

# **The Implementation of Role-Playing Model in Principles of Finance Accounting Learning to Improve Students' Enjoyment and Students' Test Scores**

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## **ABSTRACT**

This research is a classroom action research. The goal of conducting this research is to improve students' enjoyment level and their test scores by implementing role-playing method. The research is conducted in Accounting Education Study Program of Sanata Dharma University at odd semester on academic year 2010/2011. The participants were divided into two classes. The first class was the class that got the treatment, while the second class was the control class. The result of the study showed that there was an improvement of students' enjoyment level and test scores in the class which implemented role-playing method.

**Keywords:** Classroom action research, enjoyment level, tests scores.

## **INTRODUCTION**

Various activities are needed to be done in a learning process. Those activities involve the effective teaching implementation, the effective curriculum development, the pedagogic innovation, the curriculum examination, pedagogic issues, and its application in the class, learning material development, and the education research (Rover 2007). The learning innovations are needed to be done by utilizing the sets of technology equipment, learning technique development, and the assessment (Boyer 1990; Weiser 1996; in Rover, 2007). Learning technique development means to build and communicate a new understanding and perspective, to develop and refill the used contents and methods, and to emphasize the continuous learning. Furthermore, the educators should monitor students' progress continuously and create instructional environment that it is possibly for students to improve themselves.

For years now, research has been done to show the effectiveness of different teaching strategies. Hands-on or active learning is one of those strategies. Active learning gives students an opportunity to take a more interactive role with the subject matter. It requires students to get involved rather than just sitting and listening. Active learning allows the students to take part in their education through a number of games and activities (Felder and Brent, 2003). Social studies teachers are constantly looking for new methods to

assist them in reaching their students in ways that are most beneficial. These active learning methods of reaching students are non-traditional. Some non-traditional teaching strategies include cooperative learning, presentations, role-playing, video instruction, and game playing. Schug et al (1984) in Dawood (2006) have reported that students expressed a desire to take part in strategies in which they were more actively involved in the learning process.

Researchers and theorists believe that not all students learn in the same way and that there are a number of different teaching strategies that could be used to help them learn. They believe that the traditional method of education like lectures and note taking may not benefit students as much as a more non-traditional approach such as playing educational games. Research has shown that students not only learn in different ways but that students have become bored with teachers traditional approaches. Some theorists now believe that non-traditional educational strategies and techniques are more useful to the student. Not only non-traditional methods like role-playing, cooperative learning, and game playing get the students more interested but they feel that they will better prepare students socially which in turn will produce a more positive contributing member to society (Dawood 2006).

However, how will it be in accounting learning? Accounting learning which is done in many places shows that the educators often place

the learners tend to be passive in the class. That condition causes the learners to master the material comprehensively. Suwardjono (2003) notes down that there are some reasons why their understandings are still low: (1) accounting learning process in the class at introduction level tends to discuss the 'how' matters without emphasizing on 'why' aspects, (2) accounting is often narrowly described as the documentation process, not as information engineering process. Students' cognitive aspects are possibly developed after the learning process is finished. Nevertheless, their affective and psychomotor aspects tend to be not sharpened. Therefore, it is essential to develop alternative learning approach which allows students to have better accounting understanding.

Accounting learning strategies are usually an individual-based and passive learning approach. Those strategies are needed to be changed into an active learning model and team-based. In other words, learning is directed in the form of cooperative learning. Cooperative learning is a teamwork model/method that allows students' active participation in their learning process. The active participation will encourage them to be more interested in the learning process directly or indirectly which later will affect to the improvement of students' understanding. Researchers and practitioners have found that students working in small cooperative groups can develop the type of intellectual exchange that fosters creative thinking and productive problem solving (Southwest Consortium for the Improvement of Mathematics and Science Teaching, 1994).

