

Teaching Economics Using Cooperative Learning Approach:

Accounting Students' Performance and Attitude

**ENSEIGNEMENT DE L'ÉCONOMIE EN UTILISANT
L'APPROCHE DE L'APPRENTISSAGE COOPÉRATIF:**

**LA PERFORMANCE ET L'ATTITUDE DES ÉTUDIANTS EN
COMPTABILITÉ**

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Abstract: Using experimental and post experimental setting, this study examines whether different learning approach influence students' behaviour. Specifically, this study examines whether using cooperative learning approach could improve students' performance in economics course better than the conventional approach. This study also examines the students' attitude towards economics subject, communication skill and social skill upon reliance on the learning approach used in the experiment. Sixty one undergraduate accounting students in a public university in Malaysia participated in this study. The results show that although there is a difference in performance between students using cooperative learning approach and students using conventional approach, the result is not significant. However, the students' attitude toward economic subject, communication skill and social skill is more positive among the cooperation learning approach group compared to the conventional approach group. The findings of this study provide some understanding to academics

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and universities on the use of different learning approaches in teaching economics subject to accounting students.

Key words: economics; undergraduate students; cooperative learning approach

Résumé: En utilisant des mécanismes expérimentaux et post-expérimentaux, cette étude tente d'examiner si les approches d'apprentissage différentes peuvent influencer sur le comportement des élèves. Plus précisément, cette étude examine si l'utilisation de l'approche de l'apprentissage coopératif pourrait améliorer la performance des élèves dans les cours d'économie, plutôt que l'approche conventionnelle. Cette étude examine également l'attitude des élèves envers les sujets économiques, les compétences de communication et les aptitudes sociales en cas de recours à l'approche d'apprentissage utilisée dans cet essai. 61 étudiants de premier cycle en comptabilité dans une université publique en Malaisie ont participé à cette étude. Les résultats montrent que bien qu'il existe une différence de performance entre les étudiants qui utilisent la méthode d'apprentissage coopératif et ceux qui utilisent l'approche classique, l'écart n'est pas significatif. Cependant, l'attitude des étudiants face aux sujets économiques, les compétences de communication et des aptitudes sociales sont plus positives chez le groupe de l'approche de l'apprentissage coopératif par rapport à celui de l'approche conventionnelle. Le résultat de cette étude montre une certaine compréhension vis à vis des universités qui utilisent des approches d'apprentissage différentes dans l'enseignement de l'économie pour les étudiants en comptabilité.

Mots-clés: économie; étudiants de premier cycle; approche de l'apprentissage coopératif

1. INTRODUCTION

A common practice in the education system is the way knowledge being taught. Students often have the expectation that their role in the knowledge transmission process is to sit passively in class and waiting for their lecturers to impart the knowledge to them. Such attitude, however, led the students to come to class unprepared, reluctant to do reasoning and discussion and failure in providing two-way communication. Consequently, such attitude has led the students to become more assisted learners rather than self-directed learners which impair their ability in the survival of the competitive world. To overcome such limitation, there have been calls by practitioners and universities for changes in the learning approach from teacher-centeredness to student-centeredness. One of the approaches suggested to improving students' performance is the cooperative learning approach.

Cooperative learning approach is an instructional strategy focusing on small groups to allow the members within a group to work together in maximising their goals and learning capabilities. This approach ensures that students would actively participate in the learning process rather than passively listening to their lecturers (Johnson et al. 1998).

It is important to note that cooperative learning approach is not the same as group work. Studies have suggested that a crucial difference exists between simply placing the students in a group and cooperative learning approach (Johnson and Johnson, 1989). Cooperative learning approach is not merely being physically near to other students at the same table and sharing materials among students. Nor it is limited to assigning a report to a group of students in which only one student does all the work and the other students place their names on the product (Johnson and Johnson, 1989). It is also not limited to students doing the task on individual basis with instructions that student who finishes first would assist the other

students. Cooperative learning approach includes all these elements combined with principles of cooperative learning. Therefore, the use of this approach is shown not only to enhancing students' achievement but also to promoting self-esteem, improving interpersonal relationship and attitude towards school and peers (Johnson and Johnson, 1989; Slavin, 1991).

