

The State of Cost and Managerial Accounting Education: Management's Perspective

Edward R. Walker
University of Central Oklahoma

Yinghong Zhang
University of Central Oklahoma

Bambi A. Hora
University of Central Oklahoma

Paula R. Sanders
University of Central Oklahoma

There is a decline in the emphasis of cost and managerial accounting courses in university accounting programs. There is also a growing concern that accounting graduates wishing to pursue careers in cost or managerial accounting are not receiving adequate preparation for such careers. Results of a survey of cost and managerial accountants supported previous research findings that there is a gap between the skills that entry-level accountants have and what employers desire. The most significant needs identified were additional coursework in cost and managerial accounting, quantitative skills, and a stronger emphasis on decision-making.

Keywords: cost and managerial accounting, educational competencies, management perspective, accounting education

INTRODUCTION

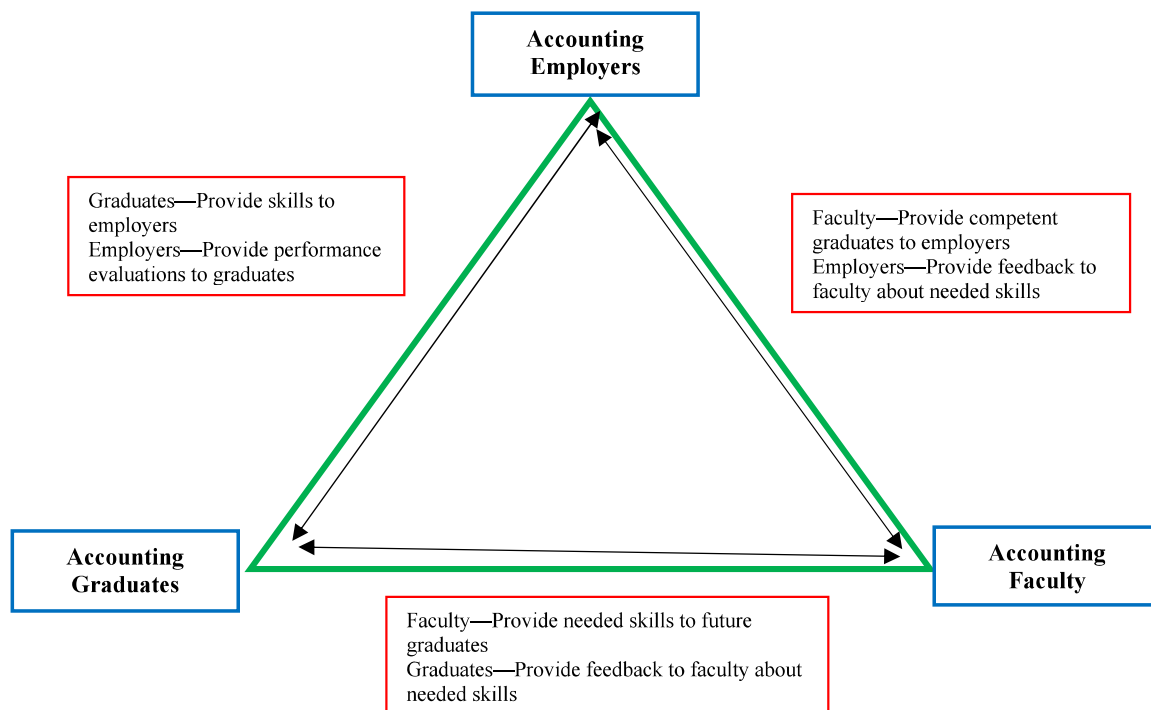
For many years, there has been an expectations gap between the skills that companies desire entry-level accountants to bring to the workplace and the actual skills that these accountants have upon graduation. In general, there is an increasing shift toward making accounting education more focused on strategic decision-making techniques.

The growing complexity of financial accounting and reporting coverage on the Uniform Certified Public Accountant (CPA) Examination has reduced the coverage of cost and managerial accounting topics. What was once a large part of the Theory and Practice sections of the previous format of the CPA Examination is now a small part of the Business and Economics Concepts (BEC) portion of the current format. Consequently, many universities have increased the coverage of financial accounting and have

reduced the coverage of cost and managerial accounting in their accounting program offerings. The ultimate result of this trend is that accounting graduates who pursue careers in cost or managerial accounting may not have the skill set necessary to develop more complex decision-making techniques in the managerial and cost accounting areas. In turn, this may create significant increases in learning curves and training costs for organizations. Likewise, graduates who pursue careers in public accounting may not have a sufficient knowledge of the managerial and cost decision-making processes used by their clients and may have difficulty understanding the overall nature of client operations. This may result in less effective and/or less efficient audits and potential difficulties in assisting clients with strategic planning activities.

The process of preparing accounting students to become successful entry-level professionals and earn future progress in their careers may be viewed as a triangular relationship between three groups of stakeholders: accounting faculty, employers, and graduates (see Figure 1). Ideally, faculty should receive feedback from both employers and graduates about the skills that entry-level accountants need to perform effectively. In turn, faculty should use this feedback to adopt appropriate accounting courses and incorporate important cost accounting skills. Employers should then provide performance evaluations of employees that address technical and decision-making abilities necessary for their job requirements. Likewise, recent accounting graduates should communicate with accounting faculty, either directly or through an alumni relations committee, about education-related issues. Unfortunately, such channels of communication either do not exist or do not function effectively, therefore contributing to the existing skills gap.

**FIGURE 1
IDEAL COMMUNICATION CHANNELS AMONG EMPLOYERS,
FACULTY, AND GRADUATES**



FOCUS OF ARTICLE

This article addresses the existing expectations gap between education and industry. We explore the attitudes of cost accounting managers toward entry-level accountants with regard to their skills in accounting, communication, and decision-making abilities. Future articles will explore the attitudes of cost accounting professors toward the efficacy of the education process and the abilities of students, and attitudes of accounting students toward the educational process.

