USE OF AN ENGAGED LEARNING PROJECT FOR STUDENTS IN UNDERGRADUATE AND GRADUATE INTRODUCTORY FINANCIAL/MANAGERIAL ACCOUNTING COURSES

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ABSTRACT

An engaged Project was investigated in introductory financial/managerial accounting for a midwest undergraduate course [MW]) and a southwest graduate course [SW]. This Project included many of the Pathways Commission (2015) Learning Objectives, CGMA Framework (2019), and AICPA Framework Competencies (2019/1999). The Project entailed teamwork, written reports, oral presentations, and peer evaluation. The students “strongly agreed/agreed” (mean scores of 4.750 [MW] and 4.890 [SW]) that this Project increased understanding of selected financial/managerial accounting topics. It appears that this Project can be successfully used for teaching these topics in undergraduate and graduate courses.

Keywords: Engaged learning project, Introductory financial/managerial accounting, Alternative teaching method

INTRODUCTION

There has been a call for change in the accounting curriculum and teaching approaches for more than thirty years by several committees. Recently, the Association of International Certified Professional Accountants recommended skills that are needed by managerial accountants in the CGMA Competency Framework: 2019 Update (2019) [CGMA Framework]. Also, the AICPA Pre-Certification Core Competency Framework (2019) [AICPA 2019 Framework] suggested a skills-based curriculum for accounting students (e.g., public, industry, government, or not-for-profit fields). Earlier, the Pathways Commission (2012) advocated approaches or learning experiences that are intended to help students in thinking, performing, and making decisions that are comparable to accounting professionals. Our research investigated a Project that engaged students in activities to assist them in experiencing several needed accounting skills including thinking and making accounting decisions.

The instructor’s role according to Jackson and Durkee (2008) must shift from being the presenter of facts to facilitator of active (engaged) learning to help students to attain the essential professional skills. In addition, Wessels (2010) stated that the instructor’s primary responsibility is to motivate students to utilize learning activities (e.g., problem solving or engaged learning) that will achieve the desired learning course outcomes. This research paper investigated whether a Project that engaged the students was a good method of teaching selected financial and managerial topics to undergraduate and graduate students enrolled in introductory financial/managerial accounting courses.

According to Apostolou et. al. (2013) accounting research should be conducted to identify approaches and/or methods to teach or learn core professional competencies (e.g., communication skills). Also, Bandura and Lyons (2012) advocated that instructors should integrate different learning approaches (e.g., lecture, problem-solving, or engaged learning) in their courses. Further, Helliar (2013) implied that a vital component of accounting education should encompass teaching methods that engage (enable)
students (e.g., role playing, real-world case studies, and group activities). In this research our Project included group work and the use of real-world data (i.e., financial and nonfinancial data from two corporations in the same industry).

In 2015 the Pathways Commission recommended the use of Schulman’s (2005) five signature pedagogies criteria. Three of these criteria specified that students: (1) should be held accountable for their work to clients, student peers, and faculty; (2) must be active and interactive; and (3) should experience adaptive anxiety. In this research our Project incorporated group work and required the students to actively engage in the learning process. Also, this Project held the students accountable to their peers. Further, the students in the preparation of their Projects may experience some anxiety (e.g., uncertainty and complexity).

The Association of International Certified Professional Accountants (i.e., Chartered Global Management Accountants) in the *CGMA Competency Framework* [CGMA Framework] (2019) discussed five skilled knowledge areas. In addition, the Pathways Commission’s Knowledge and Pedagogy Task Force in November 2015 proposed a “Common Body of Knowledge Learning Objectives.” Earlier, the *AICPA Core Competency Framework for Entry into the Accounting Profession* [Framework] (1999) endorsed a set of essential competencies (encompassing 100 elements) for accounting students who plan to enter the profession. Our Project was developed to help the students in undergraduate and graduate introductory financial/managerial accounting courses to experience several of the competencies/skill sets recommended by these organizations (i.e., CGMA, Pathways Commission, and AICPA).