However, one issue that could be raised in the usage of this approach in classrooms is whether such approach is effective to all courses in general. This is because courses varies in nature and therefore, may need to use different learning approach or approach in disseminating the knowledge to students. For example; economics subject is considered different from other subjects due to its abstract in nature and extensive theories. Due to the nature of economics subject, one could question whether the benefits of cooperative learning approach could be extended to this subject, particularly when such subject is not a core subject for students in different field.

The remainder of this paper is structured as follows. The next section provides a review of relevant literature. Section 3 presents the research framework and hypotheses in this study. Section 4 provides the research design. The results are presented in section 5. A summary and conclusion are provided in the last section.

2. LITERATURE REVIEW

Students' performance has often being used as the key element to measure the success of the education process. The success of the education process depends not only on the physical facilities and qualified educators, but also as much upon the attitudes, aspirations and awareness of the students themselves (Hijazi and Naqvi, 2006). Students' performance could also rely on other factors related to the students' background and behaviour (Devadoss and Foltz, 1996). The success of the education process could also rely on the learning approach used in the classrooms (Yamarick, 2007) as well as students' attitude upon reliance on the learning approach (Holtfreter and Holtfreter, 2000). One of the learning approaches suggested in improving students' performance is the cooperative learning approach.

Cooperative learning approach is one of the most popular instructional strategies in classrooms (Yamarick, 2007). Cooperative learning approach is defined as an instructional use of small groups so that the students could work together in maximising their own and other members' learning (Johnson et al., 1991). Apart from attaining usual learning goals, it also includes the goal of establishing a collaborative relationship among students (McCulloch 1985). Such approach was introduced based on the belief that if students work individually or competitively, the goals in a community could not be fully achieved (Drsicoll, 2000). This approach stresses that students are not responsible for their own learning but also for their group members' learning.

Two theories that support the use of cooperative learning approach in improving students' performance are motivational model and cognitive model. Motivational model suggested that when students work together towards a common goal as they do when cooperative learning takes places, their efforts would be directed towards helping each other learn and succeed (Slavin, 1991). Similarly, cognitive model argued that students must be active learners to enable them to elaborate and explain the material learned to other students in order to retain the information (Wittrock, 1978). Therefore, the importance of cooperative learning approach on students' performance is evident.

Within the education literature, there are studies that have focused on cooperative learning approach and its impact on students' performance (such as Johnson and Johnson, 1987; Whicker et al., 1997; Cheah and Poon, 1999; Yamarick, 2007). These studies used experimental setting in determining the influence of cooperative learning approach to students' performance. These studies found that participants who were exposed to cooperative learning approach performed better than those participants who used conventional approach.

Studies that have examined the link between cooperative learning approach and students'

performance have focused on various fields. The fields include calculus (Whicker et al., 1997), English, mathematics and science (Cheah and Poon, 1999), accounting (Holtfreter and Holtfreter, 2000), food and nutrition (Abu and Flowers, 1997) and engineering (Felder et al., 1998; Brawner et al., 2002). Studies that examined the link between cooperative learning approach and students' performance in the field of economics are limited (Yamarick, 2007), compared to other fields (Sax et al., 1999). One attribute to such limitation is that most economics lecturers tend to use predominantly teaching method (Benzing and Christ, 1997). Becker and Watts (2001) found in their survey that students who took economics classes devote only a small amount of time involving discussion.

