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Using a Self-Managed Learning Case in an Intermediate Accounting I Course Including Ethics
with Value-Added Assessment

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ABSTRACT

An Intermediate Accounting I self-managed learning case including ethics issues was examined. This case incorporated many of the Pathways Commission's Common Body of Knowledge Learning Objectives (2015) and the AICPA Core Competency Framework elements (1999). The effectiveness of this case was determined with a pre/post test [Quiz #3 (pre-test) and Final Exam (post-test)]. There was a significant difference at $p = .01$. About 6% of the students considered ethics as an important factor in their investment decisions. On a survey the students strongly agreed/agreed (4.56 mean score) that this case increased their understanding of the financial statement analysis topics.

KEYWORDS: Self-Managed Learning, Intermediate Accounting I, Pathways Commission, Ethics

INTRODUCTION

Revision of the university accounting curriculum has been recommended by various committees over several decades. In 2012 the Pathways Commission indicated that accounting educators have responsibilities that encompass both curricular dimension (what we teach) and pedagogical scope (how we teach). In its most recent report, the Pathways Commission (2015) recommended engaging accountants to define a signature pedagogy for learning the accounting common body of knowledge that will support the learning approaches of a diverse student body. According to Apostolou *et. al.*, (2013), there needs to be accounting research 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 is a good method of teaching financial statement analysis topics.

In 2012 the Pathways Commission suggested that approaches or learning experiences should be established to assist students in thinking, performing, and making decisions similar to accounting professionals. Earlier, Albrecht and Sack (2000) stated that there is a need to change the delivery method of accounting education. This research study investigated a learning experience that should encourage students to think and make accounting decisions.

Jackson and Durkee (2008) specified that the instructor's role must change from being the presenter of facts to facilitator of active learning to help students acquire the needed professional skills. Teaching techniques that engage students should be an integral part of accounting education (e.g., role playing, real-world case studies, and group activities) according to Helliar (2013). Schulman (2005, pp. 56-57) indicated that one of the characteristics of

signature pedagogy involves learning experiences that ensure students are active and interactive. Bandure and Lyons (2012) recommended that instructors should provide different learning approaches (e.g., lecture, problem-solving, or self-managed learning) because students do not all learn using the same technique. The Pathways Commission (2014) recommended that quality education should involve using various teaching methods that permit students to develop the ability to exercise professional judgment in the decision-making process. A self-managed learning financial statement analysis case project (i.e., involving financial data from two corporations in the same industry) for an Intermediate Accounting I course was utilized in our research study.

The AICPA Core Competency Framework for Entry into the Accounting Profession (Framework) (1999) identified a set of essential competencies (encompassing 100 elements) for students preparing to enter the accounting profession. These competencies are comparable to the skills set discussed by educators and practitioners in Albrecht and Sack (2000), Canadian Institute of Chartered Accountants [CICA] (2010), the Institute of Management Accountants (1994), Institute of Internal Auditors (1999), and the Accounting Education Change Commission [AECC] (1990). More recently, the Pathways Commission (2015) developed a “Common Body of Knowledge Learning Objectives” for accounting. The self-managed learning case in our research 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.

The Pathways Commission (2015) 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) suggested that accounting courses might focus less on preparation of financial statements and more on analysis. In addition, these authors 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.

Various professional committees have consistently advocated that accounting education should place more emphasis on writing skills, oral skills, and critical thinking skills. The Pathways Commission (2012) indicated that accounting students must possess both technical knowledge and professional skills such as the ability to communicate effectively. In a follow-up report, the Pathways Commission (2014) suggested that quality accounting education should result in students improving their oral and written communication skills. Our self-managed learning case required the students to write, make oral presentations, and utilize critical thinking in making business decisions.

In addition, the International Federation of Accountants (IFAC) identified the essential skills that are needed by individuals desiring to enter the accounting profession in its International Education Standard 3 (IES3), Professional Skills and General Education (2008). The IFAC in IES3 emphasized that interpersonal and communications are necessary skills for accountants entering the profession. Further, the Institute of Chartered Accountants in Australia (ICAA) and Certified Practising Accountants of Australia (CPA Australia) in their International Accreditation Guidelines for Accounting Degree Programs (ICAA/CPA Australia, 2009) emphasized that cognitive skills (e.g., writing skills and thinking critically) and behavioral skills (e.g., interpersonal skills) are needed by accounting graduates. 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.

