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THE EFFECT OF WEBCOMICS UTILIZATION IN READING COMPREHENSION AMONG LOWER SECONDARY STUDENTS

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Abstract

The study aims to investigate if webcomics has an effect on students' reading comprehension. A Quasi-experiment method was used to administer the study. The samples are 67 students from form two secondary aged 14 years old. Pre-test and post-test were administered before and after the intervention to the control and the experimental group. The intervention was six lessons utilizing webcomics constructed based on the topics in the text book. The data collected was analysed using t-test. The results indicated that the mean of scores of the experimental group is higher and the difference is significant compared to the control group. The study concluded that webcomics improved students' reading comprehension. The findings from the study have implicated the importance of using pictures and words which has contributed better to the students' comprehension of the text in this study.

Keywords: reading comprehension, webcomics, quasi-experimental, intervention.

INTRODUCTION

This study focuses on enhancing students' reading comprehension skills. It is essential because the ability to comprehend a text well is a necessity for all especially the students because it is a basic skill to be mastered in order to understand what is read especially the reading materials in the reading lessons in the English classroom. This study utilizes the features of webcomics as intervention to the experimental group. There are vast features of webcomics found. However the features focused in this study are accumulated into six constructs which are conceptual structure, navigational structure, event structure, narrative structure, format, and mode.

Conceptual structure in this study is confined to the items in the construct utilized in the webcomics and the questionnaires. The items include text and images of the webcomics. Navigational Structure in this study refers to panels, position of the speech bubbles, position of the narrative boxes and directionality as found in the webcomics and they are combined in the construct in the questionnaires.

Event structure in this study means flow of images and panels used in the webcomics and are one of the construct in the questionnaires. Narrative structure refers specifically to the text in the narrative boxes and images in the background found in the webcomics and as a construct in the questionnaire. Format include other features of webcomics such as the lettering, at the gutter, legibility, size and spacing and is also a construct in the questionnaires. Mode is defined as the colour of the images, background pictures and language used in the webcomics and a construct in the questionnaire.

One of the key attributes identified in the Malaysian Education Malaysia Education Blueprint 2013-2025, as needed by every student to be globally competitive is proficiency in the National Language and the second language which is the English language (Preliminary Report Malaysia Education Blueprint 2013-2025, 2013). The importance of the English Language has also been recognized as the choice of medium in international trade and commerce, and in the science and technology domain (Foo & Richards, 2004). In the 5th Asia TEFL International conference held in Kuala Lumpur, the role of English language was highlighted. It was perceived as having great influence in the world through the prominent role held by the language in managing the world of today (Doshi, 2012) especially in the field of science and technology, in the spread and acquisition of knowledge itself and in the boost of economy of a nation.

Students' inability to use English effectively, appropriately and efficiently, contributes to the decline of English in the country. This has been observed through the deterioration of the English Language usage in Malaysia. Kaur and Peng (2000) as cited in Airil Haimi (2005) have stressed that there is evidence that the use of English has deteriorated in the Malaysian education system across all levels and caused detrimental performance in the English language (Harison, 2010). This standard keeps on declining from previous years and still persists in the present day (Gobel, *et al.* 2013). The English proficiency level, in the Penilaian Menengah Rendah (PMR) and the SPM examinations are very low too. Only 28percent of the candidates obtained a minimum credit in the 2011 SPM English Paper against Cambridge 1119 standards. 23% of the form 5 students failed the SPM English paper in 2011 and only 16% were found to be excellent. However, when compared to the Cambridge 1119 standards, 50% of the form 5 students failed the English paper (Preliminary Report Malaysia Education Blueprint 2013-2025, 2013).

