

IMPROVING READING SKILLS AMONG CRITICAL LEVEL STUDENTS THROUGH INVERTED PYRAMID APPROACH

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Abstract---*The main objective of the study is to improve reading skills in Malay language among critical level students through inverted pyramid approach. Quantitative approach through pre-test and post-test on experimental and control group design was implemented in this study. Simple random sampling was carried out to recruit the study sample comprising 10 Form One students who cannot read in Malay Language in a secondary school from a population of 20 students. The researcher found that the experimental group students had a high score of 979 (97.9%) compared to the control group students of 292 score (29.2%). In comparison, these post-test groups recorded a gap of 68.7%. Meanwhile, during pre-test, these two groups only recorded a gap of 1.6%. The findings show that the inverted pyramid approach has improved the reading skills in Malay language among critical students. This study is useful in improving the reading skills among critical level students. This inverted pyramid approach not only is used to teach reading skills but also to teach all skills pertaining to all subjects. Inverted pyramid approach has not been used in teaching any pedagogical skills. This research is the first research on inverted pyramid approach. This approach really works in improving learning skills among the critical level students.*

Keywords--- *Improving, Reading skills, Critical level students and inverted pyramid approach, Students learning ability, Students confidence.*

I. INTRODUCTION

The education system in Malaysia divides students in schools into five levels, excellent, potential excellent, medium, potential medium and critical level students. Critical level refers to slow and low-skill students in studying with other level students in the same classroom (Samikkanu Jabamoney, 2018).

Critical level students are children under average intelligence who have low levels of ability to master basic skills such as reading, writing and arithmetic. They are said to be slow students based on their normal circumstances and their age. These children go through the same basic development stage as other children, but will do all their tasks at a slower pace. Critical level students may master immature language patterns or face problems in speech and exhibit immature social behavior. Critical students will also experience disappointment, anxiety and aggression. Academically, though they show efficiency in certain tasks in a particular subject, but they have weak memory power and show difficulty in understanding steps to carry out tasks. Students in these categories face difficulty in transferring information learned in one situation to another (Dorothy M. Dietrich, 2006).

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Typically, critical level students are given less attention by the teacher as slow students cannot be nurtured equally in the same skills taught to students from other levels. Under obligation to undergo a planned syllabus, a teacher cannot wait for critical level students to master the skills spelt out in the syllabus. Thus, critical level students are neglected in the interest of students at other levels (Samikkanu Jabamoney, 2018).

II. LITERATURE REVIEW

Some studies related to pyramid approaches and critical level student have been implemented, and the studies are listed below in the literature review. Recent studies on the pyramid approach have been implemented by Letrud & Hernes, (2018). He has written an article entitled Learning Pyramid enjoys a considerable level of authority within several areas of educational studies, despite that nobody knows how they originated or whether they were supported by any empirical evidence. This article investigates the early history of pyramid models. Through comprehensive search in digital libraries, it is found that the pyramid learning version has become part of the debate and practice of education over 160 years. The findings show that pyramid models do not come from empirical research but deviate significantly from the standard picture of human memory.

In addition, Emdad (2012) discusses the need for education, especially for the Base of the Pyramid People (BOP) which is very important from various aspects including their livelihood, economic, social, and cultural and other aspects to minimize the digital divide between the rich and the poor. Since most BOPs are illiterate, living in rural areas with limited school or educational institutions and unable to attend school, the task of educating such groups is tough and disheartening. This article also describes affordable practical solutions to educate BOP by using Voice Internet e-Learning that uses smart and voice agents by using the phone.

Further, Ilse (2010) published an article entitled, 'The Conflict Pyramid: A Holistic Approach to Structuring Conflict Resolution'. This article discussed the pyramid of conflicts used by Richard Cohen, which can be used as a model to illustrate the relationship between conflict resolution education programs and activities in educational programs. The main question posed in the article is how the pyramid of Richard Cohen's conflict can be used as a model to illustrate the relationship between the program and the different activities. How can we describe the pyramid of conflict? How does pyramid of conflict help teachers to organize programs and activities that can be implemented in schools? Cohen described an ideal system of conflict and conflict resolution in a school environment as a four-stage pyramid, i.e. conflict prevention, conflict management, third-party support and ultimately, stop the conflict by way of arbitration. Furthermore, Mary & Lise (2009) has selected the model of pyramid to teach in the classroom. Through this the researcher implemented the behavioralism in the classroom.

