Indigenous Student’s Perception of Multimedia Learning as an Approach for Enhancing Reading Comprehension Skills

Mohamad Subaidi bin Abdul Samat¹, Azlina binti Abdul Aziz²*

¹Sekolah Kebangsaan Punan, 86000 Kluang, Johor, Malaysia, E-mail: subaidisamat@gmail.com
²Centre of Innovation in Teaching & Learning, Faculty of Education, Universiti Kebangsaan Malaysia, E-mail: azlina1@ukm.edu.my

*Corresponding Author: Azlina binti Abdul Aziz, Centre of Innovation in Teaching & Learning, Faculty of Education, Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia, E-mail: azlina1@ukm.edu.my

Abstract

Reading comprehension is one of the language skills needed in processing the language, especially in comprehending information. Despite its importance, many of the students failed to perform comprehension skills well. Some of the reason was their lack of language proficiency and divergent approaches used by the teachers. Technology has been in favor of teachers and students in teaching practices such as multimedia learning because it has proven to help them in learning the language. Thus, this study aimed to find out indigenous students’ perception of multimedia learning as an approach to enhancing their reading comprehension skills. Besides, the alluring features of multimedia learning have ignited the need to explore its potential in helping indigenous students learn comprehension skills better. This study relied heavily on the questionnaire to obtain comprehensive data from the students’ perspective. The surveys employed four sections that covered attention, motivation, relevance, and satisfaction. The findings showed the students agreed that multimedia learning is an excellent tool in enhancing their reading comprehension skills. Despite that, the students disagree with the use of audio in multimedia learning.

Keywords: Multimedia Learning; Reading Comprehension; ESL Learner; Technology; Perspective

INTRODUCTION

The teacher plays an important role as a facilitator and guider for students to achieve the required skills in reading because the process of teaching contributes to the students’ success in acquiring basic skills in reading (Anderson, Evertson, & Brophy, 1979). Most of the teachers equipped with good background knowledge on language teaching but what is it mean by the teaching of reading and what are the elements or skills that need to be taught? Normally, a teacher will describe reading as a process of comprehending information, understanding or getting meaning but reading is more than that. Reading is a process of integrating prior knowledge, information, and additional support from surrounding to build, create, decode and construct meaning (Day, 2018). Thus, effective teaching of reading required the teacher to aware of the diversity of the reader, the nature of reading and which method and approach are suitable for them (Kameenui & Carnine, 1998).
To develop a good reading skill among learners, a suitable approach is needed. Thus, multimedia learning is one of those good approaches to suit the learners’ need for learning the language. The study by Zhang Zhen (2016), stated multimedia learning offered many benefits in language learning such as simplify abstract information into visual form, save time and scaffold students in comprehend new information. Besides that, the interesting features of multimedia learning have been proven to encourage students to learn a language effectively as the students participate actively in language learning and feel motivated to learn using multimedia learning (Baharudin, Zulkiflei, & Yunus, 2019; Dedo & Hashim, 2019; Taisin, Hamzah, Omar, & Kiting, 2019).

Indigenous student’s education is a top priority in Malaysia as stated in Malaysia Education Blueprint (2016) but despite that, not much emphasis given to the development of their education. The study of education development of indigenous students in Malaysia had been done by some researchers and they found out the culture and environment were the core factor in the language learning process (Hanafi, Ahmad, & Ali, 2017; Wahab, Mustapha, & Talib, 2017). Also, the learning must incorporate nature, creativity and straightforward teaching materials to suit their learning needs(Harun, Rahman, Mansor, & Muhamad, 2020). Thus, it interesting to explore their perception of the use of multimedia learning and how its effect on their learning process especially in reading comprehension. Lastly, the need for this study is important to the field of education in Malaysia especially for the development of Indigenous students’ education. The findings from this study will help teachers who are teaching in indigenous and rural schools to design a comprehensive guide in preparing multimedia learning for language learning.