The Pathways Commission (2014) denoted that high-quality education encompasses deep learning beyond memorization. The managing partners of the then “Big 8” CPA firms (“Perspectives . . .”) (1989) specified that accounting education should emphasize analytical and conceptual thinking instead of rote memorization. Further, students should actively participate in the learning process and not be just passive recipients of information according to the Accounting Education Change Commission [AECC] (1990). Both the Wilkin and Collier (2009) and the Flood and Wilson (2008) studies recommended that accounting programs should deviate from the traditional practice of communicating large amounts of technical knowledge and, instead, facilitate students’ understanding of the principles and concepts involved with accounting/business practices. Our self-managed learning case was designed to motivate the students to do some analytical and conceptual thinking and writing.

The Pathways Commission (2012) stated that to be competent an accountant needs not only technical knowledge but also must possess professional skills such as the capability to use knowledge to make reasoned judgments. Also, 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. In addition, Albrecht and Sack (2000) recommended that accounting education delivery methods be altered to allow students to develop critical skills. Further, the Canadian Institute of Chartered Accountants (CICA) in its CA Skills and Competencies (2010) report recommended that students should learn to examine and interpret information and ideas critically. Classroom delivery methods (e.g., self-managed learning cases) should be developed to achieve these goals.

Under the Pathways Commission’s Common Body of Knowledge Learning Objectives (2015), accounting students should comprehend how to locate appropriate accounting information for guidance in determining accounting measurement methods. Albrecht and Sack (2000) emphasized the importance of “teaching students how to find answers and how to learn.” The ability to locate, obtain, and organize information is one of the skill sets that the AECC (1990) believed that students should possess. Also, the need for entry-level accounting professionals to be able to organize and evaluate information was suggested in the AICPA Framework [Functional Competencies category under Decision Modeling] (1999). Our self-managed learning case required the students to locate, organize, and evaluate financial and nonfinancial information.

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. Earlier, Albrecht and Sack (2000) recommended that an undergraduate accounting curriculum should include, among other topics, analysis of accounting information and use of accounting information in making decisions. Also, accounting graduates should be able to analyze the information gathered and form an opinion on the impact of the information in a situation according to the CICA in its CA Skills and Competencies (2010). 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).

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. Further, Gammie

and Kirkham (2008) stated that the ability to “learn to learn” is a key competency needed by accountants to adapt to the rapidly changing business environment. 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.”

Students should learn to think, do and act as professionals during their educational process according to the Pathways Commission (2015). Prior to this report, Sin, Reid and Jones (2012) advocated that accounting education should help students to develop transferable skills that will help them to make the transition from their present learning environment to the work environment. These transferable skills include report writing and interpersonal skills. 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) in order to become successful continual learners and future accounting professionals. 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.

This study contributes to the accounting literature by presenting and analyzing a case that exposes 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 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 contributes to the accounting literature by investigating the effects of our self-managed learning exercise. In addition, student opinions of this self-managed learning technique were obtained and analyzed.

THEORY

Learning-to-Learn

Cognitive researchers (Anderson 1970; Gage and Berliner 1984; Ross 1983; and Glaser 1984) have suggested that learning is an active process, which involves several steps. The first step requires the students to be attentive. Secondly, the students must encode the information into their own words in a meaningful manner. Finally, the students must associate the new information with their previously acquired related knowledge.

Johnstone and Biggs (1998) recommended supplementing existing textbook material with real world activities (e.g., realistic case analysis). Our case supplements the textbook material with financial and nonfinancial information from actual corporate annual financial reports and/or SEC 10-K reports. Also, in preparing this outside-of-class case assignment, the students were required to write the financial statement analysis case reports in their own words. Further, this

case permitted the students to incorporate many of the Pathways Commission's learning objectives and the AICPA Framework elements encompassing the analysis and evaluation of financial accounting topics. For example, it was necessary for the students to identify the components that needed to be included in the calculation of financial statement ratios.

Writing-to-Learn

The ability of the students to write is important in an accounting career. Communications is an element of the Personal Competencies category of the AICPA Framework (1999). Accounting professionals who are starting their careers should be able to organize and effectively communicate information so that it can be readily understood by the receiving parties.