Within the economics education literature, although limited, there are a number of studies that examined the link between cooperative learning and students' performance (Moore, 1998; Johnson et al., 2000; Jensen and Owen, 2001; Brooks and Khandker, 2002; Yamarick, 2007). The results are mixed. Few studies showed that students using the cooperative learning approach tend to perform better than those students relying on conventional approach (Moore, 1998; Brooks and Khandker, 2002; Yamarick, 2007). Other studies showed no supporting evidence (Johnston et al., 2000). The mixed results could not provide conclusive evidence on the link between cooperative learning approach and students' performance, particularly when teaching economics subject as a non-core subject for a group of students of different field, such as accounting.

Another body of the education literature have examined students' attitude on cooperative learning approach (such as Astin, 1977; Abu and Flowers, 1997; Cheah and Poon, 1999; Holtfreter and Holtfreter, 2000). These studies showed that students tend to favour cooperative learning approach compared to conventional approach (Holtfreter and Holtfreter, 2000). These studies showed that students also tend to become more forward looking to class and actively participate in class discussion. They become more positive towards the subject (Astin, 1977) as well as being able to communicate effectively and improving their social skills (Johnson et al., 1986). However, study on attitude towards cooperative learning in the economics education literature has yet to be extensively examined. Examining this issue in the field of economics context would shed some lights on whether similar results would appear.

In summary, there are limited studies that have examined the link between cooperative learning approach and students' performance and attitude using economics subject as the setting. The lack of such examination motivates this study to examine these issues in a Malaysian setting.

3. RESEARCH FRAMEWORK AND HYPOTHESES

3.1 Research Framework

Figure 1 illustrates the framework that underpins this study. The framework shows that cooperative learning approach could influence students' performance and attitude. Studies have shown that cooperative learning approach encourages students to help each other with answers to questions rather than seeking answers from their lecturers (Slavin, 1985; Yamarick, 2007). These studies suggested that by using this approach, students will work with each other understand the knowledge being taught and consequentially, improving students' ability to grasp key ideas of the knowledge (Yamarick, 2007). However, there are limited studies that examined the effect of cooperative learning approach on students' performance and attitude. Therefore, cooperative learning approach becomes the independent variable.

The framework shows that students' performance is one of the dependent variables. Studies have shown that students who were exposed to cooperative learning approach tend to perform better in their examination compared to those students who were not exposed to this approach (Abu and Flowers, 1997; Whicker et al., 1997; Cheah and Poon, 1999). However, these studies were mainly conducted in a non-economics course setting, leaving examination on the link between cooperative learning approach and students' performance largely unexplored.

Within the education literature, a group of studies have also looked into the attitudes of students on

cooperative learning approach (Cheah and Poon, 1999). These studies found that students who were exposed to cooperative learning approach tend to become more interested in learning and making efforts to attend classes (Astin, 1977; Holtfreter and Holtfreter, 2000). Furthermore, students also agreed that using cooperative learning approach influence their communication and social skills. Therefore, students' attitude is the second dependent variables.

3.2 Hypotheses

Most studies that have examined the effect of cooperative learning approach on students' performance have found that this approach influence the students' performance significantly (Abu and Flowers, 1997; Cheah and Poon, 1999). There are studies that found this approach does not affect students' performance (Johnston et al., 2000). These studies, however, are mostly conducted in a non-economics sub course setting, which motivates this study to re-examine this issue in an economics subject setting. The following hypothesis is developed:

H1: There is no significant effect difference on students' performance between cooperative learning approach and conventional approach.

Studies that examined the link between cooperative learning approach and students' attitude is sparse. These studies often link attitude to the subject being taught, communication skill and social skills. In Malaysia, Cheah and Poon (1999) examined this issue and found students tend to learn effectively and developed positive attitudes towards the subject taught and learning approach used. Further, Cheah and Poon (1999) focused on secondary school students. This study extends Cheah and Poon's study by looking at the higher education level, the undergraduate students. The following hypothesis is developed:

H2: There is no significant effect difference on students' attitude between cooperative learning approach and conventional approach.

4. RESEARCH DESIGN

This study examines the influence of cooperative learning approach on students' performance and attitude. Specifically, this study examines whether:

First, Cooperative learning approach could influence students' performance differently.