**THEORY**

**Learning-to-Learn**

The Association of International Certified Professional Accountants (2019) recommended that accountants should recognize the necessity for lifelong professional learning and experience. Earlier, the CPA Vision Project (2017) specified the need for lifelong learning in the profession (i.e., continuous acquisition of new skills and knowledge). Also, the Pathways Commission (2014) stipulated that high-quality accounting education should prepare students for a lifetime of learning. In addition, Albrecht and Sack (2000) implied that accounting educators should help students in development of their ability-to-learn skills. Further, Gammie and Kirkham (2008) stated that the ability to “learn to learn” is a key competency that is essential for accountants to adapt to the rapidly changing business environment. Our financial/managerial accounting Project should give the students an opportunity to develop or expand their ability to “learn to learn.”

Under the constructive learning theory, the role of students is to actively participate (engage) in activities that construct their knowledge base. According to this theory the learning environment should be aligned with learning outcomes, which should develop into independent learning. Our learning Project permitted the students to participate (engage) in an activity that should assist them to construct their knowledge base and to learn to learn.

**Learning Objectives and Skills**

The CGMA Framework (2019) discussed interdependent knowledge areas (i.e., technical skills, business skills, people skills, leadership skills, and digital skills). For example, under the technical skills category, students participating in teams and groups could prepare the financial ratio analysis to assess the
performance of the organization (e.g., liquid position) and to utilize the analysis for decision-making purposes (e.g., investment decisions).

In addition, the Common Body of Knowledge (i.e., Accounting Competencies, Professional Foundational Competencies, and Broad Management Competencies), which was developed by the Pathways Commission (2015), has incorporated measurable learning objectives. Specifically, the Pathways Commission’s Common Body of Knowledge Learning Objectives suggested that accounting students should be able to interpret financial and nonfinancial data located in external corporate annual reports (e.g., ratio analysis or trend analysis) for decision-making purposes (e.g., investment or credit decisions). Our Project required each team to analyze and present information from a different industry for decision-making purposes.

**Communication**

The ability of the accounting students to communicate (both written and oral) is vital to the profession. In a survey, Bui and Porter (2010) found that employers considered communication skills to be indispensable for accounting graduates. Various professional committees have consistently advocated over many years that accounting education should place more emphasis on writing skills, oral skills, and critical thinking skills. In 2014 the Pathways Commission stated that quality accounting education should result in an improvement in the students oral and written communication skills. More recently, the CGMA Framework (2019), the AICPA Framework (2019) and the Pathways Commission (2015) have indicated that beginning accounting professionals should be able to communicate clearly to the intended audience. Our learning Project allowed the students to write, make oral presentations, and employ critical thinking in making business decisions.

According to Conrad and Newberry (2012), despite the educators’ best efforts, there still appears to be a gap between practitioners desired communication skills of graduates and what is presently possessed by new graduates. Taking into account this disparity, the Pathways Commission (2015) included under “Professional Foundational Competencies” learning objectives related to communication. Recently, the CGMA Framework (2019) included communication under its “People Skills—Proficiency Level.” As suggested by both the CGMA Framework (2019) and the Pathways Commission (2015), our Project gave the students an opportunity to make oral presentations and to write on financial statement analysis topics. Specifically, the students were assigned two different types of writing exercises (a team report and an individual report) and an oral presentation as part of their Project requirements. Also, our Project required the students to work in teams, and utilize critical thinking in making business decisions.

**Analytical Thinking**

In 2017 the CPA Vision Project specified that one of the top five core competencies involves linking data, knowledge and insight to offer strategic decision-making advice. Further, the CGMA Framework (2019) suggested that professionals are expected to capture data, analyze information, advise and influence decision makers, and assist in ensuring required outcomes are achieved. Our Project was designed to encourage the students to do some analytical and conceptual thinking and writing.

