THE EFFECT OF USING POSSE STRATEGY IN TRAINING AND DEVELOPMENT COMPREHENSION READING SKILLS AMONGST SIXTH GRADERS

Tareq Mohamad Alyatim1, Wail Muin (Al-Haj sa'id) Ismail2, Muhammad Azhar bin Zailani3, Ala Muhammad Al Saadi4

1,2,3,4Faculty of Education, University of Malaya, Kuala Lumpur, Malaysia.
Email: 1 tarekhaneen@hotmail.com, 2 wailismail@um.edu.my, 3 azhar@um.edu.my, 4 tarekhaneen@hotmail.com

Article History: Received on 28th January 2020, Revised on 03rd March 2020, Published on 15th March 2020

Abstract

Purpose of the study: This study aims to measure the effectiveness of using P.O.S.S.E strategy in the development of teaching to improve reading comprehension skills for sixth-grade students.

Methodology: The procedure used is an experimental method based on Stratified Sampling which consists of 43 students divided into two groups – a control group of 21 students and an experimental group of 22 students- and a lesson plan was designed as a tool.

Main Findings: The outcomes of the study indicated that the POSSE strategy has a positive effect on the development of reading comprehension skills over its five levels among the representative sample of sixth graders.

Applications of this study: It is an essential reference in the development of teaching and training teachers to adapt to the P.O.S.S.E strategy for teachers, student educators.

Novelty/Originality of this study: The result of this study is consistent with previous studies, which investigated the efficacy of POSSE strategy on the development of reading comprehension skills.

Keywords: POSSE Strategy, Reading Comprehension, Stratified Sampling, Experimental and Control Groups, Lesson Plan.

INTRODUCTION

Reading is one of the main skills that modern education aims to develop in the process of education and learning, especially that it is included in the curriculum from the very early stages of education. It is the most important means of acquiring knowledge, especially at schools, and without it learning other subjects would be very difficult. It is also a primary indicator for predicting academic achievement (UNESCO, 2005). It has been shown that the student learns concepts in all subjects mainly by resorting to reading from the assigned textbooks; thus a weakness in reading skills will directly impact the student’s comprehension and learning of these subjects. Some researchers even attribute most cases of academic failure to the learner’s weakness in reading comprehension (Al-Naqa & Hafidh, 2002). At Sloat, Beswick&Willms (2007) stated:

“Reading is a complex process and that complexity is reflected in the range of philosophies, pedagogies, curricula, and programs available to guide early elementary reading instruction”

Therefore, its increasingly essential of faculty and school educators to manage reading comprehension for developing students reading skill and school success (Alber-Morgan et al., 2007), such as Zutell&Rasinski (2001) suggested that organize teachers with proper training to enable them to identify oral reading fluency problems and correct these deficiencies with confidence. As well as Neumann, Ross &Slaboch (2008) worked for the project “Increasing Reading Comprehension of Elementary Students through Fluency-Based Interventions”.

There has been a great development in the understanding of reading comprehension and its importance, which is represented in switching the focus in education from the behavioral perspective to the comprehensive holistic one. This development coincided with the study of cognitive processes in the process of reading; the reader must learn particular ways of thinking and how to extract information from the text, all while being aware of the organized cognitive processes associated with reading (Snow, 2002).

Reading comprehension is no longer defined by understanding the concepts and facts present in the text. It is now considered a complex mental process that requires mental activity that depends on many cognitive processes such as analysis, synthesis, differentiation, linking, extrapolation, reasoning, judgment and problem solving (Al-Allam, 2011). Al-Bousais (2015) described the process of reading comprehension by showing that effective communication demands that the learner understands should go beyond words and sentences and that effective learning requires a critical reader that sees through the apparent and links the various elements present in the text.

The development of reading comprehension skills requires the implementation of teaching methods and strategies that revolve around the learner’s active role in learning. The learner must be the focus of the educational process in an attempt to develop their skills and enhance their motivation to participate. These strategies should also help the learner...
experience independent discovery, and employ what they learned in problem-solving, in a way that allows them to feel that they are an important part of the educational process (Ahmed, 2014).

Many studies have attributed students’ weakness in text comprehension, in general, to their lack of training in employing the correct strategies while reading. For example, a study by Ahmed (2014) confirms that the majority of the students’ time in the classroom is spent on learning vocabulary and lingual fluency at the expense of comprehension strategies. In another study, it was suggested that many learners lack the basic skills and strategies necessary for text comprehension (Wendy, Siekiresi & Williams, 1999). Al-Bousais (2015), on the other hand, sees that the learners tend to only possess the minimum reading skills in their obsolete definition, recognizing the text, in contrast with modern education, which seeks to train students on deduction and critical thinking. In this regard, Bimmel & Schooten (2004) showed that the solution to this weakness lies in training teachers on the use of suitable strategies for reading comprehension.