Second, Cooperative learning approach could influence students' attitude differently.

This study examines these issues by way of experimental and post experimental setting.

4.1 Participants

Sixty one undergraduate students enrolled in accounting courses in a public university in Malaysia are chosen as the participants in this study. These students are chosen since they are required to undertake economics subject as part of the requirement to obtain their degree. However, economics subject is a non-core subject for the accounting students. These students came from two different classes doing economics subject at the same time of the semester.

4.2 Experimental Design

The research instrument consists of materials related to economics subject. The materials cover the economics syllabus set up by the university for one semester. The syllabus of the economics subject

basically consists of conceptual topics such as economics problems, demand and supply, calculation topics such as elasticity and cost of production and factual topics such as introduction chapter and market structure.

The students of the two classes are categorised into two groups. The first group of students represent the control group. The second group of students represents the experimental group. The control group consists of 30 students and are taught using the conventional approach. The experimental group consists of 31 students and are taught using the STAD strategy of cooperative learning approach. To avoid biases, the students are taught by the same lecturer for both groups.

4.3 Post Experimental Questionnaire

A post experimental questionnaire is developed in this study. The post experimental questionnaire consists of 4 sections. Section A is related to students' attitude towards economics subject. In this section, the participants are requested to complete 10 items. The items relate to how participants felt about the course, how interesting they find the course, whether the participants are able to complete their work and the given assignments within the stipulated time.

Section B is related to participants' attitude to communication skill. In this section, the participants are asked on their confidence level in doing presentation as well as their ability to write economics essays well. Section C is related to participants' social skill which includes leadership qualities, cooperativeness, ability to help others and be responsible for their activities. The respondents are asked to complete section A to section C on a 5-point scale of 1 being "highly disagree" to 5 being "highly agree". The last section, section D requests the participants' demographic profile such as gender and CGPA.

4.4 Experimental Procedures

The experiment was conducted throughout a semester (4 months). On the first day of class, both classes (representing both groups) were briefed on the teaching approach that is to be adopted in the class. One group was introduced to the cooperative learning approach and the other group was introduced to the conventional approach (lecture).

To ensure that the result of the experiment is attributed to the learning approach, at the end of the first week of the semester, both groups were given a test. The purpose of this test is to ensure that the students' performance would not differ significantly between the two groups before embarking on the experiment.

In the experimental group, the students were asked to form a group of 4. However, to achieve heterogeneity in all groups in the experimental group, the groups were re-groups according to their performance of the test. Each group consists of two students with high performance, one student with average performance and one student with poor performance.

At the end of the semester, the participants were also asked to complete the post-experimental questionnaire. The participants of both groups then sat for their final examination.

4.5 Dependent Measures

To measure students' performance, the participants' score on their final examination of economics subject are used. The participants' answers are marked to determine the score (Bricker and Nehmer, 1995; Dunn and Grabski, 2000). To avoid biasness in marking, two lecturers are assigned to mark the students' answers. The score becomes the dependent measure for students' performance.

Students' attitude on the subject, communication skill and social skill upon reliance on the learning approach used in the experiment are assessed by way of a series of questions that require participants to indicate, using a 5-point scale from 1 (very highly disagree) to 5 (highly agree), their opinions on each of

the variables of attitude.

5. RESEARCH RESULTS

5.1 Demographic Statistics

Table 1 sets out the demographic attributes of participants. Panel A, Table 1 presents the descriptive statistics of the groups of participant in this study. The results show that both groups have almost similar number of students being 50.8% for cooperative learning approach group and 49.2% for conventional approach group.

Panel B of Table 1 provides the number of male and female participants in each group. The results show somewhat similar pattern for male and female participants. Specifically, 32% of the participants in the cooperative learning approach group are male while 68% of the participants are female. Similarly, 23% of the participants in the conventional learning approach group are male, leaving 77% female participants.