As suggested by the Pathways Commission (2015), our self-managed learning case assignment gave the students an opportunity to write on financial statement analysis topics. Specifically, the students had two different types of writing exercises (a team report and an individual report) as part of the case requirements.

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. 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. The pre-test allows the instructor to establish a benchmark of what the students know on the subject matter being investigated before the study technique (case) is utilized. Gordon (1998) has used the pre- and post-assessment technique to evaluate students' knowledge of social responsibility accounting.

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.

The following hypothesis was used to test the benefit of the self-managed learning technique encompassed in the case:

- H₁: 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.

Value-Added Assessment

Ennis (1987) stated that attitudes strongly determine the ability to apply intellectual skills (e.g., written communication skills). Stout and Rebele (1996) indicated the need to examine student attitudes toward a classroom teaching method. If students do not have positive attitudes toward a teaching method, desired learning outcomes (e.g., intellectual skills) may not be achieved.

In their study Stone and Shelley (1997) used questionnaires to measure student perceptions of the instructional processes. Ramsay *et al.* (2000) utilized a questionnaire to determine students' preferences for a cooperative learning method. Sawyer *et al.* (2000) administered a survey after the students received their grade and assessment sheet for a case to determine whether the students felt that the case was useful in meeting specified skills. 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 (2015) learning objectives and AICPA Framework core competencies were measured using a questionnaire (available upon request). Like Sawyer *et al.* (2000), the questionnaire was administered after the students received their case results.

Ethics

In discussing high-quality education, the Pathways Commission (2014) suggested that students should be instilled with a commitment to ethics and integrity. The November 2015 report by the Pathways Commission considered ethics so important that there is an entire section in their Common Body of Knowledge Learning Objectives related to professional values, ethics, and attitudes. Specifically, this Commission believes that students should be able to recognize ethical issues.

The SEC (as mandated by Section 406 of the Sarbanes-Oxley [SOX] Act of 2002) requires a company to disclose whether it has a Code of Ethics. If a company does not have a Code of Ethics, the SEC requires that company to disclose why a Code of Ethics has not been developed. SOX was enacted in response to the downfall of Enron and WorldCom. The purpose of SOX was to restore the general public's confidence in the governance of US corporations.

There are several social theories of corporate governance. One of these theories is the "stockholder theory." Under the stockholder theory a company is responsible only to its stockholders, that is, the employees' actions are focused on maximizing stockholder wealth within the law. Another social theory is "stakeholder theory." The stakeholder theory suggests that a company is responsible to all individuals, groups, etc. that have a stake in the company; not only to stockholders. Navron (2002) identified several basic characteristics of Codes of Ethics. Some of Navron's characteristics include accountability, honesty, integrity, leadership, and responsibility.

Our research study required the students to locate and obtain the Code of Ethics of a company. After reviewing the Code of Ethics, they were to classify the Code as being representative of either the stockholder theory or the stakeholder theory. The students also were required to analyze the Code of Ethics to determine whether Navron's characteristics are encompassed in the Code. Further, the students' individual written reports were analyzed to determine whether they considered the company's Code of Ethics as a factor in their investment decisions.

AICPA Framework

The AICPA Framework (1999) provided 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 incorporated elements of five of the six criteria of the functional competencies category. The specific criteria that were expected to be accomplished with our case were: decision modeling, measurement, reporting, research, and leverage technology to develop and enhance functional competencies.

The AICPA Framework personal competencies category is subdivided into seven criteria (professional demeanor, problem solving and decision making, interaction, leadership, communication, project management, and leverage technology to develop and enhance

personal competencies). Our case was designed to permit the students to experience elements of each of these criteria.

In addition, our case exposed the students to six of the seven criteria of the AICPA Framework broad business perspective competencies category. Specifically, the case involved elements of the following criteria: strategic/critical thinking, industry/sector perspective, resource management, legal/regulatory perspective, marketing/client focus, and leverage technology to develop and enhance a broad business perspective.

Our team financial statement analysis case was expected to result in elements of all three categories of the AICPA Framework competencies being integrated into an Intermediate Accounting I course with a minimum of two to three hours of class time. Of course, the amount of class time spent on the project will vary depending on the size of the class.