Role-playing is one of cooperative learning models. Role-playing has a long history to be one of the methods in teaching. It is a literature development form which exists in law and diplomacy field (Susskind et al, 1999). Role-playing has been broadly used especially in social studies. Its motivational factors are role-playing offers an alternative teaching method which can be used as a media for science development and social interaction (Lea and Sparks 1999 in Hales and Cashman, 2008), anecdotal and popular scientific writing (McPhee 1989 in Hales and Cashman, 2008), class discussions and experiments (Bladh, 1990). The implementation of role-playing method in learning is based on some argumentations as follows: first, to formulate life problems so that the learning process can be easily understood by students; second, role-playing will encourage the students to express their feelings; third the psychological process will involve behaviors, values, and faith. By referring to those three argumentations, role-playing method is implemented in this research to accounting learning

especially on the materials of service companies' accounting cycle.

The purpose of this study is to investigate the effects of playing educational based games in an accounting class. These games utilize various motivational strategies and are used to increase knowledge and understanding of the material while at the same time increasing students' enjoyment. The study is conducted in two classes, the first class is the class which gets the treatment and the second class is as the control class. It is proposed that using different strategies may lead to increase student learning and classroom's enjoyment based on students' test scores and classroom surveys. The results of this study may be important to all educators. It will provide insight into whether or not non-traditional teaching techniques such as playing games and making projects will contribute to better test scores and overall satisfaction of the subject by students, than traditional teaching techniques. By teaching students in multiple ways, they may enjoy their social studies classes by being challenged academically and socially.

## COOPERATIVE LEARNING

Cooperative learning has been a popular topic in educational circles for more than a decade (Southwest Consortium for the Improvement of Mathematics and Science Teaching 1994). Cooperative learning is another strategy that has come to the forefront in education. Vygotsky's educational theory suggests that individuals first learn through person-to-person social interaction, and then internalize knowledge individually (Fogarty 1999 in Hwang et al 2005). Based on this theory, cooperative learning is a structured and systematic instructional design in which small groups work together toward a common goal (Davidson and O'Leary 1990).

Cooperative learning technique is developed as arranged formal group model/method to improve students' active participation not merely in their learning process, but also their learning in the class (Peek et al 1995). Cooperative learning is based on premise in the real world that students will work in various team/group to solve the problems. Therefore, the group forming in cooperative learning is needed to be done by considering: intellectual factor, technique abilities, and cultural factor. Arronson and Goode (1980), the pioneers of cooperative learning technique development, state that the students' focus in cooperative learning will give them to have interpersonal relationship and social creativity that are really needed when they work.

The implementation of cooperative learning in the classroom means that all members in a group can learn together through person-to-person interaction, and will subsequently perform better as individuals (Jonhson et al, 1991). Students are put into diverse groups so they can solve problems and learn information. Supporters believe that when cooperative learning is used properly, it has the potential to be an alternative to tracking, a means to mainstreaming, a means of improving race relations, a solution to the problems of students at risk, a means of developing pro-social behavior, and a method for increasing achievement (Guyton 1991). Students who are involved in cooperative learning have shown an increase in long-term retention and improved critical thinking skills (Guyton, 1991). Furthermore, Slavin (1990) also finds that it can lead to a better attitude toward school and subject, increased self-esteem, and a better ability to work successfully with others.

As cooperative learning has produced positive results in the enhancement of learning outcomes in mathematics, physics, education, music, and the social sciences, educators have begun to explore whether it can enhance learning process outcomes in accounting (Lindquist 1995; Peek et al 1995; Ravenscroft et al 1995, 1997). The effectiveness of cooperative learning has been tested in several accounting courses, including the following: accounting (Ravenscroft et al 1995, 1997); managerial accounting (Peek et al 1995; Ciccotello et al, 1997; Ravenscroft et al 1995, 1997); taxation (Hite, 1996); auditing (Lindquist 1995; Ravenscroft et al 1997); and intermediate accounting (Ravenscroft et al 1997).

