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Learners’ Perceptions and Attitudes towards the Use of Mind-mapping Technique in Enhancing their Understanding of Short Stories

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Abstract
Learners’ proficiency in ESL includes their ability in comprehending a reading text. Short stories are often found difficult due to linguistic and cultural elements found in the texts. Despite this, Part 2 Diploma students in Universiti Teknologi MARA Perak are required to read a selection of short stories as part of their English class syllabus. In this study, a mind mapping technique is used to assist learners to understand the short stories well. This technique is chosen as its concept involves the process of associating ideas and information through relationship ties. 60 students from 2 English classes were introduced to this mind mapping technique which they had to apply when discussing the plot of the story and the traits of the main character to ascertain their understanding of the short story. Although the students managed to complete the task well, it was not known whether the mind-mapping technique had helped them in enhancing their understanding of the short stories. Therefore, this paper aims to find out their perceptions and attitudes towards the use of mind-maps in comprehending short stories through a survey questionnaire using 5-Likert scale. The data from the survey underwent a statistical analysis using SPSS before discussing the findings. The findings revealed that the respondents of this study had a positive attitude towards the use of mind-map and perceived it as a useful tool in helping them to understand short stories. Thus, the mind-mapping technique should continue to be used in reading class to help learners to enhance their comprehension of short stories.

Keywords: ESL, Learners’ Perception, Mind- Mapping Technique, Reading Skills, Short Story.

Introduction
Reading English is a crucial component of language learning because it aids in the development of other competencies such as vocabulary, grammar, and writing. Reading also allows language learners to explore topics and ideas that they are interested in.
Next, having good reading skills will enable students to understand better what they have read, thus helping them use the knowledge and ideas for other purposes in learning such as writing, presenting, reporting and other essential learning abilities. Besides, reading also serves as the window to the outside world. The more reading is done; the more knowledge gained. Kaya (2015) in his research, finds that students have improved their reading comprehension when they are taught reading skills first to provide them with specific techniques to reach optimum grasp of ideas. Instructors do not focus only on academic reading but also vary the materials and techniques using pleasure reading.

**Improving reading skills through reading for pleasure**

Pleasure reading refers to the act of reading for enjoyment in one’s free time outside classroom hours. It also refers to reading that we do out of willingness or due to someone else’s request and get satisfaction from it because we enjoy it (Clark and Rumbold, 2006). Does reading for pleasure develop literacy among students? According to Clark and Rumbold (2006), there are numerous examples that demonstrate the relevance of pleasure reading for both educational and personal progress. Twist (2007) also found strong relevance between the amount of pleasure reading and their achievement in reading class.

In Malaysia, from primary to secondary level, students have been exposed to reading for pleasure in their schools such as short stories, novels, poetry, websites, and other reading materials outside the classroom. Thus, it is not considered something new when they deal with it at the tertiary level.

**Using Short Stories to Improve Reading Skills**

Teaching short stories will be more meaningful when the teachers themselves are well versed in the stories, the techniques used, the literary terms involved, and other related ideas and opinions about the short stories that they choose. In other words, they should master the content and choose the correct short stories to suit the level of the target students. Apart from that, the teacher or instructor should be ready before teaching and have in mind the possible reactions of the students when teaching them. This preparation will enable them to tackle any problem in class to reach the objectives of the lesson. Jennifer and Ponniah (2015); Wilhelm and Smith (2016) claim that when students enjoy reading, their comprehension skills (vocabulary, grammar, spelling, and so on) increase. When they encounter the same words during pleasure reading, they have a better probability of accurately defining and interpreting the term, resulting in better text comprehension.

**Using a Mind-mapping Technique to Understand Short Stories**

The mind mapping technique was introduced by Tony Buzan to help students make notes using keywords and images. A mind map is also considered as a structured strategy of taking notes that illustrates the connection of ideas when students write them on paper (Vimalah and Melor, 2019). Using mind maps in teaching short stories may help students comprehend the story and recall the storyline. According to them, the educators may be creative in adapting the mind map to suit the students’ level of proficiency by filling in ideas in diagrams, charts, or tables, a mind map can be utilised in class for brainstorming sessions. Furthermore, it encourages students to reflect on and share what they have learned from the stories. This activity engages the students to discuss, summarise and be creative to come out with selected keywords that represent different ideas of the stories.
In this study, the researcher intends to find out what students think about and how they feel about utilising the mind-map technique to comprehend short stories.

