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#### THE EFFECTS OF USING WEBCOMICS AS AN INSTRUCTIONAL APPROACH ON THE DEVELOPMENT OF ESL STUDENTS' READING COMPREHENSION ABILITY

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The research aimed to study the effects of webcomics on students' reading comprehension ability. Ten hypotheses were generated from three main research questions. The webcomics were developed by employing the principles of multimedia learning on designing of multimedia presentations and the Cognitive Theory of Multimedia Learning. This study employed a quasi-experimental design with multiple method enquiries, a survey and a focus group interview. A pre-test was administered prior to the six week intervention and a post-test after that. A set of questionnaires was distributed to the experimental group and a focus group interview was held after the quasi-experiment to obtain data on the effect of webcomics on the students' comprehension of the text. The dependent variables of comprehension studied were literal comprehension, reorganisation, inference and prediction. The respondents were 34 students in the experimental group and 33 students in the control group. They were Form Two students, who were fourteen years old and from a secondary school in Selangor. The data obtained were analysed using descriptive and inferential statistics (t-test) for the quantitative data and theme analysis for qualitative data to explain the effect between the studied variables. The analysis showed that the experimental and the control group were equivalent since there was no significant difference in the scores of the comprehension questions between the control and the experimental group in the pre-test. However, significant difference (t (65) =12, p< .05) was found in the mean scores of the comprehension questions between the post-test of the experimental (M=86.19, SD=5.11) and control group (M=66.14, SD=6.02) after the intervention. The results indicated that the respondents scored better after being taught using the webcomics. The students' ability of literal comprehension, reorganisation, inference and prediction in reading comprehension were enhanced. The study implicated that the use of webcomics with graphics, colours and text representation have assisted the reading comprehension particularly with lower secondary students of low or average proficiency.

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#### Peroustakaan Tuanku Bainun KESAN PENGGUNAAN KOMIK WEB SEBAGAI PENDEKATAN **INSTRUKSIONAL TERHADAP PERKEMBANGAN KEBOLEHFAHAMAN BACAAN PELAJAR ESL**

#### ABSTRAK

Kajian ini bertujuan untuk mengkaji kesan komik web terhadap kebolehfahaman pelajar dalam bacaan. Sepuluh hipotesis telah dijana daripada tiga soalan kajian. Komik web dalam kajian ini telah dibangunkan berdasarkan prinsip-prinsip pembelajaran multimedia dalam mereka bentuk persembahan multimedia dan Teori Kognitif Multimedia. Kajian ini menggunakan reka bentuk kajian kuasi-eksperimen dengan metod pelbagai inkuiri, soal selidik, dan temu bual kumpulan fokus. Ujian pra ditadbir sebelum intervensi selama enam minggu manakala ujian pos pula ditadbir selepas intervensi. Soal selidik telah diedarkan kepada kumpulan eksperimen dan temu bual kumpulan fokus telah diadakan selepas kajian kuasi eksperimen untuk memperoleh data tentang kesan komik web terhadap pemahaman pelajar pada teks yang dibaca. Pemboleh ubah bersandar bagi pemahaman yang dikaji ialah kefahaman literal, penyusunan semula, inferens dan ramalan. Sampel kajian ini terdiri daripada 34 orang pelajar dalam kumpulan eksperimen dan 33 orang pelajar dalam kumpulan kawalan. Mereka merupakan pelajar tingkatan dua yang berusia 14 tahun dari sebuah sekolah di Selangor. Data kuantitatif yang diperoleh dianalisis menggunakan statistik deskriptif dan inferens (t-test) manakala data kualitatif pula dianalisis menggunakan analisis tema untuk menerangkan kesan antara pemboleh ubah yang dikaji. Dapatan kajian menunjukkan bahawa kumpulan eksperimen dan kumpulan kawalan adalah setara kerana tiada perbezaan signifikan dalam skor soalan kefahaman ujian pra antara kumpulan eksperimen dan kumpulan kawalan. Walau bagaimanapun, terdapat perbezaan yang signifikan (t (65)=12,p < 0.05) dalam skor min ujian pos antara kumpulan eksperimen (M=86.19, SD=5.11) dan kawalan (M=66.14, SD=6.02) selepas intervensi. Dapatan kajian ini menunjukkan bahawa pelajar-pelajar memperoleh skor yang lebih baik selepas diajar menggunakan komik web. Kefahaman literal, penyusunan semula, inferens dan ramalan dalam pemahaman bacaan pelajar didapati meningkat. Kajian ini memberi implikasi bahawa penggunaan komik web yang mengandungi grafik, warna dan representasi teks membantu pemahaman pelajar dalam bacaan khususnya pelajar menengah rendah yang sederhana pencapaiannya.

