THE CORRELATION OF PLAYING ROLE-PLAYING GAMES AND STUDENTS' READING COMPREHENSION OF NARRATIVE TEXT

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Abstract: This research investigates the correlation of playing Role-Playing Games and students' reading comprehension of narrative text. Thirty (30) ninth grade students who play Role-Playing Games participated in this study. Their frequency in playing Role-Playing Games and their ability in reading comprehension of narrative text are analyzed by using correlation research design. Correlation research design was used in this study in order to find out the tendency of relation between students' frequency in playing role-playing game and their reading comprehension in narrative text. Creswell (2012, p. 338) states that correlation is a statistical test to determine the tendency or pattern between two variables or two sets of data to vary consistently. The result shows that the correlation degree between both variables is at the point of 0.687. It can be categorized as positive strong relationship, which means that students who play Role-Playing Games have a tendency to get higher score in reading comprehension of narrative text. From the findings, it is recommended that Role-Playing Games can be used as a media to teach narrative text to the students.

Keywords: video games, role-playing games, reading comprehension, narrative text

Introduction

The effects of playing video games have been widely studied and debated among researchers. The research on positive and negative effects of video games clearly shows that video games are effective teachers that can affect players in multiple ways simultaneously (Prot et al., 2012, p. 653).

Video games have been successfully used to teach children and adolescents a variety of topics, such as reading skills (Prot et al., 2012, p. 652). Spache and Spache, (Cited in A. Tinker & M. Mc cullough, 1975) define reading under a variety of headings: reading as a skill development, as a visual act, as a perceptual act, as a reflection of cultural background, as a thinking process. Gray (1960) defines meaningful use of reading as a problem-solving tool. It suggests that students in language learning should get meaning or the context of the text to solve

the problems that come from a question or an instruction related with the text.

Appropriate video games like action games could improve visual-spatial skill, educational games successfully teach specific skills, Exergames (Exercise games) can improve physical activity level, and Prosocial games (those in which the primary purpose of the player is to help other game characters) increase empathy and helping (Prot et al., 2012, p. 648). Accordingly, there are also positive effects that are conveyed by proper type of video games into educational field.

On the other hand, video games do not only bring positive effects to the player, but also come with negative impacts. Any negative findings (cited in Ip et al., 2008) such as gaming addiction (Fisher, 1994), aggression (Bensley & Van Eenwyk, 2001), and violent content (Kirsh, 2003; Anderson, 2004) become harmful effects for the players. It is important to respond to it wisely. Shapiro (2013) states that:

> Like all technologies, video games have the capacity to influence players in both positive and negative ways. It is foolish to study only the negative impact. Understanding the positive ways that games are involved in the development of citizens will enable us to use them to create a better world.

This research is focused and limited to explore RPG (Role-Playing Game) related with students' reading comprehension of narrative text. Role-playing game is one of the genres or types in video games. Mackay (2001) defines Role-playing game as:

> Episodic and participatory story-creation system that includes a set of quantified rules that assist a group of players and a game master in determining how their fictional characters' spontaneous interactions are resolved.

From the definitions above, in order to play Role-playing game appropriately, players should know what they should do as the main character in the game. They have to read the text as the narrative story from the game. Text is an important component of video games culture (Gee, 2003; Leander, & Lovvorn, 2006; Steinkuehler, 2007). It provides the players to make meaningful connections for the stories by interacting with the game master. Players have to think and solve the problem in the game and do the task for completing the part of games so they can continue and end the game the aim of this research is to investigate the correlation of role-playing games and reading comprehension of narrative text: whether or not there is a link between the frequency of playing role-playing video games and students' reading comprehension of narrative text.

Literature Review

- **Definition of Reading Comprehension**

Reading is defined as an activity of understanding information from the written text. Cameron (2001) states that reading is essentially about understanding the text.

Reading is a complex activity. It is more than only reading the written text, it is about meaning making process that need total awareness of the readers (Johnston and Donald cited in Pebriyanti, 2007).

Comprehension is commonly referred to the ability of understanding or comprehending both written and spoken language (Donald, 1980). Good comprehension means good understanding, and recognizing of main idea and information from the source.

Hence, students' reading comprehension in this present research is defined as students' ability to get the information from text. Students have to understand what is the information that writer try to deliver within a text. They need to conclude and arrange the information from a text that they have read. Conclusively, when they have comprehended the text, they are expected to be able to answer the questions or solve the instruction that related with the text.