### **Role-playing as a Learning Strategy**

Role-playing has also been often defined as a game system (Mackay, 2001), though some attempts to look at it as a gaming process have been done as well (Hakkarainen & Stenros 2002). Based on Heliö (2004), it can be argued that any formal game system can be used as a basis of role-playing process, provided the players have the proper mindset, and that any formal game system is not necessarily needed. On the other hand, it has been noted that any role-playing game – whether we are discussing traditional tabletop role-playing games, larps (live role-playing games) or online role-playing games – can be participated without role-playing. Bartle (2004) in Montola (2008) or instance decides that online worlds are not games but places, since they lack many qualities of games while having several qualities of places. Partially due to this confusion, the ludological discussion has

been confused on whether role-playing is game playing or not. Typically, the analyses have focused on the role-playing games as rule sets. Role-playing has been seen as a borderline case of game for various reasons. Due to game master's influence, role-playing lacks static rules (Juul 2003 in Montola (2008), and many role-playing systems do not allow the players to rate their characters' success or failure in the game as "positive" or "negative" thing (Montola 2005). Montola sees role-playing mindset as a method of game lying, which can be optionally combined with various game systems. It is not the only distinct gaming mindset. For instance, some games are supposed to be played with mindset of a conspiratorial diplomacy and backstabbing, while others require an honorable sportsmanship or a style prioritizing style over success.

Hakkarainen and Stenros (2002) define role-playing game as that which is created in the interaction between players or between player(s) and game master(s) within a specified diegetic framework. This definition approaches role-playing from the angle of communication. If role-playing games are to be studied as games, a more ludological definition is required, one that demonstrates the similar game-like and features of all different forms of role-playing. It must also be understood that Bartle's notion of persistent worlds being places rather than games is appropriate to all forms of role-playing to certain extent. While, Chesler and Fox (1966) in Haddad (2003) define role-playing as taking on the role of another person and by pretending to feel like, think like, and act like another person. They give various reasons why role-playing can be tremendously helpful in elementary and secondary classrooms. First, they believe that when students are taking the role of someone else, they can act out their true feelings without the risk of sanctions or reprisals. They will be less hesitant to keep their feelings hidden because they see it as only acting. This can lead to increased creativity and spontaneity in students who are reserved. Second, when students are role-playing they can identify with the real worlds and the imaginations of other children and adults. This will lead to students having a better understanding of their actions toward others. They may also come to understand the motives that guide their behavior and the behavior of others. Third, role-playing that helps individuals to understand their own and others' behaviors can free them to utilize their intellectual potential more fully. Students who are using more of their intellectual potential can be asked to do work that uses higher order thinking skills. Bloom (1956) believes for students to grow intellectually, they must participate in

learning in which they must synthesize or evaluate information. Finally, Chesler and Fox (1966) see role-playing as a unique instructional strategy to use because of its active nature. Students are not passively discussing or listening to information. They are actively involved in knowing a topic and using that knowledge to act out a scenario. Thus there is a stress on active participation in learning that enhances the learning itself.

There are some approaches usually used in role-playing implementation in the class. Those approaches are based on (Zaini 2008): 1) Skills-based approach. In this approach, learners are expected to get creativity, ability or attitude through a model with a set of criteria; to treat the behaviors to be perfectly internalized by following the existed criteria; to demonstrate those behaviors to other for evaluation purpose, 2) Speculative-based approach. In this approach, learners are involved to make a speculation about past knowledge, past events, or even the future by using the aspects known from a certain subject area and the knowledge they have interactively. By using this approach, learners are hoped to be able to arouse the knowledge to fill the crack between information has been known and has no; to use the evidences to make a basic evaluation; and to reconstruct then represent a certain interaction to analyze an event, 3) Issues-based approach. In this approach, the actors actively explore issues by imagining the roles of the real world who are arguing each other to achieve certain desire. Through this approach, students are expected to be able to examine behaviors, beliefs, and values which surround the issue; to examine behaviors and beliefs which are professed by certain people; to make themselves to take side on the roles with the same position; to negotiate and debate with the different position roles; and perhaps to have stand from the opposition issue.