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СРТ	Cambridge Placement Test
CTML	Cognitive Theory of Multimedia Learning
ICT	Information and Communications Technology
ITPC	Integrated Model of Text and Picture Comprehension
KBSM	Kurikulum Bersepadu Sekolah Menengah
KBSR	KurikulumBaruSekolah Rendah
KPLI	Kursus Perguruan Lepasan Ijazah
TPACK	Technology, Pedagogy, and Content Knowledge

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### **CHAPTER 1**

### **INTRODUCTION TO THE STUDY**



#### 1.1 Introduction

This chapter presents the background of the study, statement of the problem, objectives, research questions, rationale, hypotheses and the operational definition. The background of the study discusses the fundamental discussion on the issues of English language, the statement of the problem highlights the major problems faced by the students in reading comprehension, the research questions and the hypotheses are derived from the objectives of the study. The rationale of the study highlights the importance of administrating the study while the operational definition explains the terminology used specifically for this study.

## 1.2 Background of the study

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English Language has always found its place in the international agenda as one of the most important and outstanding language used globally, recognized as a language to present ideas and often perceived as the bridge for common understanding among different language speakers of the world. English is spoken as the first language by 300 million people and as a second language by millions apart from being accepted as the official language in fifty countries (Ikonta & Ugonna, 2015). Malaysia as one of the progressing nation has also established measures to sustain the importance of English Language and improve the proficiency specifically among the students as stated in the education blueprint. One of the key attributes identified in the Malaysian Education Blueprint 2013-2025, is that students must be globally competitive.

🕓 05-4506832 📢 pustaka.upsi.edu.my 🕴 PustakaTBainun ptbupsi To attain this, students need to be proficient 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 and Richards, 2004). In the 5th Asia TEFL International conference held in Kuala Lumpur, the role of English language was highlighted. English Language 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. Thus, Malaysia is one of the nations that has always prioritize English language in many aspects such as in education, technology and economy. The English Language was 05-4506832 🛛 📢 pustaka.upsi.edu.my Kampus Sultan Abdul Jalil Shah

established as the medium of instruction in schools throughout Malaya through the Razak Report in 1956 but in 1971, the Malay Language was made the official language and the medium of instruction in national schools throughout the country through the National Language Act and in tertiary education by 1983.

The Cabinet Committee Report (1979) also stressed the vital need of the English language in order to progress through science and technology (Ambigapathy, 2002). This resulted in the introduction of the KBSR (Kurikulum Baru Sekolah Rendah) and KBSM (Kurikulum Bersepadu Sekolah Menengah) syllabus for primary and secondary school respectively. The aim of the primary English language syllabus is to equip the students with the basic knowledge and language knowledge in order to enable them to communicate effectively in all situations. Similarly, the KBSM English syllabus stresses on producing citizens who are well versed in the language and are able to use English in acquiring knowledge and fulfil the needs in job environment. The Ministry of Education perceives English Language as having a political position as the second most important language after their mother tongue (Nesamalar, Saratha, and Teh, 2005).

The Ministry of Education has also placed the language to be the important language to \_enable Malaysia to engage meaningfully in local and international trade and commerce' (Nesamalar et al., 2005) apart from enabling Malaysians to have access to academic, recreational and other sources of knowledge to improve themselves and put oneself on par with the rest of the world. In other words, the aims of the government are to elevate the English Language to be the international

communication and the Bahasa Malaysia as the official language of the country (Loga Mahesan, 2005). Thus, English Language Language has been accepted as the second language in Malaysia and undoubtedly been given a lot of emphasize specifically since the Malaysian students standard of English Language is found to be declining (Doshi, 2012).

The lack of proficiency in English Language contributed to the 44,000 graduates unemployment in 2002 (Lai and Md Sidin ,2012) and it was one of the main reason for graduate unemployment (Hassan, 2007). The decline of the English Language standard is also prevalent through the low command of English even among the university graduates at present as stated clearly in the Zahid Report (Mohd Nordin, 2006). The Zahid Report explains the development and the direction of higher education in Malaysia. It indicated that the graduates are divided into two groups. One group from the private institutions who with the consent of the Ministry Education uses English Language as their medium of instruction and the second group who graduate from government higher institution graduates have a better command of English Language and are in a better position in securing jobs. The graduates also have wider options of jobs to choose from the private sector which demands them to master the English Language Language as one of the important skills before employing them.

