

**IMPROVING FOREIGN LANGUAGE LEARNING USING VIDEO GAMES****Theodore Alexander Atmaja**

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**Abstract**

*The evolution of multimedia has reached into the most advance level in technological history for the past few years since the introduction of multimedia home console like Sony Playstation in 1994. Multimedia home console could provide more content that easily accessible supported by cheap purchased in the market. The emerge of home console, the new idea of language teaching also followed the same way in implementation either direct or indirect. For young learners, adopting video game as the media of language understanding can be both effective and efficient. The efficiency of adapting video game as the media of language understanding are; video game content provides both direct conversation with subtitle available by setting and the ability of switching designated language as spoken suitable for player. Furthermore, in video games usage in language learning acceleration, the study explored more in video games advantage in language understanding in thorough and the rapid increase of vocabulary management. The research method applied is textual analysis and the research is conducted by obtaining the corpus available/triggered during gameplay. The research is analyzing the text and the culture elements available in Biohazard HD remastered. The goal of this research is to determine the significance improvement of Biohazard HD remastered in improving language study and cross culture understanding in the advance of enhancing language acquisition. To conclude, to both language and cross-cultural understanding, Biohazard HD remastered is proven effective in engaging discussion among players who participated in solving puzzle also within the same time; players may use the discussion to practice their language skills. Biohazard HD remastered is suitable for senior high school and college student in pursuing the effective ways of learning language.*

**Keywords:** *multimedia, video game, vocabulary, conversation, sociolinguistics*

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**Introduction**

Language is the main tool of engaging a contact with social community. In engaging communication, not only social community that occurred in public but also different culture may also appear from different kinds of aspect. In digital ages, language cross transaction has already cross around the globe as well as other culture as the mass rapid of computer technology such smartphone, home video and digital game console.

Language teaching in the concept of technology began in 1927 where the first television was published to community while during the time period every picture broadcasted at that time was only black and white picture broadcasted live to the public. The invention of television also marked the early age of technological evolution such industrial, atomic and digital. Television produces rapid enhancement in both audio and visual development for language in achieving further step in language study.

According to Corbett (2003), The essential of language learning is culture, from culture then it comes into 4 different skills such as reading, writing, listening and speaking. The concept of culture in language learning has become an inseparable part in development especially in society. Society in this point of are not only limited in the culture itself even the effect also in culinary Japan for instance has become popular not only with culture but culinary also engage in a simultaneous role in introducing Japanese in other region.

Television in atomic ages (circa 1949-1970s) has produced a lot of significant effect in every aspect of life, there are 2 major effect impacted by television namely economy and politic. Both aspect during the atomic ages soon followed the emerge of high buying power of television in the exchange of radio usage for better quality of news interpretation. The interpretation of tv program were not only consume by adult but also followed by language learner from both English and non-English speaker in exchanging information.

Richards (2015), described that technology advancement have also plays the role in curriculum development as well as the media used in language teaching. Richard (2015), in addition also mentioned that the in language learning adapting digital learning system, the system itself has a lot of appliances such as; (1) online learning, (2) digital learning resources and mobile learning application.

de Freiteas & Maharg (2010) mentioned that, the emergence of digital technologies such as internet and multimedia gaming, both factor have contributed the new style of learning. In learning context for instance, conventional teaching learning method in which always carry out by text-book and live classroom interaction instead learning by using multimedia appliances also change the way of conventional learning. In addition, live interaction from different culture can also possible to occur since the gamer themself can afford to manage online gaming.

Greenfield as cited by Prensky (2007), in video game playing 5 factors that supports the coordination in motoric sense as well as the brain coordination, the following factors are; (1) video games are possible to develop augment skill in reading visual images and the ability of mind mapping, (2) Skill in playing game enhances causal factor in developing cumulative skill, (3) video game improves the skill of 'rule discovery' and the ability of hypothesis testing, (4) video game skills transfer and lead to greater comprehension of scientific simulation, and (5) playing video games enhances players skills in developing awareness in expected and unexpected stimuli.

The study will focus mostly to the usage of home console video games in enhancing foreign language learning and the study focus to enhancement study of English study using live interaction in video game playing.

