COLLABORATIVE LEARNING AS AN ADJUNCTIVE APPROACH IN TEACHING ACCOUNTING STUDENTS

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Abstract-

This study sought to determine the effectiveness of collaborative learning as an adjunctive approach in teaching accounting courses to accountancy students. Utilizing the quasi-experimental, pretest-post design, 40 accountancy students participated in this study. The results of this study reveal that the post test mean of experimental group (x=37.1, S=11.8) and that of the control group (x=28.7, S=11.3) are significantly different at 5% level of significance (t=8.641, DF=38, p<.05). Traditional approach in teaching is still effective for accounting students as shown by the significant improvement of scores of the control group from pre to post test. In the same way, collaborative learning approach is also effective for accounting students. However, students taught both with traditional and collaborative learning approach performed higher that those taught using traditional method alone. The results further suggest that collaborative learning is an effective adjunctive approach to lecturing.

Key words: Collaborative learning; accounting; distributed cognition; quasi-experimental.

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Introduction

Collaborative learning is not a new instructional approach and methodology and from its inception in the field of education, several studies have been done on this topic. As defined, collaborative learning is an instructional method in which students work together in small groups toward a common goal [1]. The students are responsible for one's own and other's learning. Thus, the success of one student helps another student to be successful. As cited in [1], students who worked in groups achieve highly and retain information longer than students who work and learn individually [2]. Sometimes, teachers and students mistakenly identify collaborative learning with cooperative. Collaborative learning is more than just a classroom technique [3]. It is a personal philosophy. Consensus building characterizes collaborative learning through cooperation by group members, as opposed to competition in which individuals are bound to best other group members. Cooperative learning is defined as a set of processes that help students interact with each other to accomplish a goal that is content-specific. The teacher closely controls cooperative learning, making it teacher-centered by essence. Collaborative learning is student-centered. The goal is not to answer questions but to interact and learn how to learn with other students.

Collaborative Learning and Distributed Cognition

Collaborative learning is related to Bronfenbrenner's (1979) human ecology theory that identifies four social systems: micro-system, meso-system, exosystem, and the macro system. In this theory, interaction between actors in each of these systems not only affects the actors present, but it may also indirectly affect other actors' behaviors in other systems [4]. Similarly, Hatch and Gardner (1993), in their contextual influence model, distinguished three levels of influence: personal forces, local forces and cultural forces. Personal forces are those individual abilities and experiences within a given culture. Local sources are believed to be resources and people within a specific local setting such as home, school, and work. Cultural forces, such as institutions, practices, and beliefs influence the local and personal forces through schooling, child rearing, language, religion, etc. [4], [5].

Strijbos considered collaborative learning as a dynamic distributed system. This is an influence of Bronfenbrenner, Hatch and Gardner. Referring to this concept of dynamic

distributed system, Salomon defines distributed cognition to be a system comprising an individual and peers, teachers or culturally provided tools. The distributed cognition should never be reduced to a sum of individual cognitions, but as a new cognition that emerges from interactions between individuals [6]. Quoting Salomon, Strijbos asserted that the product of the intellectual partnership that results from the distribution of cognitions across individuals or between individuals and cultural artifacts is collaborative by nature and cannot be attributed solely to one or another partner. Nevertheless, each partner in a group can still be seen as having qualities his or her own, which can either be influenced by distributed partnership reciprocally, while other qualities may not be so influenced [4]. This may mean that each partner can still be seen as having distinct qualities. However, to make these operational, there needs to be motivation and social skills [7].

The Concept of Consensus in Collaborative Learning

Consensus is a concept that is closely associated with collaborative learning and is not present in cooperative learning. Collaborative learning follows this principle. However, there are criticisms against t he use of consensus in collaborative learning. Accordingly, the use of consensus in collaborative learning is an "inherently dangerous and potentially totalitarian practice that stifles individual voice and creativity, suppresses differences, and enforces conformity" [7].

Unity in Diversity

Consensus per se may stifle individuality but it promotes unity in diversity. According to Vygotsky (1978) in [1], students are capable of performing at higher intellectual levels when asked to work in collaborative situations than when asked to work individually. Group diversity in terms of knowledge and experience contributes positively to the learning process. Bruner (1985) in [1] contended that cooperative learning methods improve problem- solving strategies because the students are confronted with different interpretations of a given situation. Through the peer support system, it is made possible for learners to internalize both external knowledge and critical thinking skills and to convert them into tools for intellectual functioning.