One of the top five core competencies of the CPA Vision Project (2017) entailed interpretation of both financial and nonfinancial information. Also, in 2017 the CGMA in *Global Management Accounting Principles* advocated that one of the main practice areas should involve an integrated and comprehensive view of the organization’s financial and nonfinancial performance along with evaluation of risks and
strategy. In 2019 the CGMA Framework indicated that foundational skills (entry-level proficiency) encompass financial ratio analysis to evaluate the organization’s performance. In 2015 the Pathways Commission suggested that students should be able to interpret both financial and nonfinancial data to determine an organization’s operating efficiency and effectiveness. Our Project required the students to analyze company financial/nonfinancial accounting information (e.g., MD&A reports) as a basis for decision-making purposes (e.g., the choice of company in which to invest).

**Leadership and Human Relations**

Another one of the top five core competencies of the CPA Vision Project (2017) incorporates influencing, inspiring, and motivating others to accomplish results. Recently, the CGMA Framework (2019) indicated that accountants should encourage team performance, train and advise others, and motivate and inspire others. Under Professional Competencies of the AICPA Framework (2019), students should be able to work effectively with diverse individuals, promote inclusion, and enhance performance to accomplish objectives. Further, under the Leadership Skills classification in the CGMA Framework (2019), entry-level professionals should welcome diverse ideas, interact effectively with everybody, contribute to groups or teams, and value the contribution and efforts of group or team members. Our Project involved students working together in teams.

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) advocated that students should objectively respect the professional assessment or evaluation of others. Also, Boud et al. (2010) suggested that students should learn to make judgments about their own work and the work of others (i.e., peer review). Further, Stone and Lightbody (2012) found that interpersonal skills need to involve both listening and oral communication. Our financial/managerial 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. Also, the students were encouraged to learn to listen.

**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. 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 (Project) is utilized. Gordon (1998) used the pre- and post-assessment technique to evaluate students’ knowledge of social responsibility accounting. In our study, Exam II, which was administered after discussing the homework problems on financial/managerial accounting topics (before the Project was assigned), was designated as the pre-test. After Exam II there was no other class discussion or homework involving financial/managerial accounting ratios or other questions included in the Project. The Final Exam, which was given after the students completed the Project, was considered to be the post-test.

In summary, the literature suggests that student engaged 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 this engaged learning technique (Project):
H1: The distribution of exam scores for undergraduate (graduate) students on the financial/managerial accounting questions for Exam II (before the engaged learning exercise) and for the Final Exam (after the engaged learning exercise) are the same.

Student Perceptions


In this research study, students’ opinions of the usefulness of the Financial/Managerial Accounting Project in accomplishing selected Pathways Commission’s Common Body of Knowledge Learning Objectives (2015), the CGMA Framework (2019), and the AICPA’s Framework Core Competencies (2019 and 1999 versions) were measured using a survey. This survey was given after the students received their Project results.

Pathways Commission – Common Body of Knowledge

The Pathways Commission developed learning goals for accounting education. Then, these goals were translated into measurable undergraduate learning objectives. The learning objectives were categorized into three competency areas (i.e., Accounting, Broad Management, and Professional Foundational). The Project’s desired accounting learning objectives have been classified by the researchers into appropriate subsections of the Pathways Commission’s (2015) Common Body of Knowledge Learning Objectives.

About half of the subsections of the Accounting Competencies have at least one Project learning objective that the students were exposed to while preparing their engaged learning Project. For the Professional Foundational Competencies, all of the subsections had at least one learning objective incorporated in the assigned Project. Of the Broad Management Competencies, all except one of the subsections were expected to have at least one learning objective reflected in the Project.

CGMA Framework

The CGMA Framework (2019) discussed interdependent knowledge areas (i.e., technical skills, business skills, people skills, leadership skills, and digital skills). Each knowledge area is divided into various competency categories (i.e., specific tasks and/or functions). The competency categories are defined at four proficiencies levels (i.e., Foundational, Intermediate, Advanced, and Expert). The foundational level involves the competencies that entry level (i.e., new graduates) should be able to accomplish on their own. In our research, the expected competencies levels investigated were activities only at the foundational level.