Upon, observing educational methods that are used by Arabic language teachers, one finds that they rely heavily on memorization, and often revolve around the teacher and the curriculum – assuming both are the primary source of information. This is the case at a time when there is a dire need to use teaching methods that provide us with a wide, varied and advanced range of educational paths and opportunities that enrich the students’ knowledge, develop their cognitive skills and train them on creativity. Needless to say, one cannot guarantee that there is only one ideal method that can be applied in all educational situations.

Inspired by these findings, we decided to examine a modern teaching strategy to investigate the impact of teaching text-reading on the development of the reading comprehension skills of the sixth-grade students. Texts from their Arabic language book were used. The strategy we examined is known as POSSE, which is short for the five steps it entails – Predict the ideas in the text based on the title; Organize these predictions in the form of an information map; Search for the predictions in the text; Summarize the cognitive map you generated for the ideas within the text, and Evaluate by comparing the cognitive map that is based on predictions with the one based on the text.

**Statement of the Problem and Questions of the Study**

Teaching reading has been gaining a lot of attention, which is evident by the many studies that attempt to explain modern strategies of teaching reading that allow the learner to fully comprehend texts. Despite the great importance of reading comprehension skills, they have not received the attention they deserve from decision-makers and those in charge. This has been the case, both, locally and internationally in the Arab world, to the point where the students’ weakness in reading has become a major problem that necessitates action. One can fairly attribute this problem to the negligence on behalf of teachers towards the development of these skills in their traditional methods of teaching reading, which are outdated and lack diversification. We hypothesize that these shortcomings can be overcome if the conditions and strategies for teaching reading have been improved by implementing modern ones that enhance reading comprehension. This leads to the aim of this study which is determining the effect of implementing POSSE strategy in teaching reading and developing reading comprehension skills among sixth-graders in the UAE. To this end, the study will attempt to answer the following questions:

1. What reading comprehension skills need to be developed for sixth graders?
2. What impact does apply POSSE strategy in teaching reading have on the development of reading comprehension skills for sixth graders?

**Significance of the study**

The significance of this study lies in the ability of its results to reveal the effects of POSSE strategy on the development of reading comprehension skills among learners. It can, then, help those in charge of planning school curricula tailor content that guides Arabic language teachers to utilize methods and activities that focus on developing reading comprehension skills as key objectives in their syllabi. It also provides Arabic teachers with guidelines and information about the POSSE strategy, its implementation mechanisms, and how it can be delivered in the form of procedural applications. This, consequently, will help them improve their teaching performance and liberate them from the obsolete traditional methods to more creative and diverse ones. Simultaneously, it will help the curriculum planners, evaluators, mentors and researchers in designing programs necessary for teachers’ pre-service preparation and in-service training.

We also hope that applying POSSE will provide an objective tool for Arabic teachers and educational researchers that can be used to measure reading comprehension among sixth graders. It can then serve as a scientific resource in educational research in the development of reading comprehension skills in other subjects and fields of study other than Arabic.

**METHODOLOGY**

**Technique**

The researcher conducted the study on two groups of students, experimental and control.

**Sample population**
The population of this study, from which a sample was chosen, consisted of all sixth-grade students in the schools of Abu Dhabi, UAE. The number of enrolled students in the academic year 2017-2018 was 27281 students (m/f) in 441 schools, according to a statistic released by the Statistics Center of the Department of Education. We chose an intentional sample from the Emirates National School – Muhammed Bin Zayed branch. Table 1 below shows the number of sixth-grade groups within the school and the number of students enrolled in each group, at the selected school at the beginning of the academic year 2017-2018.

Table 1: Number of sixth-grade students enrolled in the sample school (Emirates National School – Muhammed Bin Zayed branch)

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>23</td>
</tr>
<tr>
<td>Second</td>
<td>25</td>
</tr>
<tr>
<td>Third</td>
<td>22</td>
</tr>
<tr>
<td>Fourth</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>93</td>
</tr>
</tbody>
</table>

(Source: School Management Records (Emirates National School – Muhammed Bin Zayed Branch) for the academic year 2017-2018).

The final sample was randomly selected from the aforementioned school by randomly drawing two groups from the given sample of four. The result of the draw led to the selection of the first group as the experimental group and the third group as the control one. After excluding the failing students in the two groups, the study sample consisted of 43 students divided into two groups – a control group of 21 students to be taught following the traditional strategy, and an experimental group of 22 students to be taught following POSSE strategy.