LITERATURE REVIEW

The apparent gap between accounting education and the skills needed for long term success in accounting careers has been an issue for several decades. The Trueblood Commission (Trueblood, 1963) argued against “excessive educational differentiation for industrial and public accountants.” The Bedford Commission recommended that university accounting programs should emphasize skills needed for lifelong learning (Bedford et al., 1986). The Pathways Commission (2012) stated that in order for accounting to develop a complete understanding of its role in society, the profession must develop a strategic view of how accountants add value to an organization and create a curriculum that supports this view. A joint task force formed in 2010 between the American Accounting Association (AAA) and the Institute of Management Accountants (IMA) has proposed that the value proposition of accounting “be defined in terms of strategy formulation and analysis, planning and execution” (Lawson et al., 2014).

The skills gap is likely greater in the areas of cost and managerial accounting. Siegel and Sorenson (1994a, 1994b) surveyed members of the Financial Executives Institute (FEI), the IMA, and the American Institute of Certified Public Accountants (AICPA). They found that 63% of the respondents believed that there are significant differences between the necessary skill sets for public accounting and corporate accounting, and 55% believed that education did not place enough emphasis on management accounting. Major recommendations included developing an identifiable education track for management accounting and working with corporate clients to develop an appropriate management accounting curriculum.

A 2003 survey by Ernst & Young and the IMA reported that management accounting is at a “critical juncture” because of the shifts in roles and practices for management accountants, as well as an emerging range of management accounting techniques (Clinton and White 2012). Clinton and White (2012) replicated this study and found that, overall, management accounting did not improve insights into organizational cost management nor did it improve the applicability of cost information. Specifically, the survey results indicated a decline in professionals with the necessary expertise, skills, education, and innovation. Further, the results reflected a loss of focus by management accountants in improving cost information as well as a significant loss of academic and professional knowledge relating to cost information and management. The authors concluded that the accounting profession needs to establish a solid framework for cost accounting, decision-making, and analysis that is separate from the Generally Accepted Accounting Principles (GAAP) framework used for external reporting and analysis.

Siegel, Sorenson, Klammer, and Richtermeyer (2010a) stated that a management accountant should be more a “creator of wealth” instead of a “counter of wealth” and that the extant accounting curriculum does not provide the necessary skills for such a shift. A subsequent article by these authors (Siegel et al., 2010b) stated that almost two-thirds of accounting graduates started careers in areas other than public accounting with only an undergraduate degree. The authors also identified areas, such as budgeting, product costing, and strategic performance management, that are part of the preparation gap in management accounting education. These authors state that there is a pressing need to add more management accounting coverage to the curriculum and to make the curriculum more practitioner-driven. Finally, one of the recommendations the joint task force of the AAA and IMA was that the focus of accounting education should include organizational settings other than public accounting and curriculum recommendations should come from an analysis of how accountants add organizational value (Lawson et al., 2014).

RESEARCH QUESTIONS

In this portion of the study, we focus on the attitudes of cost managers toward the skills of recent accounting graduates and the effectiveness of the education process. We address the following questions for the managers as a whole and then control for type of industries (manufacturing versus non-manufacturing), focus of operations (local versus non-local), years of accounting experience, and number of accounting personnel:

1. Are today's accounting graduates well-prepared to enter the workforce?
2. Do accounting graduates need a strong background in cost accounting when entering the workforce?
3. Do today's accounting graduates have better decision-making skills than those graduates from ten years ago?
4. Should colleges and universities place greater emphasis on decision-making skills in their accounting curricula?
5. Is there a need for additional courses in cost and managerial accounting in the undergraduate curriculum?
6. Do today's accounting graduates have quantitative skills that are superior to those graduates from ten years ago?
7. Do today's accounting graduates have a work ethic superior to those graduates from ten years ago?
8. Do today's accounting graduates require more training and supervision than those graduates from ten years ago?
9. Are today's accounting graduates more conscious of ethical issues than those graduates from ten years ago?

METHODOLOGY

We gathered data through a survey of managerial accounting personnel who are members of the IMA. The survey was administered via Survey Monkey by the IMA Research Foundation. A total of two e-mail blasts were sent; the second request was sent approximately two weeks after the first request. A total of 103 usable responses were received; however, three questions had only 102 responses recorded. The small sample size appears to be the result of an overall decline in the number of management accountants and the interest in managerial accounting as a whole.

RESULTS

Sample Demographics

The respondents worked in a wide range of positions. Approximately 35% were managers or directors, 22% were controllers, while 14% were in senior accounting positions. The remaining 29% were in decision-making roles, such as consulting. Approximately 48% of the respondents have a Bachelor's degree as their highest degree, while 49% have a Master's degree; 38% of the subjects hold a CPA certification, while 79% hold a Certified Management Accountant (CMA) certification.

Figure 2 shows that 34.7% of the respondents were employed in the manufacturing sector, while 29.6% were employed in the for-profit service sector. Further, 14.3% of the respondents reported employment in the governmental and non-profit sector, while the remaining respondents were employed in public accounting and other sectors.

