

USING A SELF-MANAGED LEARNING PROJECT IN TEACHING GRADUATE ADVANCED TAX ACCOUNTING TOPICS

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ABSTRACT

A self-managed learning Project was examined in a graduate Advanced Tax Accounting course. Students participated in the learning process by organizing and writing on advanced tax topics. Short-term and long-term effects were measured. Student perceptions of the Project were investigated using a survey to determine their opinions on the usefulness of the Project; reading the textbook; and reviewing textbook examples in (1) understanding the tax topics, (2) preparing homework, and (3) studying for Exam II. This self-managed learning Project appears to be a good supplemental method of teaching graduate-level advanced tax topics that are moderately complex.

Keywords: Self-managed learning, Advanced tax, Student perceptions

INTRODUCTION

Requests for change in the delivery methods for accounting education have been issued by several committees over many years. In 2012 the Pathways Commission indicated that accounting educators have a dual responsibility, which involves curricular dimension (what we teach) and pedagogical scope (how we teach). Under pedagogical scope this Commission recommended that approaches or learning experiences should be developed to assist students in thinking, performing, and making decisions that are similar to accounting professionals. According to Albrecht and Sack (2000), accounting educators should help students to develop the ability-to-learn skills. In this research a self-managed learning project (self-generated elaboration) was investigated, which should give the students an opportunity to develop or expand their ability to “learn to learn.”

The Pathways Commission in November 2015 proposed that accountants develop a signature pedagogy for learning the “Accounting Common Body of Knowledge” that will support the learning approaches of a diverse student body. In 2013 Apostolou *et. al.*, stated that accounting research is needed to discover the best ways to teach or to learn core professional competencies (e.g., communication skills). Jackson and Durkee (2008) indicated that the instructor’s role must shift from being the presenter of facts to facilitator of active learning in order to help students in obtaining the necessary skills. According to Helliard (2013) an essential component of accounting education should encompass teaching techniques that engage students (e.g., role playing, self-managed learning, and group activities). Previously, the Accounting Education Change Commission [AECC] (1990) asserted that accounting students should actively participate in the learning process and not be just passive recipients of information. One of the characteristics of signature pedagogy stipulated by Schulman (2005, pp. 56-57) incorporates learning experiences that ensure students are active and interactive. Our self-managed learning project was created to engage the students and to require them to actively participate in their own learning.

In August 2014 the Pathways Commission stipulated that quality education should integrate various teaching techniques. Also, Bandura and Lyons (2012) advocated that instructors should include in their courses different learning approaches (e.g., lecture, problem-solving, or self-managed learning). In addition, our research study used a self-managed learning project to assist advanced tax accounting students in understanding the S-Corporation – Qualifying topics (S-C-Q) and the S-Corporation – Operating topics (S-C-O).

The AECC in 1990 stated that the accounting curriculum “should lay the base on which life-long learning can be built.” Recently, the AICPA Framework (2017) indicated that accountants need to commit to continuous acquisition of new professional and personal skills and knowledge (i.e., independent or self-managed learning). The Quality Assurance Agency for Higher Education (2002) suggested that accounting students should have the capability for independent and self-managed learning. The project utilized in this research introduced the students to self-managed learning.

The Pathways Commission (2012) proposed the development of the accounting body of knowledge. In November 2015 the Pathways Commission’s Knowledge and Pedagogy Task Force endorsed a “Common Body of Knowledge Learning Objectives” for accounting (e.g., communication). Following this, the AICPA Pre-Certification Core Competency Framework (Framework 2017) identified a set of skill-based competencies that are necessary for students starting an accounting career (e.g., reporting).

This study contributes to the accounting literature by investigating the effects of self-managed learning in a graduate-level tax accounting course. Also, there was further exploration of the effects of self-managed learning (elaborations) related to both short-term and long-term knowledge retention. In addition, student opinions of the self-managed learning technique were obtained by using a survey.