More than a recent decade, accounting educators have been called to reform the accounting education process (Hwang et al 2005). The goal of the reformation is to leave behind an individual-based accounting learning and passive learning approach into an active learning model and is based on team. It has stated in *The Accounting Education Change Commission (AECC)* in *Position Statement Number One* (1990):

One issue the statement addressed concerns instructional methods. The AECC urges faculty members to move away from a purely lecture format where students take on the role of passive recipients of information. Rather, students should become active participants in the learning process.

AECC expects that the educators will leave the traditional learning ways to cooperative learning model. Hence, the graduates are more able to identify, analyze, interpret, and make reliable and relevant decisions based on the accounting information they get (Hwang et al 2005). Slavin (1990) stated that cooperative learning has strong effects on higher-order understanding in social studies. This is important because of the need to teach about democratic processes. The school itself serves as a laboratory for students to learn social participation directly and not symbolically. Democratic and participatory school and classroom environments are essential to this type of real-world learning (Slavin, 1983). Cooperative learning in schools will help they becomes institutions of democracy, where both the teacher and the students will be empowered.

Hootstein (1995) examined both teacher and student beliefs about different teaching strategies. When a group of social studies students were surveyed about which type of instructional method motivated them the most, role-playing characters in simulations and group discussions were favored by them and ranked at the top. Teachers were also asked which instructional strategies they felt best-motivated students to learn about history, and once again, role-playing and games were high on their list. Playing games to introduce new topics, as well as for reviewing previously taught information, ranked high with the students. Teachers also mentioned that not only do role-playing, cooperative learning and game playing help educate and motivate their students; they also help students with the development of social skills. Piaget (1951) found that when play-like activities were used in learning, they made learning much more interesting. It also improved their cognitive thinking because it gave students more control over their learning. These play-like activities can include matching games, puzzles, Pictionary, debates, and group competitions. All of which encourages the student to participate and develop the skill of working with others. If playing educational games is an effective pedagogical method for the enhancement of learning outcomes, then we expect to find that:

Hypothesis #1: Playing educational games in accounting class, students will increase their enjoyment of the class as measured by a survey given before and after the project.

Hypothesis #2: Playing educational games in accounting class, students will have higher test scores than those taught in a more traditional class before and after the project.

## RESEARCH METHODOLOGY

The research was conducted in Accounting Education Study Program, Faculty of Teachers Training and Education, Sanata Dharma University. The participants were 90 students who took Principles of Finance Accounting 1 at odd semester on academic year 2010/2011. They were distributed into two classes evenly (A and B), each consisted of 45 students. Generally, both classes had almost same characteristics. Therefore, researcher decided to choose class A as the class that got the treatment and class B as the control class. The implementation of role-playing method was on materials of service companies' accounting cycle that they usually learned in chapters partially. This research is expected to give many benefits to the students' enjoyment level and students' understanding on principles of finance accounting lecturing.

This project involved a fairly diverse group. One class was taught in a more traditional manner using lectures and note taking as its main teaching strategy while the other class was taught in a more non-traditional way using role-playing as its focus. Test scores and survey results were taken from both classes and the findings were recorded.

There were three stages done in class which got the treatment in every meeting. Generally, those stages were plan and preparation, interaction, reflection, and evaluation. The following is the elaboration of each stage.

**Plan and Preparation,** In this stage, researcher and partner lecturer implemented role-playing method in the learning process by following these steps: (a) doing pre observation towards students' characteristic and class atmosphere to form the groups (one group consisted of four members) and the roles division; (b) partner lecturer made a lesson unit (Satuan Acara Perkuliahan/SAP) about learning activities which concluded: pre-activities (apperception and learning objectives), whilst activities (implementing role-playing learning method, learning media, and time allocation), and post-activities (conclusion and reflection); (c) preparing the equipments such as tables, chairs, notebook, viewer, and media for each role (handout, transaction invoice, the evidence of cash inflows and the evidence of cash outflows, practice book of service companies' accounting cycle, fake moneys, picture of table and hearing aid), and also

each role's task; (d) researcher and partner lecturer compiled the instruments for collecting the data; (e) discussing how the learning could be implemented well, dividing the roles for students, and doing the simulation.

