ABSTRACT

THE EFFECT OF USING CLUSTERING TECHNIQUE ON THE STUDENTS ACHIEVEMENT IN WRITING RECOUNT TEXT

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This research was conducted to investigate the effect of using clustering techniques on the student achievement in writing recount text. Therefore, an experimental research was conducted to obtain the data, the population of this study were the first school year in the academic year 2019/2020 of SMA DHARMAWANGSA Medan which has two classes consisted of 80 students. They were taken as the sample. 40 students in the experimental group were taught using clustering techniques while the other 40 students in the control group were taught using free writing technique. Writing test was used to acquire to obtain data. The result the data analyzing indicated that there is a large effect of using clustering technique on the students' achievement in writing recount text since the result $t_{observed} > t_{table}$ or 2.568 > 2.06. Thus, the null hypothesis is rejected while the alternate hypothesis is accepted. This the student who are taught using clustering technique could achieve better achievement than students who were taught rewriting technique. Result of data analyzing suggests that teachers should consider the use of clustering techniques in writing recount text to their students.

Keyword : Writing , Recount Text , Clustering Technique

CHAPTER I

INTRODUCTION

A. The Background of Study

English is the International language that used in the world. English is a tool for communicating with other people. In society life, language is crucial, because languages make relationship or experience and study. In Indonesian, foreign languages are very important. To face the era of globalization, people is cumpolsory to be able to speak English well, but it is not as easy as we know. English is the foreign language for Indonesian people where the first language is the local language that used in their daily life. English has the different form in structure, grammar and others than Indonesia language. So, it does not wonder if most Indonesian people especially students make mistake in using English either in writing or speaking languages themselves.

Nowadays, the government in Indonesia has set a new curriculum that is curriculum 2013. Curriculum 2013 is an operational curriculum that is compiled and carried out by each educational unit to be character education. The objective of curriculum 2013 in English subject is that students must have communicative and active competence in five skills; the skills are observing ,asking, exploration, associating, and communicating.

Knowledge, to high ranks. Allah is informed of all what you do in learning English, reading and writing. Here, especially in teaching writing to the students sometimes they get trouble. Weaver (1957:3) said" what to write about is often the first problem of a students". A short reflection should convince the students' that they think about many things and a solutions to problem will be found partly a least in an examination of what he already has in mind. Students in writing essay forces two main tasks : a) generate ideas in language and language b) organize their ideas into a writing structure. Oshima and Houge (1981 :5) also stated "writing is not easy for students because of they want to write something thet have to master the vocabulary, spelling, grammar, functions, word choice, approriate content suitable for readers topic and occasion. From the explanation above, it means that before we can write well we should be able to major writing skills because it is the way to find out the idea, organizing and developing idea, and publishing structures sentences to write in a paragraph.

Students often have trouble of getting started writing because they are confused about what to say even the first sentence to write, perhaps they do not know well about the the topic

they have to write about or they fell puzzled to express the ideas into writing. That is why develop writing skills, attention should be paid to the process rather in product.

Writing the process of transforming thoughts into written communication and it will be difficult for the students to develop their idea of what to write. Writing activity needs time and process, according to Kenny (2001:2) they are five stated, those are pre writing, planning, drafting, revising and finishing. There are several methods of pre writing which can be used to help us in writing, namely dramatizing the subject, clustering, brainstorming, boomerang, free writing, etc. One kind of pre writing activities which will be proposed by the researcher was clustering technique. Spack (1984: 656) also assert that pre writing technique teaches students to write down their ideas quickly in raw form, without undue concern about errors and form. The researcher offered clustering technique to help students avoid vague statements, repetition of ideas and help produce naturally flowing text. Students should realize that an effective paragraph contains a good topic sentence that introduces what the topic is a about and the purpose of the paragraph in a text.

The researcher here had a great will to investigate and generate the students to write their ideas in writing recount text by using clustering technique. By using technique, the researcher would ask them generate and define an idea so that they could decide whether it was worth considering for the draft they wanted to write by writing recount text. The students are encouraged get ideas flowing freely, build and improve the previous ideas. This technique was expected to be a good solution for the students to narrow a topic make the students able to write recount text through their ideas.