## **Literature Review**

### **1. CALL**

A computer aided program and designed home appliances for entertainment purposes and it contained sequences for gamers to play. The role of multimedia appliances usage in learning foreign language has played the major role in accelerating the rapid enhancement in learning method in which the process can be obtained in a non-conventional area of teaching learning process to occur. Chapelle (2010) mentioned that there are 3 types of input that

expected to be beneficial for learners in CALL those 3 types are; (1) saliency, (2) modification and (3) elaboration.

## **2. E-Learning**

A process of learning activity either by live on site or virtual environment. The process usually involving gadget such as laptop, smartphone and other live interaction equipment. Traditional teaching-learning process usually encountering a live interaction between mentor/tutor and participant(s) in some case of additional learning processes e-learning is another solution of solving the problem.

Watkins & Corry (2011) mentioned that in managing e-learning there are 3 things that need to be considered before implementing e-learning, those of the 3 things are; (1) time (2) place and (3) given assignment. The concept of e-learning sometimes misunderstood by some people that e-learning will be always related to school based system but the real thing behind e-learning can be also implemented in non-school based system like video gameplay for instance in digital era.

## **3. Reading Comprehension**

An individual's ability to understand text is influenced by the ability in proficiency and the ability to process information. Halim et al (2019) citing Eskey (2005) mentioned that in reading comprehension mostly emphasize more to linguistic competence, the process in which carry out during the process in identifying some vocabularies that present in the presented text in the concept language interpretation also useful not only in boosting productive skill but also in receptive skill such as listening for instance.

## **4. Listening Comprehension**

The process of understanding spoken language in receptive purposes. Rost & Homouda as cited by Gilakjani & Sabouri (2016) defined that listening comprehension as an interactive process in which listeners are involved in constructing meaning. In the concept of daily practice, learner usually doing a self-repeating process as soon after the hearing process is delivered then soon after followed by direct speech process (self pronounce). The process usually occurred whether the learner is in the middle of entertainment activity or school time.

## **5. Computational Linguistics**

According to Grisham (1994) one of the linguistics branches that studies the computer system for understanding and generating natural language. It also concern with machine translation, speech recognition and interactive voice response. In an advance level of technology especially in multimedia, multimedia appliances such as video games have also evolve in the next level of gaming technology, the technology of not only concern to entertainment purposes but also in education. With the including level of advance technology along with live conversation in either cutscene or an FMV sequences, the effect can be also adapted for language learning capability.

## 6. Corpus Linguistics

O'Keeffe & McArthy (2010), describes that in corpus linguistics there are a group of specialists such as; (1) trawling through texts to find all examples of a particular piece of language, (2) writing dictionaries based on attested usage and (3) analysing language based actual informant data were all well established. Based on the quoted descriptions presented, corpus linguistic concerns mostly to the physical data presented in the text, the form of corpus can be both in physical or electronic form.

### Methodology

This research was a descriptive study is to conduct content analysis related to language and the culture elements in Biohazard HD remastered and to post the suitability whether Biohazard HD remastered is suitable for high school students or not. Content analysis in this research is focused on text and cutscenes in Biohazard HD remastered. Mc Kee (2003, p. 6) in his theory about text analysis claims that, printed investigation is a path for analysts to assemble data about how other individuals understand the world. It is a system, an information gathering process for those analysts who need to comprehend the manners by which individuals from different societies and subcultures understand their identity and of how they fit into the world in which they live.

In the concept of textual analysis, the theory is justified to analyze the part of data and to be more specific of analysis, the writer is going to analyze the language and the culture elements contain during gameplay for clearer messages in analyzing the language and culture elements in order to avoid confusing and rapid understanding in interpreting language and culture. Furthermore, in conducting textual analysis in analyzing language and culture elements, Bauer et al (2000, p. 23) mentioned in theory of text analysis is first pointed to the corpus itself. The definition of corpus in text is the whole part from the text and the cutscene itself as the digital corpus.

In order to conduct the research related to this study, the writer will obtain Biohazard HD remastered for further analysis, as the advance from the analysis the writer will analyze the language and the culture elements in Biohazard HD remastered. After finish collecting the research material the writer will make corpus linguistics as the data for later analytic procedure.

In designing a research element for this research, the writer classified a research data by creating a table of classification which consists of language and the cultural elements in Biohazard HD remastered.

The study concerns mostly to descriptive study. It is to describe systematically the facts and characteristics of video game usage as the reinforce tool to enhance language study. Moreover to this study, the main objective is to compare the response of language learner in using printed media or multimedia appliances like video game console with live interaction.