Therefore, Malaysia has always aimed at improving its students' English Language Language proficiency level in order to assist them to deal with the challenges in the future. It is also to improve the standard of English Language Language in the country. Several steps have been planned to increase the standard of English Language Language in Malaysia and one of the steps is encouraging the wide use of technology in the teaching of English Language through the interactive technology sources to improve the command of English Language.

In relation to this move, the Ministry of Education emphasized on enhancing learning through ICT in schools. One of the measures taken was to equip all 10,000 national schools with 4G internet access and a platform for virtual learning to be utilized by the teachers. The use of CD-roms and websites in English Language were accelerated. Apart from that, the use of ICT in English Language Language classroom was executed rigorously such as online learning and English Language Language leasures of ICT in education including the materials designed for English Language Language classrooms (Preliminary Report Malaysia Education Blueprint 2013-2025, 2013). Based on the emphasis and the huge portion of budget allocated for technology specifically the internet, it could be concluded that the use of internet in the English reading classroom is vital.

Besides the concern by our Prime Minister, Dato Seri Najib Tun Razak and the former Deputy Prime Minister Tan Sri Muhyiddin Yassin, there has also been significant public concern in the media about the standard of English Language teaching in Malaysia (Shuib, 2009). The Ministry of Education has also embarked on an in-depth study entitled –The Cambridge Baseline Project: measuring English Language standards and establishing an evidence-based baseline for Malaysian schools. This study investigates the learning, teaching and assessment of English in

Malaysian schools. It also measures the students' English proficiency and the teaching abilities and practices of teachers in schools. Focus has been established to raise teachers' quality by perfecting present teachers. The Education Ministry has trained 10,000 English language teachers in 2011 to raise their competency and quality (Lam L.C., 2011). In two years, all 70,000 English Language teachers have sat for the Cambridge Placement Test (CPT) and 5,000 of them were up skilled (Preliminary Report Malaysia Education Blueprint 2013-2025, 2013).

Apart from that, to increase the proficiency level of English Language among the students, the teachers' pedagogical approach has also been given great concern by the Education Ministry. The teaching of English Language and the materials used in the classroom by the teachers has transformed parallel to the latest communicative method used currently. Materials used in the classroom will have impact on students' learning and could attract students' interest through novelty, variety, attractive presentation and interesting topics. Comprehension of English reading materials is crucial as it enables the students to obtain knowledge in multidiscipline (Yeh, Hung, & Yu Hsin Chiang, 2016; Liu, Chen & Chang, 2010; Salinger, 2003). Failing to comprehend the content of materials read, would cause the students to lose the benefit of gaining knowledge from these materials. This is because materials used in the English classroom are vital and will influence the quality in the content of teaching and learning (Ong, Thang, Noorizah, Hafizah, & Mohd Sallehudin, 2012). The advent in the technology has contributed to the transformation of teaching aids utilizing the latest technology such as the internet, website, software and others pertaining to the digital world. The aim of this transformation is to enhance the students' mastery of the language used in the classroom in order to comprehend the gist of the lesson

taught in the English classroom since one of the elements in learning any language including English is the comprehension of the text or materials used in the classroom.

In relation, to facilitate reading comprehension, some important factors need to be considered by the educators of English Language. Firstly, the level of difficulty of tasks given to the students, secondly the suitability of the materials distributed to the students and the variety of the materials. Next, the ideas presented in the materials. All these should not exceed the students comprehension level (Nesamalar et al., 2005). This is because the students are of various proficiency levels and therefore materials in reading comprehension should be understood by the students. Failing to comprehend the reading materials read would contribute to the failure of students in accomplishing tasks in higher level of academic environment too because they would not be able to fulfil the task assigned to them (Nambiar and Ransirini, 2012). Therefore teachers should put in sufficient effort to select the most appropriate materials to be used in the reading classroom.

Correspondingly, the texts encountered by the adolescents today are often multimodal which incorporate variety of modes such as visual images, hypertext, and elements of graphic design combined with written text (Serafini, 2011) and this generation adopt different learning preferences with visual media oriented desire which are influenced by technology (Wang et al., 2014). The increase use in ICT and technological resources has likewise contributed to a paradigm shift in the way the young generation obtain knowledge. Adolescents greatly encounter texts containing visual images, distinctive narrative structures, intricate design elements and exclusive

formats (Serafini, 2011). This is an evident that the present technology has also influenced the medium in which materials are read by students.

Many studies have found that students learn better with the combination of pictures and text (Schnotz, Wolfgang Horz, 2010). Pictures or visual also support visualization of the text read (Tulungagung, 2014) and facilitate the processing of information read (Schnotz, WolfgangHorz, 2010). Correspondingly, picture or illustrations in the materials used in the classroom for reading comprehension are vital to enhance students' comprehension of the materials used in the classroom because pictures help students to understand the text read and improve their comprehension. The illustrations found in the materials utilized (Tomlinson, 1998) and digital form of materials such as comics on the web (webcomics) or also known as webtoons in certain countries could increase students' interest in reading the English materials.