Analysis was done for each of the skills knowledge areas with more emphasis placed on technical, business, and people skills because these are the primary skills expected at the foundational level (i.e., entry level employees). For the technical skills knowledge level, the students were expected to experience all but one of the competency categories (i.e., accounting information systems) and more than 80 percent of the sub-competencies in this research. The students were also expected to have some experiences for all of the competency categories under both the business skills (e.g., strategy, market and regulatory environment, and project management) and people skills (e.g., influence, communication,
and collaboration and partnering) knowledge areas. Further, the students experienced the majority of the competency categories related to both the leadership skills (e.g., team building, and coaching/mentoring) and digital skills (e.g., digital content creation and data strategy/planning) areas.

**AICPA Framework**

The AICPA Framework (2019 and 1999 versions) each provided a set of needed competencies for all students preparing to enter the accounting profession and/or the business world. The Framework (2019) competencies were divided into accounting, professional, and business. Our Project encompassed elements in all of these competencies. The Framework (1999) competencies were classified as functional, personal, and broad business perspective. The team Financial/Managerial Accounting Project (Project) was anticipated to result in elements of all three categories of the Framework (2019 and 1999 versions) competencies being integrated into introductory financial/managerial accounting courses (an undergraduate course and a graduate course) with a minimum of two to three hours of class time.

As previously mentioned, students’ opinions of the usefulness of the Project in accomplishing selected Pathways Commission’s Learning Objectives (2015); CGMA Framework (2019) knowledge areas; and AICPA’s Framework Core Competencies (2019 and 1999 versions) were measured using a survey. Our survey requested the students to indicate their opinions as to whether the competencies/learning objectives were accomplished in preparing, presenting, and evaluating their Projects.

**Two Different Universities**

One of the limitations of educational research that is conducted at only one university is whether the results will apply to other university settings. Accounting instructors are interested in teaching techniques or methods that might be successfully utilized in different university environments. One of the objectives of this research study was to determine if there would be different Final Exam score results when the outside of class project was used at two universities located in different regions of the country (midwest regional and southwest regional [95% English second language students]).

Another objective of this study was to determine whether there would be a different result when the introductory financial/managerial accounting course was taught at the undergraduate level as compared to the graduate level. An additional objective was to ascertain whether the student-perceived benefits from using the engaged learning Project vary between these two different university settings.

**RESEARCH METHODS**

One of the researchers taught both of the introductory financial/managerial accounting classes used in the research experiment. One of the universities was a midwest regional state university and the other was a southwest regional state university [95% English second language]. At the midwest university (MW-U), the students were undergraduate sophomores, while the students at the southwest university (SW-G) were graduate MBA students with no previous accounting knowledge.

The Project involved financial/managerial accounting 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., Goodyear and Cooper Tire) for each team. Each team (consisting of 3-5 students) analyzed a different industry (e.g., office furniture, petroleum industry, or wireless components). The students at both universities were allowed to select the industry from pairs of companies identified by the instructor. The Project required
the students to access their company’s annual report and SEC 10-K report on the Internet. Other than the selection of the industry by the team, the entire Project was designed to be prepared outside of class.

Written Reports and Oral Presentations

The students at both universities were required to prepare a written team report. This report had three parts. First, the team was required to calculate ten financial/managerial accounting ratios for the two most recent years (e.g., inventory turnover ratio). Then, the students were expected to use the ratio analysis results as the basis for answering a set of questions. For example, “Which company has the more favorable gross profit percentage trend?” Also, for the most recent year, each team was required to answer another set of questions related to each company’s annual and SEC 10-K reports. Specifically, the students were asked to identify two segments (e.g., product lines) reported by each firm and indicate if there was a product line or business segment that they would want to consider dropping in the future.