In addition, Fox et al. (2003) mentioned 'The Teaching Pyramid' which is the framework for organizing evidence-based practices to promote the development of social emotions to overcome challenging behaviors in preschool programs. This article briefly illustrates the Teaching Pyramid as a framework for implementing effective practices in the context of a holistic approach to behavioral support. This article described a set of training materials and measuring tools and discusses how the measuring tools can be used to support teachers in implementing new teaching approaches.

In addition to the pyramid approach, studies have also been conducted on critical students. Marion (2015) discussed about the critical student criteria. The critical students are identified. By identifying critical students' characteristics, the teachers can handle the students very well and can teach them better.

Agnes (2015) examines the learning problem of 20 critical students in one of the schools. In this study, the researcher has chosen 20 slow learners. These slow learners are identified from a classroom situation. The analysis of this study is presented in graphs and tables. Remedies are also provided. Ron (2008) discusses mainly about the problems of the slow learners.

Moreover, a thorough assessment was done among the slow learners. Also, the resources including strategies to be implemented are discussed in this article.

Dorothy (2006) has written an article entitled, 'Teaching Reading to the Slow Students'. This article discusses about the teaching reading skills to critical students. The reading skills are the essential skills to all the learners. Without reading skills one cannot go further for higher order skills. Hence, the study focused on the teaching reading to the slow learning students. Cyril (2006) has discusses about the reasons and solutions to the problems of learner retardation in learning. It focused on the psychological knowledge among the children from backward. The causes and treatment are also discussed in this article.

Edgar (2006) has examined previous studies, there are indeed studies related to the pyramid and critical student approaches, yet there is still no research related to inverted pyramid approach to improve reading skills among critical level students. Hence, the researcher has taken the initiative to do a research related to mastering reading skills among critical students.

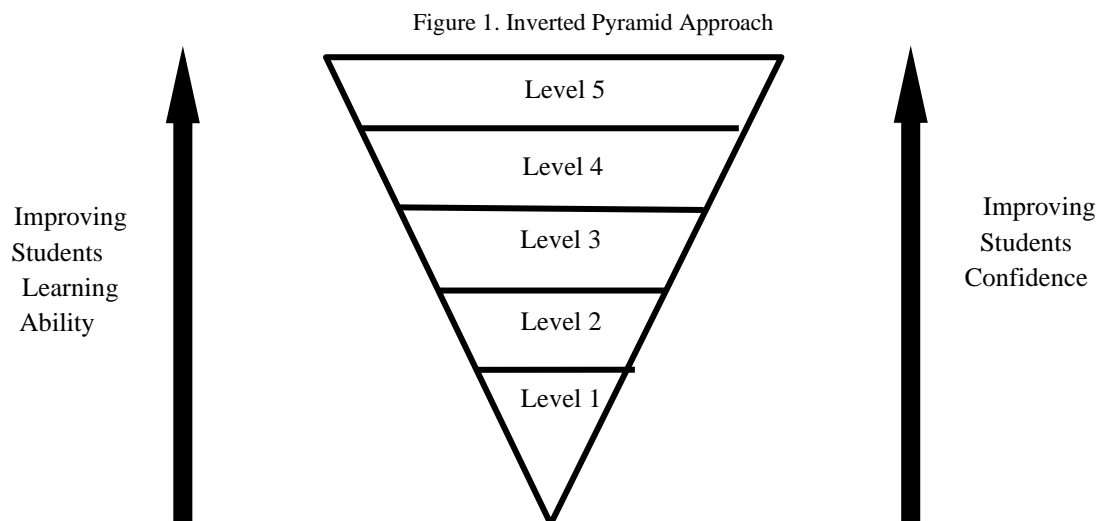
III. METHODOLOGY

The design of this study is quantitative based on field research through experimental methods. According to Gay (1992), the experimental method is a research method that can really test the hypothesis of the relationship between the cause and the consequences of a problem. The experimental method represents the most legitimate approach to solving educational problems. This study uses an inverted pyramid approach conducted on 10 Form One students who cannot read in Malay Language in a secondary school. The researcher did pre-test and post-test on experimental and control group to collect the data.