FIGURE 2
TYPE OF INDUSTRY

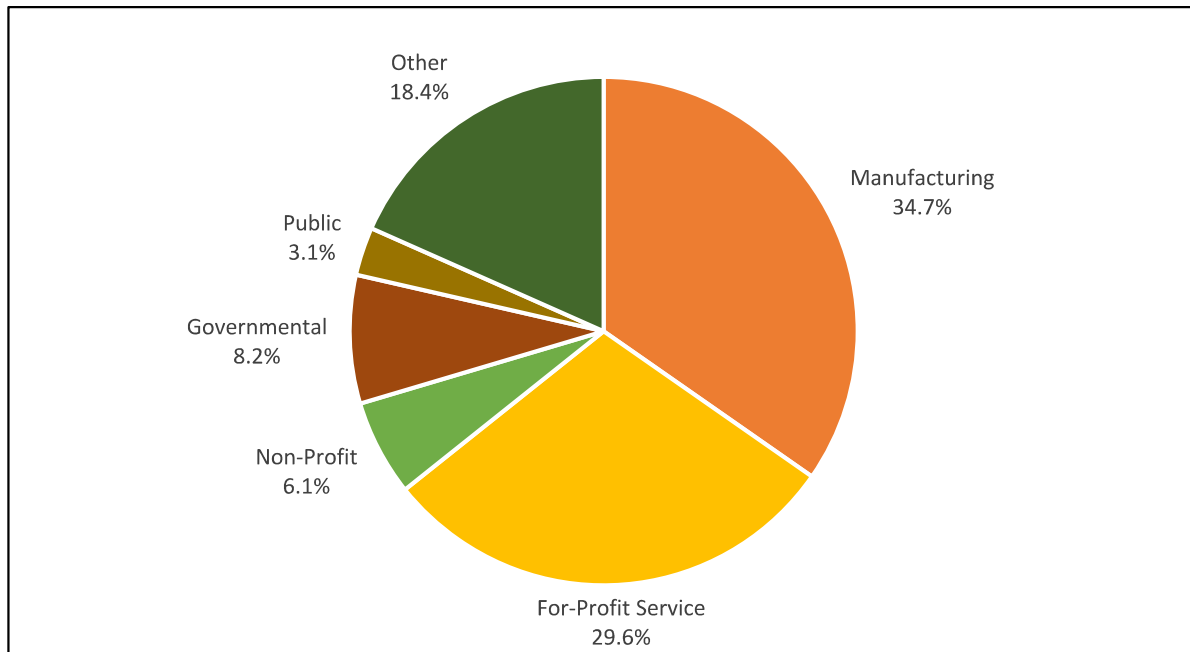


Figure 3 indicates that 21.4% of the respondents worked at firms with single locations, while 40.8% were employed by firms with multiple/nationwide locations. Further, 37.8% of