THEORY

Learning-to-Learn—The CPA Vision Project (2017) believed there is a need for life-long learning (i.e., continuous acquisition of new skills and knowledge). Earlier, the Pathways Commission (2014) suggested that high-quality accounting education should prepare students for a lifetime of learning. In addition, Albrecht and Sack (2000) implied that accounting educators need to help students in the development of their ability-to-learn skills. Our self-managed-learning project should permit the students to have an opportunity to develop or expand their ability to “learn to learn.”

Annis (1985) suggested that student-generated paragraph summaries seem to help the students in executing the vital encoding process more efficiently than either note-taking or only reading the information. Levin (1988) found that the learning process might be enhanced by utilizing elaborations. Anderson (1983) defined an elaboration as any information that explains or clarifies some to-be-learned (target) information. An elaboration can be thought of as the link that allows the new target information to be integrated into the student’s present knowledge base. Types of elaborations include summaries, examples, analogies, and self-explanations. Past research has indicated that self-generated elaborations tend to be generally superior to externally presented information [Hite and Parry (1994); Schadewald and Limberg (1990); Pressley *et al.* (1987); Jacoby (1978); and McFarland, Jr., *et al.* (1980)].

Complexity—Several researchers [Anderson (1995), Driscoll (1994), Gagné and Medsker (1996), Gredler (1997), and Schunk (1996)] have suggested that instructors need to establish diverse learning opportunities to accomplish different types of learning objectives. Boh *et al.* (2001) indicated that

lecture-based training/education may not be an adequate transfer technique when complexity of knowledge is high. Bonner (1999, p. 11) stated that “learning objectives involving complex skills require teaching methods that promote active learning on the part of students, while learning objectives involving simpler skills can be achieved with more passive teaching methods.”

Writing-to-Learn—Both the AICPA Framework (2017) and the Pathways Commission (2015) have indicated that beginning accounting professionals should be able to communicate clearly to the intended audience (i.e., to be understood by the receiving party). In 2012 the Pathways Commission advocated that accounting students must possess both technical knowledge and professional skills such as the ability to communicate effectively. In a subsequent report, the Pathways Commission (2014) indicated that quality accounting education should result in students improving their oral and written communication skills. More recently, the Pathways Commission (2015) included learning objectives related to communication under “Professional Foundational Competencies.” Our self-managed learning project gave the students an opportunity to write on moderately complex tax accounting topics.

Learning to Organize—The Pathways Commission’s Common Body of Knowledge Learning Objectives (2015) implied that accounting students should be able to identify appropriate accounting information. One of the skills sets that the AECC believed that students should possess is the ability to locate, obtain, and organize information. Also, the AICPA (1999) in the Framework (Functional Competencies category under Decision Modeling) indicated the need for entry-level accounting professionals to be able to organize and evaluate information. Our study presented a self-managed learning technique that required the students to actively participate in the learning process by organizing and writing on information related to selected technical graduate advanced tax accounting topics.

In summary, literature suggests that student self-managed learning can enrich the learning process and that writing projects can be utilized as a learning tool. Since the benefit of self-managed learning techniques may have a greater short-term effect than a long-term effect, the following hypothesis was used to test these effects (using the chi-square test).

H₁: The distribution of Exam II (Final Exam) scores on the S-C-Q (S-C-O) questions is the same for the students who prepared an outside of class project on the assigned topic as the students who did not prepare an outside project for this topic.

Learning from Examples—VanLehn (1996) found that learning from worked-out examples is a good source of learning. Thus, working-out (i.e., reviewing) examples in a tax accounting textbook should be an important source of learning. According to Anzai and Simon (1979) and Sweller and Cooper (1985), it is possible to learn from working-out examples. In fact, Anderson, *et.al.* (1984) and Recker and Pirolli (1995) indicated that the preferred learning mode of novices is to work-out examples. Zhu and Simon (1987) found that learning was quicker using worked-out examples than from lecturing and the participants had acquired not just rote learning but in-depth understanding of the subject.