The steps of a descriptive research are defining the objectives in specific and clear terminology including (1) what facts and characteristics are to be uncovered, (2) how the data are collected, (3) how the subjects are selected to assure that they represent the population to be described.

The data from this study were obtained from digital corpus and the corpus have already been selected into several parts in which contained both cutscenes and non cutscene parts, in this study the digital corpus data were taken from Japanese horror video game entitled biohazard. The game originally from in 1996 and once again been remake and remastered in 2015 with additional foreign language installment.

Since the method of this research were obtained from textual analysis, the steps of the data collection were as follows (1) preparing the corpus data, (2) separating the corpus into several parts, (3) categorizing each separated parts from corpus into statistical data.

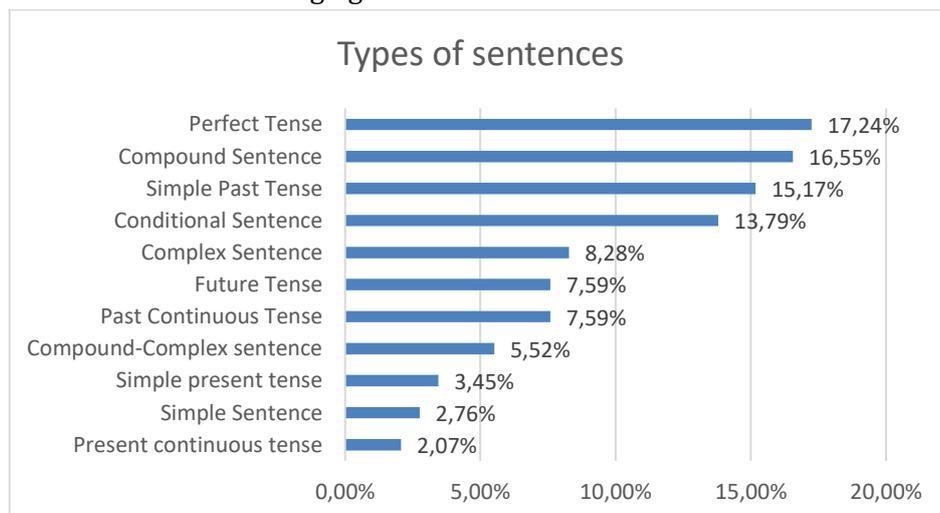
The target data from grammatical aspect were as follows;

- Perfect Tense
- Compound Sentence
- Simple Past Tense
- Conditional Sentence
- Complex Sentence
- Future Tense
- Past Continuous Tense
- Compound-Complex sentence
- Simple present tense
- Simple Sentence
- Present continuous tense

## Results and Discussion

### 1. Results

It is found out that there are 261 corpuses, the corpus consist of 116 obtained from live cutscenes during gameplay and 145 from the archieve discovered during gameplay. The live cutscenes appear during gameplay will appear in some part of storyline which will br trigger if some part of the gameplay met with certain condition, on the other hand the archieve are the files that discovered by the gamer during gameplay and exploring certain areas and only if obtained. The archives is composed from various types of sentences. For both live custcenes and archieve were composed by various type of sentences especially for live cutscene the type of sentences can be seen if the gamer have the subtitle enabled. The data discovery from the archieve can be seen the following figure.



**Figure 1.**

***Type and Frequency of Sentence encountered in Biohazard HD Remastered***

There are 17.24% of perfect tense found in the video game article. Perfect tense selected in sentence composition is to emphasize that the storyline has already happened. The following samples of perfect tense found in the game article are show below from (26) to (27) respectively;

- (1) We have given UMB No. 20 a new name: V-JOLT.
- (2) They have been known to generate toxic gases of mishandled.

The finding results presented above can be useful in enhancing language learning especially in learning English sentences. Biohazard HD remastered not only providing entertainment aspect as provided by the gamer developer, instead education aspect also included especially during cutscenes. During cutscenes, the subtitle is visible so the gamer can experience 2 learning within same time such as listening comprehension and studying grammar by pay attention to the subtitle itself.

Beside specific type of sentences found in the videogame, there are also 116 live cutscenes show as well as the conversation and the subtitle to support the language learning process. The cutscene also plays the major role in reinforcing reading comprehension, conversation and listening comprehension. The option menu configuration related to both subtitle and audio configuration can be seen on the following figure below.