the respondents were employed by firms with international locations.

FIGURE 3
NUMBER OF LOCATIONS OPERATED BY FIRM

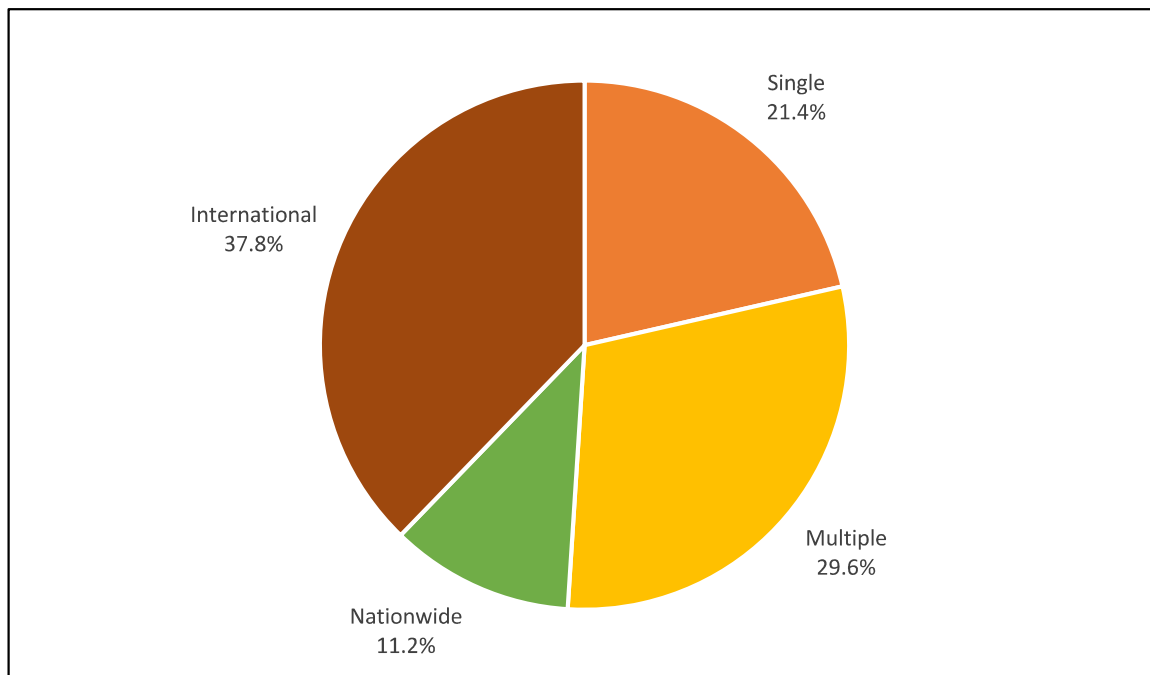
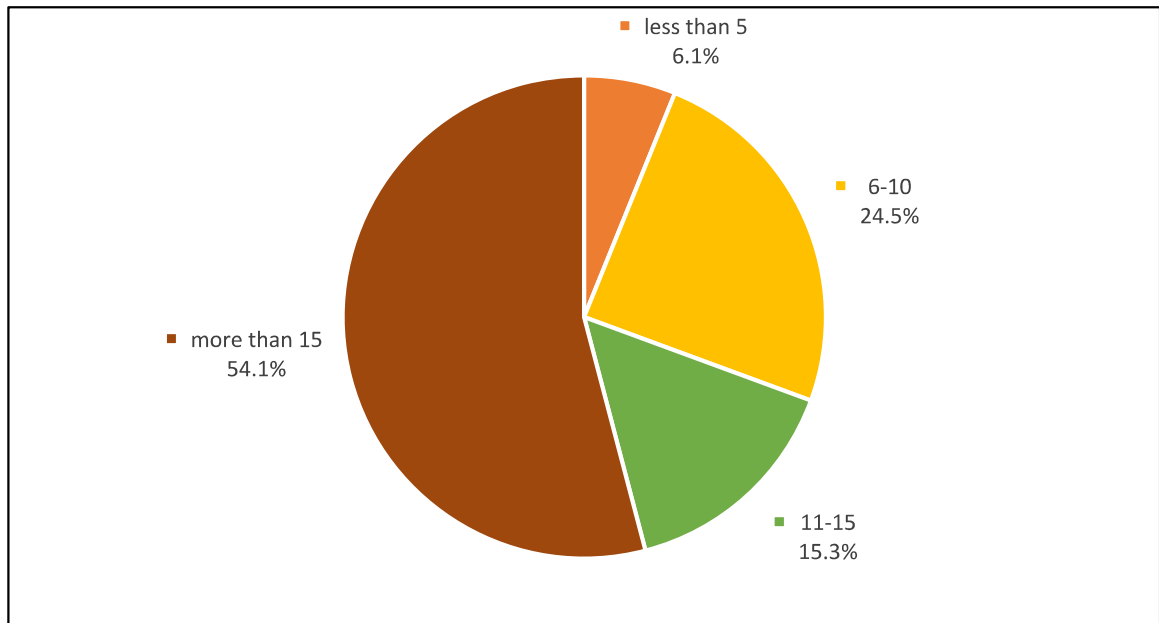
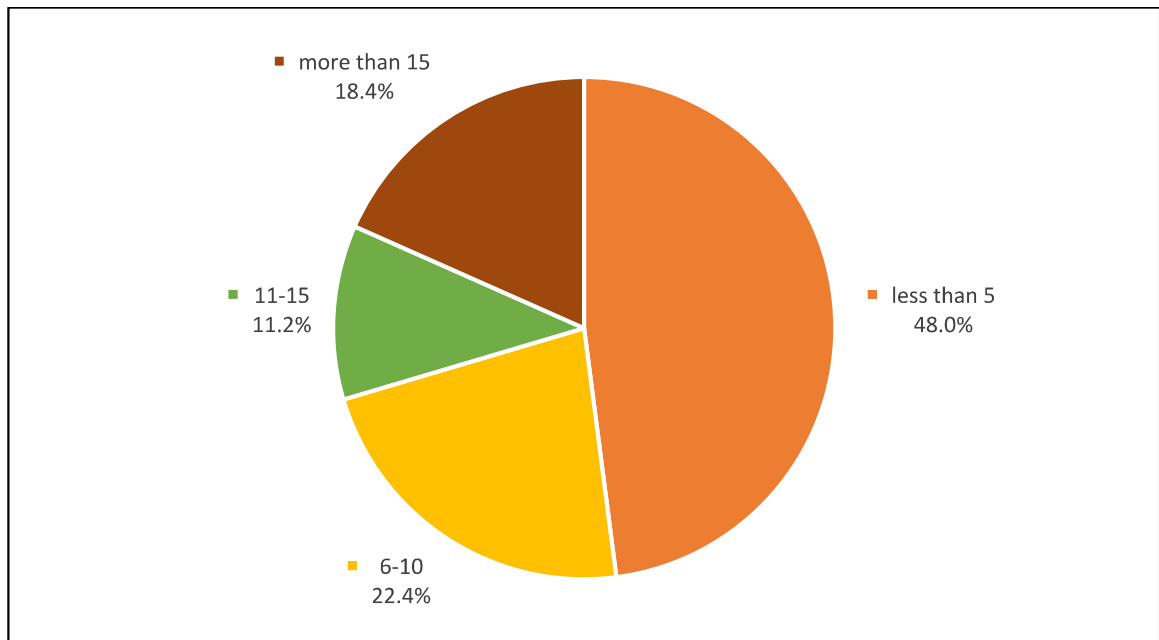