Tools

To achieve the objectives of this study, we prepared a list of the reading comprehension skills necessary for students in the sixth grade, which will be discussed in detail in answering the first question. We, then, designed a lesson plan in accordance with POSSE strategy, in teaching text-reading from the Arabic language book of the sixth grade. Two tests for reading comprehension (preliminary and latter) were also prepared to measure the degree of acquisition of reading comprehension skills by sixth graders. These tests consisted of 42 multiple choice questions, distributed in parallel over five levels: literal, deductive, critical, tactile and creative, with two questions per skill (42÷2 = 21 skills).

Test validation

The test content, in its initial form, was presented to a group of judges who specialize in teaching methods, curriculum planning, and the Arabic language. Some of the judges suggested partial amendments in the form of some alternatives to the test. We took the suggestion into account and applied the test to an initial exploratory sample of 35 students, to verify the clarity of the test’s instructions, determine its duration, and analyze its constituents.

Consistency

To validate the consistency and homogeneity of the test, we calculated the reliability of the test using the method of Alpha Cronbach, which is one of the more reliable methods in calculating these parameters of test items. It proceeds as shown in the following equation:

\[
\alpha = \frac{K}{K-1} \left(1 - \frac{\sum_{i=1}^{K} \sigma^2_{Y_i}}{\sigma^2_X}\right)
\]

For a quantity, which is a sum of \(K\) components (test items): \(X = Y_1 + Y_2 + \ldots + Y_K\), and where \(\sigma^2_X\) is the variance of the observed total test scores, and \(\sigma^2_{Y_i}\) is the variance of component \(i\) for the current sample of students (DeVilles,1991; Nabhan, 2004; Abu Allam 2004).

Using this equation, the consistency of the reading comprehension test was calculated to yield a reliability coefficient of 0.90 degrees, as illustrated in Table (2) below. This is a high coefficient that indicates that the reading comprehension test is internally consistent and reliable.

Table 2: The reliability coefficient for internal consistency of the reading comprehension test following the Alpha-Cronbach approach

<table>
<thead>
<tr>
<th>(\alpha) Reliability Coefficient</th>
<th>(\sigma^2_X) the variance of Observed Test Scores</th>
<th>(\sigma) Standard Deviation</th>
<th>(\sum \sigma^2_{Y_i}) Sum of the Variance of Components (i)</th>
<th>(K) Number of Test Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.90</td>
<td>74.12</td>
<td>8.61</td>
<td>8.49</td>
<td>42</td>
</tr>
</tbody>
</table>
Verifying the equivalence of the two groups: to achieve this, we applied the reading comprehension test on the two study groups, calculated the mean and standard deviation of the students’ scores in each group. Afterward, we used the t-test to highlight the difference between the two groups. The results are shown in Table 3 below.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>p-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>37</td>
<td>17.32</td>
<td>1.748</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>35</td>
<td>17.05</td>
<td>1.589</td>
<td>70</td>
<td>0.677</td>
<td>0.501 Insignificant</td>
</tr>
</tbody>
</table>

These results show that the t-value is 0.677 at the p-value of 0.501, being greater than the theoretical p-value of 0.50, which makes the difference statistically insignificant and negligible. This goes on to show that the student groups are equivalent to the preliminary application of reading comprehension before initiating the experiment. It also shows that any difference that may arise afterward will be attributed to the effects of the new teaching strategy.

**RESULTS AND DISCUSSION**

This section will attempt to answer the two main questions of this study. The first question is: “what reading comprehension skills need to be developed for sixth graders?” To provide a satisfactory answer, we examined other studies that dealt with reading comprehension skills and resorted to various lists and classifications that pertain to this topic. (Jaballah, 1997; Habibulla, 2000; Al-Bari, 2010; Ahmed, 2014). Upon comparing their classifications and taking into consideration the educational standards and outputs of the sixth-grade Arabic language book in the UAE, we prepared a tentative list of the most important reading comprehension skills required for that level. They are 30 skills that can be classified into five main levels. This list was then reduced to 21 skills after being presented to a group of judges and applying their suggestions. The skills fall under the following five categories: literal, deductive, critical, tactile, and creative (Appendix 1). Table 4 below shows the distribution rates of these skills in their final form over five levels.