IV. CONCEPT OF INVERTED PYRAMID APPROACH

The pyramid approach in education typically involves teaching pyramids and learning pyramids. The teaching pyramid is related to teacher teaching and learning pyramid is related to student learning. These two pyramids are popular in education. Nevertheless, until now the inverted pyramid approach has never been discussed by any researcher. This researcher has found the inverted pyramid approach to help critical students to master Malay Language reading skills for Form One student in one of the secondary schools in Malaysia.

The inverted pyramid approach is based on the concept of teaching a skill from the minimum. Teachers teach a little of the skill at a time to the critical students so that they can master that skill fully before teaching the next skill. By doing so, it not only helps the student to master the skills, but it also builds a high level of confidence in the students so that they continue studying. This will help the students to continue learning and to master the reading skills successfully.



V. DATA COLLECTION TOOLS

Researcher used the pre-test and post-test results as data collection tools. Pre-tests were held before and post-tests were conducted after implementing the inverted pyramid approach to 10 experimental group students and 10 control group students.

VI. TOOL ADMINISTRATION

The researcher has produced a reading module to be used as a teaching tool to improve reading skills in Malay language among Form One critical level students. This module is syllabic based. Syllables are vowels or a combination of vocals and consonants that form the words. The Malay language is divided into 11 patterns of syllables. Four of them are the original syllables of Malay and the other seven are the syllables of loan words. Researcher chose only the original Malay syllable patterns for this study, namely KV only. Meanwhile, for the syllable which has no KV pattern, the researcher uses the KVK syllable pattern. In addition, in the formulation of the word, the researcher chooses a word retention pattern, which is KV-KV only. The KVK syllable pattern is used for some letters that do not have words consisting of KV syllables. The researcher has produced a reading module for 20 days using four consonants, b, c, d and f as the first letters of the words chosen for the module as presented in Table 1.

Table 1. Reading Module

Days	Alphabets KV	Words
1	ba	<i>Baba, baca, baja, baka, bapa,</i>
2	be	<i>Beca, bega, beta, besi, beza,</i>
3	bi	<i>Bibi, bina, bini, biji, bisu</i>
4	bo	<i>Bodi, boga, bogi, bola, bota</i>
5	bu	<i>Buku, bucu, bulu, bumi, buru</i>
6	ca	<i>Cara, caci, cana, cari, catu,</i>
7	ce	<i>Cega, ceki, ceku, cela, cena</i>
8	ci	<i>Cili, ciku, cina, cita, cida</i>
9	co	<i>Cola. coli, comel, corak, cocok</i>
10	cu	<i>Cuba, cucu, cuci, cuka, cuma</i>
11	da	<i>Dadu, dahi, daki, dana, daya</i>
12	de	<i>Debu, desa, demi, dewa, dewi</i>
13	di	<i>Diri, dini, dinar, dilema, dikir</i>
14	do	<i>Dobi, dosa, domino, donat, dolar</i>
15	du	<i>Duda, duga, duka, duku, duta</i>
16	fa	<i>Fana, fasa, fakir, faham, fasal</i>
17	fe	<i>Feri, fenologi,, fenomena, ferum, fenol</i>
18	fi	<i>Filem, fizik, fizikal, fikah, fikir</i>
19	fo	<i>Fokus, fobia, folio, forum, fosil</i>
20	fu	<i>fuli, furuk, fungsi, fusta, furlong</i>

VII. RESEARCH SAMPLE

A total of 20 critical students were chosen as the sample for the study. Of the 20 samples of the study, 10 were selected for experimental group while 10 were in the control group.

