

# THE USE OF VALUE-ADDED ASSESSMENT FOR A SELF-MANAGED LEARNING CASE IN AN INTERMEDIATE ACCOUNTING I COURSE INCORPORATING SOCIAL RESPONSIBILITY

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## ABSTRACT

An Intermediate Accounting I self-managed learning financial statement analysis (FSA) case including social responsibility issues was investigated. This case integrated many of the Pathways Commission's (2015) Common Body of Knowledge Learning Objectives and the AICPA Framework skills. There was a significant difference at  $p = .01$ . The students "strongly agreed/agreed" (4.56 mean score) that this case increased their understanding of the FSA topics. Also, when making their investment decisions, about 24% of the students considered the company's social responsibility as an important factor. It appears that this case can be successfully utilized as a teaching technique in an Intermediate Accounting I course for FSA topics.

**Keywords:** Self-Managed Learning, Social Responsibility, Student Perceptions

## INTRODUCTION

Various accounting committees over several decades have suggested that the university accounting curriculum should be modified. The Pathways Commission (2012) indicated that the responsibilities of accounting educators need to include both curricular dimension (what we teach) and pedagogical scope (how we teach). In November 2015, the Pathways Commission recommended that accountants develop a signature pedagogy for learning the accounting common body of knowledge that will sustain the learning approaches of a diverse student body. Apostolou *et. al.*, (2013) stated that accounting research is needed to identify the best ways to teach or to learn core professional competencies (e.g., communication skills). This research paper investigated whether a self-managed learning case in an Intermediate Accounting I course is a good technique for teaching financial statement analysis topics.

In 2012 the Pathways Commission under the pedagogical scope suggested that approaches or learning experiences should be created to assist students in thinking, performing, and making decisions similar to accounting professionals. A critical characteristic of signature pedagogy according to Schulman (2005, pp. 56-57) involves learning experiences that ensure students are active and interactive. In August 2014, the Pathways Commission stated that quality education should involve the use of various teaching methods that encourage students to develop their ability to exercise professional judgment in decision making. In this research our self-managed learning project involved group work and the use of real-world data (i.e., financial data from two corporations in the same industry) to encourage students to think and make accounting decisions.

One of the recommendations of the Pathways Commission (2012) was to develop the accounting body of knowledge (Action Item 4.1.1). In November 2015, the Pathways Commission's Knowledge and

Pedagogy Task Force recommended a “Common Body of Knowledge Learning Objectives” for accounting. Previously, the AICPA Core Competency Framework for Entry into the Accounting Profession (Framework) (1999) identified a set of essential competencies for students preparing to enter the accounting profession. Our self-managed learning financial statement analysis case project was designed to permit the students in an Intermediate Accounting I course to experience many of the Pathways Commission’s Learning Objectives and about one-half of the AICPA Framework elements.

## **THEORY**

### **Learning Objectives and Skills**

The Pathways Commission (2015) in its comprehensive Common Body of Knowledge (i.e., Accounting Competencies, Professional Foundational Competencies, Broad Management Competencies) incorporated measurable learning objectives. Specifically, the Commission recommended in their Common Body of Knowledge Learning Objectives that accounting students should be able to interpret financial and nonfinancial data found in external reports (e.g., ratio analysis or trend analysis) for decision making (e.g., investment or credit decisions). Previously, Albrecht and Sack (2000) recommended that an undergraduate accounting curriculum could include the use of accounting information from different industries (e.g., cases or annual reports). In our self-managed learning case project, each team analyzed and presented information from a different industry for decision-making purposes.

*Communication*—Various professional committees have consistently advocated that accounting education should place more emphasis on writing skills, oral skills, and critical thinking skills. Also, PricewaterhouseCoopers in *Educating for the Public Trust* (2003) concluded that among other curriculum changes there should be an emphasis on a higher level of interpersonal and communication skills. The Pathways Commission (2014), suggested that quality accounting education should result in students improving their oral and written communication skills. Also, the International Federation of Accountants (IFAC) in its International Education Standard 3 (IES3), Professional Skills and General Education (2008) stressed that accountants entering the profession need interpersonal and communications skills. The self-managed learning case in our research required the students to write, make oral presentations, work in teams, and utilize critical thinking in making business decisions.