**Interaction,** The stages done by partner lecturer were: (a) explaining to students about role-playing learning method to be implemented; (b) explaining the roles to be played by students; (c) implementing role-playing learning method; (d) having a conclusion of learning activities had been done and doing an evaluation toward the roles had been played in role-playing; (e) reflecting the learning activities by using role-playing method together with the students.

**Reflection,** Reflection and evaluation were done after the learning was finished. Educator and students evaluated and concluded the activities. Besides, educator and students made a reflection to decide the further learning.

Data collection was done by using two methods: tests and questionnaires. Tests were done at the beginning and end of the learning activity in the forms of pre-test and post-test in both classes (class which got the treatment and control class). Meanwhile, questionnaires were given also at the beginning and the end of the learning activity. Questionnaires that were adapted from Dawood (2006) were used to discover students' enjoyment level (students' enjoyment survey – see appendix). The test scores and questionnaires' answers from both classes were compared later.

## RESEARCH FINDINGS AND DISCUSSION

Data collection of students' enjoyment and students' test score in a learning process was done before and after the research. Data collection at the beginning of the research was done to ensure whether or not a class determining of treatment class and control classes was in accordance with the initial design of this study. In addition, it was intended for mapping learning. Meanwhile, data collection at the end of the learning is intended to investigate how the research findings in both classes that were specifically used as an evaluation tool for determining the effectiveness of the treatment. The following description presents research findings before and after the research.

## Initial Conditions

Table 1. Descriptive Statistics of Students' Enjoyment Level

| Class   | N         | Range     | Minimum   | Maximum   | Mean      |            | Std. Deviation | Variance  |
|---------|-----------|-----------|-----------|-----------|-----------|------------|----------------|-----------|
|         | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic      | Statistic |
| Class A | 45        | 15.00     | 16.00     | 31.00     | 22.5556   | .57169     | 3.83498        | 14.707    |
| Class B | 45        | 20.00     | 14.00     | 36.00     | 23.2889   | .62654     | 4.20293        | 17.665    |

Table 2. Independent Samples Test of Students' Enjoyment Level

| Independent Samples Test |                             |                                               |      |                              |        |                    |                    |                          |                                                 |        |
|--------------------------|-----------------------------|-----------------------------------------------|------|------------------------------|--------|--------------------|--------------------|--------------------------|-------------------------------------------------|--------|
|                          |                             | Levene's Test<br>for Equality of<br>Variances |      | t-test for Equality of Means |        |                    |                    |                          |                                                 |        |
|                          |                             |                                               |      |                              |        |                    |                    |                          | 95% Confidence<br>Interval of the<br>Difference |        |
|                          |                             | F                                             | Sig. | t                            | df     | Sig.<br>(2-tailed) | Mean<br>Difference | Std. Error<br>Difference | Lower                                           | Upper  |
| Students' Enjoyment      | Equal variances assumed     | .076                                          | .783 | -.865                        | 88     | .390               | -.73333            | .84816                   | -2.41887                                        | .95220 |
|                          | Equal variances not assumed |                                               |      | -.865                        | 87.272 | .390               | -.73333            | .84816                   | -2.41906                                        | .95240 |

Table 3. Descriptive Statistics of Pre-test Scores

|         | N         | Range     | Minimum   | Maximum   | Mean      |            | Std. Deviation | Variance  |
|---------|-----------|-----------|-----------|-----------|-----------|------------|----------------|-----------|
|         | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic      | Statistic |
| Class A | 45        | 52.00     | 24.00     | 76.00     | 44.8000   | 1.60101    | 10.73990       | 115.345   |
| Class B | 45        | 56.00     | 22.00     | 78.00     | 44.8222   | 1.70954    | 11.46792       | 131.513   |

