The Effect of Multimodal Texts on Students' Reading Comprehension

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ABSTRACT

This research aimed to know the effect of multimodal texts on students' reading comprehension ability. This was an experimental research. The participants of this research consisted of 60 students of the second semester at a private college in Pekanbaru in the academic year of 2016/2017, 30 students were assigned as experimental group and another 30 students as control group. The instrument of this research was reading comprehension test in form of multiple choices, used as pre-test and post-test to asses the participants' reading comprehension ability in both experimental and control group. The result of this research found that there was significant effect in the post-test after using multimodal text in learning reading comprehension in experimental group. It was obtained that the value of t-test was 4.223 while the value of t-table was 2.002, with the level of significant $\alpha = 0.05$ at 58 degrees of freedom. The t-test result was higher than the value of t-table, therefore the hypothesis H₁ was accepted. The research concludes that there was significant effect of multimodal text on students' reading comprehension.

Keywords: effect, multimodal texts, reading comprehension

Introduction

Reading is a fundamental skill that students should master in learning English. Reading is the main source to develop students' knowledge and skill in order to improve their knowledge of foreign language. Thus, they can access information from all over the world. Farhady et al, (1994) state that the most important skill for language learners in learning English is reading. It means that reading is the basis of instruction in all aspects of language learning. Anderson (2000) emphasizes that the mastery of reading skill could help students success not only in English learning but also in other content class where reading is required. However, having good English skills especially in reading is a crucial point for students especially for undergraduate or university students. Reading is not only for developing their knowledge but also to support their academic and their future career. Due to Asean Economic Community has released in 2015, English become a crucial skill for most undergraduate students if they want to compete for jobs in international scope. In fact, one problem for undergraduate students in learning English is the poor ability of reading comprehension. Moreover, reading comprehension is the key for them to achieve the other English skills.

The main goal of reading is to achieve comprehension from what we read. According to Kitson (2011), reading comprehension involves the active construction of meaning through the interaction of the reader and the

text. Johnson et al, (2004) state that reading comprehension is an active process, directed by intentional thinking of readers in making connections between their thinking processes, the textual content, and their own knowledge, expectation, and purposes for reading. Wooley (2011) defines reading comprehension as the process of making the text meaningful. He added that the objective of reading comprehension is to gain the whole understanding about what it is provided in the text rather than to get meaning from the isolated words or sentences. Based on the definitions, it can be concluded that reading is an active process that used reader's prior knowledge in order to understand and to make meaning from what she/he read.

Furthermore, one of Indonesian Qualification Framework (KKNI) objective is to produce Indonesian human resources that have international quality and competitiveness. So that, every undergraduate or university students should prepare themselves by mastering English well during their study at campus. Thus, they can get great jobs easier after having their degree. Besides, all lecturers have responsibility to develop their teaching method and teaching materials in order to increase the quality of undergraduate students. Teaching material is vital in teaching and learning activities because it is a media used by the lecturers in transferring knowledge to the students related to the topic. Students' interest and students' motivation in learning English can be affected by using interesting materials. Therefore, the lecturer should consider appropriate and interesting materials based on students' level and their environment.

The rapid development of information communication and technology (ICT) has brought changes people's life at all aspects, including the field of education and learning paradigm. As a result of this era, the students use variety of technologies and digital media in their life. Thus, communication has become multimodal. In this context, especially students are exposed to a variety of multimodal texts, such as websites, picture books, magazine articles, advertisements, novels, video games and movies, which contained written text, visual images, graphics, design elements, and sounds. It other words, students can read texts or information's not only in the form of printed materials, but also from non-printed texts or digital texts. This phenomenon changes learning environment and teaching materials greatly. In other words, the materials used by the lecturer in teaching and learning reading should shift from static texts (monodal texts) to dynamic texts (multimodal texts) both in printed or non-printed texts.

Many experts have given their definition about multimodal texts really means. According to Jewitt and Kress (2003), multimodal texts present information across a variety of modes including visual images, design elements, written language, and other semiotic resources. Walsh (2015) defines that multimodal texts are those texts that have more than one 'mode' so that meaning is communicated through a synchronization of modes. He points out that printed or linear texts are monodal texts, whereas multimodal texts using of variety of sensory modes and working in synchronized way to convey meaning. In other words, multimodal text can be a combination of spoken and written languages, still or moving images which can be found on paper or electronic screen. It is concluded from the definition that multimodal texts can be divided into two types. The first type is printed texts namely picture books, newspaper, magazines, and information books. The second type is non-printed texts namely video, films, and digital media. The examples of digital media are CD rooms, DVDs, texts through electronic screen namely emails and information on internet. Anstey