LITERATURE REVIEW

IMPORTANCE OF READING

Reading is one of the language skills acquired by a human informal education and reading plays a vital role in many aspects of life such as literacy, reading fluency, reading comprehension and discover new knowledge. Reading owns a deep meaning in human life as we interact with the world and ourselves, we connect through the reading process (Freire, 1983). The development and growth of the individual are based on their experience in reading literary texts as it is seen as a part of integrating with the knowledge offered by reading.

Meanwhile, in the book by Commeyras, Bisplinghoff & Olson (2003) discussed the importance and influence of reading in the classroom from a teacher’s perspective. One of the notable issues raised by the teachers in the formation of new words and the acquisition of vocabulary through reading. Most of the students in their classroom able to guess new words or vocabulary while reading a book. Also, the students also able to find suitable reading strategies that they found helpful. Reading fluency is the goal of reading which neglected by many as they focused on the early process of reading and higher cognitive processing such as comprehension, inferencing, and prediction (Samuels, 2006). Reading also supports a human’s high-level cognitive process and the process of developing the skills is not easy as it required ongoing guidance from the teacher in exercising those skills. Thus, to function as a good reader, a variety of skills needed such as analogical skills, deductive reasoning, inferential and critical analysis (Wolf, Barzillai, and Dunne, 2009). All these skills can be fostered through a deep reading approach where the reader sets their time frame and use a complex comprehension process which more time-consuming.

MULTIMEDIA LEARNING AS LANGUAGE LEARNING STRATEGY

Multimedia learning is a theory by Richard Meyer and it encompasses the idea of improving the learning of language by the aid of multimedia. The theory is to be said using a combination of pictures, audio, video, and any graphic materials to create a multimedia reading text(Mayer & Moreno, 1998). Issue of the reading comprehension problem among pupils falls on their failure of using suitable language
learning strategy while learning and in term of reading comprehension, less effective learner relies on prior knowledge and guessing (Bruen, 2017). Meanwhile, the effective learner used an appropriate learning strategy while learning especially for reading comprehension and vocabulary learning (Asgari, 2012). The study also finds the importance of media as a strategy to learn vocabulary effectively and the pupils able to apply the knowledge to learn English better. Besides that, the study by (Rahimi & Allahyari, 2019; Wang, Mendori, and Hoel, 2019) suggested the use of multimedia elements in language learning especially in vocabulary can be helpful as it helps the visual learner to learn better and cater to their learning needs. In a nutshell, an effective learning strategy can be foster through the use of multimedia learning in education and provide pupils with limitless chances to make learning meaningful and effective (Thamarana, 2015).

PAST STUDY ON MULTIMEDIA LEARNING

Multimedia learning has long been used in teaching various language skills, especially in teaching reading comprehension. The main factors of the selection were due to the factors that multimedia learning offers many exciting features such as creating a mental image, assisting visualization process and lessen cognitive load which helps students to understand abstract and concrete information (Anmarkrud, Andresen, & Bråten, 2019; Lin, Lee, Wang, & Lin, 2016; Mutlu-Bayraktar, Cosgun, & Altan, 2019). In the study by Nasrifan and Saidon (2017) stated multimedia learning helped the students to learn independently by relying on the stimulus presented. The students have their control in their learning intake and in return, they engaged seriously in the lesson. The study of Malaysia students’ perception of multimedia learning has been conducted by Neo, Neo, and Yap (2008) and they found out the students perceived multimedia learning as enjoyable and motivating. In another study on students’ perception, the emotional pressure while processing information has been reduced significantly with the implementation of multimedia learning (Schneider, Nebel, & Rey, 2016). In the overall study, students have a positive perception of multimedia learning and they performed better in language learning.

METHODOLOGY

The study employed a survey design to explore students’ perception of multimedia learning as a tool for helping learning reading comprehension. An indigenous primary school located in Kluang; Malaysia has been chosen to execute the study. The participants of this research are limited to twenty students and most of them were intermediate in language proficiency. Multimedia learning has been introduced to the pupils on regular basis to ensure they are familiar with this approach and can give honest responses through the questionnaires.