Students' motivation can be increased and stimulated through the technique of teaching writing used by teacher. That was why here the researcher used the technique which is called clustering technique which can encourage the students' thinking creativity. Through the explanation above, the researcher tried to investigate the effect of clustering technique on the students' achievement in writing recount text.

B. The Identification of the Problem

1. The effects of using Clustering technique recount text
2. Clustering Technique was able to improve students' achievement in writing recount text.

C. Scope and Limitation

The study of had a scope effects of using Clustering technique achievement in writing recount text. researcher focused on the students' writing ability. In this case, the researcher limited it writing recount text on first year students of SMA DHARMAWANGSA Medan. The materials which would be tasted materials which the students have learned.

D. The Formulation of the Problem

a. Was effect of using Clustering technique on the students' achievement in writing recount text ?
b. Was clustering technique able to increase the students' achievement in recount text?

E. The Objective of the Study

a. To find out the effects of using Clustering technique on the students' achievement in writing recount text.
b. To find out whether clustering technique was able to increase the students' achievement recount text.

F. The Significance of the study

a. It is useful for the students to increase their knowledge in learning writing, and also motivate them to be better in writing in order to achieve better master English
b. The teachers, it will provide the English teachers an alternative technique to apply clustering technique in the classroom in teaching English
c. The readers, to get the information and give alternative way in teaching and

learning writing

CHAPTER II

RESEARCH METHOD

A. Location

The research was conducted at SMA DHARMAWANGSA Medan 2019/2020. The reason of choosen this school was accessible in terms of time, the amount of students that was suitable to be sample for this research, and students have problem in writing.

B. Population and Sample

In this study the writers choose the first grade students of SMA DHARMAWANGSA Medan 2019/2020 consisted of two classes namely X-1, X-2. The population consisted of 80 students. Total population the study can be seen below:

Table II Population

Number	Class	Population
1	X-1	40
2	X-2	40
Total		80

The technique for taking the sample by using lottery technique used to draw representative sample. It was decided in taking two classes slips then were taken out of the container randomly one by one until two classes gained. One of the two classes is determine to be experimental group (X-1) and other class as the control group (X-2).

C. Research Design

The design of this research is experimental research. This research was conducted in two groups, which are experimental group and the control group. These are treatment. The design can be figured as following:

Table I

The Research Design

Group	Pre-test	Treatment	Post-test
Experimental	√	×	√
Control	√	√	√

Note × : The experimental is the sample clustering technique

D. The Procedure of the Teaching

1. Pre-Test

The pre-test is given to measure of students before applying the treatment. The function of the pre-test is to know the average score of the experimental group and the control group who received the treatment.

2. Treatment

The treatment given after the first test of pre-test. The experimental group oriented to the Clustering Technique. This was done as following :

1. Explanation about recount text
2. Explanation about Clustering Technique and the rules form
3. An example of recount text which construct by using Clustering Technique
4. Discuss the example
5. Exercise of recount text using Clustering Technique.

For the control group, researcher used different treatment. The following will be the steps:

1. Researcher asked the students to make recount text based on the topic.
2. Researcher will give post test (10 minutes) to finish writing.
3. The researcher will collect their writing and assign by the teacher.

3.Post-test

The function of the post-test is to know the mean score applied, to know the effect of teaching in both classes. The post-test is same with pre-test.

E. Instrument for Collecting the Data

The data of this study is collecting by using a writing test. The test is about writing test. In this study the media uses to collect the data is recount text. The writer were asked to write recount text. Cumulative score ranged from 0 – 100.

Scoring of Writing Test

According to Jacobes, et all (1983:140) states that the ability to write involves at five components skills. They are:

1. Content

The ability to develop written substance the idea expressed. The scale level for this criteria is 1-30 out of 100. The details shown below:

Table III

The Content Descriptors in Writing Test

Level	Descriptors
30-27	Excellent : Knowledge; substantive; through development of topic- relevant to assigned topic
26-22	Good : some knowledge of subject; adequate range; limited topic development; mostly relevant to the topic, but less detail.
21-17	Poor : Limited knowledge subject; small subtance, inadequate element.
16-13	Very poor : does not indicate subject knowledge ; not-substantive; irrelevant or not evaluating.