Webcomics has emerged as a digital format of comic books which is on the rise (Colman, 2014). Webcomics have been used extensively in many fields across the world. For psychological purposes, the comics and webcomics were used for discussion of traumatic events and replicating mental condition and also to depict stories from storm such as Katrina Hurricane survivors, sexual trauma survivors, and 9/11 survivors. They became the forum for discussion for the victims to vocalize their scary experiences. Webcomics have also been used to motivate and build confidence in adolescents since webcomics can provide exposure to new things, feedback from the readers and form a community (Brigid, 2016). Webcomics used as materials in the reading comprehension classrooms could cater to young readers' interest to read (Brigid, 2016) and assist them in understanding a text.

However, webcomics for children and teen are not easy to find (Brigid, 2016) because they don't have age ratings and might contain unsuitable elements for the young readers. Based on the influence of the webcomics on the youngsters, webcomics have started to get more coverage and attention in the mainstream media (Brigid, 2016). Therefore there is a need to create the webcomics to suit the need in the classrooms as reading materials.

#### **1.3** Statement of the problem

Children who face reading comprehension difficulties are also found to have difficulties with social functioning in society, employment and other aspects of daily live as stated by Snow (2002) and highlighted by De Koning & Van der Schoot (2013). In relation to this matter, developing reading comprehension proficiency was found to be a major problem and concern of learners of English (Jahromi, 2014). Similarly, Sabbah, Masood, & 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 comprehension of the English text read. This was proven through a study conducted among the secondary and college students regarding problems faced in reading, 25 out of 46 respondents reported that they have difficulties in comprehending passages read during secondary school (Hiew, 2012). Some adolescents are able to read with correct intonation and correct pronunciation but are incapable of comprehending the text read (Brozo & Simpson, 2003) including failing to understand the theme of the text (Sam D & Rajan, 2013). The reasons for this are lack of vocabulary and grammar knowledge. The lack of vocabulary has also been associated with the low percentage of reading done by Malaysians. It was

revealed that 76.2 % of the secondary school students and 80.1% of university students hesitate to read English materials as stated by Pandian (2000) in Harison, (2011). From 85 % of Malaysians who read regularly, 77 % of them prefer reading newspaper. (The Star Online, 2009). In a study conducted by the Malaysian National Library in 2005, it was found that half of 60,441 Malaysians surveyed, read less than seven pages a day (Tharumaraj and Nooreen Noordin, 2011). When numerous unfamiliar vocabulary are present in a text, the process of conveying information from the text will be hindered and this was also revealed in a study conducted by Jun Zhang & Suani Anual (2008).

Other factors that have impact in reading classrooms are the teaching methods used by the teacher. Many teachers are not adopting the current method and pedagogical skills in reading lessons. The common way of teaching includes reading, questioning, explaining and grammar exercise (Zhang, 2017). The study indicates that teachers do not use their own creativity to teach reading, (Lin Eng & Mustapha, 2010). The teachers fail to realize the importance of being creative and adaptive in pedagogy to attract students who have different kinds of intelligence in the classroom (Jing, 2012). It is vital and necessary for teachers to reform their teaching methods as the present methods do not apply for the current situation (Zhang, 2017). Teachers must be creative and innovative in the reading comprehension classrooms.

Correspondingly, inappropriate and unappealing materials used in the reading comprehension classrooms will affect the ability of students in comprehending a text because the teaching materials will influence the teacher's instruction of the lesson (Ong et al. ,2012) since reading comprehension is also affected by the quality of the

reading materials ((Lenz, n.d.). This has been underlined by a study conducted by Ibrahim & Mohamed Nor (2011) among teachers teaching Form 1, Form 2, Form 4 and year 5 which revealed that 67.2 % of the teachers in a study conducted in Perak and Terengganu, admitted that they just follow the text book to teach reading and ask comprehension questions at the end of the lesson on what is read. In language teaching, materials used are vital and with the advancement of technology, reading materials too become diversified with characteristics such as vitality, interactivity and so forth (Zhang, 2017). Apart from that, materials in digital format are gaining significance among the younger generation of Malaysia and change the types of materials used for reading (Shahriza, Karim, & Hasan, 2007). Therefore selection of reading materials by the teachers which is a pre-instructional action is one of the most critical one (Harison, 2008). Hence, there is also a lack in the literature on the effect of different types and new types of materials on language acquisition and development (Tomlinson, 2012) which needs to be addressed.