In order to assist instructors in teaching, Shanahan and Meyer (2001) proposed that research be performed to facilitate a better understanding of what, why, and how students learn. Therefore, to understand “how” students learn, our research study required the students to complete a survey to determine their opinions of the usefulness of reviewing the textbook examples related to the assigned tax accounting topics in (1) understanding these topics and (2) preparing for Exam II on these topics. In

addition, our research study compared the students' opinions associated with reviewing textbook examples to only reading the textbook. Like Stone and Shelly (1997), survey questions were used to measure student perceptions of the learning techniques. The following hypotheses were used to test whether the students considered the Project, reading the textbook, and reviewing the textbook examples to be useful in understanding the appropriate tax accounting topics:

- H₂: In understanding the appropriate tax accounting topics, the students will consider the self-managed learning technique (Project) to be as useful as reading the textbook (reviewing the textbook examples).
- H₃: In understanding the appropriate tax accounting topics, the students will consider reviewing of the textbook examples to be as useful as only reading the text in the textbook.

Students should be able to apply their newly acquired knowledge. A good self-managed learning project should help the students. The preparation of homework assignments is probably the first time the students apply their recently acquired knowledge. When students take an exam, they also are applying their knowledge. The following hypothesis was used to ascertain if the students believed that the Project was most helpful in (1) understanding the topics, (2) doing homework or (3) preparing for Exam II:

- H₄: The students will consider the Project to be as useful in understanding the appropriate tax accounting topics as doing the homework [preparing for Exam II] on these topics.

RESEARCH METHODS

An advanced tax accounting class taught by one of the researchers was used in the research experiment. At the beginning of the semester, the students were requested to complete a personal data sheet (i.e., classification, university GPA, accounting GPA, credit hours enrolled, work hours, number of accounting course(s) enrolled in during that semester, number of previous accounting courses taken, and gender). There were no significant differences between the two experimental groups (S-C-Q topics and S-C-O topics) on the reported demographic information.

Projects—Every other student in the graduate advanced tax accounting class was assigned to Group A. The Group A students were asked to prepare a project (Project S-C-Q) to assist them in learning about S-Corporation – Qualifying topics. The other students in the class (Group B) were asked to prepare a project (Project S-C-O) to assist them in learning about S-Corporation – Operating topics. Both groups received the same class discussion and were assigned the same homework problems. The students were told they could use a checklist, chart, graph, grid, flowchart, outline, or other approach that would help them understand the topics. The project was not to be more than 1 1/2 pages in length. The students were given one week to prepare the project. The students were instructed to use their projects in preparing their homework assignments and in studying for Exam II and the Final Exam.

Testing—In the class period following the discussion of the tax accounting homework problems on the appropriate topics, Exam II was given. The students were reminded to use their projects to help them study for Exam II. On Exam II there were six points related to S-C-Q topics and six points pertaining to the S-C-O topics. The Exam II results were used to measure the short-term effect of this teaching technique (Project). Several weeks after Exam II, a Final Exam was administered. The instructor

suggested that the students use their projects to help them study for the Final Exam. There were six points on each of the advanced tax accounting topics (S-C-Q and S-C-O) on the Final Exam. The questions used on the Final Exam were different (but equal level of complexity) from the ones given on Exam II. The Final Exam results were used to measure the long-term effect of this teaching technique.

Student Survey—As recommended by Shanahan and Meyer (2001), the students were requested to complete a survey to better understand how students learn (e.g., reading the textbook or reviewing textbook examples). The survey was designed to determine the students' opinions on the usefulness of the Project in (1) understanding the appropriate tax topics, (2) preparing the homework assignments, and (3) studying for Exam II. In addition, other questions were included, which pertained to the usefulness of both the textbook readings and textbook examples in (1) understanding the appropriate tax topics, (2) preparing the homework assignments and (3) studying for Exam II.

RESULTS

The short-term effect (analysis of Exam II results) of the self-managed learning projects were examined first. Next, the long-term effect (analysis of Final Exam results) were investigated. Also, the student survey results were reviewed.

Short-Term Effect—After the discussion of the homework problems on the appropriate topics, the students were given Exam II. This test instrument was used to measure the short-term effect of the self-managed learning technique. As previously stated, Exam II included six points for each of the S-Corporation – Qualifying topics (S-C-Q) and the S-Corporation – Operating topics (S-C-O). Exam II results shows that the students in both Group A and Group B, who prepared the Projects, did better on Exam II than the control group. However, there were no significant differences.