The research instrument employed in this study was the questionnaire which covered four sections namely attractiveness, relevance, confidence and satisfaction. Each questionnaire holds several questions with four responses, ranging from strongly disagree, disagree, agree and strongly agree. The questionnaires were given in bilingual to help the students understand the questions. The teacher read the questions and explained to elicit a response from them. The students can only pick one response per item as instructed. Finally, a quantitative analysis was used to analyze the students’ perception of multimedia learning as an approach to enhancing reading comprehension skills.

RESULTS AND FINDINGS

Table 1. Student Perspective on Multimedia Learning as Attractive Tool in learning Reading Comprehension

<table>
<thead>
<tr>
<th>No</th>
<th>Questions</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
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<tbody>
<tr>
<td>1</td>
<td>There was something interesting at the beginning of the multimedia presentation that got my attention.</td>
<td>3</td>
<td>4</td>
<td>3.60</td>
</tr>
</tbody>
</table>
2. The multimedia learning was eye-catching (example: attractive design/layout) 3 4 3.85
3. The different use of media in teaching comprehension helped me to hold my attention. 2 4 3.45
4. The video presented helped to keep my interest 3 4 3.45
5. The pictures presented helped to keep my attention on the lesson 2 4 3.35
6. The audio presented helped to keep my attention on the lesson 1 4 2.55

Based on table 1 in term of attention, students have a different perspective as most of the time they were agreed that multimedia learning able to keep their attention span. Based on the finding (Table 4.) reveal that (2.5%) students “strongly disagree”, (10%) students “disagree”, (35%) students “agree” and lastly (52.5%) students “strongly agree” that multimedia learning is attractive. Besides that, all students agreed that multimedia learning is indeed fun and eye-catching. This proof that the injection of multimedia in learning can hold the student’s attention in comprehending a difficult text. In addition to that, students agreed the different use media help them to focus longer as it ease the process of comprehension by providing visual aids as found in the study by L. Wang & Li (2019) and Zhou & Yadav (2017).

According to question no 4, all students agreed that the video keeps their attention in learning the text. As expected, video combined many elements of media such as audio, animation, picture, and text able to attract students’ attention. An interesting video that uses colorful color, a loud and stable pace of audio, interesting characters such as cartoons and clear subtitles were factors that support this finding. Besides that, the movement in video assisting the process of visualizing the text and the concept of the cartoon is taken to help the students feel familiar and able to link it with their prior knowledge. In the sixth question, half of the students disagree that audio helps to keep their attention span on the lesson while the other half agreed with the statement. This once again shown how individual differences play a vital role in designing your lesson. Some of the factors that lead to this finding might be from the length of the audio, unclear narration and difficult word choices. Some of the students might feel bored if they could not catch up with the narration of the text and end up hindering the processes of understanding the lesson.

<table>
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<th>Mean</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>When I first heard about multimedia learning, I thought it would be easy for me.</td>
<td>2</td>
<td>4</td>
<td>3.25</td>
</tr>
<tr>
<td>2</td>
<td>The content of multimedia learning is relevant to my interests.</td>
<td>2</td>
<td>4</td>
<td>3.40</td>
</tr>
<tr>
<td>3</td>
<td>The explanations or examples presented are relevant to the learning content</td>
<td>3</td>
<td>4</td>
<td>3.70</td>
</tr>
<tr>
<td>4</td>
<td>The content presented through multimedia learning will be useful to me in learning comprehension.</td>
<td>3</td>
<td>4</td>
<td>3.80</td>
</tr>
<tr>
<td>5</td>
<td>I could relate the content of this multimedia learning to things I have seen, done, or thought with the lesson.</td>
<td>3</td>
<td>4</td>
<td>3.45</td>
</tr>
<tr>
<td>6</td>
<td>The use of audio is relevance in learning the text.</td>
<td>1</td>
<td>4</td>
<td>2.15</td>
</tr>
<tr>
<td>7</td>
<td>The use of pictures is relevant in learning the text.</td>
<td>3</td>
<td>4</td>
<td>3.45</td>
</tr>
<tr>
<td>8</td>
<td>The use of video is relevance in learning the text.</td>
<td>2</td>
<td>4</td>
<td>3.25</td>
</tr>
</tbody>
</table>