Due to the factors mentioned, teachers need to transform the way they present the reading materials to their students in the English classrooms in order to enhance and address students' problems in reading comprehension and increase students' interests in reading. It is very important to develop and adapt materials from various sources including the utilization of technology by the teachers (Harison, 2008) since teachers at present are facing a digital or technology immersed generation known as the Y generation. Current literature has also revealed that technologies such as internet and online learning are becoming popular among learners (Genc, 2011) and are prevalent in daily lives of this generation known also as digital natives (Wang, Hsu,

Campbell, Coster, & Longhurst, 2014).

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The urge for integration of technology in the school setting emerged from the claim that the current generation is more technology immersed (Wang et al., 2014). The level of ICT utilization among the school teachers in Malaysia are found to be quite low (Rosnaini & Mohd Arif, 2010) and specifically only 11.4% of the Malaysian English teachers in a study by Melor (2007) indicated that they are incorporating technology in the teaching materials and language learning. However, focusing on reading comprehension, only 15% of them revealed of using ICT for this skill despite 91% of the teachers admitting that using ICT in language teaching enhances students<sup>4</sup> understanding in English. The same study also indicated that 78% of them lack of ICT training and this has resulted in the teachers not incorporating technology in teaching English Language.

With reference to the above scenario, it is essential for educators to attend to the students problems in reading comprehension by utilizing reading materials that could satisfy the students who are ICT prone and versatile generation. Moreover, teachers certainly need to incorporate ICT in the materials used in the classroom because this generation gets current information through the web, not through the text book (Reilly, 2012). Materials found in the internet are dynamic tools that support and contribute to exciting lessons in the classroom (Noor Azliza Zainal Abidin, 2011). A number of studies have also demonstrated that most readers prefer reading digitally compared to traditionally printed books (Milone, 2011). Teachers who merely use textbook in the classroom are perceived as obsolete because the most prominent characteristics of this generation referred as the digital natives is technology oriented (Wang et al., (2014). Moreover the textbooks will decline in importance (Jayasundara, 2014) and replaced by technology driven materials. Accommodating to the needs of the digital native students could be accomplished by incorporating ICT materials as a form of alternative pedagogy in the reading lessons such as the use of webcomics. It is because webcomics integrates technology in its design and the usage of visual and text in its layout aid comprehension of the text.

In sum, the use of ICT provides variability to materials to fulfil the needs of the students which has influence in their comprehension of materials in English reading lessons. Apart from that, the use of sequential art in education has increased tremendously in the past ten to fifteen years (Syma & Weiner, 2013) which provides a good platform as to why webcomics should be utilized in this study.

Conclusively, reading comprehension is the most prevalent problem faced by the students when reading a text. Students could be assisted in comprehending a text through the use of ICT and sequential art. Teachers need to adhere to the desire of the digital natives in using ICT to read and obtain knowledge by incorporating ICT in their reading lessons.

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#### **1.4** Rationale of the study

This study bears significance and importance in terms of enhancing students' reading comprehension skills in order to enable the students to understand what is read. By understanding what is read, students could obtain information on the most advanced technology, ICT knowledge and other important reading comprehension materials.

The ability of the teachers to explore the various pedagogies and materials could assist students in comprehending a text better, and serve as a tool in comprehension of more difficult materials in the future to obtain knowledge and information, for the progress of the country.

Therefore, the first rationale of this study is to boost comprehension of English reading materials among the students through the utilization of reading materials that are appealing to the current students who grew in the era of cell phones, digital camera, digital technologies and fast spreading technology of information spreading platform. The students spend most of their time in front of the internet even to read. It has been stressed by Serafini (2011) that at present adolescents interact very highly with texts containing elaborated visual images apart from websites, expository texts, picture books and graphic novels. To read these materials, students must be able to process the written text, visual images and other design elements simultaneously in order to construct meaning (Serafini 2011). The researcher finds that selecting correct and appropriate materials to be used in the reading classes plays a crucial part in the students' understanding of a text and there is a need to help educators realize this through this research. Among the interesting reading materials which can be utilized are webcomics found in the internet. It is a kind of comic containing text and pictures. The characteristics of words and pictures help students to understand better and enjoy reading (Sabbah et al., 2013). Many studies, have proven that there is a very significant relationship between words and pictures that enhances the extraction of meaning for comprehension because illustrations provide elaboration to a text (Maldonado Editor & Yuan, 2011). The average and below average group of English proficiency shall find illustrations or the picture clues to be very assisting and

facilitating in depicting meaning of the difficult words found in the text (Kirsh, 2002). Text containing illustrations is easier to process compared to a text read without illustrations since illustrations provide visual images of information and vocabulary found in the text and this contributes to comprehension (Gyselinck, Jamet, & Dubois, 2008). Unknown vocabulary and complicated sentence structures (Attaprechakul, 2013) are among the elements which hinder students \_comprehension.