Long-Term Effect—Several weeks after Exam II was administered, the students were again tested on the same topics on the Final Exam. This exam was used to measure the long-term effect of the self-managed learning method. There were six points related to the S-C-Q topics and six points related to the S-C-O topics on the Final Exam. The comparison of percentage of correct answers for each project indicated that on the Final Exam the students without the project in both groups scored slightly higher than the students who prepared the projects, but there were no significant differences.

Student Survey—As previously discussed, a student survey was designed to help better understand how students learn. Just prior to returning Exam II, the students were required to complete this survey to determine their opinions on the usefulness of preparing the Project, reading the textbook, or reviewing textbook examples in helping them (1) to understand their project topics, (2) in doing the homework, and (3) in preparing for Exam II. The mean score results of the survey suggested that the students, generally, seemed to prefer the S-C-Q and S-C-O Projects over reading the textbook in (1) understanding the topics, (2) preparing the homework assignments, and (3) reviewing for Exam II; but there were no significant differences. Specifically, the students in both groups indicated that their Projects were more useful in understanding the topics than reading the textbook. However, the students in Group A (S-C-Q) also found their Project to be more beneficial in understanding the topics than reviewing textbook examples, while Group B (S-C-O) students believed that their Project and reviewing the textbook were equally as beneficial in understanding the topics.

Also, in understanding the topics, the students in Group B preferred reviewing the textbook examples to reading the textbook; however, Group A students had the opposite preference. But, there were no significant differences. When preparing the homework assignments, the Projects (Group A and Group B) were found to be equally or more helpful as either reading the textbook or reviewing the textbook examples, but there were no significant differences. For both Groups A and B, reviewing the textbook examples was equally or more helpful in preparing the homework assignments than reading the textbook, but no significant differences were found. In preparing for Exam II, Group A students felt that the S-C-Q Project and reviewing the textbook examples were equally beneficial. The students in Group A indicated that reading the textbook was the least helpful of the learning techniques. But, no significant differences were found using the *chi square* test. However, Group B students preferred reviewing the textbook examples to either reading the textbook or preparing the S-C-O Project when studying for Exam II, but there were no significant differences.

As previously discussed, Shanahan and Meyer (2001) recommended that research be conducted to determine what accounting students learn from preparing an assignment. To acquire a better understanding of what accounting students learned from preparing the Project (e.g., to obtain an understanding of a topic), the researchers analyzed the survey results to determine whether the students considered the Project to be more beneficial in (1) understanding the topics, (2) in preparing homework assignments, or (3) in reviewing for Exam II. Both Groups A and B indicated that the Project was most helpful in understanding the topics.

SUMMARY AND CONCLUSIONS

The research study results showed that the mean scores on Exam II were higher for the students who prepared the Project (i.e., either Project S-C-Q or S-C-O) than the students who did not prepare that project, but no significant differences were indicated by the *chi-square* test. However, opposite results occurred on the Final Exam, but there were no significant differences. Our research results are similar to what Hite and Parry (1994) found in their first tax course on their announced quiz and final exam. Their only significant differences between their two treatment groups occurred on the unannounced quiz given immediately after the experiment.

Generally, the students seemed to prefer their Projects to reading the textbook in (1) understanding the topics, (2) preparing the assigned homework, and (3) reviewing for Exam II; but no significant differences were found. Primarily, the students indicated that their Projects were equally or more useful than reviewing the textbook examples. But, when studying for Exam II, the Group B (S-C-O) students specified that reviewing the textbook examples was more helpful than preparing their Projects. However, no significant differences were indicated. Overall, it appears that the students found their Projects to be most beneficial in understanding the topics.

These self-managed learning projects, in which the students actively participated in the learning process, were generally equally as effective in learning the assigned graduate advanced tax accounting topics (S-C-Q and S-C-O) as either reading the textbook or reviewing the textbook examples. Therefore, it appears that these self-managed learning projects were a good supplementary method of teaching graduate-level tax accounting topics that are moderately complex.

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