Table III shows the content descriptors in a writing test. The criteria include the score and labeling of the students' performance. The scores range from 30-27 it means "excellent " or when the ideas express substantive, through the development of thesis; relevant to assigned topic. 26-22 indicates "good "; knowledges ; less detail. 21-17 indicates "Poor"; small substance; element. 16-13 indicates "very poor": does not indicate subject knowledge; ; irrelevant or evaluating.

1. Organization

The ability to organize written work according to convention English rules includes the order

and selection of material. The scale level 1-20 out of 100. The details are shown below:

Table IV

The Organization Descriptors in Writing Test

Level	Descriptors
20 -18	Excellent : fluent expression; ideas are clearly stated/ supported, summary, well-arranged, sequencing words ,solidarity.
17 - 14	Good : some what choppy, freely arranged but main idea stand out; limited support; logical but incomplete arranging
13 - 10	poor : disconnect
9 - 7	Very poor : not arrangement; or evaluating.

Table IV shows the organization descriptors in a writing test. The criteria include the score and labeling of the students' performance. The score ranges from 20 – 18 (Excellent : fluent expression; ideas are clearly stated/ supported; summary; well-arranged; sequencing words; solidarity). 17 – 14 (Good : some what choppy; freely arranged but main ideas stand out; limited support; logical but incomplete arranging). 13 – 10 (poor : non-fluent; ideas confused or disconnect; lacks logical sequencing and development). 9-7 (Very poor: not communicate; no arrangement; or no evaluating).

2. Vocabulary

The meaning of vocabulary here is the ability to choose the correct words and used appropriately.

The scale level for this criterion is 1- 3 out of 100. The details shown below:

Table V

The Vocabulary Descriptors in Writing Test

Level	Descriptors
20-18	Excellent : choice of words or idioms that are effective in usage; word mastery form; the approriate list.
17-14	Good : mistake words/ idioms form choice , usage but meaning is not obscured
13-10	Poor : limited range; often : mistake in word/idiom, choice, usage confused or unclear meaning
9-7	Very Poor : lack vocabulary, idiom, words form, or not enough to evaluate

Table V shows the vocabulary descriptors in a writing test. The criteria include the score and labeling of the students' performance. The score ranges from 20-18 (Excellent :choice of words or idioms that are effective in usage, word mastery form). 17-14 (Good : mistake of word/idiom, form choice, usage but meaning is not obscured). 9-7 (Very Poor : lack vocabulary, idiom words).

3. Use of Language

The ability to write English in gramatically correct sentences. The scale level for this criterion is 1-25 out of 100. The details shown below:

Level	Descriptors
25-22	Excellent : effective to construction; little mistakes of agreement, tense, , word/function, articles, pronouns, preposition
21-18	Good : effective but simple construction minor problems in complex construction; several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions, but meaning seldom

	Obscured
17-11	Poor : Major problems in simple/complex construction ; frequent of errors of negation, agreement, tense, number, word, order/function,articles,pronouns,preposition and/or fragments, runons, deletions,meaning confused or obscured.
10-5	Very Poor : virually no mastery of sentences constructions rule; dominated by errors ;does not communicate; or not enough to evaluate.

Table VI shows the language use descriptors in a writing test. The criteria include the score and labeling of the students' performance. The score ranges from 25-22 (Excellent to Very Good : Effective complex construction, few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions). 21-18 (Good to Average: effective but simple construction minor problems in complex construction; several errors of agreement, tense, number, word order/function, articles, pronouns, preposition, but meaning seldom obscured). 17-11 (Fair to Poor : Major problems in simple/complex construction; frequent of errors of negation, agreement, tense, number, word, order/function, articles, pronouns, preposition and/or fragments, run-ons, deletions, meaning confused or abscured. 10-5 (Very Poor : virtually no mastery of sentences construction rule ; dominated by errrors ; does not communicate; or not enough to evaluate.