*Analytical Thinking*—The Pathways Commission (2012) stated that to be competent an accountant must possess professional skills such as the capability to use knowledge to make reasoned judgments. In addition, the Broad Business Perspective Competencies category of the AICPA Core Competency Framework for Entry into the Accounting Profession [Framework] (1999) included strategic/critical thinking as a necessary component for professional success. The Pathways Commission (2015) suggested that students should be able to interpret not only financial but also nonfinancial data to evaluate operating efficiency and effectiveness. Our case required the students to analyze company financial/nonfinancial accounting information as a basis for decision-making purposes (e.g., the choice of company in which to invest).

*Leadership and Human Relations*—Albrecht and Sack (2000) suggested the use of group activities to teach both leadership and how to work together. In addition, the IFAC in IES3 (2008) indicated the need for students to learn to work with others, to negotiate acceptable solutions, to listen effectively, and to solve any conflicts that may occur. Stone and Lightbody (2012) found that interpersonal skills need to encompass both listening and oral communication. Our research involved a self-managed learning case

that required the students to not only prepare a written report and make oral presentations, but also to encourage them to learn to listen.

According to Schulman (2005) signature pedagogy should provide learning experiences that hold students accountable for their work (e.g., to clients, peers and faculty). In addition, the AICPA Framework [Personal Competencies category under Professional Demeanor] (1999) indicated that students should objectively respect other's professional assessment or evaluation. Also, Boud *et al.* (2010) suggested that students should learn to make judgments not only about their own work but also the work of others (i.e., peer review). Our financial statement analysis case project gave the students an opportunity to evaluate their classmates' presentations (i.e., to perform peer review). As a result, the students received feedback/criticism from their peers as well as the instructor.

*Social Responsibility*—The inclusion of social responsibility (e.g., community service activities) into the accounting curriculum has been encouraged by several accounting committees over the years. Recently, the Pathways Commission (2015) in its Common Body Knowledge Learning Objectives emphasized social responsibility under the Broad Management Competencies. First, students should be able to perceive if suitable ethical standards have been utilized for certain situations (e.g., standards recognized by the International Institute for Sustainable Developments, Global Reporting Initiative guidelines for sustainability reporting, and mandates of the Sarbanes-Oxley Act of 2002). Also, the students should comprehend the consequences of organizational activities related to economic, social and environmental effects for local and global stakeholders. Several Framework (1999) elements involve directly or indirectly social responsibility accounting. Our case assignment required the students to answer questions related to the environment and community activities of the companies being analyzed.

### **Learning-to-Learn**

The Pathways Commission (2014) specified that high-quality accounting education should prepare students for a lifetime of learning. Previously, Albrecht and Sack (2000) implied that accounting educators need to help students develop their ability-to-learn skills. The written self-managed-learning financial statement analysis case project in our research study should give the students an opportunity to develop or expand their ability to “learn to learn.”

This study contributes to the accounting literature by presenting and analyzing a case that exposed Intermediate Accounting I students to financial and nonfinancial information found in publicly traded company annual reports and/or SEC 10-K reports. This case involved the analysis of two companies within one industry for each team. The case also permitted the students to develop or refine some of the Pathways Commission's Common Body of Knowledge Learning Objectives (2015) and the AICPA's core competency strategies and techniques (1999) while analyzing, writing, presenting, and evaluating this case project. This study also contributed to the accounting literature by investigating the effects of our self-managed learning exercise on student learning. In addition, student opinions of this self-managed learning technique were obtained and analyzed.

### **Value-Added Assessment**

One technique to evaluate students' learning is to use pre- and post-study measurements. According to Angelo and Cross (1993), the purpose of utilizing pre- and post-assessment techniques is to determine whether students have benefited from class discussions and assignments. In our study, Quiz #3, which was administered after discussing the homework problems on financial statement ratio analysis topics

(but before the case was assigned), was designated as the pre-test. The Final Exam, which was given after the students completed the case, was considered to be the post-test. It was possible to match the students' Quiz #3 and Final Exam scores by names to determine if their exam scores on the financial statement analysis topics changed as a result of this case project.