This limited mastery of the English Language also contributes to problems in comprehending a text read in the reading lessons in the classrooms. When understanding of the intended meaning is not achieved when readers read a text (Jahromi, 2014) the text read would be meaningless. In a study conducted among the secondary and college students regarding problems faced in reading, 25 out of 46 participants reported that they have difficulties in comprehending passages read during secondary school (Hiew, 2012). Developing reading comprehension proficiency is found to be a major problem and concern of learners of English (Jahromi, 2014). Some students however, when reading a text given by the teacher, are able to read with correct intonation and correct pronunciation but are incapable of comprehending the text read. This also occurs among the adolescents. Even though majority of adolescents are able to read the words in their text, they are found to face difficulties in understanding (Brozo & Simpson, 2003). This matter was also supported and explained by Sam and Rajan (2013). They elaborated that students may be good in reading but fail to understand the theme of the text read. As an evident of this matter, Sabbah, Masood, and Iranmanesh (2013) discovered that the most frequent difficulty faced by year 5 students who participated in a research administered in the northern part of Malaysia, is comprehending the English text read. The objective of this study is to investigate if webcomics has any effect on students' reading comprehension in general after the intervention.

LITERATURE REVIEW

Over the recent years, there has been a substantial amount of studies conducted in various aspects of reading including reading comprehension, reading strategies, reading performance, methods and approaches (O'Reilly, *et al.* 2014). Text comprehension has been an intensive focus of research for three decades (Schnotz & Kürschner, 2008). Students need to understand the texts that they read in order to evoke meaning of what is read and to serve the purpose of reading. Without comprehending the text, the reading would merely be utterance of words in the minds. It has also been argued by Smagorinsky (2009) that the notion of text should also account for all manner of configurations inclusive sign configurations, drawings and the newer multimodal forms.

Reading comprehension does not occur in isolation but through the interaction of the three elements which are the reader, the text and the activity. Students comprehend texts by acquiring meaning of words read, confirming meaning and creating meaning through the three elements mentioned earlier. Hence, apart from the reader himself, the text and the activities in the classroom play a crucial role in a reader's comprehension of a text. Therefore it could be concluded, that the reading instruction has a great impact on the students' comprehension (Sweet & Snow, 2002).

A number of studies have been conducted focusing on reading instructions to elementary and primary school students and question may arise on the applicability of these findings to adolescents aged fourteen to nineteen year old population (McCardle & Chhabra, 2004; Pressley, 2004) as cited by Lamanno (2007). Studies utilizing reading instructions have been conducted for various reasons and has led to the enhancement in the reading materials used in the classroom too. It has also influenced the current practice among the teachers teaching ESL (English as a second Language) or EFL (English as a foreign Language). Both have experienced a shift in the materials provided during reading comprehension classes parallel to the ICT millennium. Concurrently many practice provide text accompanied by visuals including the English teaching course books which comprise of text and visual materials to aid students in comprehending texts (MERC, 2013).

The shift to a more visual society lead to the visual media invading majority aspects of the lives of present students' generation (Flood and Lapp 1) as cited in (Massey, 2015). Illustrations in the latest publications are also found to be more precise and delicate in order to accommodate and inspire the adolescents besides serving as a platform for the development of reading skills and vocabulary development (Massey, 2015). Hence, studies regarding reading comprehension have also been conducted in examining the effect of visual tools such as comic strips, graphic organizers and semantic maps since the integration of images and words increase students' comprehension (Chute, 2008) as cited in Ching and Fook (2013).

RESEARCH METHODOLOGY

A quasi-experimental design specifically the non-equivalent comparison group design (Campbell & Stanley, 1963) as cited by Christensen (2007) is used in the study.

The sample chosen for this study are the form two students from the average English proficiency group. The participants are chosen from intact group but randomly assigned to control and experimental group due to the school administration procedure that has determined the number and the class of the students in the schools. The experimental group contains 34 students while the control group 33 students

The instrument used in this study is the pre-test and the post-test and comprehension questions and the intervention materials consisting of six webcomics.

The pre-test used in this study consist of three passages titled SRU 5, recycling and organic farming. All three are presented on the computer screen whereby the materials have been uploaded on the website <http://ittifaqiah.org/webcomic/index.php>. The post-test is administered upon completion of the intervention which is on the eighth week in this study.