A. The Technique of Analyzing the Data

The data analyzing is used to find result of the study, whether calculated using linear regression formula. The following procedures are applied to analyze the data:

1. Rate samples answer

2. Listing their scores in two score tables, first for the experimental group scores as variable X, control group as variable Y.
3. Measuring the different scores between pre test and post test.
4. Determining the linear regression equation using a formula : $\hat{Y} = a+b$

   Where a and b is getting by $a = \frac{(\sum Y_i)(\sum X_i^2)-(\sum X_i)(\sum X_i Y_i)}{N\sum X_i^2-(\sum X_i)^2}$

   $b = \frac{n(\sum X_i Y_i)-(\sum X_i)(\sum Y_i)}{n(\sum X_i^2)-(\sum X_i)^2}$

5. Determining coeficient r^2 by formulation:

   Sudjana (2002:370)

   $r^2 = \frac{b\{\sum xy-(\sum X)(\sum Y)\}}{n\sum y^2-(\sum y)^2}$

6. Examining the statistical hypothesis
   Ha:P # 0 : the Clustering technique significantly affects on recount text.
   Ho:P = 0 :the Clustering technique does not significantly affect on recount text.

   By using statistic t formulation:

   Sudjana (2002:380) $T_{observed} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$
7. Determine the percentage effect of variable X towards variable Y
   Using determination formulation:

   $D = r^2 \times 100\%$ where $r^2 = \frac{b\{n\sum xy-(\sum X)(\sum Y)\}}{n\sum y^2-(\sum y)^2}$

CHAPTER III

DATA AND DATA ANALYSIS

A. Data Collection

The following tables VII and VIII are the scores in answering the test in both stages of the testing, pretest and post-test for experimental and control group.

Table VII

The scores of Pre-Test and Post-Test of Experimental Group

No	Student's Initial Name	Pre-test T1	Post-test T2
1	AW	75	82
2	AAF	70	78
3	AP	75	80
4	APA	78	86
5	AH	80	88
6	BP	72	79
7	BR	70	88
8	DS	60	70
9	DA	68	77
10	FH	60	70
11	FR	85	90
12	FA	80	90
13	GA	76	80
14	HS	82	90
15	KFZ	70	80
16	LR	73	80
17	MAP	85	90
18	MADC	78	84
19	MPR	78	80
20	MSRD	67	75

21	NAM	63	70
22	NZA	78	83
23	NH	70	75
24	RA	68	76
25	RI	80	90
26	S	76	83
27	SR	80	85
28	TPI	60	72
29	WS	73	78
30	YP	83	88
31	TA	60	70
32	TNA	80	87
33	WPA	75	79
34	YP	68	75
35	APS	78	85
36	DA	83	90
37	VS	70	80
38	SAL	70	77
39	SYP	80	87
40	TW	68	74
TOTAL		$\sum \boldsymbol{T1} = \mathbf{2945}$	$\sum \boldsymbol{T2} = \mathbf{3241}$

The table above shows the total scores of pre-test and post test control group is shown below:

Table VIII

The scores of Pre-Test and Post-Test of Control Group

No	Student's Initial Name	Pre-test T1	Post-test T2
1	APH	70	72
2	ASS	78	82
3	ADT	70	73
4	ANAL	70	78
5	ARS	80	87
6	AA	65	70
7	DA	75	80
8	DR	70	78
9	DP	80	87
10	F	78	80
11	FE	75	85
12	GP	85	90
13	HH	74	76
14	JPP	78	80
15	JUP	70	72
16	MSA	75	80
17	MB	70	78
18	MFAP	70	75
19	MNP	76	80
20	MR	75	78
21	NP	60	65
22	NAT	65	68
23	NI	80	86
24	NSR	74	80
25	OR	65	70

26	PS	80	85
27	RFS	75	78
28	RA	78	83
29	RAO	60	63
30	TDC	80	87
31	TAN	65	65
32	WPZ	67	70
33	UHN	65	65
34	WH	80	82
35	YS	73	77
36	Z	83	85
37	MRA	70	74
38	AA	60	63
39	NH	60	65
40	MIS	67	70
TOTAL		$\sum T\mathbf{1}$ 2891	$\sum T\mathbf{2}$ 3062

B. Data Analysis

Based on the tables VII and VIII above, the following tables IX shows the significant scores of pre-test and post-test in the experiment group