Pathways Commission – Common Body of Knowledge

The Pathways Commission's Common Body of Knowledge Task Force began by examining the AICPA Competency Framework along with the work of other accounting task forces (e.g., Chartered Professional Accountants Canada, Chartered Accountants Australia, Institute of Management Accountants, and International Accounting Standards Board Education Initiative) to develop learning goals for accounting education (i.e., undergraduate, graduate, and beyond). To concentrate on undergraduate accounting education, a new task force of the Pathways Commission was formed (Knowledge and Pedagogy Task Force). This 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 accounting competency was divided into six subsections (i.e., external reporting and analysis; planning, analysis and control; taxation compliance and planning; information systems; assurance and internal control; and professional values, ethics, and attitudes). There are five subsections under the professional foundational competencies (i.e., communication; quantitative methods; analytical thinking and problem solving; human relations; and technology). Finally, there are five subsections under the broad management competencies (i.e., leadership; organizational ethics and social responsibility; process management and improvement; governance, risk, management, and compliance; and additional core management competencies). 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 doing their self-managed learning case. Specifically, all of the learning objectives of the professional values, ethics and attitudes were integrated into the self-managed learning case. For the professional foundational competencies, all of the subsections had at least one learning objective incorporated in the assigned case. At least one half of the learning objectives were expected to be accomplished with this project case for the communication; analytical thinking and problem solving; and human rights subsections. Of the broad management competencies, all except one of the subsections were expected to have at least one learning objective reflected in the case. More than one-half of the learning objectives for the organization, ethics and social responsibility subsection were assimilated into our self-managed learning case.

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 state university with 96% minority students, which is located in the southwest. 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). An example of the instructions for this case project is found in Exhibit 1.

Industry and Team Selection

The student teams were allowed to select the industry from pairs of companies provided by the instructor. The students formed their own teams consisting of 3-5 students. The researchers have found that students are more motivated to complete this project if at least one of the firms is a regional firm or at least a nationally recognized firm by the students (e.g., Walgreens and CVS). Other than the selection of the industry by the team, the entire case project was prepared outside of class.

Written Reports and Oral Presentations

As can be seen in Exhibit 1, 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 (see Exhibit 1 for the specific 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 (see Exhibit 1). For example, "Which company has the more favorable inventory turnover?" Finally, for the most recent year, the team was required to answer another set of questions related to each company's annual and/or SEC 10-K reports. For example, "What are each company's basic and diluted earnings per share?"

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. They were expected to support their conclusions based on the team data developed in the first three parts of the case requirements. For the questions on ethical issues, the researchers analyzed the individual reports to determine whether the ethics factors were discussed by the students in support of their investment decisions.

Also, as observed in Exhibit 1, each team was required to present their analysis in an oral presentation (15 to 20 minutes) to their classmates. For the oral presentation, the students were expected to dress as if they were presenting to clients. The other classmates were expected to act in the role of the client and were encouraged to ask questions of the presenting team.

Evaluations

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.

The evaluation form indicated that the students will be graded (5-1 Likert scale with 5 being the best) based on (1) the content of their segment or topic presented, (2) the organization of their presentations, (3) the use of visual aids during their presentations, and (4) the effectiveness of the delivery of their presentations. These grading characteristics were defined on the evaluation form. For example, the characteristics for effectiveness of the delivery of the individual student's presentation were listed as: (1) Did the presenter's voice enhance the effectiveness of the presentation? (2) Did the presenter maintain good eye contact? and (3) Did the presenter sound natural and professional?

In addition, the evaluation form defined the characteristics on which the teams were evaluated. The team score was based on (1) the content of the team case presented; (2) the organization of the entire team presentation; (3) the coordination of visual aids used by the team; and (4) the cohesiveness of the team presentation.

The instructor evaluated the team and each individual on the team. Also, the non-presenting class members were required to complete the evaluation form. Each classmate and the instructor had equal evaluation weight in determining the student scores for the presentations.

The students were informed to keep the evaluation forms confidential and that only the instructor would compute the presenter's scores. 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.

When the written reports were returned, each student also received his or her score for the project. The total score for the case was 70 points (team report, 40; individual report, 15; individual presentation, 10; and team presentation, 5).

Testing

Approximately a week following the discussion of the homework problems on the financial statement analysis topics, Quiz #3 was administered. Quiz #3 was given before the students started their self-managed learning exercise (i.e., financial statement analysis case project). In our study Quiz #3 was designated as the pre-test.