Table 4. Independent Samples Test of Pre-test Scores

| Independent Samples Test |                             |                                         |      |       |        |                              |                 |                       |                                           |         |
|--------------------------|-----------------------------|-----------------------------------------|------|-------|--------|------------------------------|-----------------|-----------------------|-------------------------------------------|---------|
|                          |                             | Levene's Test for Equality of Variances |      |       |        | t-test for Equality of Means |                 |                       |                                           |         |
|                          |                             |                                         |      |       |        |                              |                 |                       | 95% Confidence Interval of the Difference |         |
|                          |                             | F                                       | Sig. | t     | df     | Sig. (2-tailed)              | Mean Difference | Std. Error Difference | Lower                                     | Upper   |
| Pre-test Scores          | Equal variances assumed     | .364                                    | .548 | -.009 | 88     | .992                         | -.02222         | 2.34217               | -4.67679                                  | 4.63234 |
|                          | Equal variances not assumed |                                         |      | -.009 | 87.624 | .992                         | -.02222         | 2.34217               | -4.67707                                  | 4.63262 |

Table 1 and Table 2 show that the level of enjoyment of students in principles of finance accounting course was low (mean = 22.5556 for class A, and the mean = 23.2889 of the measurement scale 10 to 40). Both class also showed that there was no difference in the level of enjoyment of students in principles of finance accounting course (sig. (2-tailed) = .390).

Table 3 and Table 4 show that the pre-test scores was very low (mean = 44.8000 for class A, and the mean = 44.8222 for class B, in the

measurement scale of 0 to 100). Both class showed that there was no difference in the level of students' ability in principles of finance accounting course. (sig. (2-tailed) = .992).

Based on the data of statistical tests, it appears that both in students' enjoyment level and comprehension in principles of finance accounting course had no significant difference. Therefore, the determinations of the class which got the treatment and the control class were already in accordance with the initial design of this research.

Researcher and partner lecturer agreed to set class A as the class that got the treatment, whereas class B as a control class.

At the next stage, researchers and partner lecturer developed steps of learning, especially for class that got the treatment in learning. Steps taken are as follows: (1) researcher and partner lecturer made a learning design together in the form of lesson unit; (2) preparing the necessary equipments would be used in the learning process; (3) developing instruments for data collection, and; (4) discussing the methodology of learning implementation, dividing roles among learners, and conducting simulation. Based on those steps, the implementation of role-playing in learning the principles of financial accounting is conducted by the partner lecturer on the materials of service companies' accounting cycle. Number of hours at each meeting was 3 hours. In the implementation of learning, every student in each group played a different role. So, in each lesson students played in 3 cycles/rounds, as the seller/purchaser, the finance officer, and the accounting officer. The stages done by partner lecturer were: (a) explaining to students about role-playing learning method to be implemented; (b) explaining the roles to be played by students; (c) implementing role-playing learning method; (d) drawing conclusion of learning activities had been done and doing an evaluation toward the roles had been played in role-playing; (e) reflecting the learning activities by using role-playing method together with the students.

After the partner lecturer implemented the learning activities based on role-playing method, the research findings are showed as follows.

Table 5 and Table 6 show the descriptive results of this research. Level of students' enjoyment of class A, in principles of finance accounting course was showed higher (mean = 28.4667), whereas in class B was sufficient (mean = 25.1333) on the measurement scale 10 to 40. Viewed from the side of the average level of enjoyment, in class A, the students has increased

an average level of enjoyment of 22.5556 (before the study) to 28.4667 (after research). Meanwhile, in class B, despite of in lower level, the average level of students' enjoyment was also increasing; which was from 23.2889 (before the study) to 25.1333 (after the study). This indicates that the treatment given to class (class A) had increased the level of enjoyment which was better than the control class (class B). Meanwhile, students' test scores in principles of finance accounting course show that the results of learning in class A was high (mean = 64.8000), while for class B the results indicated sufficient (mean = 49.8222) in the measurement scale of 0 to 100. Seen from the average of the results of learning, in class A, the students experienced an average increase test scores from 44.8000 (before the research) to 64.8000 (after the research), while in class B, the students' score also increased but in a lower average learning results, which is from 44.8222 (before research) became 49.8222. Thus, it indicated that the treatment given to class (class A) had increased a better average learning results than the control class (class B).