Table IX

Table VII
The scores of Pre-Test and Post-Test of Experimental Group

No	Student's Initial Name	Pre-test T1	Post-test T2
1	AW	75	82
2	AAF	70	78
3	AP	75	80
4	APA	78	86
5	AH	80	88
6	BP	72	79
7	BR	70	88
8	DS	60	70
9	DA	68	77
10	FH	60	70
11	FR	85	90
12	FA	80	90
13	GA	76	80
14	HS	82	90
15	KFZ	70	80
16	LR	73	80
17	MAP	85	90
18	MADC	78	84
19	MPR	78	80
20	MSRD	67	75
21	NAM	63	70
22	NZA	78	83
23	NH	70	75
24	RA	68	76
25	RI	80	90
26	S	76	83
27	SR	80	85
28	TPI	60	72
29	WS	73	78
30	YP	83	88
31	TA	60	70
32	TNA	80	87

33	WPA	75	79
34	YP	68	75
35	APS	78	85
36	DA	83	90
37	VS	70	80
38	SAL	70	77
39	SYP	80	87
40	TW	68	74
TOTAL		$\sum T_1 = 2945$	$\sum T_2 = 3241$

The table above shows the total scores of pre-test and post test control group is shown below:

Table VIII
The scores of Pre-Test and Post-Test of Control Group

No	Student's Initial Name	Pre-test T_1	Post-test T_2
1	APH	70	72
2	ASS	78	82
3	ADT	70	73
4	ANAL	70	78
5	ARS	80	87
6	AA	65	70
7	DA	75	80
8	DR	70	78
9	DP	80	87
10	F	78	80
11	FE	75	85
12	GP	85	90
13	HH	74	76
14	JPP	78	80
15	JUP	70	72
16	MSA	75	80
17	MB	70	78
18	MFAP	70	75
19	MNP	76	80
20	MR	75	78
21	NP	60	65
22	NAT	65	68
23	NI	80	86
24	NSR	74	80
25	OR	65	70
26	PS	80	85
27	RFS	75	78
28	RA	78	83
29	RAO	60	63
30	TDC	80	87
31	TAN	65	65
32	WPZ	67	70
33	UHN	65	65

34	WH	80	82
35	YS	73	77
36	Z	83	85
37	MRA	70	74
38	AA	60	63
39	NH	60	65
40	MIS	67	70
TOTAL		$\sum T_1$ 2891	$\sum T_2$ 3062

A. Data Analysis

Based on the tables VII and VIII above, the following tables IX shows the significant scores of pre-test and post-test in the experiment group

Table IX

The different scores between Pre-Test and Post-Test of the Experimental Group

No	Student's Initial Name	T_1	T_1^2	T_2	T_2^2	(T_2-T_1)
1	AW	75	5625	82	6724	7
2	AAF	70	4900	78	6084	8
3	AP	75	5625	80	6400	5
4	APA	78	6084	86	7396	8
5	AH	80	6400	88	7744	8
6	BP	72	5184	79	6241	7
7	BR	70	4900	88	7744	18
8	DS	60	3600	70	4900	10
9	DA	68	4624	77	5929	9
10	FH	60	3600	70	4900	10
11	FR	85	7225	90	8100	5
12	FA	80	6400	90	8100	10
13	GA	76	5776	80	6400	4
14	HS	82	6724	90	8100	8
15	KFZ	70	4900	80	6400	10
16	LR	73	5329	80	6400	7
17	MAP	85	7225	90	8100	5
18	MADC	78	6084	84	7056	6
19	MPR	78	6084	80	6400	2
20	MSRD	67	4489	75	5625	8
21	NAM	63	3969	70	4900	7
22	NZA	78	6084	83	6889	5
23	NH	70	4900	75	5625	5
24	RA	68	4624	76	5776	8
25	RI	80	6400	90	8100	10

