

A COMPARATIVE STUDY OF STUDENTS' USE OF PEER LEARNING ACCORDING TO SELECTED DEMOGRAPHICS IN THE GRADUATE SCHOOL OF BUSINESS, ASSUMPTION UNIVERSITY OF THAILAND

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Abstract: Peer learning has been shown to be one of the most effective strategies for improving students' learning, boosting motivation, and strengthening friendship. This study set out to investigate the use of peer learning and to explore the extent to which the students use this strategy in their academic lives. It also aimed to report the differences in the use of peer learning among the students according to the selected demographics. The research involved students from the Graduate School of Business, Assumption University of Thailand. A convenience sampling was used and the data were collected through the researcher-created questionnaire. Findings demonstrated that the students often used peer learning and the learning environment was desirable to encourage this type of learning. At the same time, there were significant differences in the use of peer learning according to the students' gender, nationality, and employment status. Yet, for the variable of age, no significant difference was found.

Keywords: Peer, Peer Learning, Social Constructivism, Cognitive Constructivism.

Introduction

In recent years, there has been a surge of interest in studying abroad and many students prefer to pursue their higher education in overseas universities. This popularity is, for the most part, due to the increasing importance of higher education in today's society. In fact, students who have got higher attainments in education are more likely to confront the major problems of unemployment and earnings. This usually goes along with a greater sense of achievement, job satisfaction, and social participation (Oreopoulos & Salvanes, 2011). Meanwhile, the growing demand for higher education has brought more expectations for colleges and universities. It has also led to the emergence of more private universities that are responsible for their own funding. To respond to the expectations and to be able to survive in this competitive world, universities try to implement all the measures to satisfy the students. They must ensure brighter future for the students as successful citizens, leaders and workers of their society. Considering all the outcomes, academic

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performance remains the major determinant of the students' success and satisfaction (Blackorby, Chorost, Garza, & Guzman, 2003). On the other hand, as universities are becoming more internationally diverse, students may face further difficulties improving their academic achievements. They can face several challenges including different learning and teaching styles as well as different levels of background knowledge. According to Sawir (2005), students consider lack of language proficiency as the most important challenge facing them in overseas universities. To cope with the problems of mixed-ability classes, instructors are often required to use supplementary methods. The researcher has always been interested in finding the strategies that can foster students' learning with minimal resources. Based on personal experience as well as an extensive body of research documents, peer learning has been shown to be an effective instructional strategy. It is generally defined as a process in which the students who are more knowledgeable in some subjects come to aid those who are less proficient (Topping, 1996). This strategy offers both academic learning as well as emotional support for the students (Boud, Cohen, & Sampson, 1999). Despite all the benefits, a very few studies have been conducted in the area of peer learning in Assumption University of Thailand. With an increasing number of international students, most of whom from Asian countries, the need for the use of peer learning is becoming more crucial.

Objectives

There were two main objectives for this study:

- 1- To investigate the students' use of peer learning in the Graduate School of Business, Assumption University of Thailand.
- 2- To compare the students' use of peer learning according to their age, gender, nationality, and employment status in the Graduate School of Business, Assumption University of Thailand.

Literature Review

Historical Background of Peer Learning

Peer learning is not a new term in the realm of education. It has existed since the beginning of civilization and was probably one of the first pedagogical strategies practiced by ancient societies. The origins of peer learning in western world dates back to first century A.D when it started in Ancient Greece and spread over other parts of Europe and finally reached America. According to Topping (1988), the first systematic and organized practice of peer learning started in 1700s. Other historians, on the other hand, traced the formal practice of peer learning back to the Monitorial System of nineteenth century. In the United States, it was in the 1960s when peer learning began to gain more interest and was widely used in many schools and universities. This revival was partly due to the Education Act of 1965 which encouraged the use of effective strategies to improve academic performance of students. It was also part of the efforts to enhance interracial understandings through students' closer interactions (Webb, 1987). Since then, peer learning has been widely used in many schools and universities across the world.

Social Constructivism

The main theme in Vygotsky's social constructivism theory is that individuals construct and develop their cognition through social interactions. He believed that all learning is the result of social and cultural experience which takes place through interaction with the environment (Gonzales & Willems, 2012). Since the tools and values differ from culture to culture, the level and content of learning is unique for each individual. Vygotsky proposed the notion of an internalization process in which he believed the intrapsychological aspect of development is closely linked to interpsychological activities (Frawley, 1997). He emphasized that cognitive development could not precede socialization but it is the social interaction which will lead to actual development (Blake & Pope, 2000). Vygotsky concluded that all the questions and discussions which occur through peer interactions are essential elements for the cognitive development of the learners.