Another perspective that being asked was the relevancy of multimedia learning in teaching reading comprehension. Based on the finding (Table 2) reveal that (2.5%) students “strongly disagree”, (8.13%) students “disagree”, (41.25%) students “agree” and lastly (48.12%) students “strongly agree” that multimedia learning is relevance with their need and lesson. Based on question no 1, the majority of the students agreed with a mean (3.25) that they have a good impression on multimedia learning and thought it will be easy for them. Furthermore, based on question no 2 showed almost every student strongly agreed that the selection of content presented using multimedia learning is relevant and useful to them.
Besides that, they also agreed the explanation of the text using multimedia is relevant to the topic of the lesson as the students can relate the content to things they have seen, done or thought with the lesson.

Students can relate the materials presented in multimedia learning with the information because of the content feels familiar to them. In this study, the researcher used materials depicted the life cycle of a butterfly by using a picture of a butterfly that known to them rather than unfamiliar images. This statement supported the finding in question no 7 with a mean (3.45) and 8 with a mean (3.25). These findings revealed (55%) students “agree” and (45%) students “strongly agree” the use picture is relevance in learning the text. Meanwhile, finding in question no 8 revealed (40%) students “agree” and (60%) “strongly agree” video is relevant in learning the text. As discussed above, the selection of materials did affect the learning process because improper use of materials can distract.

However, the findings from question No. 6 provide a different perspective than others. This finding shows that almost all students disagree with the fact that audio use is said to be relevant to learning comprehension. based on table 4., it was revealed that (20%) students "strongly disagree", (55%) students "disagree", (15%) students "agree" and (10%) students "strongly agree" with the statement. This can be seen as a reminder to teachers as well as students in selecting appropriate learning materials based on student level and ability.

Table 3. Student' Perspective on Confidence Level

<table>
<thead>
<tr>
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<th>Max</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>After doing the test. I felt confident that I can understand the text from the multimedia learning approach.</td>
<td>1</td>
<td>4</td>
<td>3.10</td>
</tr>
<tr>
<td>2</td>
<td>As I worked on multimedia learning, I feel confident that I could learn the materials.</td>
<td>2</td>
<td>4</td>
<td>3.40</td>
</tr>
<tr>
<td>3</td>
<td>After working with multimedia learning for a while, I felt confident that I would be able to comprehend better with multimedia help such as audio, picture and video.</td>
<td>3</td>
<td>4</td>
<td>3.90</td>
</tr>
<tr>
<td>4</td>
<td>After learning with audio, I felt confident that I would be able to comprehend the text.</td>
<td>1</td>
<td>3</td>
<td>1.65</td>
</tr>
<tr>
<td>5</td>
<td>After learning with the picture, I felt confident that I would be able to comprehend the text.</td>
<td>2</td>
<td>4</td>
<td>3.40</td>
</tr>
<tr>
<td>6</td>
<td>After learning with video, I felt confident that I would be able to comprehend the text.</td>
<td>3</td>
<td>4</td>
<td>3.65</td>
</tr>
</tbody>
</table>

Based on the finding (Table 3) revealed that (8.33%) students “strongly disagree”, (11.67%) students “disagree”, (33.33%) students “agree” and lastly (46.67%) students “strongly agree” that multimedia learning is useful to boost their confidence in learning reading comprehension by incorporating the element of multimedia learning in the process of deciphering the information and make sense of the idea presented in the lesson.