In a study in [1], the researchers asked the collaborative learning group participants about their written comments on their learning experience. In order to analyze the open- ended informal responses, the researchers divided them into three categories: 1. benefits focusing on the process of collaborative learning, 2. benefits focusing on social and emotional aspects, and 3. negative aspects of collaborative learning. Most of the participants felt that group work helped them to better understand the material and stimulated their thinking process. In addition, the shared responsibility reduced the anxiety associated with problem- solving. The participants commented that humor too played a vital role in reducing anxiety. A couple of participants mentioned that they wasted a lot of time explaining the material to other group members.

In the said study, the collaborative learning medium provided students with opportunities to analyze, synthesize, and evaluate ideas cooperatively. The informal setting facilitated discussion and interaction. This group interaction helped students to learn from each other's scholarship, skills, and experiences. The students had to go beyond mere statements of opinion by giving reasons for their judgments and reflecting upon the criteria employed in making these judgments. Thus, each opinion was subject to careful scrutiny. The ability to admit that one's initial opinion may have been incorrect or partially flawed was valued.

From this research study, the researcher suggested that collaborative learning fosters the development of critical thinking through discussion, clarification of ideas, and evaluation of others' ideas. However, both methods of instruction, cooperative and collaborative, were found to be equally effective in gaining factual knowledge. Therefore, if the purpose of instruction is to enhance critical- thinking and problem- solving skills, then collaborative learning is more beneficial. However, majority of researches in collaborative learning has been done at the primary and secondary levels and fewer researches are done in the college level, much more in non-technical disciplines [1]. Accounting is a very technical course that focuses on contents and may make introduction of collaborative learning futile, making a “blind leading another blind” as a known phrase goes. Hence, this study sought to determine the effectiveness of collaborative learning as an adjunctive approach in teaching accounting courses to accountancy students.

Further, this answers the following research questions:

1. How will the accounting students perform in their accounting course as to pretest and post test exam?

2. Will there be a significant difference between pretest results of those accounting students taught with collaborative learning approach in addition to the traditional method of lecturing and those only taught using the traditional approach?

3. Will there be a significant difference between pretest and post test results of those taught using the traditional approach?

4. Will there be a significant difference between pretest and post test results of those taught using the collaborative learning approach in addition to the traditional approach?

5. Is there a significant difference in the post tests of experimental and control groups?

Methodology

This study utilized the quasi-experimental pretest-post test design to know whether collaborative learning is, indeed, helpful in the learning process of 40 accountancy students. As a nature of quasi-experimental design, there is no randomness observed in the sampling of participants because of the fixed schedules of the students. The One class of Accounting 2 course was divided into two groups, the experimental and control groups. The division was done in random. After the section was divided, the students were given pretest using validated and reliability tested questionnaire (α=.821). The results per group were recorded and computed for mean and standard deviation. After the pretest, the experimental group was taught using the traditional approach which is mainly lecture and as the intervention, the instructor utilized collaborative learning, as adjunctive approach of teaching. As the intervention in this study, aside from the lectures, the instructor gave the experimental group assigned readings for group discussion before attending the lecture on the same subject matter. The group was briefed clearly about the task before the instructor implemented collaborative learning. He distributed an instruction sheet about collaborative learning to the experimental group. The instructor did not ask questions but encouraged the students to ask probing questions about the subject matter and discuss their answers to those questions. Also, he instructed the students to listen intently to each

other during the discussions and be willing to change their own thoughts and ideas about the subject matter if there is a need. There were students who would serve as the speaker of the group. These students were primarily those who shared their ideas longer than other members. Therefore, this study maintained to provide each group member an opportunity to contribute his or her ideas.

Moreover, groups' selection and size also matters a lot in this study. Because smaller groups, of three, are less-diverse, as to thinking styles and expertise, this study utilized smaller groups of three to four participants [8]. Since there were 20 students in the experimental/collaborative group, there were five small groups that were formed. The teacher assigned leaders for each meeting to facilitate discussion. To foster accountability, each group member signed the group goals and accountability contract. Every group member needed this contract to ensure that every group member would spend time explaining concepts to group mates [9]. After the preliminaries were done, group members formed close circles and started discussing the questions given to them concerning previous reading materials. They discussed for 30 minutes to come into a consensus. After this, the instructor lectured and facilitated a discussion [10].