The second rationale for this study to be administered is to utilize the interest in reading comics to enhance comprehension of reading materials. Subsequently it was found that 1.6 % of readers in Malaysia love to read comics (The Star Online, 2009) and comics is perceived to be able to inculcate reading culture among children (-Using comics to inculcate reading culture among children," 2011). This may be due to the fact that comic is closer to the children's heart and is considered to be easily read because of the simpler language used with illustrations. In a study using comics conducted by Sones in 1944 as quoted in Hammond (2009) and cited in Sabbah et al. (2013), Sones used comics and texts to see the effectiveness for information retention and found that comics were more effective in retaining information for average and low ability groups of sixth to ninth grade students but bear no significant difference among the high ability groups.

To transform the pedagogy to be in relevance to the 21st century, teachers need to be creative and technologies must be incorporated to support pedagogy transformation (Luna, 2015). In relation to this, the third rationale of this study is to offer the English Language teachers with a material different from the usual practice by using comics published in the web which is the webcomics to enhance students' understanding when reading a text. Besides that, this study is also to deliver the rationale of assisting teachers' aims in fulfilling the needs of students in the classroom who possess eight different intelligences as stated by Gardner in 1983 through his book Frames of Mind.

Apparently in teaching, teachers need to tailor their materials and activities to suit different intelligence which students may possess besides the normally focused logical-mathematical and verbal-linguistic intelligences (Sayed Abdallah, 2008). So, the use of webcomics is seen as a way to introduce and provide students with a variety of materials to arouse their interests and comprehension of a material read.

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#### **1.5 Objectives of the study**

- 1. To investigate if webcomics has an effect on students' reading comprehension.
- 2. To analyse how the features of webcomics affect students reading comprehension.
- 3. To determine if the themes in the webcomics have an effect on the students' reading comprehension.

#### 1.6 Research questions

1. What is the effect of webcomics on students' reading comprehension?

1a) Is there any significant difference in the scores of the comprehension questions between the control and the experimental group in the pre-test?

1b) Is there any significant difference in the scores of the comprehension questions between the pre-test and the post-test of the experimental group?

1c) Is there any significant difference in the scores of the comprehension questions between the pre-test and the post-test of the control group?

1d) Is there any significant difference in the scores of the comprehension questions between the control and experimental group in the post-test?

How do the features of the webcomics affect students' reading comprehension? 2.

> 2a) Is there any significant difference in the scores of literal questions in the experimental group between the pre-test and the post- test?

> 2b) Is there any significant difference in the scores of reorganization questions in the experimental group between the pre-test and the post-test?

> 2c) Is there any significant difference in the scores of inference questions in the experimental group between the pre-test and the post-test?

> 2d) Is there any significant difference in the scores of prediction questions in the experimental group between the pre-test and the post-test? Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah

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3. How do the themes of the webcomics affect the students' reading comprehension?

3a) Is there any significant difference in the comprehension questions scores in the pre-test for the theme science and technology and the theme people and health for experimental group.

3b) Is there any significant difference in the comprehension questions scores in the post-test for the theme science and technology and the theme people and health for the experimental group?

#### 1.7 Hypotheses

The null hypotheses for this research are as follows. Ho<sub>1</sub>,Ho<sub>2</sub>,Ho<sub>3</sub> and Ho<sub>4</sub> are generated from research question 1.

Ho<sub>1</sub>: There is no significant difference in the scores of the comprehension questions between the control and the experimental group in the pre-test.

Ho<sub>2</sub>: There is no significant difference in the scores of the comprehension questions between the pre-test and the post-test of the experimental group.

Ho<sub>3</sub>: There is no significant difference in the scores of the comprehension questions between the pre-test and the post-test of the control group.

Ho<sub>4</sub>: There is no significant difference in the scores of the comprehension questions between the control and experimental group in the post-test.

Ho<sub>5:</sub> There is no significant difference in the scores of literal questions in the experimental group between the pre-test and the post- test.

Ho<sub>6</sub>: There is no significant difference in the scores of reorganization questions in the experimental group between the pre-test and the post- test.

Ho<sub>7</sub>: There is no significant difference in the scores of inference questions in the experimental group between the pre-test and the post-test

 $Ho_8$ : There is no significant difference in the scores of prediction questions in the experimental group between the pre-test and the post- test ptbupsi

 $Ho_9$  and  $Ho_{10}$ , are generated from research question 3.