<table>
<thead>
<tr>
<th>Number</th>
<th>Reading Comprehension Levels</th>
<th>Number of skills per level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Literal</td>
<td>5</td>
<td>24%</td>
</tr>
<tr>
<td>2</td>
<td>Deductive</td>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>3</td>
<td>Critical</td>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>4</td>
<td>Tactile</td>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>5</td>
<td>Creative</td>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>21</td>
<td>100%</td>
</tr>
</tbody>
</table>

As for the second question, “what impact does apply POSSE strategy in teaching reading have on the development of reading comprehension skills for sixth graders?”, the answer required examining the following three assumptions:

**First assumption**

There is no statistically significant difference at p-value 0.05 between the mean of the experimental group’s scores in the preliminary and the latter tests. To verify this, a Paired-Samples T-test was used, and the effect was determined through the value of eta square and Cohen value, as shown in Table 5 below.

<table>
<thead>
<tr>
<th>Level</th>
<th>Application Mean</th>
<th>SD</th>
<th>Degree of Freedom</th>
<th>t-Value</th>
<th>p-Value</th>
<th>Eta Square ((\eta^2))</th>
<th>Cohen Value ((d))</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Comprehension</td>
<td>Preliminary</td>
<td>18.9</td>
<td>3.19</td>
<td>21</td>
<td>12.6</td>
<td>0</td>
<td>0.883</td>
<td>5.51</td>
</tr>
<tr>
<td>Latter</td>
<td>36.81</td>
<td>5%</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results show that the t-value for reading comprehension at the overall level was statistically significant at a p-value of 0.01, indicating that there is a statistically significant difference between the mean scores of the experimental group in the preliminary and the latter tests. This difference favors the latter test, which has a higher mean. This indicates that the POSSE strategy has a positive effect on the development of reading comprehension skills over its five levels among the representative sample of sixth graders. Table 5 provides evidence that the impact was great, given that the Cohen value is 5.51. This is because 88.3 of the total variance of the experimental group’s scores (as indicated by the eta square) can be attributed to applying the POSSE strategy. This is a high level of variance, and it confirms the great positive impact POSSE had on the reading comprehension skills of the students.
Second Assumption

There is a statistically significant difference at p-value 0.05 between the means of the reading comprehension tests for the sixth graders – using the POSSE strategy on the experimental group and a traditional one on the control group. To verify this assumption, the mean and standard deviation were calculated for the test scores of the experimental and the control groups at all levels. Then, an Independent-Samples T-test was applied and the results were charted as shown in Table 6.

Table 6: Results of Independent-Samples T-test to probe the difference between the average of test scores of the experimental and the control groups after the latter application of the reading comprehension test at all its levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degree of Freedom</th>
<th>t-Value</th>
<th>p-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literal</td>
<td>Experimental</td>
<td>8.77</td>
<td>1.77</td>
<td>41</td>
<td>0.883</td>
<td>0.383</td>
<td>Insignificant</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>8.28</td>
<td>1.847</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deductive</td>
<td>Experimental</td>
<td>7.09</td>
<td>1.823</td>
<td>41</td>
<td>0.876</td>
<td>0.386</td>
<td>Insignificant</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>6.57</td>
<td>2.063</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical</td>
<td>Experimental</td>
<td>6.59</td>
<td>2.062</td>
<td>41</td>
<td>1.294</td>
<td>0.203</td>
<td>Insignificant</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>5.8</td>
<td>1.887</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tactile</td>
<td>Experimental</td>
<td>7.4</td>
<td>1.007</td>
<td>41</td>
<td>5.527</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>4.61</td>
<td>2.132</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative</td>
<td>Experimental</td>
<td>6.95</td>
<td>1.326</td>
<td>41</td>
<td>9.896</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.85</td>
<td>1.388</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>Experimental</td>
<td>36.81</td>
<td>5.076</td>
<td>41</td>
<td>4.949</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Control</td>
<td>28.14</td>
<td>6.374</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results show that the t-value for the variance between the means of the scores of each group in the latter reading comprehension test at the literal, deductive and critical levels was statistically insignificant and negligible at p-value 0.05. However, the t-value of the difference between the means of the scores of the experimental and control groups in the latter test at the tactile and creative levels as a whole was statistically significant at p-value 0.01. This difference favors the experimental group, which has a higher score average.