**Purpose of the Study**

To investigate students’ perceptions and attitudes on using mind-map technique in understanding short stories

**Objectives:**
1. To identify students’ perceptions and attitudes towards mind-mapping technique
2. To ascertain students’ perception and attitudes towards using mind-mapping technique as a tool to enhance their understanding of short stories.

**Research questions:**
1. How do students perceive mind-mapping technique?
2. What are students’ perceptions and attitudes towards using mind-mapping in understanding short stories?

**Literature Review**

The use of short stories in ESL classrooms is proven to be beneficial for students as it reinforces students’ skill, literary, cultural, and higher-order thinking benefits as well as motivation (Erkaya, 2005:2 as cited in Handayani, 2013). Most students in an English major program agreed that the use of short stories as materials in the language skills classes helped them to achieve good mastery of the language skills (Pardede, 2010). In another study, it was reported that students’ comprehension increased with a particular teaching approach where the students were divided into two groups; reader-response and cognitive oriented and it was found that the students participate more when the teacher used the reader-response approach as they noted that it is not as challenging as the cognitive oriented approach (Liang, 2011). Kirkgoz (2012) reported that the incorporation of short stories into English as a Foreign Language (EFL) curriculum for adult Turkish learners had significantly improved the knowledge of grammar and vocabulary among the learners. In addition, the learners also stated that the story-based activities are highly motivating particularly when they involved emotional reactions. A research finding from Handayani (2013); Barzani (2020) reported that the application of reading strategies showed a significant improvement in students’ comprehension; enriched their vocabulary, increased motivation, encouraged critical thinking as well as their increased their interest to work on the language skill. Pathan (2013) observed the Libyan EFL learners’ attitudes towards the use of short stories in the classroom. At first, the students were reported to have a negative perception of short stories due to the usage of inappropriate material and their misconceptions about short stories. However, their perceptions changed eventually, with the incorporation of good short story materials in the reading comprehension lesson and it also foster other related language skills. Further, Arias Rodriguez (2017) observed how short stories were made as a language model for students to foster their understanding of the language, improve grammar knowledge, cohesion, and coherence. The result reported that short stories played a great role in the students’ acquisition of vocabulary and expressions which boost their self-confidence. Furthermore, various activities introduced with regard to
short stories also increased students’ engagement and enjoyment during the learning process.

Dastpak et al (2017) investigated two groups of students; those who did not have short stories integrated into their lesson and those who had short stories integrated into their lesson. The result informed that the group which had short stories integrated into the lesson showed a significant improvement in speaking and writing performance. Moreover, the students were also reported to be fluent in speaking and in terms of writing performance, their achievements were seen to be from the usage of vocabulary. Another study by Kahraman (2020) who also divided students into two groups, similar to Dastpak et al (2017), reported that the lesson which incorporated short stories showed a positive outcome in terms of students’ grammar knowledge and their perceptions of literary texts.

Previous studies which investigated the incorporation of short stories in the classroom have shown positive results. Short stories are proven to improve students’ language skills in terms of grammar, speaking and writing skills.

**Using a Mind-mapping Technique to Aid Reading Comprehension**

Research on schools and higher learning institutions which investigated the usage of mind-mapping in reading comprehension revealed significant findings. Apart from that, mind-mapping was informed to be a good technique for brainstorming ideas; students could group the ideas better. Siriphanich et al (2010) investigated the use of the mind-mapping technique among 35 students and the results indicated significant improvement in their reading ability and the students were also satisfied with their own reading comprehension skills. The use of mind-mapping technique was found to increase students’ engagement in a classroom, and it also trained students’ understanding of facts and details when the teachers reported that the students enjoyed creating the mind map because it was fun, and the students were also able to show their creativity and become more interactive in the classroom (Risqiya, 2013).

Buran and Filyukov (2015) implemented mind-mapping technique in an English course in a higher learning institution and it was reported that 98% of the students would rather use mind maps to understand the information than simply read the whole text. They have also found out that mind maps were very useful in problem-solving, brainstorming ideas, acquiring vocabulary, note taking which in result improved students’ reading comprehension skills. In addition, Malekzadeh and Bayat (2015); Parikh (2016) separated two groups of students into a control group and an experimental group. Their research reported that the experimental group which was taught with the mind mapping strategy showed a better achievement in reading comprehension skills compared to the control group. The students were found to understand implicit information in the text better with the mind-mapping strategy.