and Bull (2010) explain that multimodal texts combine five modes to communicate meaning. These five modes namely linguistic (vocabulary, structure, grammar of oral/written language), visual (color, vectors and viewpoint in still and moving images), gestural signal (movement, facial expression and body language), audio (volume, pitch and rhythm of music and sound effects), and spatial organization (proximity, direction, position of layout, organization of objects in space). They can be delivered live, via paper or digital electronic. In conclusion, multimodal texts mean written texts that have different modes proposed by the author and the relationship between them in making sense of a story or information whether in form of printed texts or non-printed texts.

Thus, Duncum (2004) states that we cannot avoid the multimodal environment in this technology era. The students not only can read printed texts, but also they can read non-printed or digital texts that are presented on screen of smartphone or computer. Then, Verhoeven and Perfetti (2008) view that Information Communication Technology (ICT) has provided EFL learners with many opportunities to learn English with relative ease through conforming them to multimodal texts. They propose that the factors which are combined in multimodal texts can trigger the students in making inferences about what is in the text by using their prior knowledge. In addition, they state that by using other sources of information, students read more comprehensively than the students who merely read printed texts. Van den Broek et al, (1996) assert that text comprehension cannot be accomplished merely by the information that is presented in the text. The learners have to use their prior knowledge to construct new knowledge that related to their experiences and situation to process reading comprehension texts. In other words, students who use more than one source of information

are supposed to read comprehensively. Multimodal texts enhanced students' reading comprehension achievement because students read comprehensively while using more than one channel.

Lirola (2016) views that multimodal texts are very useful to introduce cultural aspects into the classroom, to know other social realities, and to make students improve their critical capacity in reading comprehension. She adds that these texts can make students aware of how the texts are designed and analyzed, what aspects contained in texts whether explicit or implicit, how these texts integrated to the other skills, and what competence students can acquire with them. McConnell (2014) suggests that multimodal texts provide authentic and engaging materials to explore how meaning is created and to help students at any level to communicate more effectively in different contexts. It can be concluded that, multimodal texts provide authentic materials related to the students' real life. Therefore, it has great impact on students' critical thinking and their reading comprehension ability. Realizing this phenomenon, the researcher was encouraged to apply multimodal texts in learning reading comprehension to her students. The objective of this research was to know the effect of multimodal texts on students' reading comprehension.

Methodology

This study is a kind of an experimental research. It was conducted to investigate the effect of multimodal text on students' reading comprehension. The participant of this study consisted of 60 students of the second semester of STMIK-AMIK Riau Pekanbaru in the academic year of 2016-2017. In this study, the researcher took two classes as the sample, where consisted of 30 students in each class. The two classes were IIA and IIB. One class

was randomly and equally assigned to the experimental group and the other class as a control group. The students took English II course, Reading class. They had class once a week. The researcher only gave treatments during 8 meetings and each session covered 100 minutes. The experimental group used printed and non-printed multimodal texts in learning reading, while the control only used monodal texts during treatments.

In collecting data, the researcher used reading comprehension tests to measure students' reading comprehension achievement before and after treatments. Reading comprehension test was used for pre-test and post-test. The kind of the reading comprehension was multiple choice test because the researcher thought that the students were familiar to this kind of assessment. Furthermore, this was supported by Weir (1990:43), who says that multiple choice technique has several advantages, they are; (1) it tend to be more effectively than other forms of written test, (2) the test items can be more efficiently and reliably scored, (3) it is usually possible to estimate in advance the difficulty level, (4) it has accurate measurement.

In her research, the researcher validated the items of the test which is known as content validity before arranging the instrument. It was appropriate with Bachman's theory (1990:40) who states that the test has content validity if the test design measured what should be measured in teaching and learning process reflect to syllabus or instructional program. Therefore, the researcher administered the test based on the syllabus and the topic. Furthermore, the researcher asked her colleague or the expert judgment on the appropriateness of the test. It is supported by Gay et al, (2009), who state that content validity is determined by expert judgment. There is no formula statistic that can be computed, and there is no way to express it quantitatively. Thus, the researcher took 50

items which have been validated to measure students' reading comprehension. The researcher also found the reliability of the test by trying it out to another class which had as same ability as the sample. In finding the reliability of the instrument, the researcher used Kuder-Richardshon 21 formula (Gay, 2009). The reliability of the instrument was reliable.