Cognitive Constructivism

According to this theory, acquisition of new knowledge takes place through cognitive organization and adaptation of environmental experiences. Piaget (1952) used the term *schema* as units of knowledge which form individuals' perceptions of concepts, objects and procedures. He maintained that schemata are in constant restructuring processes of assimilation and accommodation until they reach equilibrium. Assimilation refers to adding new information into schemata while accommodation is defined as change in the schemata (Piaget, 1952). Piaget assumed that peer interaction creates conflicts in students' existing schemata and results in disequilibrium. However, through dialogues and discussions with peers who own similar cognitive status, the new equilibrium with higher understanding is re-created (Piaget, 1959, cited in Fawcett & Garton 2005).

Different Types of Peer Learning

Peer learning is usually practiced in five different ways which include class wide, cross-age, home-based, one to one, and small group peer learning.

Classwide: peer learning involves all the students to take part in tutorial activities. In this format every student can experience the role of both tutor and tutee as they switch their roles after the assigned task was successfully accomplished. Meta-analysis conducted by Cohen and Kulik (1982) showed that academic performance of both sides as well as attitudes towards the course improved significantly through classwide peer learning. The improvement was also observed in the other areas of social relations and self-concept. It has also been proved that this type of peer learning increases the efficiency of instructional time and allows both the teacher and the students to work at their optimal level regardless of the class size and knowledge gap.

Cross-age: peer learning is an effective strategy which provides weaker students with individualized instruction. In this system, which happens in out of class environment, the tutor student is often some years older than the tutee and they usually study in the same school (Heron & Harris, 2001). Studies indicate that both younger and older students gain social and academic benefits through this type of tutoring. Greenwood, Carta, and Hall (1988) pointed out 3 areas of academic skills,

social disciplines, and peer relationship which are improved during cross-age peer learning. Other researchers added more benefits including self-esteem and parenting.

Home-based: format usually involves siblings or parents as the tutors. Though there have been few studies in this area, the results shows that family members could serve as effective tutors (Elksnin & Elksnin, 1991).

One to one peer learning is another format in which only few students are selected for the task of tutoring (Nobel, 2005). Through one to one peer learning the teacher will be able to convey his instruction more effectively and, at the same time, increase the engagement of students (Greenwood, 1991; Olmscheid, 1999, as cited in Stenson, 2013).

Small group: peer learning is practiced in two different variations, remedial and rotating groups (Nobel, 2005). Remedial work is used when a group of students need additional tutoring and therefore, they will be provided with extra time to acquire the skills and knowledge through group work. In rotating work, the class is divided into several groups and while the teacher is working with one group the other groups will be engaged in group peer learning. This procedure will rotate throughout the course so that each group will have an equal chance to receive both teacher's instruction and peer learning (Miller, Barbetta, Drevno, Martz, & Heron, 1996).

Advantages of Peer Learning

The benefits of peer learning are not merely limited to the tutees but they cover all the educational system including the tutor students as well as the teachers. Goodlad and Hirst (1989) identified four main benefits of peer learning for the tutee students. They include additional teaching, individualized instruction, better opportunities to respond, and finally closer friendships. Ehly and Larsen (1980) argued that students feel less stressed to work with peers than the teachers or consultants. This prepares the ground for more feedback and correction which arises from more mistakes. At the same time, the process of clarifying, exemplifying, and simplifying would help the cognitive development of the peer tutor (Topping, 1996). Furthermore, peer learning has positive effects on students' self-concept (Miller, Topping, Thurston, 2010). It is defined as individuals' perception of themselves and it stems from interpersonal and intrapersonal activities and comparisons (Marsh, 1986). Brookover & Lezotte (1979) considered self-concept as essential part for personal, social, and professional performance of the students. Positive self-concept can also foster attendance, participation and task completion (Green et al., 2012). Efficiency of peer learning is another advantage which has been pointed out by educators. Topping (1996) emphasized that peer learning can help achieve more with fewer resources. It is mostly helpful for the teachers coping with large classes without sufficient resources.