An interesting study by Sabbah (2015) separated two groups of students; one group generated a computerized mind map on their own and another group was taught with a mind map generated by the teacher. This study reported that the students’ computerized mind map improved the students’ performance in reading comprehension as they were able to use various shapes and colours to understand the relationship among the ideas, details, and examples of the reading texts. Further, Fiktorius (n.d.) found that mind map might impact students’ abilities in planning and organising their ideas for writing tasks, develop a comprehensive understanding of key concepts, aid creativity, productivity, and memory. A study was conducted on two groups of students which investigated the usage of electronic mind map in English language subject, and it showed a significant difference in results for the
reading test between the group which implemented the electronic mind map and the group which used the traditional way of learning reading comprehension (Saori, 2020). Studies done on the usage of mind mapping technique revealed that it can facilitate students’ learning in reading comprehension. The students were found to have a better understanding of ideas, enhanced creativity, improved performance, and they also noted that it was fun to do the mind map.

**Studies on Perception and Attitudes in ESL Classroom**

Perception shows how individuals perceive or interpret things that are significant, and their interpretation can have an influence on their attitudes towards that matter. In respect of students’ perceptions and attitudes towards mind mapping technique, it was found that most studies in this area focused on writing and reading comprehension. A study done by Hariri (2013) who investigated attitudes of pre-university students towards mind mapping strategy in reading comprehension showed that the majority of the students (83.4%) had positive attitude using the mind maps and they stated that mind maps made the English course enjoyable as they could use pictures to create the mind map and they understood the categories and subcategories of the text. The students also noted that most of them prefer to do the mind maps in groups rather than individually.

Yunus and Chien (2016) conducted a study on Pre-University students’ perceptions of the use of mind mapping strategy in the Malaysian University Entrance Test (MUET) writing section which involved limited users to satisfactory users according to their performance in MUET. The result showed that the majority of the students’ responses with regard to the use of mind map in their writing were positive and they stated that creating the mind map was not difficult, the process was enjoyable, mind map helped them to organize their thoughts and facilitated them in understanding the concepts and ideas which allowed creativity in writing.

Research done by Fadillah (2019) which examined the students’ perception of the use of mind mapping applications in ESL classrooms reported that the use of mind map eased the students to organise ideas in the pre-writing stage, assisted them to develop ideas effectively and eased them to memorize the ideas that they intended to write. On the other hand, this study also highlighted the disadvantages of the mind mapping application such as a lot of time spent creating and organising ideas as well as it requires them to access the computer to use the application.

In addition, Karim and Mustapha (2020) conducted a case study to investigate the usage of digital mind map in stimulating creativity and critical thinking skills among students in writing tasks and the result of the survey indicated positive perceptions of students toward the digital mind map. The digital mind map aided them to brainstorm ideas and improved their writing skills as it helped them to organise ideas without difficulty and write efficiently. In addition, it also stimulated the students’ creativity in the writing course which made them able to be flexible, produce authentic ideas and elaborate the information creatively as well as enhanced their critical thinking skills such as evaluating arguments and drawing conclusions in writing. Basically, the majority of the students agreed that the digital mind map was practical in writing.

Chalak (2021) made a comparison of students’ perceptions of the traditional and digital mind mapping strategies in English writing class where the students had been taught both mind mapping strategies and the data was collected through surveys and interviews. The result revealed that the students had positive perceptions of the usage of mind map in general
particularly when it comes to writing organization (well-structured writing can easily be produced), creativity and memorisation of ideas which eased them during the writing process. Past studies have proven that the majority of students held positive perceptions and attitudes in relation to the use of mind mapping techniques in ESL classrooms. These studies also highlighted the improvement of students’ performance, creativity, and memorisation skill when the mind mapping technique is utilized in the writing and reading comprehension skills.

**Methodology**

This study adopts a quantitative methodological approach where subjects were given a questionnaire that has been adopted and adapted from a previous study.