VIII. DISCUSSION

The study was conducted on two groups of students, namely experimental group and control group. Prior to implementing the inverted pyramid approach, the researcher conducted pre-test for both groups. In pre-test, students were asked to read the 100 words listed in Table 1. After pre-test, the researcher took 20 days to teach reading skills to the experimental group students using the inverted pyramid approach. Researcher taught as many as five words each day for 20 days. Pre-test results for experimental groups and control groups are shown in Table 2 and Table 3. Pre-test and post-test results are shown in Table 2 and Table 3 for further discussion.

PRE-TEST

Pre-test for experimental group and control group is shown in Tables 2 and Table 3.

EXPERIMENTAL GROUP

Table 2. Experimental group's pre-test result

Students Words	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total
ba x 5 words	3	2	1	2	2	1	3	2	1	2	19
be	2	1	2	1	1	0	2	2	0	1	12
bi	2	2	1	2	2	1	1	2	1	1	15
bo	2	2	2	1	2	0	2	1	2	1	15
bu	3	2	2	2	2	2	2	2	2	2	21
ca	3	2	1	1	1	1	2	2	2	1	16
ce	2	2	1	1	2	1	1	2	1	1	14
ci	2	1	2	1	2	1	2	1	1	1	14
co	2	1	1	1	2	0	2	1	0	1	11
cu	3	2	1	2	2	1	2	2	1	2	18
da	3	2	2	1	2	1	3	2	1	1	18
de	2	2	1	2	2	1	2	1	1	1	15
di	2	1	1	2	1	1	2	1	1	2	14
do	2	2	1	1	1	0	1	1	0	1	10
du	3	2	2	2	2	1	3	2	1	1	19
fa	1	1	0	1	1	0	1	1	0	1	7
fe	1	1	1	1	1	1	1	1	0	1	9
fi	1	1	0	0	1	0	1	0	0	0	4
fo	1	1	0	1	1	0	1	0	0	0	5
fu	1	1	1	1	1	0	1	1	0	0	7
Total	41	31	23	26	31	13	35	27	15	21	263

A total of 10 students were involved in experimental group. On average, experimental group students only mastered 26.3% of the words given. This shows that experimental group students are very weak in reading skills in Malay language.

CONTROL GROUP

Table 3. Control group's pre-test result

Students Words	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total
Ba x words	2	1	3	2	3	2	2	3	2	2	22
be	1	1	2	1	1	1	2	1	2	1	13

bi	2	2	1	2	2	1	1	2	1	2	16
bo	2	2	2	1	2	1	2	2	2	1	17
bu	1	1	2	2	3	2	2	3	2	2	20
ca	2	2	2	2	2	3	2	2	2	2	21
ce	2	2	1	2	2	1	1	2	1	1	15
ci	2	1	2	1	2	1	2	1	1	2	15
co	2	1	1	1	1	0	2	1	2	1	12
cu	2	2	1	2	2	1	2	2	1	2	17
da	2	2	3	1	2	1	2	3	1	1	18
de	2	2	1	2	2	1	2	1	1	2	16
di	2	1	1	2	1	1	2	1	1	2	14
do	2	1	1	1	1	1	1	1	1	1	11
du	2	2	2	3	3	2	2	2	1	2	21
fa	1	0	1	1	0	0	1	1	0	2	7
fe	1	1	1	1	1	1	0	1	0	1	8
fi	1	0	1	0	1	0	1	0	1	1	6
fo	0	1	1	0	0	0	0	1	0	0	3
fu	0	1	1	1	1	0	1	1	0	1	7
Total	31	26	30	28	32	20	30	31	22	29	279

A total of 10 students were involved in the control group. On average, the control group student only controls 27.9% of the words given. It also shows that experimental group students and control group students have the same level of mastery in reading skills in Malay language. The pre-test results for both experimental and control groups are shown in Figure 1 and Figure 2.