Figure 4 indicates that 54.1% of the respondents had more than 15 years of accounting experience, while 15.3% reported 11-15 years of experience. The remainder had ten or less years of experience. However, Figure 5 indicates that approximately 48% of the respondents had been employed by their current organization for less than five years, while 22.4% had been with their current employer for six to ten years. These results seem to imply a high rate of turnover in managerial and cost accounting positions and/or a shift from public to private accounting.

**FIGURE 4
YEARS OF ACCOUNTING EXPERIENCE**



**FIGURE 5
YEARS EMPLOYED WITH CURRENT ORGANIZATION**



Among the managers sampled, approximately 38% worked for organizations with less than ten accounting personnel, and 38% were employed by organizations with more than 50 accounting personnel (see Figure 6). Approximately 75% of the firms hire less than ten accounting graduates annually, while 10% of the firms hire more than 50 graduates (see Figure 7).

FIGURE 6
NUMBER OF ACCOUNTING PERSONNEL IN RESPONDENTS' FIRMS

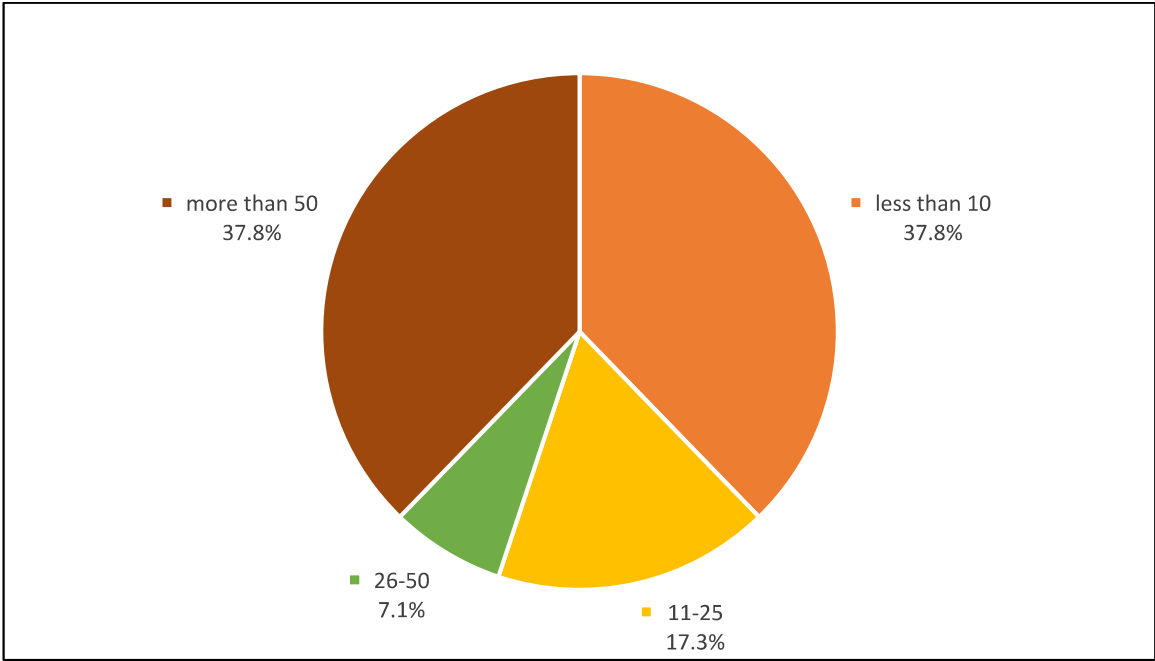
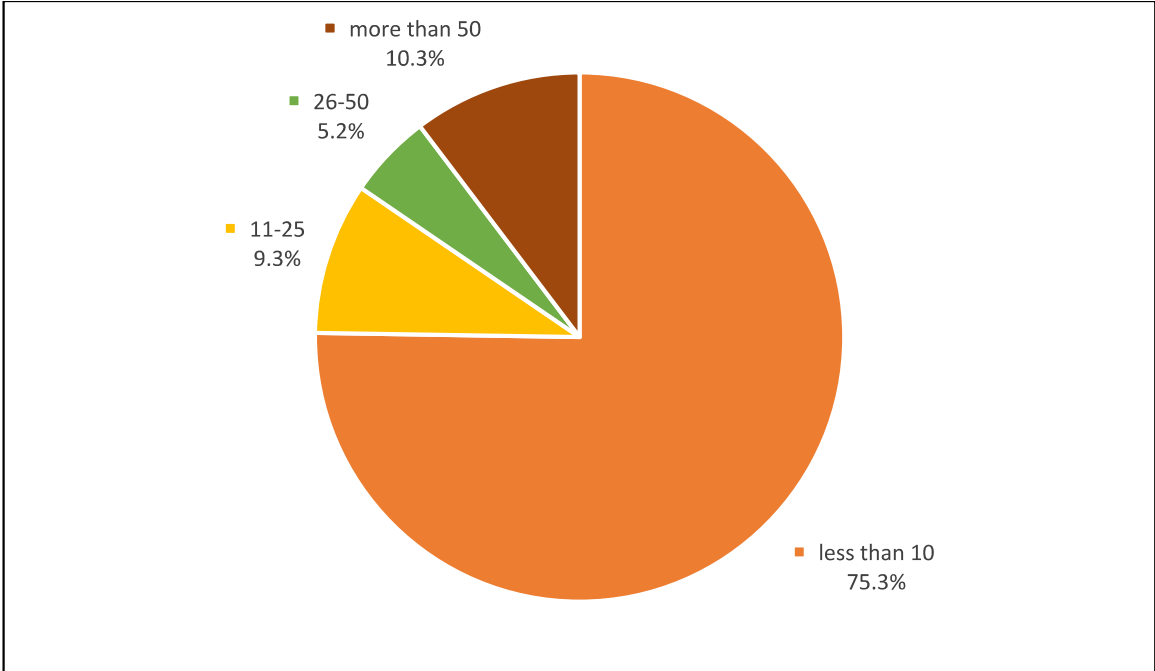


FIGURE 7
NUMBER OF ACCOUNTING GRADUATES HIRED ANNUALLY

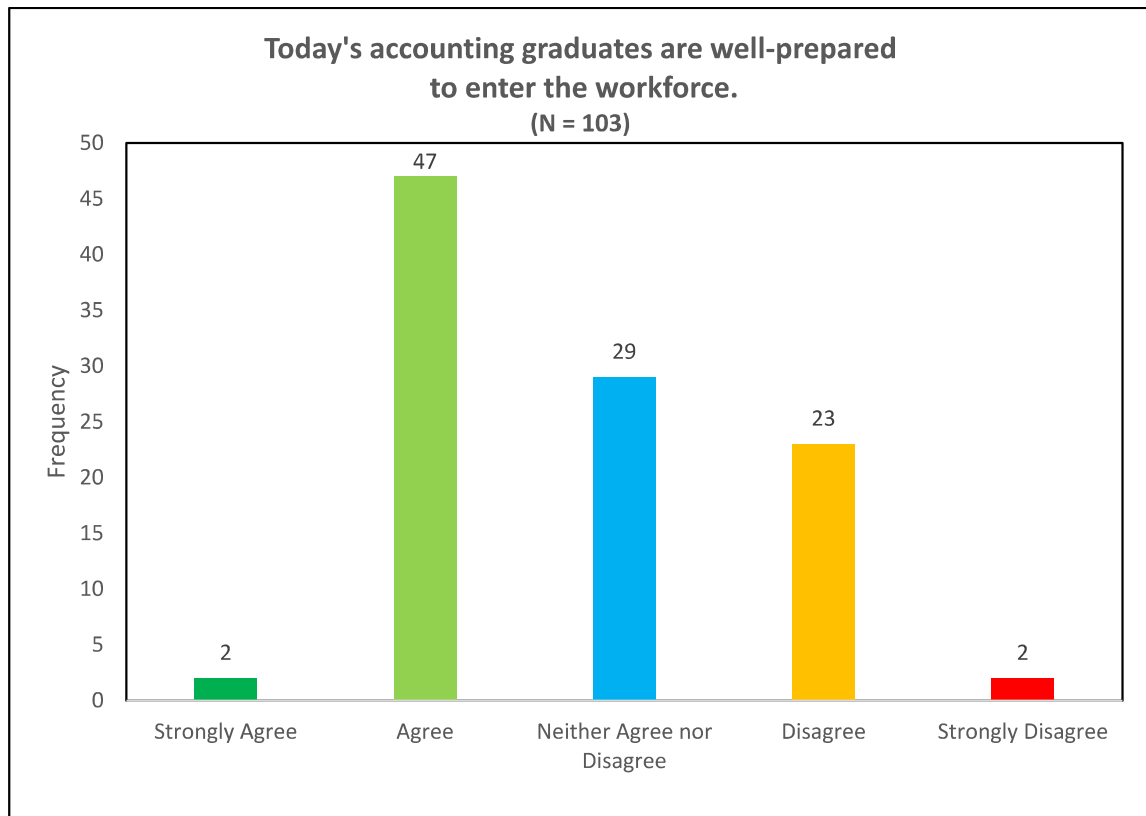


For each of the research questions, we analyzed the sample as a whole; we then partitioned it by using several demographic variables to determine if statistically significant differences existed between the responses of specific groups. First, we partitioned based on whether the firms were manufacturing versus non-manufacturing. We then partitioned based on whether the firms were local (single location or multiple local locations) versus non-local (nationwide or international). Finally, we partitioned the sample by respondents' years of experience (ten years or less versus more than ten years), and by the number of accounting personnel (50 or less versus more than 50).