**Participants**

The participants of this study were 61 female and male students of semester 2 Art and Design diploma students in Universiti Teknologi Mara in Seri Iskandar, Perak. All of them were enrolled in Integrated Language Skills II (ELC151) an integrated English course that focuses on reading. This English course is compulsory for all semester 2 students with the main aim to improve their reading skills. The course ran for 14 weeks with 4 hours of meeting schedule. Since the pandemic Covid 19 was still in place, the course was conducted based on Online Distance Learning (ODL) mode.

**Procedural Method**

In ELC151, students have to read a selection of at least 6 short stories chosen by their class instructor. From 6 short stories, 2 were then selected to be used for assessment which students need to answer 3 questions. Prior to the assessments, students would be guided by their instructor in their discussion of the short stories to understand them. 2 important questions that became the base of the discussion were:

1. What is the plot of the story?
2. What are the personality traits of the main character?

In order to help discuss and answer these questions, a mind-map technique was introduced to the students. The instructor briefed the students on this technique in a 2-hour lecture on the Google meet online platform which also included a quiz at the end of the session to gauge students’ understanding of the concept of mind-map. They were then given a take home task to read the assigned short story and answer the above questions using a Mind-map. This task was to be completed within a week where they had to scan the mind-map and upload it on Google Classroom for the instructor to view. By the end of the week, every student managed to upload their mind maps.

**The Instrument**

Upon completion of the tasks, they were given a survey questionnaire consisting of 12 statements that would reveal their perception and attitudes towards the use of mind-mapping technique. Students need to indicate their agreement on each statement based on a 5-Likert scale.

Out of the 12 statements, statements 1 to 3 are related to the perception of students’ emotions when using the mind map.

3. I felt confident creating mind maps.
4. I felt pleased when told to create mind maps.
5. I was satisfied with the technique of creating mind maps.

Statements 4 and 5, on the other hand, investigated whether students would perceive a mind map as a useful tool to comprehend the short story:

6. Mind maps helped me to understand the story better.
7. Mind maps helped me to remember the content of the story better.

Meanwhile, statements 6 to 10 are related to students’ perceptions about how well they could use or synthesize mind-maps to understand the short story:

8. I was able to create mind maps regardless of the length of the short story.
9. I was able to create mind maps regardless of the different plot structures of the short story.
10. I was able to transform the short story well into a mind map.
11. I was able to draw the mind maps well.
12. I was able to integrate the important elements in the short story into a mind map.

As for the last 2 statements, the students were asked to indicate whether mind maps could help them in understanding the short story in an organized manner:

13. Mind maps helped me to organize the flow of the story.
14. Mind maps helped me to arrange the story in the correct sequence.

The quantitative data were then analysed using SPSS to get descriptive statistics.

Results and Discussion

Table 1 shows the representation of respondents based on gender. From the table, a total of 61 students from 2 groups participated in the survey. Out of 61 respondents, the majority 82% (50) were female students and 18% (11) were male students.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>50</td>
<td>82.0</td>
<td>82.0</td>
<td>82.0</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>18.0</td>
<td>18.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>No.</th>
<th>Survey items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I felt confident creating mind maps. (emotion)</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>I felt pleased when told to create mind maps. (emotion)</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>I was satisfied with the technique of creating mind maps. (emotion)</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>36</td>
<td>21</td>
</tr>
</tbody>
</table>
Table 2 displayed that majority of the respondents chose ‘Strongly agree’ and ‘Agree’ scales for all the items in the survey. Based on Mean Score Interpretation Table by Hadiyanto and Amirul (2013), the mean scores (as observed in Table 3) between 3.67-5.00 represents High/Positive displayed the respondents’ overall positive perceptions and attitudes towards the use of mind-mapping technique in understanding short stories.
Table 3
Mean scores for all items