**Figure 2.**  
**Option screen for configuring language in Biohazard HD remastered**

Biohazard HD Remastered not only providing media for learning English but also other foreign languages such as Japanese. The game originally developed by Japanese video game company in 1996 at that time only 1 single language presented, later in 2014 with the release of PS3 the game came up with additional update with audio and subtitle switch over in advance feature to support foreign language learning, for Japanese gamer who wish to study English with Japanese subtitle to appear can also switch easily or vice versa.

The cutscenes availability shares the percentage of 44.44% in occurrences. It is clear that the significant number of cutscenes is less to appear but only in some trigger happened in specific storyline but instead the numbers of reading and grammar composition shares more in gameplay.

## 2. Discussion

Based on Corbett (2003), The essential of language learning is culture, from culture then it comes into 4 different skills such as reading, writing, listening and speaking. Biohazard HD Remastered in this case provided almost all elements of both culture and education. It served by company not only for marketing purposes but also promoting culture in this case the cultural promotion available in the videogame is solely to language learning as the addition of digital advances of digital home console for gaming.

Although the game is quite difficult for minor to understand the gameplay, the game also proved effective in exercising language learning and enhancing sense of curiosity in solving the problem available during gameplay in the same time the gamer will also exercise reading comprehension and listening comprehension.

Biohazard HD Remaster is one of the many recommended videogames suitable as the best selection for both cultural learning and language learning especially for overseas countries and non-English spoken country or vice versa.

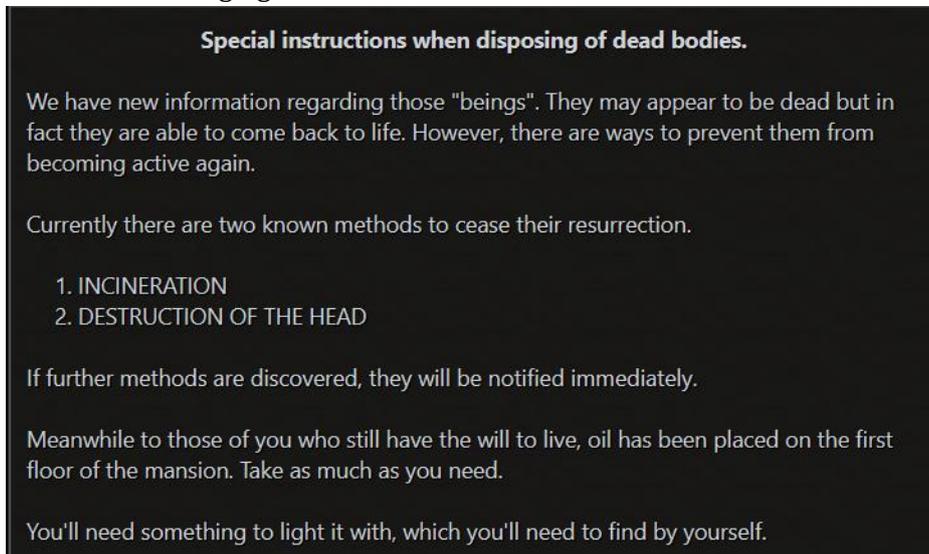
In addition to Greenfield as cited by (Prensky, 2007), in video game playing 5 factors that supports the coordination in motoric sense as well as the brain coordination. Most of the 5 factors are available in the following especially in the moment that the player feel the sense of suspense of finishing the game. Biohazard HD Remastered has the element of augment skill especially during gameplay. The augment skill projected during gameplay can be seen during puzzle solving in certain areas where the player must exercise reading comprehension to understand the puzzle solving provided by the fact or some files obtained in certain rooms. The puzzle clue related to augmented skill can be seen in the following figure below.



**Figure 3.**  
***Clue to puzzle it says ' Lisa, protected by the three spirits'***

Another part of cumulative learning skill that can be discovered during gameplay is that, the game provided a lot of reading material either during cutscene with subtitle provided and the files obtained during gameplay so within the same time, gamers can also train both

reading skills and speaking skills. The following figure related to cumulative learning skill can be seen in the following figure below.