In summary, the literature suggests that student self-managed learning exercises can enrich the learning process and that writing projects can be utilized as a learning tool. The following hypothesis was used to test the benefit of the self-managed learning technique encompassed in the case:

H<sub>1</sub>: The distribution of scores on the financial statement analysis questions in Quiz #3 (before the self-managed learning exercise) and in the Final Exam (after the self-managed learning exercise) are the same.

Stout and Rebele (1996) indicated the need to examine student attitudes toward a classroom teaching method. In their study, Stone and Shelley (1997) used questionnaires to measure student perceptions of the instructional processes. Chu and Libby (2010) utilized a post-assignment questionnaire to evaluate an active learning assignment. In our research study, students' opinions of the usefulness of the financial statement analysis case project in achieving selected Pathways Commission's (2015) Learning Objectives and the AICPA Framework Core Competencies were measured using a questionnaire.

### **Pathways Commission – Common Body of Knowledge**

The Pathways Commission's Knowledge and Pedagogy Task Force translated the goals of the Common Body of Knowledge Task Force into measurable undergraduate learning objectives. The learning objectives were categorized into three competency areas (i.e., accounting, broad management, and professional foundational). The desired accounting learning objectives have been placed into appropriate subsections of the Pathways Commission's (2015) Common Body of Knowledge Learning Objectives. One half of the subsections of the accounting competencies have at least one learning objective that the students were exposed to while preparing their self-managed learning case. For the professional foundational competencies, all of the subsections had at least one learning objective incorporated in the assigned case. Of the broad management competencies, all except one of the subsections were expected to have at least one learning objective reflected in the case.

### **AICPA Framework**

The AICPA Framework (1999) provides a set of needed competencies (100 elements) for all students who are preparing to enter the accounting profession. As discussed previously, the AICPA Framework competencies are classified as functional, personal, and broad business perspective. Our financial statement analysis case included elements of five of the six criteria of the functional competencies category. Also, the personal competencies category is subdivided into seven criteria and our case was designed to permit the students to experience elements of each of these criteria. In addition, our case introduced the students to six of the seven criteria of the broad business perspective competencies category.

As mentioned previously, students' opinions of the usefulness of the financial statement analysis case project in accomplishing selected Pathways Commission's Learning Objectives (2015) and selected AICPA Framework Core Competencies were measured using a questionnaire. This questionnaire requested the students to indicate their opinions as to whether competencies/ learning objectives were achieved in analyzing, writing, presenting, and evaluating their cases.

## RESEARCH METHODS

An Intermediate Accounting I class taught by one of the researchers was used in the research experiment. The university utilized in the research is a southwest state university. The project involved financial statement analysis for the two most recent years of annual reports and/or SEC 10-K reports for two companies within the same industry (e.g., Home Depot and Lowe's) for each team. Each team analyzed a different industry (e.g., hotels, shoe manufacturing, or airlines). Other than the selection of the industry by the team, the entire case project was prepared outside of class.

The students were required to prepare a team written report, which included three parts. First, the team was required to calculate liquidity ratios, solvency ratios, and profitability ratios for the two most recent years. Then, the students were to use the financial statement ratio analysis results as the basis for answering a set of questions. In addition, to assure that each student has writing experience in the preparation of this case, each student was required to write a one-page report. This individual report required the students to give their opinions as to the firm they would select for investment purposes. Also, each team was required to present their analysis in an oral presentation (15 to 20 minutes) to their classmates. For the questions on community service, the researchers analyzed the individual reports to determine whether these factors were discussed by the students in support of their investment decisions.

As the Pathways Commission (2012) recommended, the case was designed to promote deep engagement of the students by holding them accountable to the instructor and fellow students through the use of an evaluation form during their oral presentations. Each student's presentation was evaluated as well as the team as a whole (5-1 Likert scale with 5 being the best). The instructor and the non-presenting class members evaluated the teams and each individual on the teams. The evaluation form permitted the evaluators to write comments and suggestions for each presenter and for the overall team presentation. The instructor summarized the comments and attached them to the student's individual written report. As the Pathways Commission (2012) suggested, it was expected that the students will benefit from peer evaluation/observation and comments.