Peer E-Learning

While peer learning is traditionally practiced in physical classroom settings, it can easily be adapted to virtual classes and provide even more benefits for the students. Online learning, which is often referred to as e-learning, has gained increasing popularity among schools as well as students. It provides a unique opportunity for the learners to engage in a dynamic and interactive education beyond the limitations of time and distance (Wagschal, 1998). Despite all this popularity, however, the current

methods used in e-learning often lack the features to create a cooperative and interactive environment among the learners. The first concern is that these methods operate in the same way as traditional classrooms where the teacher is at the center and the students are passive recipients. It also requires teachers to spend further time coordinating with each individual student. Secondly, they often lack any mechanism to allow the students to cooperate among themselves. Finally, the feedback system is usually based on pass/fail records and does not assess the actual skills which have been acquired (Fong, 2005).

Peer e-learning could be an effective method to develop the potential of E-learning and improve the inefficiency of traditional methods. It could create constructive interaction between the teacher and students as well as among the learners. Furthermore, it will improve interpersonal skills of students which are usually undermined in virtual settings (Light & Cox, 2001). Finally, the students find it more appealing to learn through peer discussions and interactions rather than listening to the lecturers or downloading files.

Previous Studies

Celis (2013) conducted research to find out the effectiveness of peer learning in English writing skills of the students in a public university in Colombia. The results revealed that implementation of peer learning not only helped students' writing skills but improved their oral production as well. He also found out 3 advantages which include self-confidence, extra help, and better group work.

Another study conducted by Lee (2003) in a secondary school in Hong Kong studied the effects of classwide peer learning on students' mathematics performance as well as the students' perceptions towards such learning strategy. The score results before and after the intervention showed positive effects on students' academic performance. Most of the students also confirmed positive attitudes towards peer leaning and found it as an easy and effective strategy.

Use of peer learning has also been studied by Wills, Deremer, McCauley, and Null (1999) in the introductory computer science curriculum. The project included use of different types of peer learning in different settings. The results suggested that peer learning is a valuable strategy which should be used as a pedagogical approach in teaching computer science.

Conceptual Framework

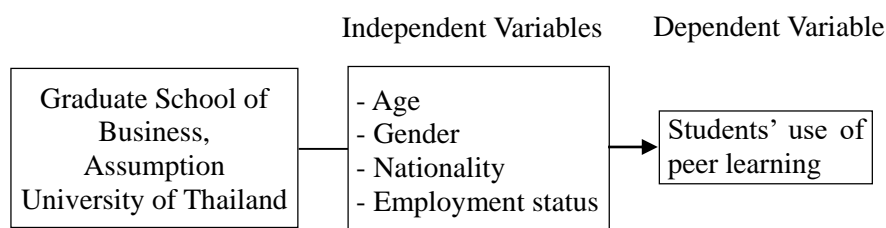


Figure 1: Conceptual Framework of The Study

Figure 1 illustrates the main independent and dependent variables which were used in this study. The researcher surveyed the use of peer learning among the students in the Graduate School of Business, Assumption University of Thailand. At the same time, possible differences in the students' use of peer learning according to the variables of age, gender, nationality, and employment status were identified.

Procedure

Participants

The participants of this study were students from the Graduate School of Business, Assumption University of Thailand. A total of 265 graduate students were selected through the use of convenience sampling technique in the first semester of academic year 2014.

Instrumentation

The researcher used a questionnaire as the primary means of collecting data and employed both descriptive and inferential statistics to analyze the collected data. The questionnaire consisted of two parts: demographics, and the students' use of peer learning.

Part 1: This part aimed to identify demographic information of the respondents. It included variables of gender, age, nationality and employment status.

Part 2: The second part of the questionnaire consisted of 15 items which aimed to survey the extent to which the students use peer learning in their academic activities. The selection format was arranged in a five point Likert Scale and the responses were interpreted according to the frequency levels.

The draft questionnaire was validated by three experts in terms of grammar, content, and construct. According to their comments, some parts were modified, added, and grammatically corrected. Once the validity of the questionnaire had been approved by the experts, the researcher did a tryout of the questionnaires involving 20 students from the Graduate School of Education who have had the similar characteristics to the main population of the study. The tryout aimed to compute the Cronbach's coefficient alpha in order to assess the internal consistency of the instrument. Additionally, the researcher re-computed and reported the internal consistency of the questionnaire after conducting the main survey on the target population. The Table below illustrates the measurements for the Cronbach's coefficient alpha of the questionnaire.