The intervention materials used in this study are six webcomics designed by the researcher based on the text passages found in the form two textbooks used in different zones in Malaysia. These webcomics would be used by the experimental group. While the control group would utilize the same content found in the form two text books in the form of text passages read on the computer screens. The justification for both groups to read through the computer screen individually is to ensure that the effect on the comprehension is solely due to the use of illustration and features of the webcomics.

FINDINGS

The discussion of the findings are proposed based on the hypotheses as mentioned formerly.

Ho1: There is no significant difference in the scores of the comprehension questions between the control and the experimental group in the pre-test

Table 1.0 demonstrates the pre-test results between the experimental and control group prior to the intervention. The mean score for the experimental group is 69.50 (Std Deviation = 5.20) and the control group obtained 65.71 (Std Dev = 5.98). The mean score of the experimental group is higher than the control group. However, the difference in the mean is not significant (Sig. = .007, $p > 0.05$). Therefore Ho1 is accepted that there is no significant difference in the scores of the comprehension questions between the control and the experimental group in the pre-test.

Table 1. Pre-test result of experimental and control group in t-test.

Type of test	Group	N	Mean	Std	Df	T	F	Sig (2tailed)
t-test	X	34	69.50	5.20	65	2.77	1.20	.007
	C	33	65.71	5.98				

Sig p< 0.05

Based on table 1.0 the variances are the same (F=1.20) and therefore the experimental and the control group are homogenous.

Ho2: There is no significant difference in the scores of the comprehension questions between the pre-test and the post-test of the experimental group

The scores obtained from the post-test of the experimental group were compared with the scores of the pre-test of the experimental group using t-test. Based on table 4.4, the mean score for the pre-test of the experimental group is 69.50 (Std Dev = 5.20) and the mean score of the experimental group in the post- test 86.19 (Std Dev = 5.11). The difference of the mean scores is 16.69 marks and the difference is significant because Sig. (2 tailed) = .000, p<0.05. Therefore there is a significant difference in the scores of experimental group when the scores of the pre-test and the post-test are compared. Hence, hypothesis Ho2 is rejected.

Ho3: There is no significant difference in the scores of the comprehension questions between the pre-test and the post-test of the control group

Similarly, the t-test was conducted to the scores of the control group to establish whether there is any significant difference between the scores obtained in the pre-test and the post-test of the control group too. Referring to table 1.1, the mean score of the pre-test for the control group is 65.71 while for the post-test the mean score is 68.12. There is an increase of 2.41 marks in the mean score and the difference is not significant because Sig (2tailed). = 1.34, p<0.05. Based on that result, Ho3 is accepted.

Table 2. Results of pre-test and post - test of the experimental and control group.

t-test	N	Mean	Std Dev	F	Sig	Df	Sig(2tailed)
Pre-test X	34	69.50	5.20	.121	.729	66	.000*
Post-test X	34	86.19	5.11				.000*
Pre-test C	33	65.71	5.98	.604	.440	64	.134
Post-test C	33	68.12	7.04				
Post-test X	34	86.19	5.11	2.468	.121	65	.000*
Post-test C	33	68.12	7.04				.000*

Sig p< 0.05

X-experimental

C-control

Ho4: There is no significant difference in the scores of the comprehension questions between the control and experimental group in the post-test

Accordingly, based on table 1.1 there is also a difference in the mean when the post test of the experimental and the control group is compared. The mean score of the post-test of the experimental group is 86.19 while the mean score of the post test for the control group is 68.12. There is a difference of 18.07 in the mean scores and the difference is significant because Sig (2tailed) = .000, p<0.05. Therefore, Ho4 is rejected.

Based on the study conducted, the rejected hypotheses are Ho2: There is no significant difference in the scores of the comprehension questions between the pre-test and the post-test of the experimental group and Ho4: There is no significant difference in the scores of the comprehension questions between the control and experimental group in the post-test.

These findings indicate that there is a significant difference in the scores of the comprehension questions between the pre-test and the post-test of the experimental group. The findings also conclude that there is significant difference in the scores of the comprehension questions between the control and experimental group in the post-test.