About a week after the students made their presentations and completed their team and individual reports, the Final Exam was administered. The Final Exam 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 Final Exam was considered as the post-test in our study. 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 student perceptions of this self-managed learning technique as Stone and Shelly (1997) did in their research. The questionnaire was utilized to measure the students' opinions of the usefulness of the financial statement analysis case project in accomplishing selected Pathways Commission (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.

Like the Sawyer *et al.* (2000) study, the questionnaire was given after the students received their case results (i.e., their grade and assessment sheet). The questionnaire requested the students to rank (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, or strongly disagree = 1) whether selected AICPA Framework competencies and Pathways Commission learning objectives were accomplished during their case preparation, team presentation, individual presentation, completion of the peer evaluation form, and reviewing peer evaluations. The specific learning objectives and skills evaluated can be observed in Table 2.

RESULTS

The students were tested twice on the financial statement analysis topics. First, Quiz #3 was administered after discussing the homework problems on these topics, but before the case was assigned. Quiz #3 was considered to be the pre-test. The Final Exam was given after the students completed the case. The Final Exam was designated as the post-test. The student quiz and exam results can be observed in Table 1.

TABLE 1
Financial Statement Analysis Case Project Score Results

	Quiz #3 (before the active learning exercise)	Final Exam (after the active learning exercise)
Mean scores	35.53%	76.32%*
Median scores	50%	87.5%
Range	75% - 0%	100% - 25%

*Significant difference Final Exam > Quiz #3 at $p = .01$

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 median score increased from 50% on Quiz #3 to 87.5% on the Final Exam (see Table 1). Also, the mean score increased from 35.53% on Quiz #3 to 76.32% on the Final Exam.

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 (see Table 1). 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.

Like Sawyer *et al.* (2000), the researchers administered a questionnaire after the students received their grade and assessment sheet for their case. The 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). The student questionnaire results can be seen in Table 2.

TABLE 2
AICPA Core Competencies – Student Experiences During
Intermediate Accounting I Case Project

Answer the following questions. Please indicate if you believed the items listed below (1 – 56) were accomplished by your team report, individual report, team presentation, individual presentation, and peer evaluation form using the following code **SA** (strongly agree), **A** (Agree), **N** (Neutral), **D** (Disagree), or **SD** (Strongly Disagree). **Note:** A 5-1 Likert scale was used with 5 being "strongly agree."

	Mean	Core Competency Skills
		FUNCTIONAL COMPETENCIES
		Decision Modeling – Elements include:
1	4.50	Organizes and evaluates information and alternatives
2	4.50	Links data, knowledge, and insights together for decision-making purposes
		Measurement – Elements include:
3	4.33	Identifies what needs to be measured
4	4.44	Presents the measurement results objectively using applicable standards of disclosure or reporting
5	4.33	Resolves ambiguities when estimates are required
		Reporting – Elements include:
6	4.33	Prepares reports with objectivity, conciseness and clarity
7	4.22	Describes work performed and conclusions reached in a manner that enhances the reports' usefulness
8	4.61	Employs appropriate media in report preparation and presentation
		Research – Elements include:
9	4.06	Identifies relevant information such as industry trends, internal performance history, benchmarks, and best practices
		Leverage Technology to Develop and Enhance Functional Competencies – Elements include:
10	4.39	Accesses appropriate electronic databases to obtain decision-supporting information
		PERSONAL COMPETENCIES
		Professional Demeanor – Elements include:
11	4.28	Evaluates information in a manner free of distortions, personal bias or conflicts of interest
12	4.44	Respects confidentiality
13	4.50	Commits to quality and efficiency
14	4.39	Objectively considers others' professional criticism or evaluation
15	4.61	Adheres to a level of personal appearance appropriate to the environment
		Problem Solving and Decision Making – Elements include:
16	4.39	Makes valid and reliable evaluations of information
17	3.94	Uses experience and comparison in forming opinions
18	4.39	Evaluates the significance of evidence or facts
19	4.17	Seeks consensus where appropriate