26	S	76	5776	83	6889	7
27	SR	80	6400	85	7225	5
28	TPI	60	3600	72	5184	12
29	WS	73	5329	78	6084	5
30	YP	83	6889	88	7744	5
31	TA	60	3600	70	4900	10
32	TNA	80	6400	87	7569	7
33	WPA	75	5625	79	6241	4
34	YP	68	4624	75	5625	7
35	APS	78	6084	85	7225	7
36	DA	83	6889	90	8100	7
37	VS	83	6889	80	6400	10
38	SAL	70	4900	77	5929	7
39	SYP	80	6400	87	7569	7
40	TW	68	4624	74	5476	6
TOTAL		$\sum T_1 = 2945$	$\sum T_1^2 = 218795$	$\sum T_2 = 3241$	$\sum T_2^2 = 264193$	$\sum(T_2\text{-}T_1) = 296$

The table IX above,show that mean scores and standard deviation in the pre-test and post-test in the experimental group are calculated as follow:

1. Pre – test to post-test calculation in the experimental group

   a. Mean

$$(M_1(T_2 - T_1) = \frac{\sum(T_2 - T_1)}{N_1}$$

$$= \frac{296}{40} = 7.4$$

   b. Standard deviation(SD)

$$SD_1 = \sqrt{\frac{\sum(T_2 - T_1)^2}{N}}$$

$$= \sqrt{\frac{87616}{40}}$$

$$= \sqrt{21904} = 148$$

2. Pre-test calculation in the experimental group

   a. Mean

$$MT_1 = \frac{\sum T_1}{N}$$

$$= \frac{2945}{40} = 72.625$$

   b. Variances

$$s^2 = \sum T_1^2 - \frac{(\sum T_1)^2}{N}$$

$$= 218795 - \frac{(2945)^2}{40}$$

$$=218795 - \frac{8673025}{40}$$

$$= 218795 - 216825.625$$

$$=1969.375$$

$$S = \sqrt{1969.375} = 44.377$$

c. Standard deviation

$$SD = \sqrt{\frac{\sum T^2}{N}} \frac{1}{}$$

$$=\sqrt{\frac{218795}{40}}$$

$$=\sqrt{5469.875}$$

$$=73.958$$

3. Post- test calculation in the experimental group

a. Mean

$$MT_2 = \frac{\sum T_2}{N}$$

$$= \frac{3241}{40} \quad =81.025$$

b. Variances

$$s^2 = \sum T_2^2 - \frac{(\sum T_2)^2}{N}$$

$$= 264193 - \frac{(3241)^2}{40}$$

$$= 264193 - \frac{10504081}{40}$$

$$=264193 - 262602.025 = 1590.975$$

$$S = \sqrt{1590.975}$$

$$= 39.887$$

c. Standard deviation

$$SD = \sqrt{\frac{\sum T^2}{N}} \frac{2}{} = \sqrt{\frac{264193}{40}}$$

$$=\sqrt{6604.825} \qquad = 81.270$$

Table X

The different Scores Between Pre-Test and Post-Test of the Control Group

No	Students' Initial Name	T_1	T_1^2	T_2	T_2^2	(T_2-T_1)
1	APH	70	4900	72	5184	2
2	ASS	78	6084	82	6724	4
3	ADT	70	4900	73	5329	3
4	ANAL	70	4900	78	6084	8
5	ARS	80	6400	87	7569	7
6	AA	65	4225	70	4900	5
7	DA	75	5625	80	6400	5
8	DR	70	4900	78	6084	8
9	DP	80	6400	87	7569	7
10	F	78	6084	80	6400	2
11	FE	75	5625	85	7225	10
12	GP	85	7225	90	8100	5
13	HH	74	5476	76	5776	2
14	JPP	78	6084	80	6400	2
15	JUP	70	4900	72	5184	2
16	MSA	75	5625	80	6400	5
17	MB	70	4900	78	6084	8
18	MFAP	70	4900	75	5625	5
19	MNP	76	5776	80	6400	4
20	MR	75	5625	78	6084	3
21	NP	60	3600	65	4225	5
22	NAT	65	4225	68	4624	3
23	NI	80	6400	86	7396	6
24	NSR	74	5476	80	6400	6
25	OR	65	4225	70	4900	5
26	PS	80	6400	85	7225	5
27	RFS	75	5625	78	6084	3
28	RA	78	6084	83	6889	5
29	RAO	60	3600	63	3969	3
30	TDC	80	6400	87	7569	7
31	TAN	65	4225	65	4225	0
32	WPZ	67	4489	70	4900	3
33	UHN	65	4225	65	4225	0
34	WH	80	6400	82	6724	2
35	YS	73	5329	77	5929	4
36	Z	83	6889	85	7225	2
37	MRA	70	4900	74	5476	4
38	AA	60	3600	63	3969	3
39	NH	60	3600	65	4225	5
40	MIS	67	4489	70	4900	3
TOTAL		$\sum T_1 =$ 2891	$\sum T_1^2 =$ 210735	$\sum T_2 = 3062$	$\sum T_2^2 =$ 236600	$\sum(T_2 - T_1)$ = 171