Ho<sub>9</sub>: There is no significant difference in the comprehension questions scores for the theme science and technology of the experimental group in the pre-test and the post-test.

Ho<sub>10</sub>: There is no significant difference in the comprehension questions scores for the theme health and people of the experimental group in the pre-test and post-test.

# Significance of the study

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This section of the study discusses the importance of utilizing webcomics as an alternative material to be used in the English reading lessons. This study shall assist the students, teachers, curriculum developers and teacher educators. Focusing on the students, the study contributes to the types of materials that can be used to facilitate students' comprehension which is through the text that is presented in the form of illustrations and text. The picture clues presented add to the elaboration of a context or a word in the text and provide more information to the reader.

The illustrations shall increase the understanding of the text read and students do not need to rely on the text alone to comprehend a text. It will also increase students' interest towards reading because reading something that is perceived of 4506832 postake opsiled unit for puttake a reader from continuing reading a text. Illustrations provided in the text will also capture the interests of the students because the illustrations always trigger the curiosity of a reader to figure out what they mean. These kind of texts would add to the types of reading materials to be provided to the students to enhance their reading comprehension.

As for teachers, this study shares ideas on materials that can be used by the teachers to teach English specifically comprehension by using comics in the form of webcomics. It will also utilize the latest technologies that play a prominent role in teenagers' lives since they spend a lot of time in front of the internet including when reading comics. Using webcomics in the second language learning can also add to the collection of teaching materials to be used by teachers to inculcate interest in reading 05-4506832 Or pustaka.upsi.edu.my Perputakaan Tuanku Bainun PerstakaTBainun Perpustakaan Tuanku Bainun PerstakaaTBainun PerstakaaTBainun Perpustakaan Tuanku Bainun PerstakaaTBainun PerstakaaAbautaataa PerstakaaAbautaaataa PerstakaaTBainun Per

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Curriculum developers can benefit through the idea of including webcomics in the curriculum to ensure a rich curriculum to English Language learners which include materials that are technology integrated.

With the rapid development of technology teacher educators too need to be always vigilant especially in the respective fields of their expertise. This is because teacher educators play an important role in moulding future teachers to be competent English Language teachers who can function effectively. Teacher educators need to guide novice teachers to employ effective and alternative materials to make reading comprehension lessons more meaningful.

#### **1.9 Operational definition of terms**

The following terms perceive and describe how they are employed throughout this study

#### **Reading comprehension**

There are many definitions to explain what reading comprehension means. It simply means a reader understands or could establish the meaning of what is read in a text as how it should be understood in the respective context of the reading materials. Reading comprehension has been defined as whether the subjects understood the content information of the articles provided, by Chen (2008) as cited in Wern (2010). Others have defined it as an \_ability to think about what one is reading 'Cunningham and Allington (2003) as cited in Fitzgerald (2010). Therefore in this research, reading comprehension is defined as understanding of a text read and being able to grasp the gist and meaning of the reading material distributed by answering the comprehension questions on literal comprehension, reorganization, inference and prediction posed to the respondents in written form. Reading comprehension here also specifically refers to the reading and understanding of the webcomics by the experimental group and reading of the same content as a reading passage on the webpage created.

#### Webcomics

Webcomics are described as comic books which are published intentionally to be viewed on the internet (Vassilikopoulou, Retalis, Nezi, and Boloudakis, 2011). However, the term webcomics used in this research is confined to webcomics constructed from six reading passages selected from the Form 2 text books and published on the web using internet. The webcomics referred to here are the six webcomics constructed by the researcher to be used in the intervention.

There are two themes found in the webcomics. These themes are the themes used in comprehension passages in the Form Two text books. The themes are also the same themes used in constructing the webcomics utilized by the experimental group and the text passages used by the control group. The first theme is science and technology and the second is people and health.

#### **Features of webcomics**

There are many features of webcomics found. However the features focused in this study are accumulated into six constructs which are conceptual structure, pustaka upsi edu my provide a conceptual structure, pustaka and provide a conceptual structure, pro navigational structure, event structure, narrative structure, format, and mode. The features stated here refer to the features used in designing the webcomics for intervention and the constructs in the questionnaires distributed to the experimental group after the intervention. The stated features are described based on the definition by Cohn (2013a), Cohn (2011) and Guigar, Kellett, Kurtz, & Straub (2008).

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 includes other features of webcomics such as the lettering, 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.