- **Narrative Text**

Abbott (2008) describes narrative text as the representative of an event or the series of events. Furthermore, Abbott (2008) states one of the purposes of the narrative text, which is to entertain and involve the readers to the imaginative story. Another purpose of narrative text is to explain a phenomenon (myths and legends). Other definitions of narrative text are stated by Tickoo (1995) who describes, "Narrative text is essentially a story with events that constitute problem for one or more characters who are motivated to confront and solve the problem". Accordingly, at the end of the narrative text, the problem or conflict in the narrative text is solved.

Narrtive text has generic structure. Derewianka (1991, p. 35) divides narrative text into three parts or structures as follows;

- Orientation: first part that introduce the story and characters
- Complication: the problems are introduced in this part
- Resolution: the complication is solved

Anderson and Anderson (2004 enlarge two additional parts in narrative text generic structure; evaluation and coda. Evaluation is Reaction by characters to the complication and coda shows final display of the story. Mostly, the coda in many fairy tales will be implemented to tell that the

main character finally live happily ever after.

In addition, a narrative text usually containslot of dialogues (Knapp and Watkins, 2005). The sample of simple narrative text is attached below with the generic structure.

Table 1. Sample of Narrative Text

Text structure	Jane and Woodcutter
Orientation	Once upon a time in the middle of the -forest, there lived a girl named Jane with her -father, a poor woodcutter.
Complication with Evaluation	One day, the little girl's father did not come home from the forest and jane became more and more frightened that he had had an accident. She didnt know what to do because she was very afraid of the dark.
Resolution	Finally she plucked up all her courage and headed out to the clearing where she thought her father had been that day. After two long hours searching, she finally found him. His foot had been trapped under a log and he couldn't lift it himself. ~ianehelpedher father to free himself and they went home happily.
Coda (optional stage which evaluates events}	Jane was very glad she had not been too frightened to go in search of her father.

• **Role-Playing Games**

There are some definitions of Role Playing-Game (RPG) Video games. Generally, Role-Playing Game is defined as one of the more popular genres of video games being released for computer and video game console systems (Kacmarcik, 2005).

Hitchens and Drachen (2009, p.16): discuss how Role playing games have been and should be defined. In RPG, there are some components, which build the game as whole. They are elaborated below:

- Game World:

A role-playing game is a game set in an imaginative world. Players are free to choose how to explore and play the game world, in terms of the path or story through the world they want to take. They can also revisit the place that they have explored and typically the world provides many paths to be explored by the players.

- Participants:

The participants in the games are divided between player's character, who control the main character, and games masters who control the remainder of the game world beyond the player characters.

- Characters:

Controlled by the player as the main character. It can potentially develop and level up, for example in terms skills, abilities or personality, the form of this development is at least partially under player control and the game is capable of reacting to the changes.

- Game Master:

At least one, but not all, of the participants has control over the game world beyond a single character. The

function of the game master is for controlling the gameplay of the game.

- Interaction:

Players have wide range of configurative options for interacting with the game world through their characters, usually including at least combat, dialogue and object interaction.

- Narrative:

Role-playing games show some sequence of events within the game world, which gives the game a narrative story element.

Fritts (2013) characterizes Role Playing Game into some aspects:

- Player control a character which often form a close attachment to their characters (an avatar)

- Characters improve as they progress through the game and become more experience.

- Role-Playing Game has a strong storyline.

From some aspects that define Role Playing Game above, this paper emphazies on the story line and narrative aspect of RPG.

- **Narrative Text in Role-Playing Games**

Based on the theories of the structure of the narrative text mentioned on the previous sub-section, this sub-section elaborates the relation of the narrative text and role-playing game.

The main character of the game is introduced on the earlier of the games as the orientation of narrative story. In some role-playing games, player is freely to give the main character's name for the story.

The setting of narrative story in role-playing games are introduced while the characters is visiting new place. As the character and the story continue to the new place, the game usually introduces the name of the place as the part of setting place in the story. It is important that the name of the place should be introduced because sometimes the story of the game asked the player to revisit the place in order to accomplish the mission.

In role-playing games, there are many mini narrative stories that relate each other. These mini narrative stories are the complication of narrative story that are called as the mission. Player has to finish each of the mini narrative stories that build the main stories of the game.

Narrative text in role playing-games is built from the interaction or dialogues from each character. The conversation between characters form a narrative story in the game. Interaction feature in role-playing games hold the important key as the clue to solve the problem.

Based on the resolution of the narrative text structure, the main problem in the narrative text is solved at the end of the story. It is also happens in role-playing games. The main conflict in the story of the game is solved at the end of the game as the resolution of the story. The part of coda in narrative text also usually happens in role-playing games which the main is story happy ending and the character lives happily ever after.