Discussion of Findings

Based on the first findings, it is apparent that prior to the intervention, both the experimental and the control group are homogenous since there is no significance difference in the scores of the comprehension questions between the control and the experimental group in the pre-test. This indicates that the difference that exist in the post-test is due to the intervention.

The second findings is that the scores of the experimental group is higher than the control group which indicate that the students scored better after being taught using the webcomics. The multimedia which is defined by Mayer (2009) as the utilization of words and pictures as in webcomics is found to have positive effects in comprehension of a text. Pictures assist students to construct meaning, organize information, identify the relation of ideas, visualizing and creating mental models (Khoshkar & Eshagh Nimvari, 2014). Research conducted by Kuo, Yang and Kuo (2010) as cited in Alkhasawneh, *et al.* (2012) who investigated the effect of multimedia on elementary students' reading comprehension concluded that students' reading comprehension is enhanced by multimedia integrated text. Apart from that it is evident that by looking at the dialogues found in the webcomics and the illustrations, the students managed to organise those images and connect the information or knowledge with their prior knowledge (Mayer, 2009). The students' ability to comprehend as explained is reflected through the higher and significant different scores obtained by the experimental group in the post-test.

The third findings of this study demonstrate that students could improve in their scores even through the reading comprehension classes without the intervention or classes using passages from the text books but the difference does not signify the improvement in understanding compared to the reading classes held using the webcomics.

The fourth findings prevailed that there is also a difference in the mean when the post-test of the experimental and the control group is compared. The findings indicate that the students' post-test marks signify that the students who had been exposed to the intervention performed better. According to the Integrated Model of Text and Picture Comprehension (ITPC) by Schnotz (2005), multimedia leads to learners utilizing multiple sensory modalities to comprehend a multimedia text such as the webcomics. Hence, from the findings of the experimental group whose performance outperformed the control group, it is evident that the use of features of webcomics such as the images, speech bubbles and narrative boxes prompted the formation of mental representations which lead to the building of a mental model of what is read. This corresponds to the fact that comprehension of reading materials containing text and pictures is a construction of mental representations based on tasks (Koler & Brison, 1984) as cited in Otero, Leon & Graesser, 2002).

CONCLUSION

Based on the findings, it could be concluded that webcomics contributed to the enhanced comprehension of reading materials during the reading lessons specifically to the students with average proficiency level of English. Findings from the study discovered that cogently it could be argued that the integration of pictures and words in reading materials for reading comprehension of secondary students enhanced reading comprehension. Hence the students could understand what is read better and display their understanding by answering the comprehension questions more accurately.

REFERENCES

- Airil Haimi, M. A. (2005). The English language dilemma in Malaysia: Vision, reality and the ethnicity-religion-language tapestry of the Malay majority. In A. Kamisah, I. Mohd Rozaidi, A. A. Roslina, A. L. Mohd Zaki, & K. L. Ngo (Eds.), *English in education: Issues and challenges in the Malaysian classroom* (pp. 1–13). Shah Alam: UiTM University Publications.
- Brozo, W. G., & Simpson, M. L. (2003). *Readers, teacher, learners: Expanding literacy across the content area* (4th Edition). New Jersey: Pearson Education.
- Ching, H. S., & Fook, F. S. (2013). Effects of multimedia-based graphic novel presentation on critical thinking among students of different learning. *The Turkish Online Journal of Educational Technology*, 12(4), 56–66.
- Christensen, L. B. (2007). *Experimental methodology* (10th Edition). New York: Pearson.