Panel C provides the descriptive results of the participants' CGPA by group category. The results also show similar pattern between the cooperative learning approach group and the conventional approach group. The results of the descriptive statistics provide an indication that the proportion of the participants' gender and CGPA are almost equal. Such results provide an assurance that the results of the hypotheses in this study would not be biased due to uncontrolled factors such as gender and CGPA.

5.2 Learning approach and students' performance

This section presents the results of testing hypothesis 1. Hypothesis 1 states that there is no significant effect difference on students' performance between cooperative learning approach and conventional approach. This hypothesis was tested using independent T-Test.

Panel 2 provides the results that show whether there is any significant difference on the students' performance between cooperative learning approach group and conventional group. The results show that there is a different in students' performance between the two groups. Specifically, on average, the cooperative learning group has a higher mean score of students' performance (82.32) compared to the mean score of students' performance of conventional approach group (79.46). Further test, however, shows that the mean score difference between the two groups is not significant ($p=0.2631$). The results in this study indicate that learning approach does not play a significant role in influencing students' performance. Therefore, hypothesis 1 is accepted.

5.3 Learning Approach and Attitude

This section presents the results of testing hypothesis 2. Hypothesis 2 states that there is no significant effect difference on students' attitude between cooperative learning approach and conventional approach. Three variables of attitude were chosen: subject, communication skill and social skill. These variables were tested using independent T-Test.

The results in panel A of Table 3 shows that more participants in the cooperative learning approach have more positive attitude towards economics subject (3.87) compared to participants in the conventional approach (3.53). Further analysis shows that the difference between the two groups is significant ($p=0.006$). The results indicate that participants in the cooperative learning approach group found economics subject as more interesting, more focused and able to complete the assignments within the stipulated time compared to the participants in the conventional group. Therefore, hypothesis 2 for

attitude on subject is rejected.

Panel B, Table 3 presents the results of testing whether the participants' attitude towards the communication skill differ between the cooperative learning approach group and conventional group. The results show that on average, participants in the cooperative learning approach group have a more positive attitude mean score (3.94) on their communication skill compared to the attitude mean score of the participants in the conventional group (2.90). The results of the independent T-Test show significant difference between the attitude mean score of the two groups ($p=0.000$). Such results indicate that the participants in the cooperative group exhibit a higher degree of confidence and are able to express themselves better in class presentation compared to the participants in the conventional group. This is evidenced when the examiners of the participants' answer scripts found that participants in the cooperative learning group have their essay answers explained well and detailed compared to the conventional group. Therefore, hypothesis 2 for attitude on communication skill is rejected.

Panel C of Table 3 presents the results of testing whether the participants' attitude towards their social skill differ between the cooperative learning approach group and conventional group. The results show that on average, participants in the cooperative learning approach group have a more positive attitude mean score (4.37) on their social skill compared to the attitude mean score of the participants in the conventional group (3.48). The results of the independent T-Test show significant difference between the attitude mean score of the two groups ($p=0.000$).

In summary, the results of testing hypothesis 2 for the three variables of attitude are rejected. The results indicate that students' attitude toward economics subject, communication skill and social skill improved when they were being exposed to cooperative learning approach compared to conventional approach.

6. SUMMARY AND CONCLUSION

This study examines whether using cooperative learning approach could improve students' performance in economics subject better than the conventional approach. This study also examines the students' attitude towards the subject, communication skill and social skill upon reliance on the learning approach.

The results in this study failed to support previous studies that show significant difference in students' performance between students being taught using cooperative learning approach and the students being taught using the conventional approach (Moore, 1998; Johnson et al., 2000; Jensen and Owen, 2001; Brooks and Khandker, 2002; Yamarick, 2007). This study, however, supports the findings in Johnston et al. (2000). Despite the insignificant difference between the two groups, the participants in the cooperative learning approach group enjoyed to this way of learning approach since their academic accomplishments were valued and rewarded.