In this study, quantitative data analysis was used by using Statistical Package for Social Science (SPSS) to analyze students' improvement before and after treatments. Descriptive statistic was used to find the means and standard deviation of each group. An independent t-test was used to determine the differences between the means of the test in experimental group and control group. It used to decide whether there was a statistically difference after giving treatments between these groups.

Result and Discussion

All of the data were gathered from students' reading comprehension test on pre-test to post-test. The result of this research finding was analyzed by using SPSS in order to investigate whether there was any significant difference in students' scores between the two groups before and after treatments, an independent t-test was applied. The result could be shown in the following tables.

Table 1. Result of Independent t-Test : Pre Test

Group	N	Mean	Stdev.	t-test	Df	P-Value
Control	30	61.73	10.382	.332	58	.741
Exp.	30	62.60	9.828			

Table 1 shows that the mean score of control group in the pre-test is 61.73 (SD=10.382),

while the mean score of experimental group is 62.60 (SD=9.828). It shows that the value of t-test is 0.332, p-value is 0.741 which is higher than 0.05 with df=58. According to this result, it is confirmed that both of these group have the same level of reading comprehension ability or homogenous before treatment. It can be concluded that there is no statistically significant difference on the students' reading comprehension ability between these two groups.

To investigate statistically significant differences in students' reading comprehension improvement in control and experimental group after treatment, independent t-test was conducted. The result could be shown in the table below:

Table 2. Result of Independent t-Test : Post Test

Group	N	Mean	Stdev.	t-test	Df	P-Value
Control	30	66.00	6.215	4.223	58	.000**
Exp.	30	72.33	5.371			

Table 2 shows that there is significant difference result between experimental and control group in the post-test. The mean score of control group is 66.00 (SD=6.215), while in the experimental group is 72.33 (SD=5.371). It describes that the students in the experimental group significantly better in the post-test. It reveals that the value of t-test both of groups are 4.223 with degree of freedom (df) was 58. The t-test is compared to t-tablen with α = 0.05. As the result, t-test is higher than t-table (4.223 > 2.002). In addition, P-value (0.000) is lower than α (0.05). Thus, null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted. It means that multimodal texts helped the students to improve their reading comprehension ability.

The improvement of students' reading comprehension ability within the groups in the pre-test and post-test can be shown as following:

Table 3. The Comparison of Control and Experimental Group

Group	N	Pre-test		Post-test	
		Mean	Stdev	Mean	Stdev
Control Group	30	61.73	10.382	66.00	6.215
Exp. Group	30	62.60	9.828	72.33	5.371

From table 3, it shows that the mean score of pre-test in control group is 61.73 SD=10.382) while the mean score in post-test is 66 (SD=6.215). It means that the mean score increased about 4.27 point from pre-test to post-test. Then, the mean score of pre-test in experimental group is 62.60 (SD=9.828) while the mean score in post-test is 72.33 (SD=5.371). It can be concluded that, there is raising score about 9.73 point from pre-test to post-test.

Finally, the reseacher assumes that using multimodal texts can give positive effect on students' reading comprehension. it can be seen on the students' achievement in experimental group from pre-test to post-test. The experimental group had better ability in the post-test of reading comprehension than control group. As the fact that the control group also got instruction during treatment, at the end of the session this group has made little progress compared to the experimental group which is certain proof the effectiveness of treatment. It is confirmed that, students who were taught by using multimodal texts had better reading comprehension ability than those who were only taught by using monodal texts. This finding is congruent with Boshrabadi and Biria (2014) who claimed that using multimodal texts had a positive effect on students' reading comprehension skills.

They adds that multimodal texts reading processes not only helped the participants to gain a considerable amount of useful information on reading skills, but also served as a strong motivating factor and made the reading class more enjoyable than regular reading class. Furthermore, it is also line with Chayaburakul (2003) who use multimodal texts provided with pictures on his students. He found that using multimodal texts in learning can motivate the students and capture their attention to the content of reading materials as well as reading tasks. As a result it improved the students' reading comprehension ability.

Conclusion

The findings of this research found that multimodal texts have significant effect on students' reading comprehension. It showed that there was a statiscally significant difference between the mean scores of experimental and control groups on the post-test of reading comprehension. After analyzing the students' post-test of reading comprehension of both groups, it was revealed the value of t-test was 4.223 while the value of t-table was 2.002 with the level of significant α = 0.05 at 58 degrees of freedom. The t-test result was higher than the value of t-table, therefore the hypothesis H₁ was accepted. The research concludes that there was significant effect of multimodal text on students' reading comprehension.

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