Figure 1. Pre-test result of Experimental and Control groups

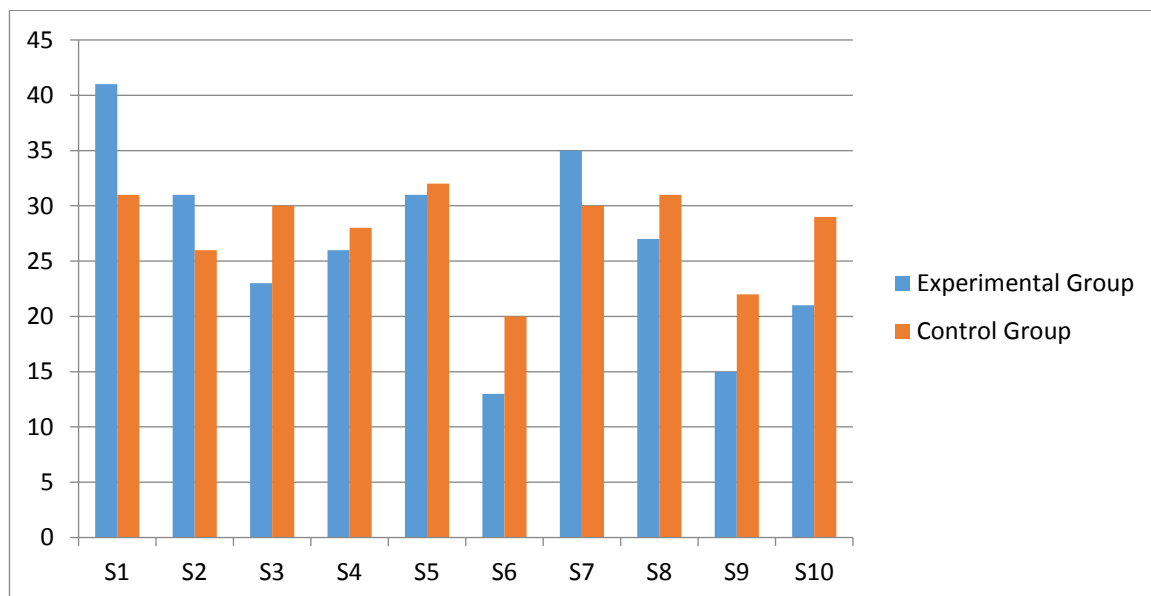
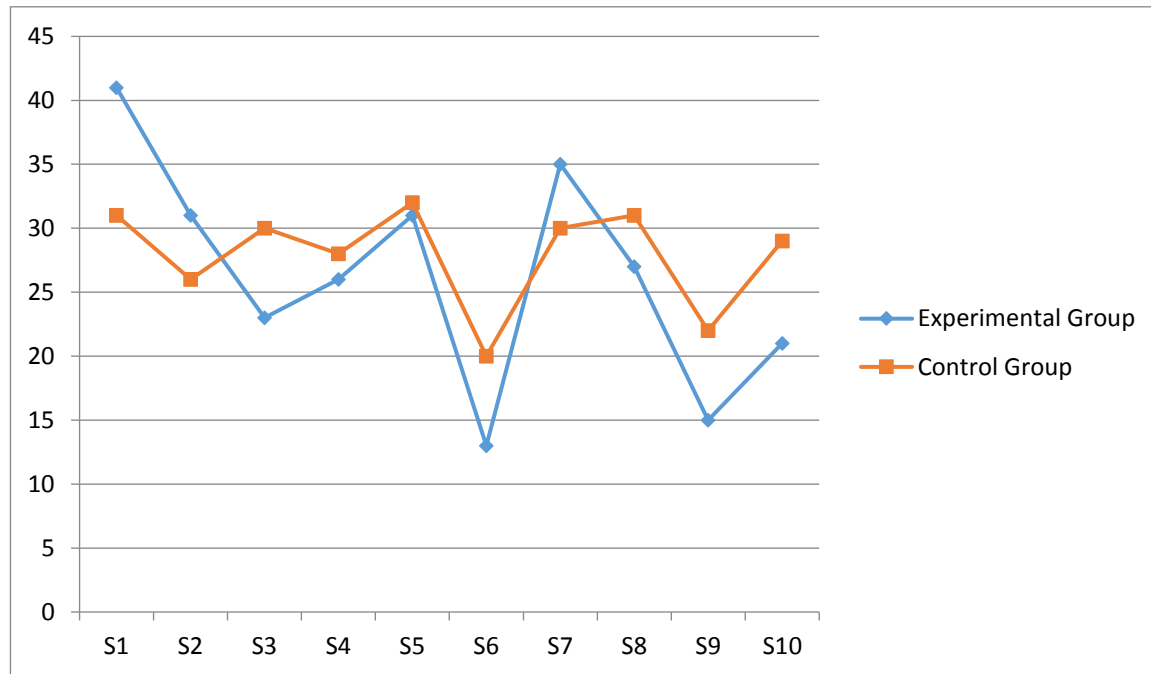