Preparation for Entering Workforce

The survey responses revealed that approximately 48% of the managers agreed or strongly agreed that present accounting graduates were well-prepared to enter the workforce (see Figure 8). While approximately 24% disagreed or strongly disagreed with this statement, 28% of the respondents were neutral. When partitioned by location, industry, years of experience, and number of accounting personnel, no statistically significant differences existed between groups. This may imply that the overall level of preparation needs improvement.

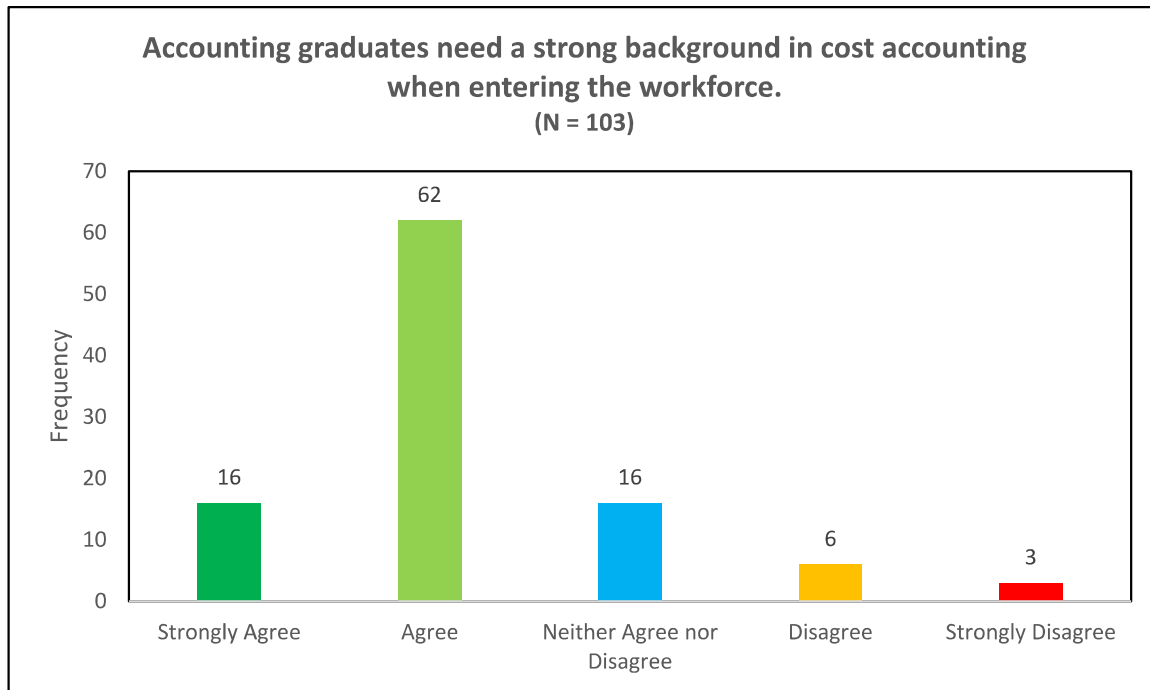
**FIGURE 8
PREPARATION OF GRADUATES TO ENTER WORKFORCE**



Importance of a Strong Cost Accounting Background

Approximately 76% of the respondents agreed or strongly agreed that accounting graduates need a strong background in cost accounting when entering the workforce (see Figure 9). Again, there were no statistically significant differences between groups when the sample was partitioned by location, industry, years of experience, and number of accounting personnel. This implies that, overall, competency in cost and managerial accounting skills is still considered important for accounting graduates.

FIGURE 9
NEED FOR STRONG BACKGROUND IN COST ACCOUNTING



Strength of Decision-Making Skills

Figure 10 indicates that, overall, approximately 49% of the respondents expressed no clear opinion on the statement that today’s accounting graduates are better decision-makers than those from ten years ago. Further, approximately 30% of the respondents expressed either disagreement or strong disagreement with this statement. However, when the data was partitioned and analyzed based on years of experience, approximately 37% of managers with more than ten years’ experience (N = 70) disagreed or strongly disagreed compared to approximately 15% of the managers with ten or less years’ experience (N = 33) (see Figure 10a). This difference was statistically significant at the 5% level ($t = 2.55$). This implies that there is a need for increased emphasis on decision-making skills in the classroom setting. More importantly, it also implies that managers with less experience may not yet have fully grasped the complexity of the decision-making process in this environment.

