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# THE EFFECT OF SCAFFOLDING TECHNIQUES IN WRITING REPORT BASED ON NON LINEAR TEXTS

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## ABSTRACT

The study examined whether the scaffolding techniques used in writing reports on non linear texts helped students. Students did not use appropriate trend words such as “going up” and “going down” instead of “increased” and “decreased”. The subjects of this study consisted of 56 form 6 students of a secondary school in the district of Tapah, Perak and they were randomly assigned to experimental and control groups. The experimental group was taught with the scaffolding techniques meanwhile the control group was taught with conventional teaching method. The instruments used in this study were questionnaires, pretest, posttest and semi-structured interviews. Descriptive analysis was used to analyze the data from the questionnaires. The questionnaires were carried out to find out how far the students were aware of the report text structures and the use of trend words in report writing. The results showed that 73.3% of the students were aware of the report text structures but 73.2% students still had difficulties in employing trend words in writing reports. The scores from the pretest and posttest scores were analyzed through paired and independent sample T-test. The effects of utilizing scaffolding techniques on the experimental group were compared with the control group by examining the significance of mean scores before and after the treatments were carried out. The findings revealed that the experimental group performed better than the control group. The qualitative data from the semi-structured interviews, which were analyzed, based on thematic document analysis was to obtain students’ opinion of the use of scaffolding techniques in writing reports. The analyses of the interviews showed that the students preferred the scaffolding techniques as they had assisted them in writing reports. The students also preferred to work in groups and received support from their peers since the techniques enabled the students to develop good writing skills through the use of correct report text structures and the use of appropriate trend words.

## KESAN TEKNIK *SCAFFOLDING* DALAM PENULISAN LAPORAN BERASASKAN TEKS BUKAN LINEAR

### ABSTRAK

Kajian ini meneliti sama ada teknik perancah yang digunakan dalam penulisan laporan berdasarkan teks bukan linear dapat membantu pelajar. Pelajar tidak menggunakan pola perkataan yang sesuai seperti *naik* dan *turun* yang sepatutnya *menaik* dan *menurun*. Sampel kajian terdiri daripada 56 orang pelajar tingkatan enam dari sebuah sekolah menengah di daerah Tapah, Perak dan mereka secara rawak telah dibahagi kepada kumpulan rawatan dan kawalan. Kumpulan rawatan telah diajar menggunakan strategi teknik perancah dan kumpulan kawalan diajar menggunakan teknik mengajar secara konvensional. Instrumen yang digunakan dalam kajian ini ialah soal selidik, pra ujian, pasca ujian dan temubual separa struktur. Dekriptif analisis telah digunakan untuk menganalisis data daripada soal selidik. Soal selidik telah dilaksanakan untuk mengetahui sejauh mana para pelajar sedar tentang struktur laporan dan kegunaan pola perkataan dalam penulisan laporan. Hasil kajian menunjukkan bahawa 73.3% pelajar sedar akan struktur laporan dan 73.2% pelajar mengalami kesukaran dalam menggunakan pola perkataan dalam penulisan laporan. Skor daripada pra ujian dan pasca ujian telah dianalisis dengan menggunakan ujian berpasangan dan ujian tidak bersandar daripada ujian T. Kesan penggunaan daripada teknik perancah ke atas kumpulan rawatan telah dibandingkan dengan kumpulan kawalan dengan menggambarkan perbezaan signifikan min sebelum dan selepas pengajaran dijalankan. Dapatan kajian menunjukkan bahawa kumpulan rawatan meningkatkan kebolehan pelajar berbanding daripada kumpulan kawalan. Data kualitatif daripada temubual separa struktur menggunakan analisis dokumen tematik adalah untuk mendapatkan maklumat tentang pendapat pelajar mengenai kegunaan teknik perancah dalam menulis laporan. Hasil analisa daripada temubual menunjukkan bahawa pelajar memilih teknik perancah sebagai bantuan untuk membantu mereka dalam penulisan laporan. Pelajar juga mengemari untuk berinteraksi dalam kumpulan dan menerima bantuan daripada kawan-kawan kerana teknik ini membolehkan pelajar meningkatkan kemahiran melalui penggunaan struktur yang betul dan pola perkataan yang sesuai.

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## LIST OF ABBREVIATIONS

MUET	Malaysian University English Test
MEC	Malaysian Examinations Council
SPSS	Statistical Package for the Social Sciences
ZPD	Zone of Proximal Development



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## CHAPTER 1

### INTRODUCTION



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#### 1.0 Introduction

The Malaysian University English Test (MUET) was introduced by the Malaysian Education Council (MEC) as a pre-requisite for university entrance. The examination papers consist of four separate papers testing on different skills: reading, writing, listening and speaking. In the writing paper, one of the questions is report writing. In report writing, students are required to write a report based on stimulus such as graphs, charts and tables. Here, they are tested based on their ability to synthesize and analyze information as well as use trend words appropriately. One of the challenges

faced by MUET candidates in answering a report question is not knowing how to



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write a precise statistical-oriented piece of writing (Teo, Voon & Voon, 2013). Thus, this study looks at one of the possible techniques teachers or instructors could use to help students to overcome the problem faced in report writing. Hence, scaffolding is chosen as one of the techniques to teach text structure and trend words. This chapter outlines the background of the study, statement of the problems, objectives of the study, research questions, research hypothesis, and operational definition of terms, significance of the study and limitations of the study.