The hypothesis confirmation was done in this research in order to prove the initial allegations. This hypothesis confirmation was on the data collected in the treatment class and the control class before and after the research. Hypothesis confirmation I shows the following condition

Table 7 shows that there is a difference in the level of students' enjoyment before and after the research on the class which implemented role-playing method than the control class (sig. (2-tailed) = .000). In the class which implemented role-playing (class A), the level of students' enjoyment in accounting class was better than the control class (class B). Meanwhile, the hypothesis confirmation II about the results in students' test scores is showed in the following Table 8.

Table 8 shows that there is a difference in the students' test scores before and after the research on the class which implemented role-playing

**Table 5. Descriptive Statistics of Students' Enjoyment Level**

|         | N         | Range     | Minimum   | Maximum   | Mean      | Std. Deviation | Variance  |
|---------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|
|         | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error     | Statistic |
| Class A | 45        | 15.00     | 21.00     | 36.00     | 28.4667   | .61513         | 4.12641   |
| Class B | 45        | 20.00     | 16.00     | 36.00     | 25.1333   | .67540         | 4.53070   |

**Table 6. Descriptive Statistics of Students' Test Score**

|             | N         | Range     | Minimum   | Maximum   | Mean      | Std. Deviation | Variance  |
|-------------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|
|             | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error     | Statistic |
| Post-test A | 45        | 52.00     | 44.00     | 96.00     | 64.8000   | 1.60101        | 10.73990  |
| Post-test B | 45        | 56.00     | 27.00     | 83.00     | 49.8222   | 1.70954        | 11.46792  |

Table 7. Comparison of the Mean Level of Students' Enjoyment Before and After the Research

| Independent Samples Test |                             |                                         |      |                              |        |                 |                 |                       |                                                          |
|--------------------------|-----------------------------|-----------------------------------------|------|------------------------------|--------|-----------------|-----------------|-----------------------|----------------------------------------------------------|
|                          |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |        |                 |                 |                       |                                                          |
|                          |                             | F                                       | Sig. | t                            | df     | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference<br>Lower Upper |
| Aft-Bfr A –              | Equal variances assumed     | 9.993                                   | .002 | 7.519                        | 88     | .000            | 3.75556         | .49952                | 2.76287 4.74824                                          |
| Aft-Bfr B                | Equal variances not assumed |                                         |      | 7.518                        | 87.622 | .000            | 3.75556         | .49952                | 2.76281 4.74830                                          |

Table 8. Comparison of the Students' Test Scores Level Before and After the Research

| Independent Samples Test |                             |                                         |      |                              |        |                 |                 |                       |                                                          |
|--------------------------|-----------------------------|-----------------------------------------|------|------------------------------|--------|-----------------|-----------------|-----------------------|----------------------------------------------------------|
|                          |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |        |                 |                 |                       |                                                          |
|                          |                             | F                                       | Sig. | t                            | df     | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference<br>Lower Upper |
| Aft-Bfr A –              | Equal variances assumed     | 71.867                                  | .000 | 30.547                       | 88     | .000            | 17.08889        | .55942                | 15.97716 18.20062                                        |
| Aft-Bfr B                | Equal variances not assumed |                                         |      | 30.547                       | 44.000 | .000            | 17.08889        | .55942                | 15.96145 18.21633                                        |

method than the control class (sig. (2-tailed) = .000). In the class which implemented role-playing (class A), the students' test scores in accounting class was better than the control class (class B).