The table X above, show that the mean scores and the standard deviation in the different scores betweeen are calculated as follow :

1. Pre-test and post-test calculation in the control group is:

a. Mean

$$(M_1(T_2–T_1) = \frac{\sum(T_2–T_1)}{N_1}$$

$$= \frac{171}{40} = 4.275$$

b. Standard deviation

$$SD_1 = \sqrt{\frac{\sum T_2–T_1)^2}{N}}$$

$$=\sqrt{\frac{(171)^2}{40}}$$

$$=\sqrt{\frac{29241}{40}}$$

$$=\sqrt{731.025}$$

$$= 27.037$$

2. Pre-test calculation in the control group

a. Mean

$$MT_1 = \frac{\sum T_1}{N}$$

$$= \frac{2891}{40} = 72.275$$

b. Variances

$$s^2 = \sum T_1^2 - \frac{(\sum T_1)^2}{N}$$

$$=210735 \frac{(2891)^2}{40}$$

-

$$=210735 - \frac{8357881}{40}$$

$$= 210735 – 208947.025$$

$$= 1787.975$$

$$S = \sqrt{1787.975} = 42.284$$

c. Standard deviation $SD = \sqrt{\frac{\sum T^2}{N} - \frac{1}{}} = \sqrt{\frac{210735}{40}} = \sqrt{5268.375} = 72.583$

3. Post- test calculation in the control group
   a. Mean

$$MT_2 = \frac{\sum T_2}{N}$$

$$= \frac{3062}{40} = 76.55$$

   b. Variances

$$s^2 = \sum T_2^2 = \left(\sum \frac{T_2^2}{N}\right)$$

$$= 236600 - \frac{(3062)^2}{40}$$

$$= 236600 - \frac{9375844}{40}$$

$$= 236600 - 234396.1 = 2203.9$$

$$S = \sqrt{2203.9}$$

$$= 46.945$$

   c. Standard deviation

$$SD = \sqrt{\frac{\sum T^2}{N}}^2$$

$$= \sqrt{\frac{236600}{40}}$$

$$= \sqrt{5915} = 76.909$$

Table XI

The Calculation Table

No	X	Y	X^2	Y^2	XY
1	82	72	6724	5184	5904
2	78	82	6084	6724	6396
3	80	73	6400	5329	5840
4	86	78	7396	6084	6708
5	88	87	7744	7569	7656
6	79	70	6241	4900	5530
7	88	80	7744	6400	7040
8	70	78	4900	6084	5460

9	77	87	5929	7569	6699
10	70	80	4900	6400	5600
11	90	85	8100	7225	7650
12	90	90	8100	8100	8100
13	80	76	6400	5776	6080
14	90	80	8100	6400	7200
15	80	72	6400	5184	5760
16	80	80	6400	6400	6400
17	90	78	8100	6084	7020
18	84	75	7056	5625	6300
19	80	80	6400	6400	6400
20	75	78	5625	6084	5850
21	70	65	4900	4225	4550
22	83	68	6889	4624	5644
23	75	86	5625	7396	6450
24	76	80	5776	6400	6080
25	90	70	8100	4900	6300
26	83	85	6889	7225	7055
27	85	78	7225	6084	6630
28	72	83	5184	6889	5976
29	78	63	6084	3969	4914
30	88	87	7744	7569	7656
31	70	65	4900	4225	4550
32	87	70	7569	4900	6090
33	79	65	6241	4225	5135
34	75	82	5625	6724	6150
35	85	77	7225	5929	6545
36	90	85	8100	7225	7650
37	80	74	6400	5476	5920
38	77	63	5929	3969	4851
39	87	65	7569	4225	5655
40	74	70	5476	4900	5180
TOTAL	3241	3062	264193	236600	248574

