in research in English as a Second Language field has shown some desired result in term of second language acquisition. The effectiveness of the video games in ESL field did not differ greatly with the video games in EFL field. The most prominent result in this field is the vocabulary acquisition of the participants. The effectiveness of the vocabulary acquisition has proved in the research by Rankin et al. (2006), Eskelinen (2012), Ranalli (2008), and Rankin et al. (2008). Vocabulary retention is one of the important skills if language learners would like to master the target language. Nassaji (2006) mentioned language learners would possess better lexical knowledge if they have better access to the knowledge source, hence they can produce a more accurate semantic meaning of the word. In this case, knowledge source can be obtained from in game context as the participants would gather tons of vocabulary by the text in the game. Additional materials of target language as can be seen in Ranalli (2008) research, can also be embedded to the game to increase the participants' comprehension toward the purpose of the research. Furthermore, the ability of the participants in remembering the vocabulary cannot be separated with their ability in deducing the meaning from the context and their background knowledge (Nassaji, 2006); hence one of the strong methods in learning vocabulary comes from learning from context.

The next effectiveness from the research of ESL field is in term social interaction and communication. The research that proved to be significant in term of increasing the participants' communication skill is by Rankin et al. (2006) Ranalli (2008), Zheng et al. (2009), and Rankin et al. (2008). Research by Rankin et al. (2006), Ranalli (2008) and Rankin et al. (2008) allowed the participants to be cooperative to each other and increasing their social skill thus lead to higher use of communication skill. According to Firth & Wagner (1997) language acquisition especially second language would be better learned in the target language being acquired through interaction then used resourcefully and contextually. In this case, the target language of the participants was not only acquired by the video game but also through the communication and interaction with other participants or native speaker. In addition, Long & Robinson (1998) quoted from Blake (2000) stated that the condition of second language acquisition is significantly enhanced by having the language learners to negotiate for meaning with other speaker would it be native or non-native speaker. Therefore, the importance of communication and interaction in second language acquisition is crucial in determining the output language production of the participants as it would be their main path to be proficient in target language.

There is other effectiveness of video game in ESL field that affected the language proficiency of the participants in ESL research. One research in particular had the participant to recognize the grammatical structure from the video game. The

research by Eskelinen (2012) revealed that the participants could recognize the grammatical pattern that he learned from the school. The grammatical aspect of the language is defined from the pattern recognition point of view and it is useful to describe the syntactic and semantic structure (Tsai & Fu, 1980). In other words, the video game awakes the grammatical pattern recognition of the participant hence he could use it later for his own language production. Another surprising effectiveness of the video game in ESL research is that the differences of culture among the participants did not hinder the target language acquisition (Zheng et al., 2009). In fact, in the research the participants that were divided into native and non-native speaker were able to create the situation where they can share their own knowledge. This led to the participants was able to increase their mutual interest and motivation especially for non-native speaker as they can directly use the target language to learn something new. Furthermore, the effectiveness mentioned above is the type of things that could not be predicted even by the researcher; however, it must not be ignored as it could be the variable to calculate and describe the complex process of language acquisition.

3. CONCLUSION AND RECOMMENDATIONS

3.1. Conclusion

Visual clues

If there is something that video games excel compared to any other media in language learning and acquisition is that the video games supported the use of images and graphics as well as on some occasion the text or name of the objects. Compared to book that, of course rich in textual language; video games also provided images to complete the visual help or clues needed for language learners to adapt and recognize the word. In movie, there are an images or series of pictures that would help language learners to perhaps learn and memorize the target language however, it doesn't provide sufficient learning material if the object only appear for once (Rudis & PoÄitiÄ†, 2017). Furthermore, visual clues in the video games is not only enhanced the text but also to give a clear picture and detail about the object thus increasing the odd of language learners to recognize and memorize the vocabularies of target language.

Interactivity

Interactivity can be described as the course of action where two people or things influencing or working together to have an effect on each other. In this case, the term interactivity comes between the player and NPC, feature, object, or instruction available in the game. Prensky (2001) mentioned that the interactivity of the video game could provide direct feedback which is a necessity in educational process especially in language learning and acquisition. The feedback that video games offer may differ with other media as it can be repetitive for the learners hence they don't have to be worry about forgetting lexical or vocabularies they have learned. The interactivity also provided the learner with the situation where they learn language by directly experience it. Video games allowed the language learner to learn by doing and by adding the repetition feature video games offer drilling practice for language learners. Furthermore, by allowing language learners to interact with the

features available in the game it will add the possibility for players to explore and discovers new language and vocabularies.