In addition, there is an example attached of the mini narrative story as a first mission conclusion of Final Fantasy 9 role-playing game. It is arranged by the researcher by following the structure of the narrative text

Table 2. Sample of Narrative Text in Role-Playing Games

| Text structure	
Orientation	Once upon a time in the world named Alexandria kingdom, there lived a princess. Her name is princess Garnet.
Complication with Evaluation	One day, the princess celebrates her 16th birthday in the castle with Alexandria people and her mother, Queen Brahne, who invites Tantalus Theater to entertain the people. However all is not as it seems as the members of Tantalus have an ulterior motive, which is to kidnap Princess Garnet. Princess Garnet decides she wants to be kidnapped so she can escape from her mother Queen Brahne who has increasingly erratic behavior. Princess garnet goes willingly with Tantalus much to the displeasure of Adelbert Steiner the Princess' loyal servant who decides to go along with her so he can protect her
Resolution	Conclusively, they escape on Tantalus' theatre ship the "Prima Vista" but they are shot down and crash into the evil forest where they have to escape.

Methodology

- **Research Design**

Correlation research design is used in this study in order to find out the tendency of relation between students' frequency in

playing role-playing game and their reading comprehension in narrative text. Creswell (2012, p. 338) states that correlation is a statistical test to determine the tendency or pattern between two variables or two sets of data to vary consistently. The result of the correlation between the two variables is categorized into form of the coefficient correlation. As stated by Creswell (2012), researchers in correlation research design applies statistical test of two variables data that comes from each of the participants' score and converts the result into the coefficient correlation. Accordingly, the result of this study merely comes from the score of two sets of data.

Based on the title of this research "The Correlation of Playing Role-Playing Games and Students' Reading Comprehension of Narrative text". The research is stated as follows for two sets of data:

Figure 1 Illustration of Correlation cited from Sugiyono (2002, in Mayningsih, 2009, p.42)
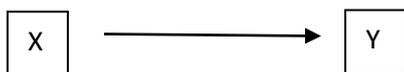
X: the result of students' frequency in playing role-playing game

Y: the result of students' Reading comprehension test of narrative text

• **Population and Sample**

A population is a group of individuals who have the same characteristics (Creswell, 2012, p. 142). Arikunto (2007) states that population is the whole subject of the research. Population in this research is the third grade of one junior High School in Bandung. This population is selected since the students in this grade have studied the topic of narrative text in academic skill.

This study uses probability sampling with stratified sampling. Probability sampling is used in order to select individuals from the population who are representative of the population (Creswell, 2012, p. 142) and stratified sampling is used to divide (stratify) the population based on the specific characteristics (Creswell, 2012, p. 144).

Based on the theories above, the sample in this paper is chosen by the specific characteristics. 30 students who have played role-playing games are selected for the sample. The total of 30 participants are required since it is the minimum requirement for the participant in correlation research. In line with Creswell (2012) and Frankeal et al (2012) the number of 30 participants has to be fulfilled in a correlation research.

• **Research Instruments**

In order to collect the data from the participants, this study employs Likert scale (non-test instrument) and

achievement test (test instrument) as Data-Collection Instrument. Rating scale is used to measure judgment of behavior and achievement test is used to measure knowledge or skill in a given subject (Fraenkel et al, 2012).

- **Research Procedure**

Here are the procedures in collecting the data for this research:

- Preparing research instruments; Likert scale (attitude / rating scale) and reading Comprehension test of narrative text (achievement test)
- Trying out the two research instruments to the participants for checking the validity, reliability, difficulty index (only for instrument 2), and discrimination index (only for instrument 2) of the text.
- Giving the real test (Likert scale and Reading comprehension test of narrative text) to the participants
- Scoring the participants' result on two instruments.
- Classifying the participants' scores on two administered instruments.
- Calculating the correlation between the two test results using Pearson Product Moment formula (if the data is normally distributed) or Spearman formula (if the data is not normally distributed) employing SPSS software.

- Analyzing the result through the relevant theories and drawing a conclusion of this research.

The procedure above had to be taken carefully step-by-step to prevent errors during the research.

Data Presentation And Discussion

After trying out research instruments to participants, the result shows that the instruments is considered as valid and reliable to be used in this research. Hence, the instruments were then administered to the participants.