## 1.1 Background of the Study

This study was carried out in the effort of identifying effective methods in teaching students how to write a report on non-linear texts. The method scaffolding is hoped to be an interesting method to help students as it assists them in completing the task or work at a higher level and if possible working on their own (Rose, Lui-Chivizhe, McKnight & Smith, 2003; Samana, 2013)

Vygotsky introduced the socio-cultural theory. He believed that a child is not only influenced by neurobiological factors or functioning of a brain but also by psychological factors. A child, not only learned on their own, they are also influenced by cultural factors that can help them in their language learning.

According to Vygotsky, mediation focused on important people who assist students learning by choosing vital learning experiences. The mediators are the person who can be considered as experts in certain areas and they can provide direct and indirect help to the students in the process of learning the language. Mediation can also be provided by objects such as books, diagrams and others. Mediators are regarded as tools and language can be considered as one of the important tools to assist the students in the Zone of Proximal Development (ZPD) zone (Christmas, Kudzai & Josiah, 2013; Lantolf & Thorne, 2006). Vygotsky also stressed on mediation concept where he argued that language can also be considered as psychological tools. Thus, language can mediate a child's learning. In this study, Lantolf and Thorne (2006) suggested that teachers or learners who are expertise in certain areas can scaffold one another, in order to help the students in learning. By giving assistance, it can aid students in writing reports on non linear texts. The teacher acts as the mediator where he or she imparts the knowledge on how to use the writing techniques using scaffolding.

In many studies, scaffolding is considered a teaching method that is originated from the Lev Vygotsky's socio-cultural theory (Samana, 2013). In socio-cultural theory is defined as "social event taking place as a result of interaction between the learner and the environment" (Mansoor Fahim & Mastaneh Haghani, 2012, p.693). Vygotsky stressed on the importance of social interactions within the social circle to develop the human's cognitive ability (Lantolf & Thorne, as cited in Mansoor Fahim & Mastaneh Haghani, 2012). When a child is born, he begins to learn about his





sociocultural environment. Subsequently, through interaction, the child begins to internalize the information around him. Vygotsky proposed the concept of zone of proximal development (ZPD), showing the gap between what the learners can achieve by themselves or from the help of other people (Mitchell & Myles, 1998). A child receives scaffolding which is a temporary support from experts during this period of learning or solving tasks (Ferguson & McDonough, 2010; Dahms, Geonnotti, Passalacqua, Schilk & Wetzel, n.d.) Teachers are considered experts as they provide scaffolded assistance. The concept of scaffolding has been researched by many scholars and researchers do not limit the role of an expert to teachers but also their peers (Samana, 2013). Scaffolding is categorized into three categories verbal scaffolding, procedural scaffolding and instructional scaffolding (Echevarria, Vogt & Short, 2004, p.86-87). In this study, the researcher focused on instructional scaffolding in which students were assisted in learning by giving examples, explanations, handouts, hints, prompts and visual scaffolds (Alibali, as cited in Northern Illinois University, 2008).

Scaffolding techniques were used in this study to teach report writing on charts and graphs and also to show that assistance by experts or more knowledgeable students hopefully can help students in learning

In this study, scaffolding was chosen as a method to teach students as it provides students with an environment to learn and slowly prepares the students to be independent in learning (Christmas et al., 2013) or self regulated in their final stage,



which means that students are capable to accomplish objectives of activities with less support or completely no external support (Lantolf & Thorne, 2006).

## 1.2 Statement of the Problems

In 1999, Malaysian University English Test (MUET) was introduced in schools (Lee, 2004). It follows a skill-based syllabus which it is designed according to the 4 skills of learning that are listening, reading, speaking and writing. MUET was introduced to provide a standardized examination for the pre-university students as a university entrance requirement (Zuraidah Mohd Don, 2003). Consequently, it was hoped that it can enhance students' proficiency in the English language that they needed when they start pursuing their studies in universities

In general, students' achievements of the MUET writing paper have not been very reassuring. In the mid-year 2010 MUET exam, candidates' inadequacy could be seen in their writing paper where 45.73% scored Band 2 and 25.99% scored Band 1. This proved that students were generally weak in English especially in the writing component (Majlis Peperiksaan Malaysia, 2011c, p.158).