Those results in this research are in line with Piaget (1951), Richmond (1975) and Hootstein (1991) in Dawood (2006), and Hootstein (1995). Piaget (1951) found that when play-like activities were used in learning, they made learning much more interesting. It also improved their cognitive thinking because it gave students more control over their learning. These play-like activities can include matching games, puzzles, Pictionary, debates, and group competitions. All of which encourages the student to participate and develop the skill of working with others. Richmond (1975) and Hootstein (1995) believe that using games and simulations is much more beneficial to students than traditional education. The atmosphere and surroundings in the classroom are geared towards the students' enjoyment by using a more comfortable setting. This puts the focus more on the students and less on the teacher. In arranging the seating, the desks are usually arranged in a way that facilitates communication among the

students and teacher, such as a circle or facing rows. Therefore, by making the students comfortable and interested in learning, it will spark a continued desire for further knowledge. Hootstein's research (1995) which found that when a group of social studies students were surveyed about which type of instructional method motivated them the most, role-playing characters in simulations and group discussions were favored by them and ranked at the top.

The research findings were in line with Lightner (1981), Ravenscroft et al (1995), Lindquist (1995), Hite (1996), Johnson and Johnson (1989), Slavin (1991), Williamson and Rowe (2002). Lightner (1981) compared the individual exam performance of a control group with no group requirement to experimental group with a group requirement in an intermediate accounting class. Measured by individual performance, he found that the performance of the individuals who worked in groups were, on average, better than those of the individuals who had worked alone. Ravenscroft et al (1995) investigated student exam performance after learning through cooperative learning techniques in an accounting principles



class. Their research indicated that the students who had been evaluated based on both individual performance and team effort substantially outperformed those who had been evaluated entirely on their individual effort in the examinations. A case study in an auditing course, Lindquist (1995) found that cooperative learning improved attitudes and achievements of students. The results of Hite's research (1996) showed that students who worked in teams to review their midterms achieved higher scores in their final exams in a junior-level taxation course. Johnson and Johnson's research (1989) which found that by using cooperative-learning students were achieve better results in the class, especially with regard to reasoning and critical thinking skills than those that did not. In Slavin (1991)'s review of the cooperative-learning classes achieved significantly higher test scores than the traditional classes. He notes that the difference between the more and less effective cooperative-learning classes was that the effective ones stressed group goals and individual accountability. Williamson and Rowe (2002) observed that students in cooperative-learning sections were more willing to ask the instructor questions (in class or through office visits) than those in traditionally taught sections. The results indicated that cooperation seems to be much more powerful in producing achievement than the other interaction patterns and the results hold for several subject areas.

## CONCLUSIONS AND SUGGESTIONS

The result of the research showed that role-playing implementation in learning principles of finance accounting could improve learning process. In this research, it was found that role-playing implementation in a learning process could improve students' enjoyment level and test scores. Students were more positive about school, subject areas, and teachers or professors when they were structured to work cooperatively. Students were more positive about each other when they learned cooperatively than when they learned alone, competitively, or individualistically - regardless of differences in ability, ethnic background, handicapped or not. Students with cooperative experiences were more able to take the perspective of others, were more positive about taking part in controversy, had better developed interaction skills, and had a more positive expectation about working with others than students from competitive or individualistic settings.

The efforts to enhance accounting learning quality need henceforth to be done. By using classroom action research, there are many learning

methods to be implemented in accounting learning. Nevertheless, it is essential to choose the most appropriate method for appropriate material so that the action research can attain its goals properly.

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## APPENDIX

### STUDENTS' ENJOYMENT SURVEY (Dawood, 2006)

Use the following scale to rate your answers.  
When you are finished please total your score.

**4 – Strongly Agree      3 – Agree      2 – Disagree      1 – Strongly Disagree**

1. \_\_\_\_ Do you enjoy learning?
2. \_\_\_\_ Accounting class is my favorite class
3. \_\_\_\_ I enjoy lectures
4. \_\_\_\_ I want to do well in this class
5. \_\_\_\_ I enjoy learning about accounting
6. \_\_\_\_ I enjoy reading the textbook
7. \_\_\_\_ I learn better by playing educational games in class
8. \_\_\_\_ I am able to express my creativity in this class
9. \_\_\_\_ I enjoy working with other students
10. \_\_\_\_ I enjoy this class

TOTAL SCORE: \_\_\_\_