Further, the third part of the team report was designed to expose the students to other sections of the company’s annual report in addition to the financial statements and accompanying notes (e.g., Management’s Discussion and Analysis (MD&A) section). The students were requested to use the MD&A section to determine if the company management made forward-looking or projection statements. Then, if company projections were presented in the MD&A section, the students were asked to identify two factors related to the projections that would also affect the preparation of a budget for each company. For example, “What assumptions discussed in the MD&A section were related to the development of sales forecasts?”

In addition, to assure that each student had writing experience during preparation of the Project, 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 Project requirements.

Also, each team was required to orally present their analysis to their classmates. The students were expected to dress as if they were presenting to clients. The teams were informed that their presentations should be 15 to 20 minutes in length. The other classmates were expected to act as the client and were encouraged to ask questions of the presenting team.

Evaluations

As the Pathways Commission (2012) recommended, the Project 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 students at both universities received (one week before the presentation) a copy of the evaluation form (5-1 Likert scale with 5 being the highest), which was to be used during their presentations. Each non-presenting classmate and the instructor had equal evaluation weight in determining the student scores for the presentations. This helped the students to consider the presentations more seriously.

The students were asked to keep the evaluation forms confidential and were told that only the instructor will compute the presenter’s scores. The evaluation form permitted the evaluators to write comments and suggestions for each presenter and for the team presentation as a whole. One of the purposes of the evaluation form was, as suggested by the Pathways Commission (2015), to hold the presenting students
accountable to their student peers and the instructor. Also, as implied by the Pathways Commission (2012), it was expected that the students will benefit from peer evaluation/observation and comments.

When the written reports were returned, each student at both universities also received his or her Project score and the written instructor/peer comments for the individual and team presentations. The total score for the Project was 70 points (team report, 40; individual report, 15; individual presentation, 10; and team presentation, 5).

Testing and Survey

Approximately a week following the discussion of the homework problems on the financial/managerial accounting topics, Exam II was administered. Exam II (i.e., pre-test) was given before the students started their engaged learning exercise (i.e., Financial/Managerial Accounting Project). About a week after the students made their presentations and completed their team and individual reports, the Final Exam (i.e., post-test) was administered, which had questions related to the financial/managerial accounting topics that were different than those that were given on Exam II but were similar in the level of complexity. The results of Exam II and the Final Exam were used to measure the effect of this engaged learning exercise technique.

This study used a survey to measure student perceptions of this engaged learning technique. Our survey was given after the students received their Project results (i.e., their grade and assessment sheet). The survey requested the students to rank (strongly agree = 5) whether selected Pathways Commission Learning Objectives, CGMA Framework (2019) knowledge areas, and AICPA Framework Core Competencies (2019 and 1999 versions) were accomplished during their Project preparation, team presentation, individual presentation, completion of the peer evaluation form, and review of the peer evaluation results. In addition, the survey was used to ascertain the opinions of the students on the usefulness of the Project in understanding the financial/managerial accounting topics.

RESULTS

The students at both universities were tested twice on the financial/managerial accounting analysis topics. Exam II was considered as the pre-test. The Final Exam was designated as the post-test. At both universities, the majority of the student exam scores related to the financial/managerial accounting analysis topics increased or stayed the same after the Project was completed. For the undergraduate midwest university (MW-U) course, the mean score increased from 43.2% on Exam II to 55.2% on the Final Exam. The mean score for the graduate southwest university (SW-G) course increased from 29.7% on Exam II to 53.0% on the Final Exam. The students’ Exam II and Final Exam scores were matched by names. The Wilcoxon signed rank test was utilized to test $H_1 (EII \geq FE)$. Since there was a significant difference ($p = .01$ at MW-U and $p = .05$ at SW-G), $H_1$ was rejected. The students’ exam scores appeared to have significantly increased at both universities as a result of this engaged learning exercise. Thus, it appears that this type of learning exercise can be successfully used as a teaching method for financial/managerial accounting analysis topics at both the undergraduate and graduate levels.