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt confident creating mind maps. (emotion)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.115</td>
<td>.6608</td>
</tr>
<tr>
<td>I felt pleased when told to create mind maps. (emotion)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.033</td>
<td>.6574</td>
</tr>
<tr>
<td>I was satisfied with the technique of creating mind maps. (emotion)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.279</td>
<td>.5811</td>
</tr>
<tr>
<td>Mind maps helped me understand the story better. (comprehension)</td>
<td>61</td>
<td>1.0</td>
<td>5.0</td>
<td>4.459</td>
<td>.7205</td>
</tr>
<tr>
<td>Mind maps helped me to remember the content of the story better. (comprehension)</td>
<td>61</td>
<td>1.0</td>
<td>5.0</td>
<td>4.475</td>
<td>.6978</td>
</tr>
<tr>
<td>I was able to create mind maps regardless of the length of the short story. (synthesis)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>3.951</td>
<td>.6172</td>
</tr>
<tr>
<td>I was able to create mind maps regardless of the different plot structures of the short story. (synthesis)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>3.951</td>
<td>.6172</td>
</tr>
<tr>
<td>I was able to transform the short story well into a mind map. (synthesis)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.016</td>
<td>.5914</td>
</tr>
<tr>
<td>I was able to draw the mind maps well. (synthesis)</td>
<td>61</td>
<td>2.0</td>
<td>5.0</td>
<td>4.246</td>
<td>.7224</td>
</tr>
<tr>
<td>I was able to integrate the important elements in the short story into a mind map. (synthesis)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.082</td>
<td>.6657</td>
</tr>
<tr>
<td>Mind maps helped me to organize the flow of the story. (organization)</td>
<td>61</td>
<td>4.0</td>
<td>5.0</td>
<td>4.393</td>
<td>.4926</td>
</tr>
<tr>
<td>Mind maps helped me to arrange the story in the correct sequence. (organization)</td>
<td>61</td>
<td>3.0</td>
<td>5.0</td>
<td>4.328</td>
<td>.5692</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the results of the survey, the respondents displayed positive responses to items with ‘emotive’ elements attached to using mind-mapping technique (items 1 to 3). The respondents felt that they are confident and pleased when asked to create mind maps for
short stories. As the students are in Arts and Design programmes, this could also suggest their personal interest in class activities relating to creative aspects, in this case creating mind-maps. These findings also stressed the importance of ‘aesthetic’ values in creating mind-maps for the respondents- which could be therapeutic and even motivating to them.

It is also evident from Table 3, mind-mapping technique helped the respondents to understand and remember the content of the short stories significantly (items 4 and 5). The respondents also believed that this further improve in terms of helping them to organize ‘the flow’ and sequence of the story. Understanding the plot of the story is especially an important aspect and this is clearly demonstrated with the use of this graphic organisation method.

Besides that, the high mean scores for items 6 to 10 showed that the respondents were able to synthesize the story using mind-map technique in their effort to comprehend the short story despite its length and level of contents. However, lower mean scores are observed for items 6 and 7 (3.95) as compared to other items categorised as ‘synthesis’, which suggests that the respondents had lesser confidence in their ability to produce mind maps on their own (besides the stories discussed in the class). These imply that the respondents require assistance from their class lecturers to some extent, especially in terms of plotting the storyline. Further practice in creating mind-maps would benefit the respondents so that they could gain confidence in creating the mind maps independently.

Furthermore, the results for items 11 and 12 indicate that respondents were confident that the mind-map technique had helped them in organizing the plots of the short story. This entails that the respondents were able to understand the flow of the story easily with the aid of a mind map.

**Conclusion**

Based on the results, there are some major findings obtained. First, in terms of emotion, comprehension, synthesis, and organisation regarding the short stories, the overall finding shows positive perceptions and attitudes towards the use of mind-mapping techniques in understanding short stories. Second, the respondents benefitted not only from the use of the mind-mapping technique to understand the short stories but also appreciated the aesthetic value of the mind maps and the processes involved in creating these mind-maps, which could be therapeutic for them. Thus, it is suggested that the use of the mind-mapping technique to understand short stories for the course ELC151 should be continued, as evidently shown, the respondents showed positive attitudes towards the graphic organiser. The same findings were reflected in other studies conducted by Hariri (2013); Yunus and Chien (2016); Karim and Mustapha (2020) where the positivity shown in the students’ perceptions of the use of mind maps was the result of their enjoyment and confidence towards the application of this technique. Even though a few students felt unsure about creating the mind map on their own, it is recommended that they get further assistance from their lecturers to plot the mind maps for the short story. Through frequent practice, eventually the students will gain more confidence in creating their own mind maps. All in all, in a broader sense, a mind-mapping technique would allow the reading comprehension of a short story to take place through an intentional, active, and interactive process.
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