In summary, the results associated with the second question indicated that students of the experimental group who studied reading texts using POSSE strategy exhibited noticeable improvement in their level of reading comprehension at its five levels, compared to the control group. This was due to the substantial statistically significant difference observed in their performance before and after the experiment. This means that the level of their reading skills has improved overall compared to their level before applying the POSSE strategy. In particular, the POSSE experimental group displayed superiority over the control group, which used a traditional strategy of reading comprehension to study for the test, at the tactile and creative levels. Though, the difference between the two groups was insignificant at the literal, deductive and critical levels. This result does not necessarily mean that the POSSE strategy did not contribute to any improvements at the literal, deductive or critical levels at all. However, it means that the traditional strategy and POSSE strategy contribute almost equally towards the development of these three skills for students in the sixth grade.

The result of this study is consistent with previous studies, which investigated the efficacy of POSSE strategy on the development of reading comprehension skills, such as the studies done by Rabihat (2009); Al-olate (2011); Al-Makhzoumi and Bataynah (2012); Al-Seydawi (2015); Pesa and Somers (2007); Maha and Sibarani (2013); Arianti and Tiarina (2014); Aprilia (2015); and Jameel (2017). All these studies showed superiority in the reading comprehension skills of the experimental students that experienced the POSSE strategy over those that studied using traditional methods. In light of all this information we have drawn the following conclusions:

1. The essence of the POSSE strategy is the activation of the student’s prior knowledge about the text he/she is reading, through prediction and previously acquired information, to create cognitive links between it and the new information
the student is exploring. This, in turn, facilitates the cognitive construction of meanings and text composition, which is the essence of the process of understanding. This is because if the learner was able to determine what he/she knows and what he/she imagines about the subject being read through the first step of this strategy (Predict), he/she will be able to understand the context it revolves around. Then the student will easily recognize and absorb the content of the text. The first step of POSSE enables the learner to execute one of the key processes of reading comprehension, which Bloom named in his classification of reading comprehension processes as a remembrance or recalling. In this process, the reader recalls information associated with the ideas of the text from the stock available in his/her memory (Dulaimi & Al-Awali, 2005).

2. The steps of the POSSE strategy, as a whole, enable the learner to bring forward his/her reading expectations. This helps them in the reading process by allowing them to focus on important information and drives the reading path towards information related to their prediction while distinguishing the important from the unimportant. Thus, it becomes easier for them to build the meaning and composition and save it to their stock of information, thereby enhancing the text being read. Given this, POSSE is considered a successful education strategy to teach students to monitor their reading while also reviewing themselves to ensure they absorbed the text. In other words, it allows the learners to evaluate their degree of understanding by comparing what they learned and absorbed from the text to their initial predictions and impressions. One can also imagine that it allows the learner to understand how much he/she knows about the subject, which encourages further efforts to learn more and improve his/her background on it.

3. POSSE strategy allows for classroom interaction among students as well as active participation in dialogue and discussion on the subject of the text. This leads to the creation of an educational atmosphere that increases the learner’s motivation and their ability to generate ideas, suggest corrections, and search for further predictions. In turn, this entails deep processing of texts and enhancing the learner’s ability to delve into their content, all while observing and critiquing ideas that are raised for discussion; thus, showing a higher level of understanding of the text.

4. The Summarize step of this strategy, allows the student to bring out the text’s information in his/her own words, which, in a way, forces him/her to absorb the content. This is because it is not possible to adequately summarize a text that has not been understood. Text summarizing is one of the main processes of reading comprehension because it requires the selection of key concepts and information in the text while disregarding the insignificant (Mustafa, 2011).

CONCLUSION AND FUTURE WORK

Based on the analysis, the researcher concludes that the POSSE strategy can effectively be used in improving students reading comprehension. POSSE strategy made students interested in learning, as it creates an interactive approach and self-centered way of learning, which has been proven very fruitful and useful. The measurement tools used and the result obtained can be replicated and applied in teaching students in different grades as well as other languages or subjects. Therefore, similar researches can be conducted to other language skills (speaking, listening and Writing) in schools to see whether the findings can give the same result. Moreover, Teachers and educationists should use the POSSE strategy in teaching students and teachers’ training to achieve their goals. As a reference for the school management department, they can arrange and organize activities and programs to foster or train POSSE strategy among students.

LIMITATION AND STUDY FORWARD

This study is limited to identifying the effect of the “POSSE” strategy on teaching reading in developing reading comprehension skills for sixth-grade students only. Expanding the target population to generalize the results is recommended for future study.

AUTHORS CONTRIBUTION

Tareq Mohammad Alyatim was responsible for the information collection and final draft. Wail Muin (Al-Haj sa’id) Ismail and Muhammad Azhar bin Zailaniare supervisors guide the overall framework and suggestions for data analysis and discussions for findings. Ala Muhammad Al Saadi was responsible for data collection and paper formatting, language editing. All authors are contributed to this study.

REFERENCES