The partcipants' score on both instrument was then classified and calculated for the normality test. The normality test is necessary to be calculated in order to determine whether the correlation computation will use either Spearman Correlation or Pearson Product Moment Correlation. The result of normality distribution test for both instruments is presented in the table below.

Table 3. Normality Distribution Test

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Frequency in Playing Role-Playing Games	.252	30	.000	.826	30	.000
Students' Reading comprehnsion test of narrative text	.266	30	.000	.819	30	.000
a. Lilliefors Significance Correction						

According to the result above, the score of the normality test for both instruments' data falls in 0.000 for all based on the equation of Kolmogorov-Smirnova and Shapiro-Wilk.

In this research deciding the normality was based on the significance level that equal to 0.05. From the result, all of the significance score are 0.000. Subsequently, the comparison is 0.000 < 0.05. In conclusion, both of the instruments data are not distributed normally based on the result of the normality distribution test. As stated in the third chapter, if the data obtained is not distributed normally, spearman correlation will be used in this research.

In this case, Spearman correlation is applied to find out the correlation between X variable (the result of students' frequency in playing role-playing game) and Y variable (the result of students' Reading comprehension test of narrative text). The coefficient correlation is gained through the computation of Spearman correlation by using SPSS (Statistical Package for Social Sciences) software that determines the degree of relationship between both variable. Moreover, the degree of the correlation is categorized in accordance with the degree of classification that has been stated in chapter 3 by Creswell (2012). The table below presents the correlation coefficient from both variables.

Table 4. Correlation Coefficient

Correlations			Frequency in Playing Role-Playing Games	Students' Reading comprehension test of narrative text
Spearman's rho	Frequency in Playing Role-Playing Games	Correlation Coefficient	.687**	1,000
		Sig. (2-tailed)	.000	.
		N	30	30
	Students' Reading comprehension test of narrative text	Correlation Coefficient	1,000	.687**
		Sig. (2-tailed)	.	.000
		N	30	30
**. Correlation is significant at the 0.01 level (2-tailed).				

From the table above, the coefficient correlation degree falls in 0.687. It can be concluded that the correlation between frequency in playing role-playing games and reading comprehension of narrative text is categorized as strong relationship (Good prediction can result from one variable to the other) (Creswell, 2012).

The result of the current study is based on the correlation research between the frequency in playing role-playing games and reading comprehension of narrative text ability among 30 participants, which are the students of ninth grade junior high school. The result from statistical computation of SPSS software displayed that the relationship of both variables was strong. Fraenkel et al (2012, p. 340) states that "Only a correlation of .65 or higher will allow individual predictions that are reasonably accurate for most purposes". In this study, it indicates that students who often play role-playing games seems to get

better score in narrative text comprehension. Related with the previous research that was conducted by Uuskoski (2011) who states "Playing certain types of games, most notably role-playing games, was also connected to higher English grades", this research shows that one aspect that related is narrative aspect. Since role-playing games has narrative aspect (Hitchens and Drachen, 2009), it could help students while they comprehend narrative text

Conclusions

This research focuses on the correlation between playing role-playing games and students' reading comprehension of narrative text. Referring to the findings and discussion on the previous chapter, it was found that there was a strong relationship between playing role-playing games and students' reading comprehension of narrative text. The correlation coefficient was 0.687 which indicates that students who often play role-playing games seems to get better score in narrative text comprehension. The average of participants' frequency in playing role-playing games in this research was 8.77 hours per week. It is classified as often to play category. Furthermore, their reading comprehension of narrative text was classified as excellent category. The

average score was 83.84. In spite of the different score of two variables achieved by the participants, the overall correlation was categorized as strong relationship. It is also in line with Fraenkel et al (2012, p. 340) who state that "Only a correlation of .65 or higher will allow individual predictions that are reasonably accurate for most purposes".

The similarities of generic structure of narrative text with some elements in role-playing games contribute to the relationship of both variables could come from. As elaborated in the literature review, Hitchens and Drachen (2009, p.16) propose some elements of role-playing games, which are game world, characters, interaction, and narrative element itself. While, narrative text has generic structure, which is orientation, complication, evaluation, resolution, and coda (Anderson and Anderson, 2004). In orientation, setting is introduced. There will be time and place setting in a narrative text. It is also the characters that are introduced in this part. As well as in role-playing games, the character, and setting are introduced at the first time player plays the game. Other elements of narrative text, which are complication, evaluation, and resolution, are involved in a game while player is playing it. There are conflicts and problems that should be solved by the player to

complete the story. Moreover at the end of the game, the coda that tells the ending of the story in narrative is also displayed in role-playing games.

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