After the discussion of the homework problems on the financial statement analysis topics, Quiz #3 was given before the students started their self-managed learning exercise (i.e., financial statement analysis case project), which was designated as the pre-test. The Final Exam (i.e., post-test) had questions related to the financial statement analysis topics that were different than those that were given on Quiz #3, but were similar in the level of complexity. The results of Quiz #3 and the Final Exam were used to measure the effect of this self-managed learning exercise technique.

### **Student Perceptions – Pathways Learning Objectives – AICPA Framework**

This study used a questionnaire to measure the students' opinions of the usefulness of the financial statement analysis case project in accomplishing selected Pathways Commission's (2015) Learning Objectives and the AICPA Framework (1999) Core Competencies. In addition, the questionnaire was used to ascertain the opinions of the students on the usefulness of the case in understanding the financial statement analysis topics. The questionnaire requested the students to rank (strongly agree = 5) whether selected Pathways Commission's Learning Objectives and AICPA Framework Core Competencies were accomplished during their case preparation, team presentation, individual presentation, completion of the peer evaluation form, and reviewing peer evaluations.

## RESULTS

The students were tested twice on the financial statement analysis topics. Quiz #3 (before the case) was the pre-test. The Final Exam (after the case) was the post-test. The majority of the students' scores, which related to the financial statement analysis topics, increased or stayed the same after the case was completed. The students' Quiz #3 and Final Exam scores were matched by names. The Wilcoxon signed rank test was utilized to test  $H_1$  ( $Q3 \geq FE$ ). Since there was a significant difference ( $p = .01$ ),  $H_1$  was rejected. The students' exam scores significantly increased as a result of this self-managed learning exercise. Thus, it appears that this type of self-managed learning exercise can be successfully used as a teaching method for financial statement analysis topics in an Intermediate Accounting I course.

Also, a questionnaire was used to determine whether the students felt that the assigned case was useful in meeting specified Pathways Commission Learning Objectives and AICPA Framework skills (i.e., value-added assessment) while analyzing, writing, presenting, and evaluating this case project. One of the main reasons for this project was to expose students to the Pathway's external report and analysis subsection (mean score 4.29). Another Pathway's subsection is planning, analysis, and control. Generally, the students believed this subsection was accomplished (mean score 4.33). Another purpose was to introduce the students to ethics and social responsibility. Questions related to the Pathway's professional value, ethics, and attitudes subsection indicate that the students believed this project overall improved their knowledge of this subsection (mean score 4.15). Also, our project was designed to increase student communication skills, which is not normally part of an Intermediate Accounting I course. The questions regarding the Pathway's communication subsection resulted in a mean score of 4.30. One of the advantages of the team project is the opportunity for the students to develop better human relations than is normally incorporated in an Intermediate Accounting I course. The mean score for the students' opinions on the Pathway's human relations subsection was 4.29.

As previously mentioned, this financial statement analysis case project should facilitate the students in accomplishing elements of all three of the AICPA Framework's broad skills categories (functional competencies, personal competencies, and broad business perspective). Specifically, the researchers expected about one-half of the AICPA Framework's skills to be achieved by the students. Of the objectives/elements that the researchers expected to be accomplished, the students ranked 94.64% as either "strongly agree" or "agree." Generally, the students stated that they "strongly agree" or "agree" that the selected Learning Objectives/Core Competencies were accomplished by the case. The students' average mean score was 4.39 and the median score was 4.33. The scores ranged from 4.72 to 3.89.

The questionnaire also requested the students to rank (strongly agree = 5) whether preparing the financial statement analysis case project greatly assisted them in understanding the financial statement analysis topics. The students "strongly agreed/agreed" (with a ranking of 4.56) that this case project increased their understanding of these topics.

Also, the individual reports were analyzed to determine whether the students considered either environmental issues and/or community service activities as a factor in their investment decisions. About 24% of the students mentioned environmental issues as an important factor in their investment decisions. Also, about 24% of the students discussed community service activities of a company as a factor in their investment selections.

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