#### **Comprehension Questions**

There are many types of comprehension level attained through questions posed after reading a text. However, in this study it is confined to literal comprehension, reorganization, inference and prediction based on the definition by (Day & Park, 2005).

Literal comprehension refers to the understanding of what the webcomics imply explicitly such as facts, vocabulary and locations. It is identified through the answers provided by the respondents in the experimental group in the study for literal comprehension questions after reading the webcomics.

Reorganization refers to the literal understanding of the webcomics but students need to extract and combine information from various parts of the webcomics to form understanding of the webcomics. It is portrayed through the answers to comprehension questions.

Inference refers to the ability to read the webcomics and link their background knowledge and their own understanding with the literal understanding of the webcomics. It is identified through the ability of the experimental group to answer comprehension questions by making inference. O 05-4506832 Prediction means the utilization of information from the webcomics understood combined with the experimental groups' own knowledge regarding the topic and other related information to answer comprehension questions on what might happen in future.

The comprehension questions are used in the pre-test, the post-test and intervention for the experimental group and the control group. The questions are answered after reading the text passages and the webcomics on the worksheets provided to the respondents after reading the texts.

#### 1.10 **Theoretical Framework**

The theoretical framework presented in Figure 1.1 illustrates the theory and model (2) utilized in this study specifically the Cognitive Theory of Multimedia Learning (Mayer, 2005) and the Integrative Model of Text and Picture Comprehension (Schnotz, 2005).

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Figure 1.1 Theoretical Framework

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The Cognitive Theory of Multimedia Learning (CTML) and the Integrative Model of Text and Picture Comprehension (Schnotz, 2005) are used to explain how the webcomics presented to the students as instructional materials in the teaching of comprehension are cognitively processed by the students. Both theories propose three dual coding channels, limited capacity processing, active processing and multiple memory systems including working memory, sensory registers and long-term memory which are involved in reading the webcomics.

Referring to Figure 1.1 the illustrations and words from the webcomics seen on the computer screen will penetrate the multiple sensory memory through the eyes of the reader and are channelled through the visual channel to the working memory if the webcomics are understood. In the working memory the active cognitive processes regarding the illustrations and words in the webcomics are initiated.

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The box marked as images in the working memory is a mental representation of the illustrations and words. Three kinds of mental representations are constructed when a learner is reading a text (Schnotz, 2005). They are text-surface, proportional and mental model which are built when comprehending text and pictures since a reader must build coherent mental constructs. The next cognitive process, the filtering process is indicated by the triangle named visual pictorial filter. This process would take place when the box indicating images is full of illustrations. The visual pictorial filter selects pictorial information, organizes them as visual representation, builds structural relations and forwards it through the pictorial channel. Essential processing which refers to the basic cognitive processing required and generative processing or deep cognitive processing required to make sense of the webcomics read occur here. This leads to the construction of mental model which is the pictorial model. The pictorial model is used to read the new information in the webcomics and to encode it. The cognitive process of connecting the new information from the pictorial model with knowledge possessed by the reader is indicated by the arrow, the circle and the word integrating. This involves the use of relevant prior knowledge to relate and build connections with the new knowledge obtained from the webcomics. The arrows from images to sounds indicate that readers could create sounds responding to the visuals or words seen.

In Figure 1.1, the words from the webcomics in reading aloud will penetrate the sensory memory through the ears of the reader and is channelled through the auditive channel to the working memory. The words are collected and represented by the box marked as sounds. The sounds in the working memory is selected, organized and changed to representation based on the word meaning by the verbal filter represented by the triangles in Figure 1.1 and prompts the formation of verbal mental model by delivering the selected sounds through the verbal channel. It will then be connected to prior knowledge and result in integrated learning outcome which can be identified by the circle in the working memory. The arrow from sounds to images indicates that images could be constructed from the sounds. Prior knowledge about the graphic pattern of written words, possible syntax structure and sound pattern of written words are needed for the mental text-surface representation in a text comprehension The process of \_integrating' as shown in Figure 1.1 signifies the use of prior knowledge by the learner and connecting of pictures to words in the webcomics by the learner.

In relation to the webcomics utilized in this study, the theoretical framework explains the theoretical aspects of the utilization of visual pictures and visually seen words processed cognitively in order to produce understanding of what is read specifically the webcomics in this study.

Similar processes as explained in the processing of instructional material in the CTML theory and the Integrated Model of Text and Picture Comprehension previously are experienced by the learners when using webcomics as an instructional material in this study.





This chapter presents the background of the study, the statement of the problem, the rationale, objectives, research questions and the theoretical framework as being the main structure of this chapter. The next chapter discusses the theoretical dimensions and illustrates the previous related studies.



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