Like Sawyer et al. (2000), the researchers administered a survey after the students received their grade and assessment sheet for the Project. The survey was used to determine whether the students felt that the assigned Project was useful ($5 =$ strongly agree) in meeting specified Pathways Commission Learning Objectives, CGMA Framework (2019), and AICPA Framework (2019 and 1999 versions) skills while analyzing, writing, presenting, and evaluating this Project. Generally, the students stated that they
“strongly agree” or “agree” that the selected core competencies were accomplished by the Project. The average mean score for the students at MW-U was 4.109 and the median score was 4.125. At SW-G the average mean score for the students was 4.356 and the median score was 4.440. The scores ranged at MW-U from 4.750 to 3.500 and at SW-G from 4.780 to 3.560.

Pathways Commission Learning Objectives

The Pathways Commission Common Body of Knowledge Learning Objectives were categorized into Accounting Competencies, Broad Management Competencies, and Professional Foundational Competencies. The “external report and analysis” subsection of the Pathways Commission Accounting Competencies was one of the main reasons for this Project with both the MW-U and SW-G students having a mean score of 4.32. For the “planning, analysis, and control” subsection, both the MW-U and SW-G students generally believed this subsection was accomplished with a mean score of 4.13 for the MW-U students and 4.36 for the SW-G students. Another purpose of the Project was to introduce the students to ethics and social responsibility (i.e., “professional values, ethics, and attitudes” subsection). Both the MW-U and SW-G students generally believed this Project overall improved their knowledge of this subsection with a mean score of 4.27 (MW-U) and 4.50 (SW-G). The difference between these two groups could have resulted because there was a dysfunctional team at the MW-U university.

Our Project was designed to increase student communication skills (i.e., Pathways Commission Professional Foundational competency), which is not normally part of an introductory financial/managerial accounting course. The mean score was 4.13 for the MW-U students and 4.38 for the SW-G students. The difference between the MW-U and SW-G students could be because the MW-U students (sophomores) may not have had to make presentations in their freshman level courses (which made these students feel less confident) while the graduate students at SW-G probably had made presentations prior to this course.

Another learning objective of our engaged learning Project was to motivate the students to do some analytical and conceptual thinking and writing. Explicitly, our Project expected the students to analyze company financial/nonfinancial accounting information [as recommended by The Pathways Commission (2015)] as a basis for decision-making purposes (e.g., the choice of company in which to invest). The mean score was 4.17 for the MW-U students and 4.37 for the SW-G students.

One of the advantages of the team Project was the opportunity for the students to develop better “human relations” than is normally possible in an introductory financial/managerial accounting course. The mean score was 4.19 for the MW-U students and 4.44 for the SW-G students. Probably the lack of previous teamwork experience by the MW-U students may explain the resulting differences between the undergraduate (MW-U) and the graduate (SW-G) students. Our Project required some use by the students of technology (e.g., locating and downloading their companies’ annual reports and SEC 10-K reports). Related to the “technology” subsection, the mean score was 4.15 for the MW-U students and 4.36 for the SW-G students.

Because the Project involved teams, it was hoped that the students would have some leadership opportunities (i.e., Broad Management category). The mean score for this section was 4.16 for the MW-U students and 4.43 for the SW-G students. Another subsection of the Broad Management category relates to “governance, risk management, and compliance,” which was not emphasized in the Project. Therefore, as expected the student opinions were relatively low with a mean score of 3.79 for the MW-U students and 3.93 for the SW-G students. The last subsection of this category (“additional core
managers' competencies”) is a blend of various unrelated topics. First, the mean score for “determined project goals” for the MW-U students was 4.50 and for the SW-G students it was 4.56. Also, the mean score for “analyzes and prepares strategic information” was 4.00 for the MW-U students and 4.44 for the SW-G students.

**CGMA Competency Framework**

As mentioned earlier, our Financial/Managerial Accounting Project should assist the students in attaining competencies in all five of the CGMA Competency Framework knowledge skill areas (i.e., Technical, Business, People, Leadership, and Digital). For the Technical skills knowledge area, the students primarily ranked the expected competencies as either “strongly agree” or “agree” at both MW-U (4.054) and SW-G (4.185). Most of the students ranked the Business skills as strongly agree/agree at both universities [MW-U (3.892) and SW-G (3.939)].