- Doshi, A. (2012). English in multicultural Malaysia. In Z. Mohd Don (Ed.), *Pedagogy and applied research* (pp. 15–30). Kuala Lumpur: Universiti Malaya Press.
- Foo, B., & Richards, C. (2004). English in Malaysia. *RELC Journal*, 35(2), 229–240. <http://doi.org/10.1177/003368820403500209>
- Gobel, P., Thang, S. M., Sidhu, G. K., Oon, S. I., & Chan, Y. F. (2013). Attributions to success and failure in English Language learning: A comparative study of urban and rural undergraduates in Malaysia. *Asian Social Science*, 9(2), 53–62. <http://doi.org/10.5539/ass.v9n2p53>
- Harison, M. S. (2010). *Reading instruction theory and practice*. Nilai: Universiti Sains Islam Malaysia.
- Hiew, W. (2012). English language teaching and learning issues in Malaysia : Learners' perceptions via facebook dialogue journal. *International Refereed Research Journal*, 3(1), 11–19.
- Jahromi, K. M. (2014). EMP students' use of reading strategies and the impact of strategy instruction on medical text comprehension. *Modern Journal of Language Teaching Methods (MJLTM)*, 4(4), 367–384.
- Khoshkar, A., & Eshagh Nimvari, A. A. (2014). The effect of using pictogloss on Iranian EFL learners' reading comprehension ability. *Modern Language of Language Teaching Methods (MJLTM)*, 4(1), 86–103. <http://doi.org/10.1016/j.sbspro.2013.06.194>
- Lamanno, A. A. (2007). *Exploring the use of graphic novels in the classroom: Does exposure to non-traditional texts increase the reading comprehension skills and motivation of low-functioning adolescents readers?* (Unpublished Doctoral dissertation). The Pennsylvania State University, State College.
- Massey, S. R. (2015). The multidimensionality of children's picture books for upper grades. *English Journal*, 5(104), 45–58.
- Mayer, R. E. (2009). *Multimedia learning* (2nd Edition). Cambridge: Cambridge University Press.
- MERC, A. (2013). The effect of comic strips on efl reading comprehension. *International Journal of New Trends in Education and Their Implications*, 4(1), 54–64.
- O'Reilly, T., Weeks, J., Sabatini, J., Halderman, L., & Steinberg, J. (2014). Designing reading comprehension assessments for reading interventions: How a theoretically motivated assessment can serve as an outcome measure. *Educational Psychology Review*, 26(3), 403–424. <http://doi.org/10.1007/s10648-014-9269-z>
- Preliminary Report Malaysia Education Blueprint 2013-2025. (2013). *Malaysia Education Blueprint*. Retrieved from <http://www.moe.gov.my/userfiles/file/PPP/Preliminary-Blueprint-Eng.pdf>
- Sabbah, M., Masood, M., & Iranmanesh, M. (2013). Effects of graphic novels on reading comprehension in Malaysian year 5 students. *Journal of Graphic Novels & Comics*, 4(1), 146–160. <http://doi.org/10.1080/21504857.2012.757246>
- Sam D, P., & Rajan, P. (2013). Using graphic organizers to improve reading comprehension skills for the middle school ESL students. *English Language Teaching*, 6(2), 155–170. <http://doi.org/10.5539/elt.v6n2p155>
- Schnotz, W. (2005). An integrated model of text and picture comprehension. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 49–69). Cambridge University Press.
- Schnotz, W., & Kürschner, C. (2008). External and internal representations in the acquisition and use of knowledge: Visualization effects on mental model construction. *Instructional Science*, 36(3), 175–190. <http://doi.org/10.1007/s11251-007-9029-2>
- Smagorinsky, P. (2009). The cultural practice of reading and the standardized assessment of reading instruction: When incommensurate worlds collide. *Educational Researcher*, 38(7), 522–527. <http://doi.org/10.3102/0013189X09347583>
- Sweet, A. P., & Snow, C. (2002). Reconceptualizing reading comprehension. In C. C. Block, L. B. Gambrell, & M. Pressley (Eds.), *Improving comprehension instruction: Rethinking, research, theory, and classroom practice* (pp. 17–53). Hoboken, N. J.: John Wiley & Sons.
- Vassilikopoulou, M., Retalis, S., Nezi, M., & Boloudakis, M. (2011). Pilot use of digital educational comics in language teaching. *Educational Media International*, 48(2), 115–126. <http://doi.org/10.1080/09523987.2011.576522>