1. Testing Hypothesis

a. The equation of linear regression

$\hat{Y} = a + bx$

$$a = \frac{(\sum Y_i)(\sum X_i^2) - (\sum X_i)(\sum X_i Y_i)}{n \sum X_i^2 - (\sum X_i)^2}$$

$$= \frac{(3062)(264193) - (3241)(248574)}{40(264193) - (3241)^2}$$

$$= \frac{808958966 - 805628334}{10567720 - 10504081}$$

$$= \frac{3330632}{63639}$$

$$= 52.336$$

$$b = \frac{n(\sum X_i Y_i) - (\sum X_i)(\sum Y_i)}{n(\sum X_i^2) - (\sum X_i)^2}$$

$$= \frac{40(248574) - (3241)(3062)}{40(264193) - (3241)^2}$$

$$= \frac{9942960 - 9923942}{10567720 - 10504081} = \frac{19018}{63639} = 0.298$$

$y = a+bx$

$= 52.336+0.298$

b. Coefficients r^2

$$r^2 = \frac{b\{n\sum xy-(\sum X)(\sum Y)\}}{n\sum y^2-(\sum y)^2}$$

$$= \frac{0.298\{40(248574)-(3241)(3062)\}}{40(236600)-(3062)^2}$$

$$= \frac{0.298\{9942960-9923942\}}{9464000-9375844}$$

$$= \frac{0.298(19018)}{88156} = \frac{5667.364}{88156}$$

$=0.064$

$r = \sqrt{0.064}$

$= 0.25$

c. Examining the statistical hypothesis

Ha : P≠O : The clustering technique significantly affect on the students achievement in writing recount text

Ho : P = O : There clustering technique does not significantly on the students' achievement in writing recount text

$$T_{observed} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$= \frac{0.25\sqrt{40-2}}{\sqrt{1-(0.064)}} = \frac{0.25\sqrt{38}}{\sqrt{0.936}}$$

$$= \frac{(0.25)(6.164)}{\sqrt{0.936}}$$

$$= \frac{(0.25)(6.164)}{0.967} = \frac{1.541}{0.967} = 1.593$$

The conclusion is since T_{table} 0,90 where dk = n – 2 dk = 40 – 2 = 38 then $t_{observed} > t_{table}$ or 1.593 > 1.31. so, Ho is rejected. It means that Ha is accepted "There is a significant effect of using clustering technique on the students' achievement in writing recount text".

d. Determine the percentage of the effect of variable X toward variable Y

$D = r^2 \times 100\%$

$= 0.064 \times 100\%$

$= 6.4\%$

$= 100\% - 6.4\%$

So X = 93.6%

So, the effect of variable X toward variable Y in the effect of using clustering technique on the students' achievement in writing recount text was 6.4% while 93.6% was influenced by other factors.

CHAPTER IV

CONCLUSIONS AND SUGGESTION

A. Conclusions

Based on the result of the analysis in the previous chapter, it can be concluded that the alternative hypotesis (H_a) is accepted and the null hypotesis is rejected (H_0). It can be seen that the result of $t_{observed}$ is 1.593 while the value of t_{table} in the significance is 1.31. Therefore the score of $t_{observed}$ is higher than t_{table} 1.593> 1.31. It means that there is significance effect of clustering technique in improving students writing recount text. Based on the result it can be drawn the conclusion that the teaching writing recount text can be taught by the use of clustering technique.

B. Suggestions

1. The students especially in SMA DHARMAWANGSA Medan should consider using clustering technique intensively to increase their achievement in writing.
2. The teachers of English it should be to use clustering technique as a method in teaching writing, so the students can enjoy and interesting to follow the lesson.
3. The readers general and students of English department in particular who are interested in writing especially recount text are suggested to have a read on this thesis.
4. The other researchers could consider observing this thesis in their orientation to make another research about the same topic.

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