Social Interaction

Interaction is the vital part in language acquisition as Long (1983) mentioned it in his Interaction Hypothesis derived from the comprehensible input idea by Krashen. Interaction between the language learners and the other party must have meaning, in other words there is negotiation for meaning so it can be classified as the form of social interaction (Long, 1983). Video games especially games that out nowadays or so called online video games contain not only interaction between the player and the game, but also the game provides the feature to allow the player to interact to each other and create social bond. Peterson (2010) stated that there is one important factor in language acquisition which is the concept of mediation or negotiation for meaning, as it requires high level of cognitive activity and obtainable through social interaction. Based on this, the video games can act as the mediating tool for language learners for them to acquire the language with other party that is more proficient than them. Therefore, video games supported the participants with their natural purpose which is as the media to mediate the language learners and give them opportunity to communicate to each other.

Visual Character

Video games are the only media that provide the players with their own avatar or character or persona. This character allows the players to visually experience what players would like to do in the virtual environment or mostly called as role playing. The players can be anything they want as long as the video games had the feature of it. According to Peterson (2010), role playing allow the language learners to be anonymous, they can express themselves and communicate more freely without having to worry about anxiety and low self-confidence hence increasing the effectiveness of language acquisition. Furthermore, when language learners take advantages of role playing in virtual game environment they cognitively became something or character in the game that surely will stimulates their imagination and social development.

Task Based Activity

Among other media used in language learning and acquisition, video games are the media that surely focus on task based activity to allow the players to have the goal when playing the game. This activity can be enhanced to meet the criteria in language acquisition to happen as research conducted by Ranalli (2008). In video games, the instruction given to the players in a simple and basic so that they can read it fast and experience it directly. Other information related to the goal in the game would be given during their playing time. The difficulty of the task also gradually increased to make sure the players wouldn't get bored and also to keep the challenging aspect for them. Task based activity has a close relation with the theories of educational technology. Situated cognition theory suggested that knowledge and learning requires thinking on the go rather than learning from the storage and retrieval of conceptual knowledge (Greeno & Moore, 1993). Therefore,

video games allowed the situated learning to happen in essence that everything that the player done is for a purpose or a goal that has been set by the video games for the players. In addition, a goal in the game is the important factor that makes the game engaging and makes the players think it is worth to get for them.

Motivation

In second language acquisition, motivation plays a very important role in determining the outcome of language production. Reeve (2014) mentions that motivation considered as the internal process that gives energy, direction, and persistence to the behavior. Video games rely on motivation a lot, engagement is the key role that make sure the players to keep them intrigued and entertained. By having the language learners engaged, their motivation to play and complete the in game task will surely increase. However, the process of language acquisition would not be run in a steady progress if language anxiety is in the way (Gardner, 2004). This situation is showed in some of the research analyzed in this study whereas without any motivation, playing the video game become a hindrance and not a support in the process of language acquisition. Research by Anderson (2008) shows that the cultural differences between the participants and the background of the video games unmotivated the participants in playing the game and lessen the engagement process of language learning and acquisition. Since the participants showed no willingness to play the game and just play because of being told, this result in only slight amount of language acquisition process. Furthermore, the importance of motivation is really significance in determining the outcome language production of the language learners since without it there is no willingness of acquiring the target or second language.

3.2. Recommendations

This study intended to elaborate the effectiveness of video games as the media in language learning and acquisition. Though this study only served as the basic of empirical research, there are several recommendations for the next researcher that has intentions to explore the amount of opportunities by using media video games to increase, improve, or just want to see the effect that video games can offer to language learning and acquisition. Video games usage as the media in educational environment is relatively small especially in Indonesia. Therefore, future research can try to adopt one of the video game from the research analyzed in this study that is proved to be effective in increasing the language proficiency of its' participants in some aspects. In regards to systematic meta-analysis research design, this study only explored the effectiveness and facilitative features available based on the research analyzed. Future research can explore more about debilitating features of video games that may hinder the target language acquisition. In term of language acquisition, future study can explore more about the video games that give beneficial aspects for self-learner instead of giving advantages to the learners as a group.

There are several limitations this study possessed. This study focused on the usage of video games as the media in increasing, improving, or seeing their effect for the participants. This study did not differ between the characteristic of the research

and their methodology. The research analyzed in this study was conducted not only in classroom but also in laboratory setting. Therefore, it was hardly concluded which setting is better than the other since the researcher did not explore that possibility. Finally, the quantitative data of research analyzed in this study did not elaborated in quite detail and only based on the final result of the statistical number concluded by each of the research.

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