20	4.06	Knows when to follow directions, question plans or seek help
		Interaction – Elements include:
21	4.39	Recognizes the value of working within diverse, cross-functional teams
22	4.33	Interacts and cooperates productively and maturely with others
23	4.33	Facilitates free expression and constructive activities of others
24	4.33	Coaches or mentors in appropriate circumstances
25	4.50	Commits to achievement of common goals when working on a team
26	4.33	Recognizes and accommodates the protocols and expectations of teams
		Leadership – Elements include:
27	4.39	Motivates others to achieve excellence
28	4.33	Rallies the support of others to accomplish objectives
29	4.33	Values inputs and points of view of others and responds appropriately
30	4.22	Facilitates development of consensus or compromise as appropriate
31	4.17	Persuades others to a course of action by reasoning or incentive
32	4.22	Practices principles of effective governance
		Communication – Elements include:
33	4.44	Organizes and effectively displays information so that it is meaningful to the receiving party
34	4.11	Expresses information and concepts with conciseness and clarity when writing and speaking
35	4.28	Receives and originates direct and indirect messages as appropriate when listening, reading, writing and speaking
36	4.22	Uses interpersonal skills to facilitate effective interaction
37	4.17	Places information in appropriate context when listening, reading, writing and speaking
38	4.33	Selects appropriate media for dissemination or accumulation of information.
		Project Management – Elements include:
39	4.39	Determines project goals
40	4.28	Prioritizes and delegates as needed
41	4.44	Effectively manages human resources that are committed to the project
42	4.33	Measures project progress
43	4.44	Takes corrective action as needed
44	4.50	Sees projects through to completion or orderly transition
		Leverage Technology to Develop and Enhance Personal Competencies – Elements include:
45	4.67	Exchanges information using appropriate communication technologies such as e-mail and discussion boards
		BROAD BUSINESS PERSPECTIVE COMPETENCIES
		Strategic/Critical Thinking – Elements include:
46	4.22	Identifies strengths, weaknesses, opportunities, and threats associated with a specific scenario, case, or business activity
47	4.28	Transfers knowledge from one situation to another
		Industry/Sector Perspective – Elements include:
48	4.22	Analyzes and prepares strategic information (e.g., market share, customer satisfaction, competitor actions, product innovation, etc.)
49	4.17	Identifies the economic, broad business, and financial risks of the industry/sector
50	4.39	Communicates the financial and nonfinancial performance of an organization's operational processes
		Resource Management – Elements include:
51	3.89	Identifies the effects of market forces on organizations' costs of capital, labor,

		commodities, etc.
		Legal/Regulatory Perspective – Elements include:
52	4.00	Describes the legal and governmental/regulatory environment in which entities operate and the significant costs and benefits of regulation
53	3.94	Recognizes the dynamic nature of political and environmental forces and their implications for organizations and the ways in which they operate.
		Marketing/Client Focus – Elements Include:
54	4.17	Identifies factors that motivate internal and external customers to enter into relationships or continue doing business with an organization
		Leverage Technology to Develop and Enhance a Broad Business Perspective – Elements include:
55	4.72	Search electronic data sources for business and industry information
56	4.50	Uses technology to develop and present strategic information

As mentioned earlier, the questionnaire can also give an indication of the students' belief that certain components of the Pathways Commission's Common Body of Knowledge (2015) were accomplished while analyzing, writing, presenting, and evaluating this case project. Certain questions on the survey relate to the subsections of the Pathways learning objectives. The mean scores of the student rankings (5 = strongly agree) for the Pathways Commission's learning objectives and the AICPA Framework competencies are shown in Table 2. Generally, the students stated that they "strongly agree" or "agree" that the selected learning objectives/core competencies were accomplished by the case (see Table 2). The students' average mean score was 4.39 and the median score was 4.33. The scores ranged from 4.72 to 3.89.

To examine the students' opinions for the external report and analysis subsection, observe the answers in Table 2 to Questions 1, 2, 4, 9, 16, 18, 46, 48, 49, 50, and 51. This was one of the main reasons for this project with most students indicating a 4.2 or higher and a mean score of 4.29. For the planning, analysis, and control subsection, review Questions 3, 7, 13, 16, 18, and 48. Generally, the students believed this subsection was accomplished with all students ranking the project with a score of 4.2 or higher and a mean score of 4.33.