Figure 2. Pre-test result of Experimental and Control group



ACTIVITIES FOR EXPERIMENTAL GROUP

After pre-test, the researcher conducted 20 days reading activity for experimental group students. Every day, researcher only taught as many as five words as listed in Table 1. Almost all of these words were selected from the KV-KV syllable except for words from the KV-KVK syllable pattern. Almost all words were selected from the KV-KV syllable as it was easy to read. In this inverted pyramid approach, ‘simple to complex’ principle was implemented. Additionally, students needed to develop this skill at a minimal level so students can easily master the skills. When critical students master the minimum skills, their confidence will increase. High confidence will help students to continue to master the following skills. This will create an opportunity for critical students to master the reading skills.

POST-TEST

After teaching for 20 days, the researcher conducted a post-test on both of these groups. Post test results for experimental groups and control group are shown in Table 4 and Table 5. The results are tabulated in Table 5 and Table 6.

EXPERIMENTAL GROUP

Table 4. Experimental group’s post-test result

Students Words	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total
ba x 5 words	5	5	5	5	5	5	5	5	5	5	50
be	5	5	5	5	5	5	5	5	5	5	50
bi	5	5	5	5	5	5	5	5	5	5	50
bo	5	5	5	5	5	5	5	5	5	5	50
bu	5	5	5	5	5	5	5	5	5	5	50
ca	5	5	5	5	5	5	5	5	5	5	50

ce	5	5	5	5	5	4	5	5	4	4	47
ci	5	5	5	5	5	5	4	5	5	4	48
co	5	5	5	5	5	4	5	5	5	5	49
cu	5	5	5	5	5	5	5	5	5	5	50
da	5	5	5	5	5	5	5	5	5	5	50
de	5	5	5	5	5	5	5	4	5	5	49
di	5	5	5	5	5	5	5	5	4	4	48
do	5	5	5	5	4	5	5	5	4	5	48
du	5	5	5	5	5	5	5	5	5	5	50
fa	5	5	5	5	5	4	5	5	5	5	49
fe	5	5	5	5	5	4	5	5	4	5	48
fi	5	5	5	5	5	5	5	5	4	4	48
fo	5	5	5	5	5	4	5	5	4	4	47
fu	5	5	5	5	5	4	5	5	4	5	48
Total	100	100	100	100	99	94	99	99	93	95	979

A total of 10 students were involved in experimental group. On average, experimental group students have mastered 97.9% of the words given. This shows that experimental group students have successfully mastered reading skills in Malay language through inverted pyramid approaches.