**Figure 4.**

***File discovered during gameplay***

For rule discovery during gameplay can be seen in a condition while the gamer encounter a condition where a strategy of avoiding contact with non-discoverable character, in addition to non-discoverable character as mentioned before, the concept of rule discovery in Biohazard HD Remastered also engaging the gamer to enhance brain stimulant to make quick decision in order to solve the problem encountered during gameplay. The following figure related to brain stimulant can be seen below



**Figure 5.**

***Brain stimulant for quick decision taking***

For scientific simulation, the video game hardware is serve as the simulator for language learning, in this case there are 2 situations simulated during gameplay the first situation occurred when the gamer felt involved with the character's atmosphere and finally the second situation, gamer accidentally learn the language projected by the cutscene during gameplay. As for developing awareness is that gamer can slowly learn language in both oral and non-oral learning especially learning grammar.

## **Conclusion and Suggestion**

### **1. Conclusion**

After the study, there are 261 corpus found in Biohazard HD Remaster. The number of corpus consist of 145 of sentence types and 116 of cutscenes as the digital corpus. The first corpus consists of 11 types of sentences such as present continuous tense, simple sentence, simple present tense, compound-complex sentence, past continuous tense, future tense, complex sentence, conditional sentence, simple past tense, compound sentence and perfect tense. The percentage of appearances are numbered repectively; (1) perfect 17,24%, (2) compound sentence 16,55%, (3) simple past tense 15,17%, (4) conditional sentence 13,79%, (5) complex sentence 8,28%, (6) future tense 7,59%, (7) past continuous tense 7,59%, (8) compound-complex sentence 5,52%, (9) simple present tense 3,45%, (10) simple sentence 2,76% and (11) present continuous tense 2,07%. And for digital corpus that available during cutscenes shares the frequencies at 44,44% in percentage. The digital corpus shown in certain story trigger in some event also helped the gamer in learning not only in listening comprehension also how to pronounce certain word and deliver the word in a complete form of conversation not only in English but also in other foreign languages since the game itself has been programmed to match with overseas gamer in different region of market.

### **2. Suggestion**

The sentence construction and the learning language component in Biohazard HD Remastered are possible for adopting. For the sentence construction, the game writing script was constructed mostly in mixed and easing more not only for gamer but also gamer who are using gameplay as their media for studying other foreign languages especially in teaching reading comprehension, conversation and listening comprehension. Based on the conclusion the writer would like to conclude the suggestions for the upcoming process after this study; (a) The sentence construction in videogame also possible as the basic introduction of understanding sentence structure. (b) The reading text available in Biohazard HD Remaster is simple but worth for reading comprehension. (c) Biohazard HD Remastered proves effective for exercising motoric function of brain in problem solving. (d) For further study in both culture and foreign language learning, Biohazard HD Remastered can be recommending as other sources of teaching media. In addition to teaching media, gamer also learn the concept of marketing by using the advancement of digital technology in introducing how exactly a marketing management can be carry out through digital home console such videogame console for instance.

**References**

- Burton Robert, N. (2011). *Analysing Sentences*. London: Pearson Education Limited.
- Chapelle, C. (2010). *English Language Learning and Technology*. Ames, Iowa, United States of America: John Benjamin Publishing Company.
- Corbett, M. (2003). *Languages for intercultural approach to English language teaching*. Buffalo, New York: Multilingual Matters Ltd.
- de Freiteas, S., & Maharg, P. (2010). *Digital Games and Learning*. London: Continuum International Publishing Group.
- Gilakjani, A., & Sabouri, N. (2016, May 6). English Language Teaching. *Learners' Listening Comprehension Difficulties in English Language Learning: A Literature Review*, 124. doi:10.5539/elt.v9n6p123
- Grisham, R. (1994). *Computational Linguistics an Introduction*. New York: Cambridge University Press.
- Halim, N., Mohd Arif, M., & Supramaniam, K. (2019). Asian Journal of University Education. *Enhancing Reading Comprehension through Metacognitive Reading Strategies and Peer Tutoring among Year 7 Students at a Home School Centre*, 16, 3. doi:https://doi.org/10.24191
- O'Keeffe, A., & McCarthy, M. (2010). *The Routledge Handbook of Corpus Linguistics*. New York: Routledge.
- Prensky, M. (2007). *Digital Game Based Learning*. St. Paul, Minnesota: Paragon House.
- Richards, J. (2015). Technology in language teaching today. *Indonesian Journal of English Language Teaching*, 2.
- Watkins, R., & Corry, M. (2011). *E-Learning Companion A Students Guide to Online Success*. Boston, Massachusetts: Wadsworth Cengage Learning.