On the other hand, the instructor taught the control group using only the traditional approach. So, for one and a half hours, the instructor lectured the concepts, the conventional way. The pretest and post test questions are composed of 50 multiple-choice questions that cover the reading materials discussed and lectured in the class. Both have the same test contents, with the exception of the order of questions. This experimentation took place during midterm period of the first semester of academic year 2014-2015 in a selected college in Bacoor City, Cavite.

To avoid bias, the researcher always checked how collaborative learning took place every meeting. Constant feedbacks were given by the researcher to the instructor. After a series of lessons that ran for almost a month, the instructor gave the same set of test as post test. The means of the two tests are then compared using t-test at 5% level of significance.

Results and Discussion

The study answers the following questions:

How do the accounting students perform in their accounting course as to pretest and post test exam?

Table 1 shows that the experimental group scored a mean result of 15.5 and the control group of 16.1 in the pretest, while post test results revealed that experimental group scored 37.1 and 28.7 for the control group. The control group scored higher than the experimental group in the pretest while the experimental group was higher than the control group in the post test. However, when it comes to variation of scores, as shown by the standard deviation, the result reveals that post test (S=11.8, 11.3) is more varied than pretest results, both in experimental and control, respectively. In the pretest, control group mean score is less varied (S=6) than the experimental group (10.5).

Is there a significant difference between pretest results of experimental and control groups?

Table 2 shows that there is no significant difference in the pretest results between experimental and control groups (t=-.274, df=38, p>.05). This implies that both groups which have no previous knowledge of the subject matter scored in the pretest equally the same.

Is there a significant difference between pretest and post test of Control Group?

Table 3 demonstrates that statistically the results in the pretest and post test for the control group are significantly different (t=-5.294, df=38, p<.05). This suggests that the higher score in the post test as compared to the pretest is statistically significant. After the traditional approach was used in teaching accounting subject to accountancy students, the control group learned as reflected in the higher mean of the post test.

Is there a significant difference between pretest and post test results of the experimental group?

Likewise, the results of the pre and post tests of the experimental group are significantly different (t=-10.77, df= 38, p<.05), as shown by Table 4. Similar to the control group, experimental group also has its mean improved after the lesson was taught to them. However, it is not yet proper to conclude that collaborative learning is really effective at this juncture.

Is there a significant difference in the post tests of experimental and control groups?

It can be gleaned from Table 5 that the post test mean of experimental group (x=37.1, S=11.8) and that of the control group (x=28.7, S=11.3) are significantly different at 5% level of significance (t=8.641, df=38, p<.05). Experimental group which was taught using both the traditional and collaborative learning got the higher mean than the control group which was taught using the traditional (lecture type) approach. Therefore the null hypothesis is rejected.

Conclusions

The following are the conclusions to this study, which suggest that:

1. Accounting students solely depend on teaching and learning process, as led by teachers in their accounting courses, as shown by the results of the pre and post tests. If there is no teaching that takes place, naturally, no learning takes place.

2. Performance of all students is the same in an accounting course before teaching-learning process takes place.

3. Traditional approach in teaching is still effective for accounting students as shown by the significant improvement of scores of the control group from pre to post test.

4. Collaborative learning approach is also effective for accounting students as shown by the significant improvement of scores of the experimental group from pre to post test.

5. Students taught both with traditional and collaborative learning approach performed higher that those taught using traditional method alone. The result further suggests that collaborative learning is an effective approach that can be used adjunctive to lecturing or the traditional method of teaching.

Recommendations

1. Syllabi should be distributed earlier, even before classes start so as to promote and facilitate early research and learning.

2. Devise teaching strategies and approaches that could cater to various learning needs and styles of students.

3. Lecturing or the traditional approach should be done properly, which means principles of great lectures and lecturing need to be applied in the teaching-learning process.

4. Maximize use of collaborative learning approach in teaching business courses.

5. Enrich teaching and learning process with collaborative learning approach more often, as an adjunct to traditional approach.

6. Since collaborative learning approach was used as an adjunctive approach to traditional approach, studies on its effectivity versus other approaches can also be done by future researchers.

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