CONTROL GROUP

Table 5. Control group's post-test result

Students Words	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total
Bax 5 words	2	1	3	2	3	2	3	3	2	2	23
be	2	1	2	2	1	1	2	1	2	1	15
bi	2	2	1	2	2	1	1	2	1	2	16
bo	2	2	2	1	2	1	2	2	2	1	17
bu	2	1	2	2	3	2	3	3	2	2	22
ca	2	2	2	2	2	3	2	2	2	2	21
ce	2	2	1	2	2	1	1	2	1	1	15
ci	2	1	2	1	2	1	2	1	1	2	15
co	2	1	1	1	1	0	2	1	2	1	12
cu	2	2	1	2	2	1	2	2	1	2	17
da	2	2	3	2	2	1	2	3	1	1	19
de	2	2	1	2	2	1	2	1	1	2	16
di	2	1	1	2	1	1	2	1	1	2	14
do	2	1	1	1	1	1	1	1	1	1	11
du	2	2	2	2	3	2	2	2	1	2	20
fa	1	1	1	1	1	0	1	1	1	2	10
fe	1	1	1	1	1	1	1	1	0	1	9
fi	1	1	1	0	1	1	1	1	1	1	9
fo	0	1	0	0	1	0	0	1	0	0	3
fu	0	1	1	1	1	1	1	1	0	1	8
Total	33	28	29	29	34	22	33	32	23	29	292

Total of 10 students were involved in the control group. On average, the control group student only mastered 29.2% of the words given. This shows that there are not many changes in reading skills among students of the control group compared to the experimental group students. Post test results for both experimental and control groups are shown in Figure 3 and Figure 4.

Figure 3. Post-test result of Experimental and Control group

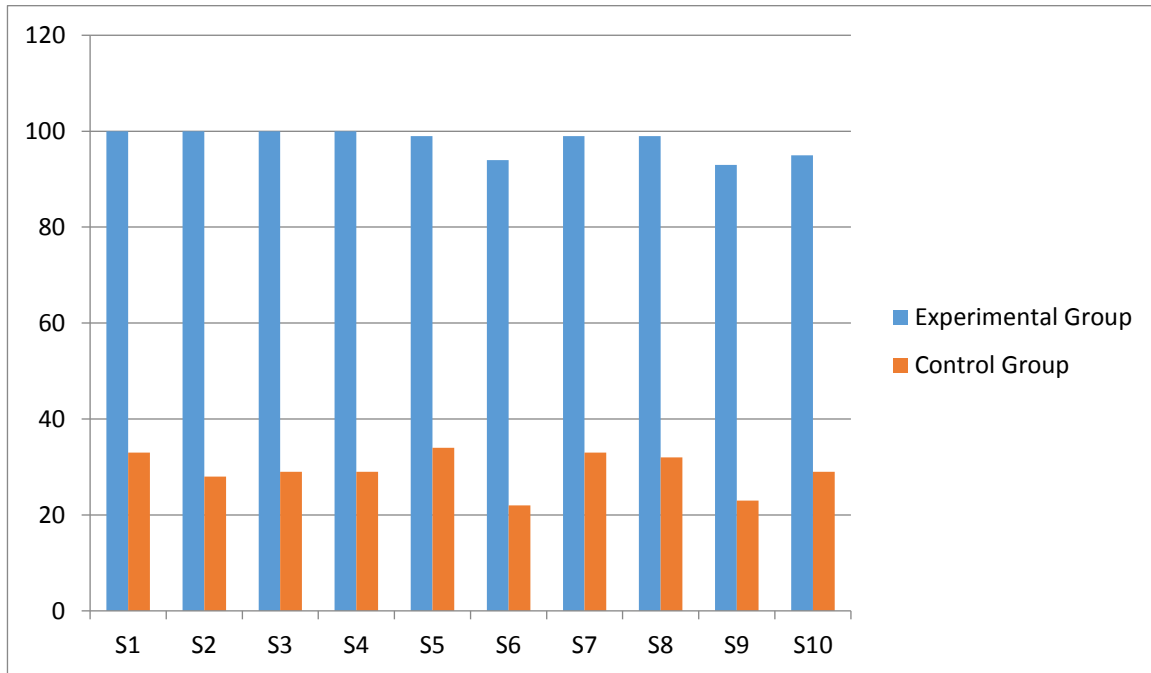
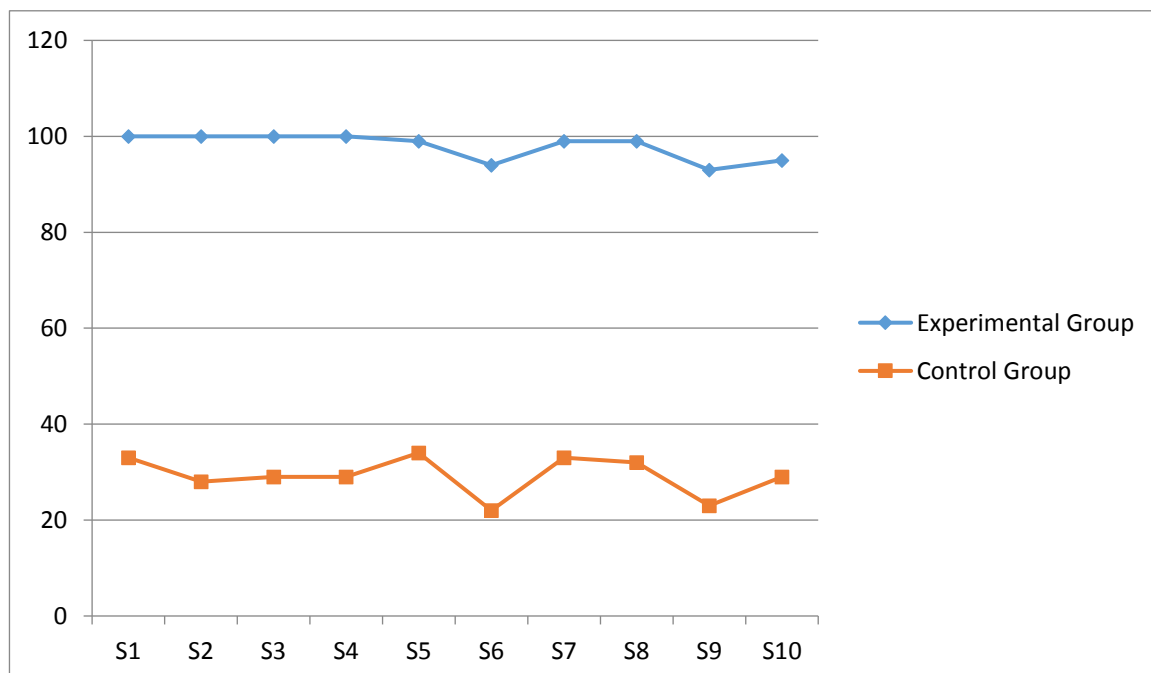