The findings in the questionnaires revealed that the students feel the confidence to understand and comprehend the text while experiencing multimedia learning, as well as after learning comprehension using multimedia learning. It can be seen from data collected in the first question with a mean (3.10), the second question with a mean (3.40) and third question with a mean (3.90). All three questions show 90% of students agree that after learning with multimedia learning, they feel confident to comprehend the information presented in multimedia learning.

Besides that, the students also believed that after learning with pictures and video, they felt confident with their abilities in comprehending the information using multimedia learning. Students' perspective on this statement is shown in question no 5 where (50%) students “agree” and (45%) students “strongly agree” that after learning with the picture, they feel confident with their comprehension abilities. In question no 6 as well, (35%) students “agree” and (65%) students “strongly agree” that their confidence level risen after learning with video.
Table 4. Student’ Perspective on Learning Satisfaction and Enjoyment

<table>
<thead>
<tr>
<th>No</th>
<th>Questions</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel satisfied to learn to comprehend the text by using audio.</td>
<td>1</td>
<td>3</td>
<td>1.75</td>
</tr>
<tr>
<td>2</td>
<td>I feel satisfied to learn to comprehend the text by using pictures.</td>
<td>2</td>
<td>4</td>
<td>3.30</td>
</tr>
<tr>
<td>3</td>
<td>I feel satisfied to learn to comprehend the text by using video.</td>
<td>3</td>
<td>4</td>
<td>3.70</td>
</tr>
<tr>
<td>4</td>
<td>I enjoyed the multimedia learning approach.</td>
<td>3</td>
<td>4</td>
<td>3.60</td>
</tr>
<tr>
<td>5</td>
<td>I enjoyed the use of the bright and colorful picture.</td>
<td>3</td>
<td>4</td>
<td>3.75</td>
</tr>
<tr>
<td>6</td>
<td>I enjoyed listening to the audio presented while learning the text.</td>
<td>1</td>
<td>4</td>
<td>2.90</td>
</tr>
<tr>
<td>7</td>
<td>I enjoyed watching the video presented while learning the text.</td>
<td>3</td>
<td>4</td>
<td>3.40</td>
</tr>
</tbody>
</table>

Based on the finding (Table 4) reveal that (5.71%) students “strongly disagree”, (15%) students “disagree”, (32.86%) students “agree” and lastly (46.43%) students “strongly agree” that they feel satisfied after learning reading comprehension using multimedia learning. The finding from the questionnaire indicated that the majority of the students feel satisfied and enjoy their learning while using multimedia learning. It can be proven from the second question as (40%) students “agree” while (45%) “strongly agree” and third question as well as (30%) students “agree” and (70%) “strongly agree” with the incorporation of audio and video makes them feel satisfied in learning reading comprehension. Even though the students enjoyed pictures and multimedia in learning comprehension, it does not share the same result as audio. Based on the first question, (30%) students “strongly disagree”, (65%) students “agree” and (5%) students “agree” integration of audio in multimedia learning satisfied their desire in learning reading comprehension.

Furthermore, all students unanimously stated that the experience of learning multimedia was fun. The students also explained that the fun was present because they were happy to understand the text better. Also, students are pleased with the new learning environment brought about by multimedia learning. They say that learning using video and pictures is fun and easier to understand than using the old method of using textbooks. The findings are supported by the findings in question no four where (40%) of the students “agree” and (60%) students “strongly agreed” that they feel enjoy learning with a multimedia approach. Besides that, in question no 5, (25%) students “agree” and (75%) students “strongly agree” that the use of bright and colorful picture was deemed as enjoyable and effective in learning comprehension. These findings share the same view as question no 7 as (60%) students “agree” and (40%) students “strongly agree” that watching video presented in multimedia learning was enjoyable. Meanwhile, students’ perspective on listening audio while learning comprehension using multimedia was a mixed response. Based on the question no 6, (10%) of the students “strongly agree”, (25%) students “disagree”, (30%) students “agree” and (35%) students “strongly agree” with the statement.