Table 1: Reliability of the Questionnaire

Reliability	Coefficient Alpha
Tryout	.70
Main Study	.76

Findings

Based on the collected data, it was found that the use of peer learning among the students in the Graduate School of Business was generally high with the total mean score of 3.90 which accounts for 78% of the maximum score. It indicates that the

students in the GSB often use peer learning in their academic activities. It should be noted that the item “I (will) seek help from my peers to write my thesis” received the highest mean score (4.12) among all the items. It further emphasizes the importance of peer learning in graduate studies where the students seek out help from their peers to write their thesis. At the same time, the item “Part of my scores comes from peer evaluation” had the lowest mean score which points out the need for more activities in the area of peer evaluation.

To address the second objective, the researcher employed inferential statistics to analyze the data according to the selected variables. Independent Samples t-test was used to compare the data based on gender, nationality, and employment status, while one-way ANOVA was employed for the variable of age. The following tables illustrate in details the results of data analysis for this objective:

Age

Table 2: Comparison of the Results According to the Respondents’ Age Groups

Source of Variance	Sum of Square	df	Mean Square	F	Sig.
Between Groups	1.27	3	.42	1.67	.173
Within Groups	66.40	261	.25	-	-
Total	67.68	264	-	-	-

In the Table 2, the F ratio is 1.67 with Sig of 0.17. Therefore, the researcher concludes that there is no statistically significant difference among the students’ use of peer learning according to their age groups.

Gender

Table 3: Comparison of Male and Female Students’ Use of Peer Learning

Female		Male		t	df	Sig. (2-tailed)
M	S.D.	M	S.D.			
3.96	.50	3.81	.49	2.33	263	0.02

In the Table above, t-value is 2.33 with Sig. (2-tailed) of .02, which is less than .05. Therefore, the researcher accepts the research hypothesis and concludes the there is a significant difference among the student’s use of peer learning according to their gender.

Nationality

Table 4: Comparison of Thai and Non-Thai Students’ Use of Peer Learning

Thai		Non-Thai		t	df	Sig. (2-tailed)
M	S.D.	M	S.D.			
3.98	.48	3.84	.51	2.17	263	0.03

As shown in the Table 4, t-value is 2.17 and Sig. (2-tailed) is .03. It reveals that there is a significant difference between Thai and non-Thai students' use of peer learning. At the same time, the mean scores for Thai and Non-Thai students are 3.98 and 3.84 respectively.

Employment Status

Table 5: Comparison of the Results According to the Respondents' Employment Status

Working		Not working		t	df	Sig. (2-tailed)
M	S.D.	M	S.D.			
3.80	.55	3.98	.45	2.87	263	0.004

Table 5 shows that for the variable of Employment Status, t-value is 2.87 and Sig. (two-tailed) .004. Therefore, the research hypothesis that there is a significant difference between full-time and working students' use of peer learning is accepted. It could also be noted that the students who are not working, have got higher mean score.

Discussion

The study found that the students in the Graduate School of Business have generally adequate interactions with their peers in different aspects of their academic activities. Being specific, however, the area that the students most often seek out help from their peers is for writing thesis. On the other hand, the use of peer evaluation for the students' grades has got the lowest mean scores among all the items. Though the mean score of 3.71 could still be interpreted as "often", the researcher hopes that the instructors provide more chance for the students to assess their peers' works. The literature also suggests that peer evaluation could enhance students' engagement and learning. Boud and Falchikov (2007, as cited in Thomas, Martin, & Pleasants, 2011) argued that peer assessment enables the students to make more sophisticated judgments. They also described it as an essential part of becoming an effective professional. Additionally, the study found that there was a significant difference between female and male students' use of peer learning. Research by Rodger, Murray, and Cummings (2007) has also supported the gender difference in learning styles of the students. In this study a group of female and male students were asked to complete mini-assignments both individually in a competitive condition and with a partner in a cooperative condition. The results indicated that female students performed higher than the males when they worked with their peers. Another finding of this study is that there was a significant difference between Thai and Non-Thai students' use of peer learning. Taking into consideration, Asian nationalities comprise a large body of international students in Assumption University of Thailand. The current results may reflect the fact that Thai students have more social interactions compared to the other Asian students.

Though the results of this study reveal that the students in the GSB have generally high levels of peer interaction, the researcher still believes that peer learning would be more beneficial if it is implemented in more structured and planned approach. Through the use of this instructional strategy, the instructors will be able

to structure a differentiated instruction which would meet the interests, abilities, and learning preferences of wider range of the students.

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