Figure 4. Post-test result of Experimental and Control group



The researcher used the inverted pyramid approach to teach reading skills amongst experimental group students after pre-test. This activity was carried out for 20 days. After that activity, the researcher conducted a post test for experimental group students as well as for control group students. The researcher found that the experimental group students had a high score of 979 (97.9%) compared to the control group students of 292 score (29.2%). In comparison, these post-test groups recorded a gap of 68.7%. Meanwhile, during pre-test, these two groups only recorded a gap of 1.6%. It is evident that the inverted pyramid approaches is effective in improving the reading skills of critical students and it achieves the objectives of this study.

IX. CONCLUSION

The study aims to improve reading skills in Malay language among Form One critical level students. Pre-test results show that the level of reading skills among the two groups is almost the same, while the post-test shows that there is a significant difference between experimental group students and control group students. The findings show that the inverted pyramid approach has improved the reading skills in Malay language among critical students. The researcher recommends using inverted pyramid approach to improve the reading skills of school students. This inverted pyramid approach not only is used to teach reading skills but also to teach all skills pertaining to all subjects.

X. LIMITATION AND STUDY FORWARD

This study is useful in teaching reading skills to critical level students by using inverted pyramid approach. This approach has improved reading skills among the Form One critical level students.

XI. ACKNOWLEDGEMENT

The author thanks the Sultan Idris University for allowing to attend a two-month attachment program in one of the secondary schools. While conducting attachment program the author conducted a study on critical students, who could not read the Malay language by using inverted pyramid approach. This attachment program has helped the author to produce this article.

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