DISCUSSION

Up to the present time, multimedia learning is a popular topic discussed among researchers and many of them focusing on the students’ perception or perspective on multimedia learning. The finding in this study shows students’ perception divided into four themes which cover attention, confidence, relevance, and satisfaction. As a result, students perceive multimedia learning as attractive, interesting, boost their confidence in learning reading comprehension, relevance to the topic learned and meet their learning satisfaction and motivation. These findings were in coherence with the study by Neo et al. (2008) which revealed the students mainly perceived the multimedia learning environment to be pleasant and motivating and were able to aid in demonstrating their comprehension skills. In addition to that, Ismail & Basri (2012) in their finding exposed that the majority of the students indicated that their attention, confidence, relevance and satisfaction level increase after learning using Interactive-Multimedia Reading Comprehension Package (IMRCP). With attention to the finding in this study and Ismail & Basri (2012), it is important to realize motivation is indeed an important factor in ensuring the learners’ learning success and the effectiveness of the approach depend on the student’s perspective and evaluation.
Picture and video were seen as the most favorite elements of multimedia learning among students. In all four themes, the students either choose “strongly agree” or “agree” with the use of video and picture in boosting their attention, confidence, relevance, and motivation. Without a doubt, everyone loves information integrated with pictures and video which usually interesting and easy to understand than text with a lengthy explanation. In the study by Mayer & Moreno (2002) indicated that animation is useful in explaining abstract information such as mathematical and scientific concept but it can only be useful if the animation used to align with the cognitive theory of multimedia.

Throughout the questionnaire, the students were unanimous “strongly disagree” that audio is neither attractive, relevant, boost their confidence nor it heightens their motivation level. These findings were indeed has been discussed in the five principles of multimedia design by Mayer & Johnson (2008) in their article which explained one of the principles which are modality principle. In modality principle, one has to integrate more than one element when designing multimedia materials such as a combination of picture and subtitles or animation and audio. Thus, explain the students’ negative perspective on using audio in multimedia learning. The students could not relate it with their existing knowledge or even linking it back with the information presented.

CONCLUSION AND IMPLICATION

CONCLUSION

In a nutshell, effective multimedia learning links the bridge between students’ prior knowledge and the new information of the text. Thus, multimedia learning has its own role in assisting students to engage with the lesson, help students to perceive information and illustrate the relevance of new information through mental image development. Multimedia learning also plays a vital role in scaffolding indigenous students in learning reading comprehension. Most of the problems in reading comprehension lie in deciphering unfamiliar words, understanding abstract idea and manipulating information acquired to answer comprehension questions. All these problems can be solved with the help of multimedia learning as it let the students visualize the information presented in the text which useful for the weak students.

Besides that, the principle of multimedia designs was important while designing multimedia materials. Designing materials without guidelines will distract the students from comprehending the text. Multimedia learning was effective in enhancing indigenous student’s comprehension skills in reading comprehension as it helps them visualize the information easily without relying much on their existing knowledge.

IMPLICATION

This study can act as a guideline for the teacher to plan a lesson with multimedia learning as an approach to teaching reading comprehension. Multimedia learning is not all about fun and interesting, it must be able to pique student’s interest and recall their stored information to perform the comprehension process. To do so, the teacher must have a learning objective that suited multimedia learning and the students’ cognitive level. Besides, the environment of the class while conducting lessons also a success criterion in aiding the comprehension process. The teacher should allow the students to explore different ways of comprehension such as bottom-up, top-down or interactive processes by providing a suitable multimedia presentation.

Despite heavily discussed on multimedia learning as an approach or method to teach reading comprehension, the written materials or textbook also can be modified to complement this approach. In the first place, the problem with reading comprehension was the lengthy and verbose textbook which seems dull to the students. Even though there are some changes throughout the time but it was not
enough in scaffolding the lesson. Thus, based on the findings of this study, the textbook and reference bookmaker shall try to produce a student-friendly textbook with proper use of pictures and words in the textbook. Along with the textbook, multimedia as a teaching aid can be used to complement the lesson and facilitate students in comprehending the written text.

Reference:


