

Effectiveness of Cooperative Learning on the Achievement and Motivation of the Student in Learning Malay Language

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How to cite this paper: Mahamod, Z., & Somasundram, B. (2017). Effectiveness of Cooperative Learning on the Achievement and Motivation of the Student in Learning Malay Language. *Creative Education*, 8, 2438-2454.

<https://doi.org/10.4236/ce.2017.815167>

Received: October 13, 2017

Accepted: December 17, 2017

Published: December 20, 2017

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Abstract

This study is a study that examines the effectiveness of cooperative learning towards students' achievement and motivation in learning Malay Language in one of the secondary school in Petaling Perdana District of Selangor. This study also examines students' perception towards cooperative learning. 60 students from 2 art classes were chosen to be the research samples. This study employs a quasi-experimental method consisting of two groups of respondent, 30 students for control group and 30 students for treatment group. Questionnaire was set as the main instruments to collect data from the sample regarding motivation and students' perception towards cooperative learning. Pre-test was conducted to test the students' achievement before treatment was administered and post-test later to test the efficiency of a given treatment. The data was analyzed using Statistical Package for Science Social (SPSS Version 21) to analysis the descriptive data. Descriptive statistics are used to find the mean, standard deviation, frequency, percentage and inferential statistic to find *t*-test to answer all hypotheses of the study. The findings show that the average mean for students perception in pre-test for treatment group are at medium level. Post-test for treatment group are at high level while for control group are at medium level. Students' motivation after post-test shows average mean for the treatment group and control group. Students' motivation showed a significant mean difference towards Malay Language between cooperative group and a traditional group. Besides, the findings also showed that students' perception from treatment group towards cooperative learning are at medium high level. Result of the study indicated that students give a positive respond towards the effectiveness of cooperative learning in schools. Thus, the result of this study is important to see the effectiveness of cooperative learning to improve achievement and students motivation. This will also give useful information to the involved parties such as the Ministry of Educa-

tion Malaysia (MOE) to assist the teachers to conduct a cooperative teaching especially in Malay Language subject.

Keywords

Cooperative Learning, Achievement, Motivation, Malay Language, Teaching and Learning

1. Introduction

Education in Malaysian school is originally intended to carry out teaching and learning (T & L) effectively. As such, the existence of the National Education Philosophy (FPK) also links the above purposes. The Federal Government of Malaysia has created an education foundation that should be given attention by educators. FPK is the first step in the national transformation of Malaysia. According to Keow (2009), education in Malaysia is an ongoing effort to expand the potential of individuals in a holistic and integrated way to create a balanced and harmonious person intellectually, spiritually, emotionally and physically based on faith and devotion to God. This effort is to produce Malaysian citizens who are knowledgeable and competent, honorable, responsible and capable of achieving personal wellbeing and contribute to the harmony and prosperity of the society and the country.

In facing global education and the realization of FPK, as well as empowering national schools in Malaysia through the Malaysian Education Development Master Plan (PIPP) 2006-2010, the Ministry of Education (MOE, 2006) has taken proactive measures. Meanwhile, teachers should be responsible for improving students' performance and producing students as a first class human capital in the future. Therefore, strategies and teaching methods should be creative and innovatively diversified by the teacher during the teaching and learning conducted in the classroom. Certainly learning can be smooth, attractive and effective for pupils, if teaching methods are varied and appropriate to the subject matter and according to the needs and abilities of the pupils is carried out by the teacher (Mohamad Johdi, 2007).

The foundation of the Philosophy of Language Education (FPB) is through FPK which needs to be incorporated into all levels. Activities or programs conducted in the name of education should be in accordance with the contents of the FPK, which is based on physical, emotional, spiritual and intellectual (JERI). According to Mohd Rashid & Abu Hassan (2010), the concept of JERI is an important pillar so that the basic principle of Philosophy of Language Theory is combined with diverse and effective language learning methods. Additionally JERI development through language teaching methodology is the basis of cognitive, effective and psychomotor skills. Consequently, teachers who appreciate the content of FPK will always take the initiative to change their personal attitudes positively through their view and the content of teaching when doing their work.

Through the appreciation of FPK, teachers will change the teaching techniques and strategies that are oriented to form and produce people who meet the core needs of FPK which is JERI to ensure that the T & L becomes more effective and engaging. All teachers are expected to choose the appropriate T & L strategies and technique in order to apply it in T & L processes. Consequently, excellence in achievement helps the students not only in the academic field but also help them to successfully survive their daily life. At the same time, the FPK can create harmonious and balanced human being and thus achieve the Vision 2020. Each student uses different ways to learn. However, applying various methods or strategies will enhance their knowledge and understanding in the learning process. The approach and method of teaching used by an educator, will certainly affect how the student learns.

Students are assumed to accept at least one of the methods implemented. This is because, if a teacher uses only one method of teaching, the student will become bored. According to Robiah (2000), there are students who question the quality of the instructor because their teaching quality is boring and not interesting. In addition, there are also teachers who only use chalk and talk in T & L without attempting to diversify teaching methods according to different groups of students based on the level of the pupils. In fact, students have different learning styles. The T & L pattern also needs to change over time. Thus, teacher's creativity is needed in order to use a flexible and effective teaching approach.

MOE itself encouraged the teachers to implement new methods which has already been applied in the Western countries and has been proven to be successful. However, it is important to note that in the eagerness of making various education reforms, MOE is reminded not to neglect the education quality of the children of future generations. This means that the quality of T & L should be emphasized as one of the qualities to produce the best human capital. This quality of T & L needs to be taken seriously, especially among the educators and curriculum makers in addressing the diversity of current education challenges and issues.

Finally, education is a powerful and effective tool in producing good quality students in terms of personality and academics. Each teacher including Malay Language teachers should diversify their teaching methods to achieve these goals. Traditional approaches such as lectures, illustrations or chalk and talk methods should be discarded. New Malay Language teachers specifically and other experienced teachers generally need to use the latest T & L strategies, approaches and techniques. KBSM Malay Language Syllabus (MOE, 2011) and Bestari (Smart) School KBSM Malay Language Syllabus (MOE, 2011) emphasizes various methods or approaches toward the latest teaching methods. One of them is through a cooperative learning approach. Actually, cooperative learning is one of the modern teaching techniques. This learning can directly enhance student understanding, promote creative and critical thinking skills, improve student achievement and motivation as well as continuously improve students'

knowledge. In conclusion, cooperative learning has boosted pupils' motivation thus promoting active learning scenarios in the classroom.

1.1. Problem Statement

In most high schools or in the workshop or in the classroom, cooperative learning has long been introduced. However, pupils involved in cooperative learning are still less noticeable than other learning methods. This is because they are still practicing teacher-centered learning. In this situation, the teacher is still a source of reference to get all kinds of help and information. Although this traditional teaching method has its own advantages such as saving teacher time and regulated class conditions, this technique is obviously lacking on the cooperative aspect of T & L. To overcome the arising problems, other methods need to be done in cooperative learning to increase the level of student engagement and to change the perceptions of students towards cooperative learning. The use of teacher-centered methods in learning should be reduced in T & L of Malay Language subject so that the students become the main focus.

Cooperative learning is one of the best ways to use (Suhaida, 2002). This is stated based on researchers' own study and experience after the education expert has identified that cooperative learning is an effective work procedure in any field of learning. According to Burton (1987), pupils can learn better through cooperative learning than chalk-and-talk methods. It is found that they favor cooperative learning because their level of understanding and achievement improved and their social and intellectual skills also increased. Interaction among students has become a major feature of cooperative learning in the previous studies and is able to improve students' achievement (Newmann & Thompson, 1987). However, the study on cooperative learning in Malay Language subject in Malaysia is not extensive yet. Thus, this study is important to determine the extent of students' engagement in cooperative learning in secondary school. Involvement is measured through the impact of achievement and motivation of students in cooperative learning at school.

Slavin (2011) says that cooperative learning methods as a whole require student to collaborate in the learning process and they are responsible for the learning of their teammates apart from their own learning. This method focuses on the team goals and team success. This can only be achieved if all the members in the team are able to learn the objectives taught. Meanwhile, some studies found that learning through this strategy can encourage pupils to get the best achievement in a subject. However, most teachers are less concerned with the use of various teaching methods because they are too focused on the effort to complete the syllabus and the mastery of techniques to answer the exam questions. This is supported by studies of Zamri, Ruslin & Mohamed Amin (2015) which found that the development of teaching that applies diverse teaching methods in the classroom is still at a less favorable level. Teaching is not as a static technique but it should use a variety of teaching methods according to the trend.

This is also emphasized in the study of Zamri & Nor Razah (2011), stating that in the context of T & L, co-operative learning is able to promote effective teacher and pupil interaction. This encourages pupils to sharpen their social skills, reduce selfishness and deepen the understanding of the contents of the lesson (Hamidah, 2008).

Even though cooperative learning creates anxiety to parents who are concerned about learning liquidity when the intelligent students are in a less intelligent group, but according to Slavin (1991) it will benefit the different groups of learners who are learning in one group. This study showed that cooperative learning can improve students' achievement and cognitive skills. If properly implemented, each student has the responsibility to master a subtopic and be able to share his/her knowledge with other members of the group. For this purpose, pupils need to really understand the subtopics, rather than just memorizing a topic. This result in higher level processing that improves memory and thus allows them to show better achievement. Studies also show that cognitive learning can improve students' social skills. Members of the group need to work together to achieve the learning objectives. Indirectly, they need to learn or improve their social skills. A slow-spoken student needs to raise the voice to be heard and understood by other members of the group. A member's comments and critics should be done accordingly so that the dynamics of the group are not destroyed and the task goes smoothly. According to Kagan (1994), cooperative learning for talented people has brought numerous effectiveness or benefits such as improving social relationships, improving achievement, improving leadership skills, improving social skills, improving high level skills and improving technological skills.

In the context of secondary school, is the cooperative approach able to improve learning as expected? Furthermore, is the cooperative approach able to motivate the students and remain for a longer period of time in learning? And will this cooperative approach be more effective in enhancing meaningful learning especially in Malay Language subject? Cooperative learning is a group T & L activity that gives students the opportunity to demonstrate their skills while helping others. In other words, cooperative T & L encourages students to share all the problems, solve it together and also celebrate the success together. All this can be achieved in the Malay Language T & L if the teacher knows how to implement it in the classroom, then the planned T & L process can achieve its goals.

1.2. Study Aims and Objectives

This study aims to see the effectiveness of cooperative learning in improving students' achievement and motivation in Malay Language learning in secondary schools. In addition, this study also sees the perceptions of students in cooperative learning towards Malay Language in the classroom. The comparison of achievement and motivation effectiveness in Malay Language learning is seen between the experimental group (cooperative learning) and the control group

(traditional method). At the end of the study, the expected objective is:

- 1) Identifying students' achievement in Malay Language learning between experimental and control group in the pre-test.
- 2) Identifying students' achievement in Malay Language learning among experimental groups using cooperative learning and control groups which is taught traditionally in the post-test.
- 3) Identifying the differences in the pre-test and posttest for the experimental groups.
- 4) Identifying the differences in pretest and posttest for control groups.
- 5) Identifying differences in students' motivation towards Malay Language learning between experimental groups and control groups.
- 6) Identifying the perceptions of the experimental group students on Malay Language learning with the use of cooperative learning.
- 7) Identifying different perceptions of experimental groups on Malay Language learning with the use of cooperative learning based on gender.

2. Methodology

The target population of this study consists of Form 4 students at a school in Petaling Perdana, Selangor, Malaysia. The population of this study involved six classes of form four students. In this study, two Form 4 classes are conclusively selected for conducting the research to find out the data for this study. In this study, the sample of the study consisted of 60 form four students from two separate but equivalent classes (Experiment and Control) which are from the Art classes. Both groups comprise of 30 students each. Therefore, through this study the sample was randomly chosen which involve the whole group. The sample uses the existing students in the classroom is to be studied. The selection of this sample is based on location and suitability. This is in line with the opinion of [Mohd Majid \(2005\)](#), where good sample selection can reduce costs, energy and time of study. This is also to prevent opposition from certain parties when conducting this study.

In this study, questionnaires are used as an instrument to obtain the necessary information. This is because the distribution of the questionnaire can be used to clearly explain the purpose of a descriptive survey in print and reduce errors in recording the results of the feedback received ([Azizi et al., 2006](#)). In addition, the questionnaires also ensure confidentiality and produce a more honest response. According to [Selinger & Shohamy \(1989\)](#) as well as [Mohd Rashid & Abu Hassan \(2010\)](#), a questionnaire was used to collect data on a phenomenon that was difficult to observe. The questionnaire has its own advantages such as easy to manage when gathering large subjects and does not require the subjects' identity. Thus, the data obtained are more objective, more uniform and accurate as it was given at the same time. In addition to the questionnaire, the research instrument also consists of two test papers namely pretest and posttest.

Pretest is used to track the level of student achievement in the aspect of Malay Language learning using normal or traditional learning methods. Posttest was

used to test the effect of using cooperative learning methods in form four Malay Language learning. The questions used in pretest and posttest are the questions that are considered suitable with the objectives of the study and these questions are taken from the activity books commonly used by Malay Language teachers in their teaching process. In order to determine the validity of the content, the researcher has constructed the items in this research tool based on the test-determinants table (JPU) according to the level of the Bloom's Taxonomy. To further enhance the validity of the content, the researcher also referred to a number of experienced teachers in the T & L of Malay Language subject to gain their views and comments. Based on the review of the expert teachers, the researcher has repaired and replaced some of the items that are not suitable.

The pre-test was administered to pupils before the T & L was conducted to see how the students' achievement is in Malay Language learning aspect. Post tests were given after the students finished the T & L process for four weeks with different methods. Student achievement will be evaluated and researchers will make comparisons between the control and the experimental groups. Assessment grades for each class are using standardized marks according to the standards of the Ministry of Education Malaysia (MOE). Based on the data of the first test score and the second test score, Pearson correlation analysis has been carried out on these scores. The result of Pearson correlation analysis showed correlation coefficient, $r = 0.861$ ($p < 0.05$). This indicates that the first test scores and the second test scores have a high and significant correlation.

Therefore, the built research instrument to measure students' achievement in pretest and posttest has a high reliability and appropriate to be used. The researcher had conducted a pilot test on the motivation and perception questionnaires using the test-retest method to obtain the reliability coefficient of the study instrument. The same study was administered to 30 students who were not involved in the study within three weeks to see the consistency of the research tool. According to Mohd Majid (2005), the marks obtained from the first measurement and the second measurement is tested using correlation test. The resulting correlation coefficient is the reliability index, if the correlation coefficient is positive and strong, the reliability index for the measuring tool is high.

Questionnaire set was used to determine students' motivation and perception towards Malay Language learning. The set of questionnaires was given to the students of the experimental group and the control group after the completion of the study session using the cooperative learning method which took four weeks. In this study, the closed questionnaire is used because it was easy to operate and the Likert Scale System was selected to be used. This scale involves five answers which is 1 - 5, where the scale 5 is a positive value and the scale 1 is a negative value. This scale is selected because of its consistency and can be measured well. This method will use frequency and percentages to evaluate respondents' responses. **Table 1** shows the score of 5 points Likert scale.

The subject for the pilot study consisted of 30 Form 4 students at the school studied. The involved pupil is from the same population but not the actual

Table 1. Respondents' demographics.

Experimental Group	Category	Frequency	Percentage (%)
Gender	Male	16	53.3
	Female	14	46.7
Races	Malay	27	90.0
	Indian	3	10.0
	A	-	-
	B	2	6.6
	C	10	33.3
Malay language achievement in PT3 2015	D	15	50.0
	E	3	10.0
Control Group	Category	Frequency	Percentage (%)
Gender	Male	19	63.3
	Female	11	36.7
Races	Malay	28	93.3
	Indian	2	6.7
	A	-	-
	B	2	6.7
	C	8	26.7
Malay language achievement in PT3 2015	D	13	43.3
	E	7	23.3

survey respondent. This is because the subject of the pilot study should have a demographic background such as the level of education and social conditions that are almost identical to the respondents of the actual study. The SPSS version 23 software is used to analyze the data obtained while the alpha Cronbach coefficient is used to test the consistency of the instrument. The results of the pilot study have shown that the value of item reliability is $\alpha = 0.859$.

The researcher analyzed quantitative data by using SPSS 23 program. The descriptive analysis is used to describe the demographics of the research sample such as percentage and frequency. Second, statistical inferential analysis is used to analyze the *t*-test data in this study.

3. Research Findings

3.1. Respondent Demographics

The study involved 60 Form Four students at a school in the Petaling Perdana district of Selangor, comprising of two groups which is an experimental group consisting of 30 pupils and a control group which also consist of 30 pupils. Both groups of these students are from Arts stream comprising of male and female students which have the same background and composed of various races. These students have the same ability as they get almost the same PT3 achievement.

Table 1 shows the respondents' demographics of the experimental group and the control group. The number of male students is 16 and female students are 14 for the experimental group while for the control group the number of male students is 19 and female students are 11. For the experimental group, the respondents consisted of 27 Malay students and 3 Indians while the control group consists of 28 Malay students and 2 Indian students of which all of them are 16 years old. Based on the survey respondents' profile, the achievement of Malay Language in Form 3 Evaluation or PT3 2015, in the experimental group 2 students recorded B grade (6.67%), 10 students of C grade (33.33%), 15 of D grade (50.0%) and 3 students of E grade (10.0%). Meanwhile, for the control group, there were 2 students (6.67%) who achieved B grade, 8 students attained C grade (26.67%), 13 students obtained D grade (43.33%) and 7 students got E grade (23.33%).

3.2. Descriptive Analysis of the Mean and Standard Deviation of Pre-Test and Post-Test Scores for Experimental and Control Group

Table 2 shows the mean score and standard deviation of the pretest and posttest of Malay Language for the experimental and the control group as a whole. Based on the small difference in the mean score in the pretest, where the test mean of the control group is 6.70 while the test mean of the experimental group is 7.43, it is clear that the pupils of both groups which is the experimental and the control group had the same achievement before treatment was performed. For the control group, the pretest mean-score is 6.70 and the posttest mean score is 5.83. This shows that there is no significant change in mean. For pretest score of the experimental group the mean is 7.43 while the posttest mean is 9.20. Here we can see a high increase in the mean. It is apparent that the experimental group has achieved a significantly higher achievement or a higher overall mean compared to the control group.

3.3. T-Test Inferential Analysis of Pre-Test Achievement between the Experimental Group and the Control Group

H₀₁: There is no significant difference of student achievement in Malay Language learning between the experimental and the control group in the pretest.

Inferential analysis is used to answer questions and to test the hypotheses that have been proposed. The main focus is to study the differences of Malay Language academic achievement between experimental and control groups. The

Table 2. Achievement of mean score and standard deviation of experimental group and control group

Groups	Experiment		Control	
	Pre	Post	Pre	Post
Mean	7.43	9.20	6.70	5.83
Standard Deviation	2.223	1.157	1.705	1.821

test used is *t*-test. From **Table 2**, no significant similarity is showed between the experimental and the control group in the pre-test. Based on the analysis conducted, the results of the study did not show a significant difference in the Malay Language test score mean (with standard deviation) for the experimental group pupils and the control group pupils in the pretest. The mean Malay Language score for the experimental group pupils was ($M = 3.716$, $SD = 4.059$), while the mean Malay Language score for control group pupils was ($M = 3.350$, $SD = 3.583$), with $t = -0.384$, $\text{sig}(p) = 0.105$ $p > 0.05$. Therefore, the null or *H₀₁* hypothesis is accepted, that is, there is no significant difference in student achievement in Malay Language learning between the experiment group and the control group in the pretest. Based on the small differences, it is clear that students' achievement is the same for the two groups before treatment is performed. From **Table 3** it is seen that, after doing *t*-test it is found that the value of *t* is -0.384 with *df* (59) then it is seen that the value of calculated $t >$ critical t or $p > 0.05$ which means the first hypothesis or *H₀₁* is accepted, that there is no significant mean difference in student achievement between experimental group and control group in pre-test. It can be concluded that student achievement is the same for experimental group and control group in the pretest.

3.4. T-Test Inferential Analysis of Post-Test Achievement between the Experimental Group and the Control Group

H₀₂: There is no significant difference of students' Malay Language achievement among experimental group using cooperative learning with control groups using traditional method in the post test.

In terms of posttest, the findings can be seen in **Table 4** which showed the significant difference between the achievement of the experimental group and the control group in the post test. From the analysis, the results showed that there was a significant difference between the experimental group and the control group in the post test. The Malay Language score mean for the experimental group is ($M = 4.600$, $SD = 4.709$) while the mean Malay Language score for the

Table 3. Comparison of mean and standard deviation for the experimental and the control groups against pretest score achievement using *t*-test.

Groups	Mean	Standard Deviation	DF	<i>t</i>	<i>p</i>
Experiment	3.716	4.059	59	-0.384	0.105
Control	3.350	3.583			

*Significant level at <0.05 .

Table 4. Comparison of mean and standard deviation for the experimental and the control groups against posttest score achievement using *t*-test.

Groups	Mean	Standard Deviation	DF	<i>t</i>	<i>p</i>
Experiment	4.600	4.709	59	-1.687	0.000
Control	2.916	3.206			

control group is ($M = 2.916$, $SD = 3.206$), with $t = -1.687$, (sig) $p < 0.001$. **Table 4** shows the values of t is -1.687 and $p < 0.001$. The t test at significance level $p < 0.05$ showed that there is a significant difference in the achievement of the post-test as a whole between the experimental group that used cooperative learning compared to the control group which undergo traditional learning ($t = -1.687$, $p < 0.05$). Therefore, the null hypothesis (H_02) is rejected. This shows that there was a significant difference between the experimental group and the control group in the post test. This shows that the achievement of experimental groups in cooperative learning is better than the control group in traditional learning.

3.5. T-Test Inferential Analysis between Pre-Test and Post Test Achievement for the Experimental Group

H₀₃: There is no significant difference in the achievement of pretest and posttest for the experimental groups.

Table 5 shows that the pretest mean for the experimental group is 3.716 while the mean for the posttest increases to 4.600. For the standard deviation of pretest and posttest were 4.059 and 4.709 respectively. This clearly shows that there was an increase in the achievement mean in Malay Language learning after the treatment was given to an experimental group using cooperative learning. The result of the analysis also shows that the significant value (p) obtained is $p < 0.001$. This means that the significant level is smaller than 0.05 ($p < 0.05$). Analysis shows that there is a significant difference in the test achievement between pretest and posttest with t -value of -4.205 . Therefore, the null hypothesis (H_03) that there is no significant difference in the achievement of pretest and post-test for the experimental group is rejected. This explains that cooperative learning treatment that was conducted on the experimental group pupils is effective in improving their BM achievement rather than before the cooperative learning treatment is implemented.

3.6. T-Test Inferential Analysis between Pre-Test and Post Test Achievement for the Control Group

H₀₄: There was no significant difference in the achievement of pretest and posttest for the control group.

Table 6 shows that the pretest min for the control group was only 3.35 and slightly decreased to 2.916. For the standard deviation, the pretest is 3.583 and the posttest is 3.206. This test shows that the traditional learning approach does not make a significant difference in students' achievement for the control group.

Table 5. Comparison of achievement between pretest and posttest for the experimental group.

Test	Mean	Standard Deviation	DF	t	p
Pre	3.716	4.059	59	-4.205	0.000
Post	4.600	4.709			

Table 6. Comparison of achievement between pretest and posttest for the control group.

Test	Mean	Standard Deviation	DF	<i>t</i>	<i>p</i>
Pre	3.350	3.583	59	4.143	0.083
Post	2.916	3.206			

The *t*-test result showed a significant (*p*) value obtained was $p = 0.083$. This means that the significant level is greater than 0.05 ($p > 0.05$) and it is clear that there is no significant difference in pretest and posttest achievement for the control group. Therefore, the null hypothesis (*H₀₄*) that there is no significant difference in the achievement of pretest and posttest for the control group is accepted. The acceptance of this null hypothesis explains that the traditional learning approach fails to increase the achievement in the learning of Malay Language among the control group pupils.

3.7. T-Test Inferential Analysis of Motivation between the Experimental and the Control Groups

H₀₅: There is no significant difference in students' motivation towards Malay Language learning between the experimental group and the control group.

Table 7 shows the students' motivation analysis towards Malay Language for the experimental group and the control group. This table shows that the experimental group mean is higher than the control group mean. It is also found that, after a *t*-test is done, the value of *t* is 0.590 with *df* = 58 thus the value of calculated $t >$ critical *t* where $p < 0.05$. The null hypothesis or *H₀₅* is rejected and it could be concluded that there is a significant difference in students' motivation towards Malay Language between cooperative group and traditional group. The findings show that cooperative learning improves student motivation in Malay Language learning rather than traditional learning which does not motivate students to learn *Malay Language*.

3.8. T-Test Inferential Analysis for Perceptions of Experimental Group Based on Gender

H₀₆: There is no significant difference in perception of the experimental group with the use of cooperative learning in Malay Language class according to gender.

Table 8 shows that the mean for the male students of the experimental group is 3.381 and the mean of female students is 3.300. For the standard deviation of the male students for the experimental group got 0.3868 and the female students of the experimental group obtained 0.3922. The perceptions towards the cooperative learning approach of the experimental group showed that there was no significant difference between genders of the students. The *t*-test result showed the significant (*p*) value obtained is $p = 0.817$. This means that the significant level was greater than 0.05 ($p > 0.05$) and this explained that there was no significant difference in the perception of the experimental group in cooperative learning

Table 7. Student motivation analysis on Malay Language for the experimental group and the control group.

Test	Mean	Standard Deviation	DF	<i>t</i>	<i>p</i>
Pre	3.541	0.460	58	0.590	0.000
Post	3.476	0.395			

Table 8. Comparison of perception for the experimental group with cooperative learning based on gender.

Gender	Mean	Standard Deviation	DF	<i>t</i>	<i>p</i>
Male	3.381	0.386	28	0.570	0.817
Female	3.300	0.392			

based on gender. Therefore, the null hypothesis (*H₀₆*) that there is no significant difference of perception among the experimental group in Malay Language learning with the use of cooperative learning based on gender is accepted. The acceptance of this null hypothesis explains that the cooperative learning approach does not affect one gender only but it is equally true for all genders that used cooperative learning.

4. Discussions

This section discusses the results of the research findings. The findings for each question and the hypotheses of the study are based on: 1) the achievement of Malay Language; 2) motivation towards Malay Language learning; and 3) the perception of students towards cooperative learning.

4.1. Achievement of Malay Language

The first study hypothesis found that there was no significant difference in students' achievement in Malay Language learning between experimental and control group in the pretest. Based on the data analysis from the findings, *H₀₁* was accepted because there was no significant difference in Malay Language achievement between the cooperative group and the control group. This is because both the experimental group and the control group undergo the same learning which is traditional learning before the actual study is conducted.

The second study hypothesis stated that there was no significant difference in students' achievement in Malay Language learning between experimental group and control group in the post test. Based on data analysis from the finding, it showed that *H₀₂* was rejected because there was a significant difference in Malay Language achievement between the cooperative group and the control group. This study supports the findings of the study conducted by Johnson et al. (1990), Pensri & Krongthong (1998), apart from academic achievement, cooperative learning also has a positive impact on social relations between races, attitudes and interest in learning. The positive effects produced by cooperative learning

have an importance in the interaction and collaboration between pupils as suggested by Vygotsky and Piaget.

One of the advantages of cooperative measures is the rewards for the group, whereby this reward is given if the group reaches the above specified score. In addition, the pupils also stated that cooperative learning improved their understanding of the teaching materials and the students also stated that they felt more self-confidence and increase their motivation as well as feeling comfortable making discussion because they were not afraid of making mistakes. Besides, the findings also state that students feel free to express their opinions. On the other hand for the control group, it is apparent that students receive only what is given by the teacher without any interaction among the students.

4.2. Motivation for Learning Malay Language

The fifth hypothesis states that there is no difference on students' Malay Language motivation between cooperative group and traditional group. Based on data analysis, the findings show that there is a significant difference of student motivation towards Malay Language in cooperative group and traditional group, which means that H_05 is rejected. This study supports the findings of the study conducted by Sardiman (2008); highly motivated students will have the spirit to engage in the learning process. According to Hartman (1997), from Vygotsky's Social Interaction Theory states that when pupils study in cooperative groups with the help of their peers' cooperation will enable them to reach their own potentials compared to self-learning. In addition, it is said that motivation is closely related to cooperative learning in which motivation of learning is the feeling that encourage someone to be successful and make a person to learn successfully.

Through the findings of this study, the researcher has shown that cooperative learning is a pedagogical approach that helps teachers reduces discipline problems that interfere with learning in the classroom. Co-operative learning strategies are not only interesting but actively involve students in learning. Pupils will have the motivation to learn and this itself will encourage them to focus more on what the teacher is teaching. Problems with learning disorders will be reduced, if not eliminated at all. Through the grouping method in this cooperative learning, it was found to have an impact on the construction of students' personality through the teaching of social and collaborative skills.

Co-operative learning is seen as a bridge in the methodology aspect that can apply moral values such as responsibility, respect and cooperation among the students. Through this method, the teacher is able to teach the students moral values that are intended to be emphasized through the activities in cooperative learning. Most importantly, this study proves that cooperative learning can increase students' interest and motivation in learning, especially in Malay Language. Through cooperative learning strategies, the students who formerly did not show an interest in learning became more eager to actively participate in

learning thus their motivation towards Malay Language learning continued to increase.

4.3. Perceptions of Students on Cooperative Learning

The next discussion focuses on student perceptions on cooperative learning. The findings show that students love cooperative learning because it allows them to: 1) exchange opinions with friends without fear, 2) can make friends as a place to ask 3) enjoy learning in groups rather than individually, 4) quickly understand when a friend explains 5) is not afraid of doing mistakes, 6) enthusiastic and motivated. This is proven by the study of [Slavin \(2011\)](#) which says that cooperative learning methods as a whole require the collaboration of students in the learning process and they are responsible for the learning of their teammates as well as their own learning.

The findings also show that students who do not like cooperative learning based on the students' respond was because of: 1) friends do not want to share, 2) non-focused discussion, 3) do not understand because they cannot communicate. This can happen because during the division of groups, the teacher does not pay attention to the other alternatives because teachers divide the group based on their values resulting in some group whose members cannot or will not be compatible with each other. They also state that they do not like to study in groups, do not understand because they cannot communicate, the discussion is not focused because most of the friends play and do not want to work together in the group.

5. Conclusion

Effective cooperative learning should focus on the knowledge and skills of a teacher. In this regard, continuous training and professional development are essential for teachers, and collaboration between teachers needs to be encourage as well, through regular meetings whether formal or informal. Teachers can learn from their peers to study the strengths and weaknesses of the lessons that have been implemented and the experiences of other teachers can also be a shared together so that it will give confidence and motivation to do a better job.

As a whole, this study shows that students who learn using cooperative learning strategies can improve their achievement in Malay Language subject. Students not only can enhance the understanding of the topics taught but also be able to use new knowledge gained from co-operative learning to solve problems more confidently. Therefore, the use of cooperative learning should be practiced and encouraged on Form 4 subjects. Education is an important area where through it, a young generation who will lead the country will be born.

However, to realize these goals, various things need to be emphasized. One of them is to ensure that the learning method used is appropriate to the level of the students' acceptance. This is to ensure that there is an increase in student achievement. Therefore, the findings show that cooperative learning methods

are effective in raising the level of understanding, problem solving skills and can create excitement to learn while strengthening social relationships between students and teachers.

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