FIGURE 10
STRENGTH OF GRADUATES' DECISION-MAKING SKILLS

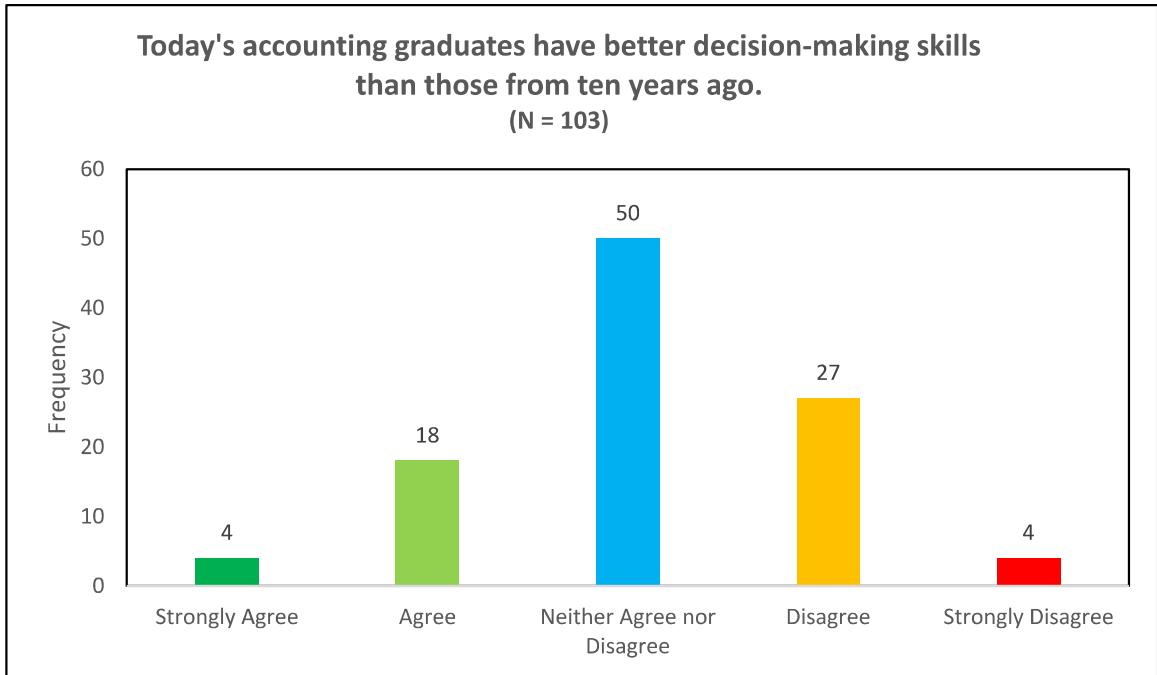
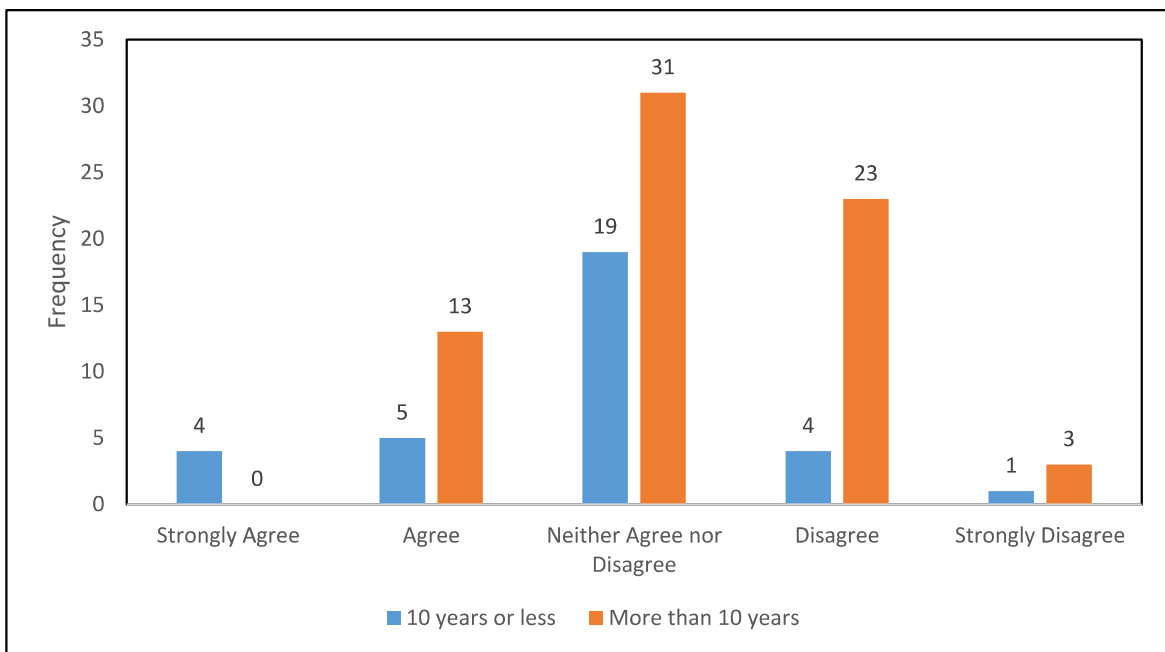


FIGURE 10a
STRENGTH OF GRADUATES' DECISION-MAKING SKILLS BY YEARS OF EXPERIENCE



Need for Greater Emphasis on Decision-Making Skills in Accounting Curriculum

Approximately 93% of the respondents agreed or strongly agreed that colleges and universities should place greater emphasis on decision-making skills in the accounting curriculum (see Figure 11). The extent of agreement was even greater for managers of large and/or international firms. As indicated by Figure 11a, approximately 89% of the managers from local firms (N = 52) agreed or strongly agreed with this statement, while 98% of the managers from non-local and international firms (N = 51) did so. This difference was statistically significant at 10% ($t = -1.94$). This implies that firms with a wider operational focus may face more complex accounting decisions and therefore have a greater need for competent accounting personnel that can effectively address such decisions. The results of this question combined with the results of the question related to strength of decision-making skills support the need for increased emphasis on these skills in the accounting curriculum.