Another purpose of the project was to introduce the students to ethics and social responsibility. Therefore, the researchers were interested in the results of the questions for the professional value, ethics, and attitudes subsection. The pertinent questions for this subsection are Questions 21, 22, 23, 30, 31, 49, 51, 52, 53, and 54. The students believed this project overall improved their knowledge of this subsection with all questions with a ranking of 4.0 or higher except questions 51 and 53 and a mean score of 4.15. The results might improve for this subsection if there were questions on the project requiring the students to review the MD&A section of the company annual reports.

Also, the students' opinions of the project's exposure to all of the subsections of the Pathways professional foundational competencies can be examined in Table 2. Our project was designed to increase student communication skills, which is not normally part of an Intermediate Accounting I course. Thus, the results of the communication subsection are important. The students' evaluation of this subsection is shown in Questions 33, 34, 36, 37, 38, 50, and 56. The majority of the students' scores were 4.2 or higher with a mean score of 4.3.

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. To view

the students' attitudes towards this experience, see Questions 14, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, and 36. The students' opinion scores were 4.2 or higher for these questions with a mean score of 4.29.

Our project required some use by the students of technology (e.g., locating and downloading their companies' annual reports or SEC reports). A few Questions (8, 33, 38, 50, and 56) show the students' opinions on the project related to the technology subsection. The students indicated that all of their opinion scores were 4.3 or higher with a mean score of 4.44. For the students' opinions of the quantitative methods subsection, review Questions 16, 18, and 55. All of the students' opinion scores for these questions were 4.4 or higher with a mean score of 4.5.

The final Pathways Commission's Common Body of Knowledge competency is the broad management category. Because the project involved teams, it was hoped that the students will have some leadership opportunities. Under this competency the students' opinions of the project associated with the leadership subsection can be seen in Questions 14, 19, 21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 39, 40, 41, and 42. Most of the students' scores for these questions were 4.3 or higher with a mean score of 4.33. The last subsection relates to governance, risk management, and compliance, which was not emphasized in the project. The students' opinions of the impact of the project on this subsection are shown in Questions 32, 52, and 53. The student opinions on these few questions were relatively low with a mean score of 3.9.

As previously discussed, 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 (see Table 2).

Of the elements that the researchers expected to be accomplished, the students ranked 94.64% as either "strongly agree" or "agree." As shown in Table 2, the fifteen highest elements had a score of 4.44 or higher. As observed in Table 2, there were only three elements that were ranked below 4.00 (Questions 17, 51, and 53). The lower ranking for Question 53 could be explained because not all companies in their annual or SEC 10-K reports discussed how environmental issues affected the way a company operated or was required to operate under regulations. However, the lowest ranked question score of 3.89 (Question 51) still implies that most of the students ranked these elements as either "strongly agree" or "agree."

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 written reports were analyzed to determine whether the students considered the company's Code of Ethics as a factor in their investment decisions. About 6% of the students mentioned ethical considerations as an important factor in their investment decisions.

SUMMARY AND DISCUSSION

The majority of the students received higher scores on the Final Exam related to the financial statement analysis topics after they completed the case than they did on Quiz #3, which reflected only regular class discussion and homework assignments on these topics (see Table

1). There was a significant difference at $p = .01$ between the mean scores on Quiz #3 (before the case) and on the Final Exam (after the case).

Many specified Pathways Commission (2015) Common Body of Knowledge Learning Objectives and AICPA Framework Core Competencies (1999) were accomplished when the students prepared, presented, and evaluated their cases. On the questionnaire the students ranked 94.64% of the learning objectives/core competencies that the researchers expected to be accomplished as either “strongly agree” or “agree” (see Table 2). Of the expected objectives/elements, 60% of the top fifteen scores (4.44 or higher) were from the personal competencies category. The average mean score for the students was 4.39 and the median score was 4.33. The scores ranged from 4.72 to 3.89.

This case project gave the students an opportunity to incorporate selected Pathways Commission’s learning objectives and to experience types of skills recommended by the AICPA Framework (1999) that may not normally be accomplished in a typical Intermediate Accounting I course (e.g., professional foundational/personal competencies). For the selected learning objectives/elements with a score of 4.00 or higher, the professional foundational/personal competencies category had a percentage of expected objectives/elements of 97.14%.

Further, the students indicated that they “strongly agree” or “agree” (rank of 4.56) that this case project increased their understanding of the financial statement analysis topics. Also, about 6% of the students in their individual written reports cited the company’s Code of Ethics as a factor in their investment choices.