The results in this study, however, found that there are significant differences on students' attitude between the cooperative learning approach group and the conventional group. The participants in the cooperative learning approach group have a more positive attitude towards the subject, communication skill and social skill compared to the participants who were exposed to the conventional approach. The results in this study supports the findings of Holtfreter and Holtfreter (2000) where they found accounting students have more positive attitude in their course when relying on cooperative learning approach.

The key finding in this study is that cooperative learning approach could be a potential tool to prepare the students to the real world. This is done by providing them essential skills in becoming more pro-active in their work, communication skill and social skill in order to succeed in their workplace in future.

In summary, the findings in this study provides valuable insights on the benefits of cooperative learning approach in teaching economics subject to accounting students. Particularly, to the academics

who are looking for better ideas and challenging ways to make their classes more interesting in planning productive activities for their students.

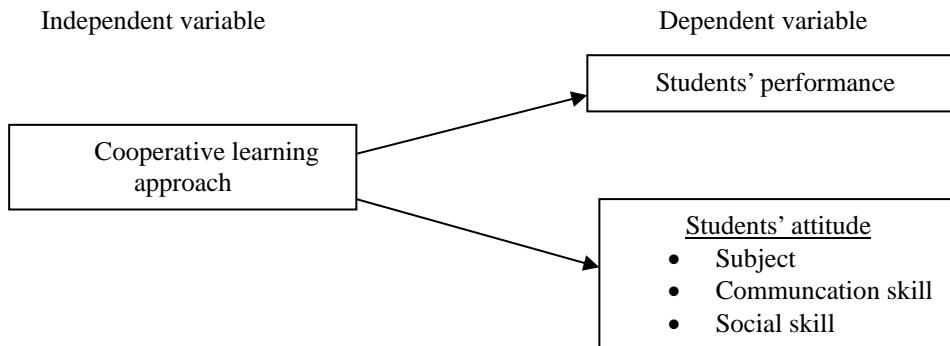
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FIGURE

Figure 1: Research Framework



TABLES

Table 1: Demographic statistics

Panel A: Group category	N	%		
Cooperative learning approach	31	50.8		
Conventional approach	<u>30</u>	<u>49.2</u>		
Total	61	100		
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Panel B: Gender by group category		Cooperative learning	Conventional	
	N	%	N	%
Male	10	32	7	23
Female	<u>21</u>	<u>68</u>	<u>23</u>	<u>77</u>
Total	31	100	30	100
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Panel C: CGPA by group category		Cooperative learning	Conventional	
	N	%	N	%
3.95 – 4.00	2	6	3	10
3.67 – 3.94	9	29	7	23
3.20 – 3.66	13	42	16	53
2.30 – 3.19	7	23	2	7
2.00 – 2.29	<u>0</u>	<u>0</u>	<u>2</u>	<u>7</u>
Total	31	100	30	100

Table 2: Independent sample T-Test

Group	N	Mean	Std. Deviation	t-value	p-value
Cooperative learning	31	82.32	7.69583	1.132	0.2631
Conventional	30	79.46	11.56014		

Table 3: Independent sample T-Test

Panel A: Attitude on economics course	N	Mean	Std. Deviation	t-value	p-value
Group	N	Mean	Std. Deviation	t-value	p-value
Cooperative learning	31	3.87	0.47972	2.846	0.006
Conventional	30	3.53	0.45497		
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Panel B: Attitude on communication skill	N	Mean	Std. Deviation	t-value	p-value
Group	N	Mean	Std. Deviation	t-value	p-value
Cooperative learning	31	3.94	0.48179	6.145	0.000
Conventional	30	2.90	0.80032		
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Panel C: Attitude on social skill	N	Mean	Std. Deviation	t-value	p-value
Group	N	Mean	Std. Deviation	t-value	p-value
Cooperative learning	31	4.37	0.44393	7.327	0.000
Conventional	30	3.48	0.49586		