Two significant weaknesses within students are identified. First, students have knowledge of the text structure like introduction, overall trend, analysis and synthesis sentences and conclusion and second, students lacking in using trend words such as

increase, decrease and others when writing a report. According to MUET Examination Report; STPM – 2009 (Art and Science Stream) (Majlis Peperiksaan Malaysia (Malaysian Education Council), 2010b), it was vital for students to know what was required from the task (The structure of report writing) (Majlis Peperiksaan Malaysia, 2010, p.130). Furthermore, no appropriate trend words were given in the students' report writing (Majlis Peperiksaan Malaysia, 2010b, p.132).

The poor performance of students in writing reports on non-linear text is reported by the Malaysia Examination Council (Majlis Peperiksaan Malaysia, 2010).

Some evidences on students' weakness in the text structure of writing a report were pinpointed. Firstly, students did not understand what the task requires them to do. Secondly, students wrote more words than what is required by the targeted 200 word limits. Moreover, students were not able to write concluding statement within the word limits. Then, when the students analyzed the data, they tend to be inaccurate and repetitive (Majlis Peperiksaan Malaysia, 2010b). Next, students were not able to give the overall trend (Majlis Peperiksaan Malaysia, 2010b). Finally, it seemed that students were not able to analyze the non linear texts and were also unable to synthesizes two non linear texts (Majlis Peperiksaan Malaysia, 2010b).

The first main concern addressed by this study is that students do not have the knowledge of the text structure. They do not know the five components of writing a report: introduction, overview, analysis and synthesis of data and conclusion. The



second main concern is that students lack the knowledge in using trend words when writing a report. In conclusion, the two main problems listed above have become the focus of the current study.

### 1.3 Objectives of the Study

There are three objectives of this study:

- i) To investigate the level of students' awareness of the requirement of the report text structure and trend words.
- ii) To see the effectiveness of implementing scaffolding instruction (experimental group) as compared to the conventional teaching technique (control group).
- iii) To obtain students' opinion of the use of scaffolding techniques in writing lessons.





## 1.4 Research Question

Specifically the study examined how scaffolding techniques could be utilized on report writing. The study addressed the following research questions.

- i) What are the levels of students' awareness on report text structure and trend words?
- ii) Are there any significant differences in students' results after the use of scaffolding if compared to conventional teaching technique?
- iii) What are the students' opinions on the use of scaffolding techniques in



## 1.5 Research Hypothesis

The research hypotheses of this study are:

- a) Ho1: There is no significant difference between the mean scores of experimental group on pretest and posttest.  
Ha: There is a significant difference between the mean scores of experimental group on pretest and posttest.



b) Ho2: There is no significant difference between the mean scores of control group on pretest and posttest.

Ha: There is a significant difference between the mean scores of control group on pretest and posttest.

c) Ho3: There is no significant difference between mean scores of experimental group and control group with regard to achievement in writing a report on non linear texts on pretest.

Ha: There is a significant difference between mean scores of experimental and control group with regard to achievement in writing a report on non-linear texts on pretest.

d) Ho4: There is no significant difference between mean scores of experimental group and control group with regard to achievement in writing a report on non linear texts on posttest.

Ha: There is a significant difference between mean scores of experimental and control group with regard to achievement in writing a report on non linear texts on posttest.

## 1.6 Operational Definition of the Terms

For the purpose of this study, the following terms are used based on the given scope of definition.

a) Scaffolding techniques

According to Murali Krishnamurthi (2009) “instructional scaffolding is a “pedagogical technique that helps students receive incremental support in learning activities that may be too difficult to complete initially on their own” (p. 2). In this study, the researcher focused on instructional scaffolding which means that students are assisted in learning through examples, explanations, handouts, hints, prompts and visual scaffolds (Alibali, as cited in Northern Illinois University, n.d.).

In this study, the focus is on scaffolding techniques used to assist students to learn the structure and trend words while writing a report on non-linear texts.

b) Trend words

According to Business Dictionary (n.d.), trend means “ a pattern or gradual change in a condition, output or process or an average or general tendency of a series of data points to move in a certain direction over time represented by a line or curve on a graph”(p.1).

Trend words such are verbs and nouns that express movements, for example, increase, decrease, soar and other words that can be used in order to interpret non-linear texts.



### c) Non linear texts

A study by Hamzah Md Omar, Lee and Sheikh Badrul Hisham Jamil (2013) states that non linear texts are also known as ‘graphical data’ such as graphs, bar charts, pie charts, tables and others. On the other hand, the Malaysian Examination Council (2010) defines non linear texts as non linear stimuli.

Following the earlier, this study, the non linear texts as bar charts, line graphs, pie charts and tables.



This study is conducted in order to investigate students’ use of scaffolding techniques and the way these techniques could facilitate students’ in writing a report.

This will benefit students in many ways. One is that students will be more aware of the scaffolding techniques needed to write a report on non linear texts. With that eventually, they can reduce their dependency on teachers and will be able to write a report on their own. The writing experience could be more enjoyable because they have learned to utilize the scaffolding techniques to write a report on non linear texts. As for teachers, the study on using scaffolding techniques to help students in writing a report on non linear texts is significant. The study will be documented and it will help other teachers to add more effective in their teaching practices. The one and only