Also, in the preparation of this case the students were active participants in the learning process as suggested by Schulman (2005) and the AECC (1990). The use of actual company data in this case permitted the students to analyze and interpret financial information as advocated by Albrecht and Sack (2000). Also, as recommended by both the Pathways Commission (2015) and the AECC (1990), the students were required to locate, obtain, and organize/analyze financial and nonfinancial information.

This project can be accomplished using a minimum of two to three hours of class time. In conclusion, it appears that this self-managed learning exercise (case) can be successfully used as a teaching method for financial statement ratio analysis topics in an Intermediate Accounting I course.

EXHIBIT 1

Financial Statement Analysis Case Project Requirements

Note: You will need to download from the company’s website each of the company’s annual financial statements (that is, the pair of companies that your team selected from the listing provided). Make sure you obtain a complete set of financial statements including accompanying footnotes, not just summary financial statements.

*1. Compute for each company the following ratios for the two most recent years (e.g., 2013 and 2014): Use the definitions of the ratios given in Chapter 5 – Appendix 5A (p. 201) of your textbook. For each ratio, state the formula and show supporting calculations.

<u>Liquidity</u>	<u>Activity</u>	<u>Profitability</u>	<u>Coverage</u>
Current ratio	Receivables turnover	Profit margin on sales	Debt to total assets
Quick ratio	Inventory turnover	Rate of return on assets	Times interest earned
	Asset turnover	Rate of return on common stock equity	

*II. Answer the following questions based on your financial statement ratio analysis results in Part I above. Briefly state underlying reasoning for each of your answers.

1. Which company is in a more liquid position to pay off its current liabilities?
2. Which company has the more favorable accounts receivable turnover trend?
3. Which company has the more favorable inventory turnover trend?
4. Which company has the more favorable asset turnover trend?
5. Which company has the more favorable return on sales trend?
6. Which company has the more favorable return on assets trend?
7. Which company has the more favorable return on common stockholders' equity trend?
8. Which company is in a better position to issue additional long-term debt (e.g., bonds)?
9. From the point of view bondholders, which company is in a better position to pay its interest expense each year?

*III. Answer the following questions based on the information given in each of your company's annual reports and/or SEC Form 10-Ks for the most recent year (e.g., 2014).

1. Based on the income statement for each company, describe "Gains or Losses from Discontinued Operations," if any.
2. What are each company's basic and diluted earnings per share amounts?
3. What inventory methods for each type of inventory does each company use?
4. What depreciation methods are used for each asset category by each company?
5. Describe any contingent liabilities disclosed for each company.
6. Based on the cash flow statement, what is the amount of cash flows for each company from: Operating activities? Investing activities? Financing activities?
7. What new FASB standards have been adopted by each company as indicated in their most recent annual (e.g., 2012) financial statements?
8. Describe any impairment losses disclosed for each company.
9. Which CPA firm audits each company's financial statements? Describe any unusual situation cited in the CPA firm's audit report.
10. Which company is more favorable toward improving/maintaining the environment? Explain.
11. Which company is more concerned about social or community activities? Explain.
12. The SEC (as mandated by Section 406 of the Sarbanes-Oxley Act of 2002) requires the company to disclose whether it has a Code of Ethics. If the company does not have a Code of Ethics, it must disclose why a Code of Ethics has not been developed.
 - a. Do each of the companies have a Code of Ethics? **Hint:** Check the SEC Form 10-K Report for each company.
 - b. If the company does not have a Code of Ethics, give the company's reason(s) why a Code of Ethics has not been developed.

- c. For each company indicate whether its Code of Ethics has the following characteristics: Accountability, Honesty, Integrity, Leadership, and Responsibility.
 - d. Which of the following theories best characterizes each company's Code of Ethics?
 1. **Stockholder Theory** – Companies are responsible only to stockholders, that is, employees' actions are focused on maximizing stockholder wealth within the law.
 2. **Stakeholder Theory** – Companies are responsible to all individuals, groups, etc. that have a stake in the company; not only to stockholders.
- IV. **Individual Written Report** – An individual written report is to be prepared by each student on each team. Overall, in which company would you prefer to invest? Briefly state your reasoning. Limit your reasoning to no more than one page.
- V. For the oral presentation each student on each team must participate in making the presentation.

*One set of answers for each team.

REFERENCES

References available upon request.