The mean scores for the students’ opinions related to the People skills, which is not normally taught in an introductory financial/managerial accounting course, was 4.111 (MW-U) and 4.410 (SW-G). Also, the mean scores for the Leadership skills, which is not normally emphasized in these courses, was 4.183 (MW-U) and 4.416 (SW-G). It is possible that the lack of previous teamwork experience by the MW-U students could explain the resulting differences pertaining to People skills and Leadership skills between the undergraduate (MW-U) and the graduate (SW-G) students. Finally, the Digital skills had mean scores of 4.098 (MW-U) and 4.509 (SW-G).

**AICPA Framework Core Competencies**

As previously discussed, this Financial/Managerial Accounting Project should facilitate the students in accomplishing elements of all three of the AICPA Framework’s broad skills categories (i.e., Functional Competencies, Personal Competencies, and Broad Business Perspective). Of the elements that the researchers expected to be accomplished (i.e., about half of the AICPA Framework’s skills), the students ranked 70.49% and 93.44% as either “strongly agree” or “agree” at MW-U and SW-G, respectively. The ten highest elements at MW-U had a score of 4.500 or higher. Because of ties the 20 highest elements at SW-G had a score of 4.560 or higher.

The majority of the core competency elements achieved by this Project were related to the personal competencies’ category. Personal competencies may be more difficult to achieve with traditional activities in an undergraduate or graduate introductory financial/managerial accounting class. Of the top ten elements at MW-U, 80% are from the personal competencies’ category. Of the top 20 elements (because of ties) at SW-G, 80% are from the personal competencies’ category.

The survey also requested the students to rank (strongly agree = 5) whether preparing the Financial/ Managerial Accounting Project greatly assisted them in understanding the financial statement analysis and managerial accounting topics. The students “strongly agreed” or “agreed” (4.750 mean score at MW-U and 4.890 mean score at SW-G) that this Project increased their understanding of these topics.

**SUMMARY**

Many of the students received higher scores on the Final Exam (after the Project) related to the financial statement analysis and managerial accounting topics than they did on Exam II (before the Project), which involved only regular class discussion and homework assignments. There was a significant
difference at $p = .01$ for MW-U (undergraduate course) and at $p = .05$ for SW-G (MBA graduate course). The students’ exam scores appear to have significantly increased at both universities as a result of this Project. Therefore, this engaged learning exercise (Project) appears to be beneficial for both undergraduate and graduate students.

Many of the specified Pathways Commission (2015) Learning Objectives, CGMA Framework knowledge skill areas, and the AICPA Framework Core Competencies (2019 and 1999 versions) were accomplished when the students prepared, presented, and evaluated their Projects. Of the expected elements, about 80% of the top scores at both universities were from the learning objectives/personal competencies category. This Project gave the students an opportunity to experience types of skills recommended by the Pathways Commission (2015) Learning Objectives, the CGMA Framework knowledge skill areas, and the AICPA Framework Core Competencies (1999 and 2019 versions) that may not normally be accomplished in a typical undergraduate or graduate financial/managerial accounting course (e.g., professional foundational, people/leadership skills, personal competencies). Further, the students indicated that they “strongly agreed” or “agreed” (4.750 mean score at MW-U and 4.890 mean score at SW-G) that this Project increased their understanding of the financial statement analysis and managerial accounting topics.

Also, in the preparation of this Project 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 Project permitted the students to analyze and interpret financial information as advocated by Albrecht and Sack (2000). Further, 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. Of course, the amount of class time spent on the Project will vary depending on the size of the class. In conclusion, it appears that this engaged learning exercise (Project) can be successfully used as a teaching method for financial statement analysis and managerial accounting topics in an undergraduate or graduate financial/managerial accounting course.

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