FIGURE 11
GREATER EMPHASIS ON DECISION-MAKING SKILLS IN ACCOUNTING CURRICULA

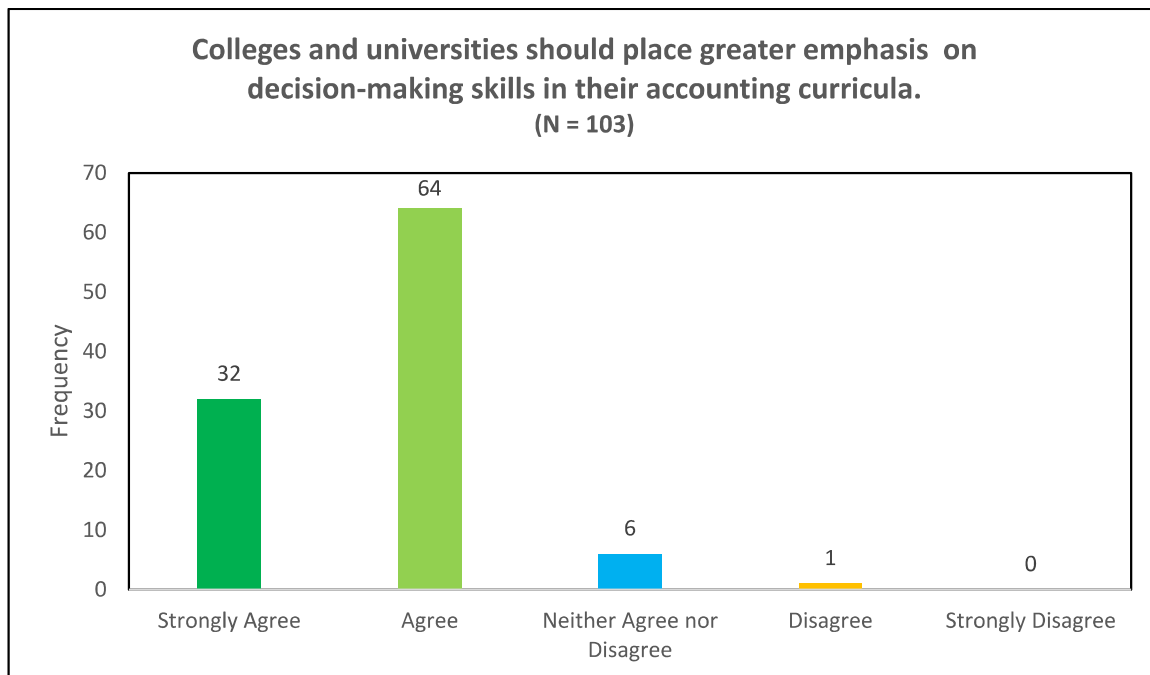
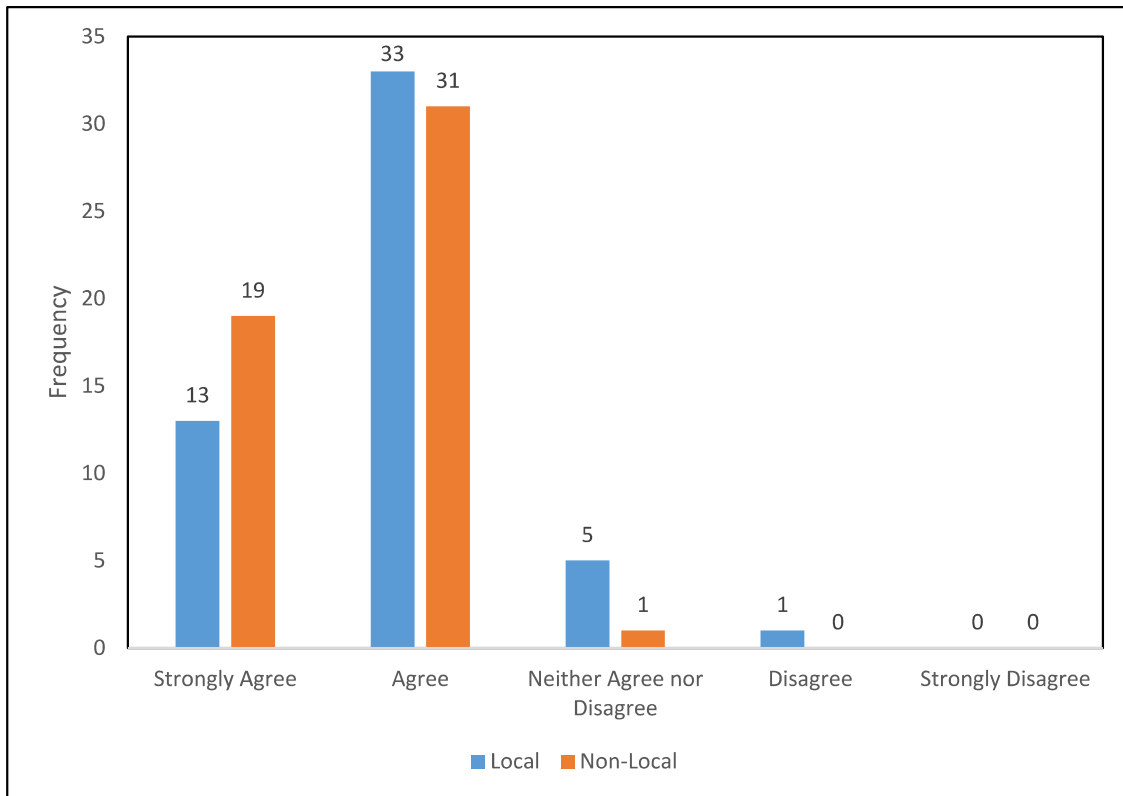


FIGURE 11a
GREATER EMPHASIS ON DECISION-MAKING SKILLS—LOCAL VS. NON-LOCAL FIRMS



Additional Courses in Cost and Managerial Accounting

Overall, approximately 83% of the managers agreed or strongly agreed that there is a need for additional courses in cost and managerial accounting (see Figure 12). The extent of agreement was significantly larger for managers of non-local firms, with approximately 90% of the managers of non-local firms (N = 51) expressing agreement, versus approximately 75% of the managers of the local firms (N = 52) (see Figure 12a). This result was statistically significant at 5% ($t = -2.20$). Again, this implies that non-local firms may face more complex operating challenges than do local firms and, thus, need accountants with well-developed decision-making skills. It also implies that, overall, there is a need for more in-depth coverage of cost and managerial accounting.

FIGURE 12
NEED FOR ADDITIONAL COURSES IN COST AND MANAGERIAL ACCOUNTING

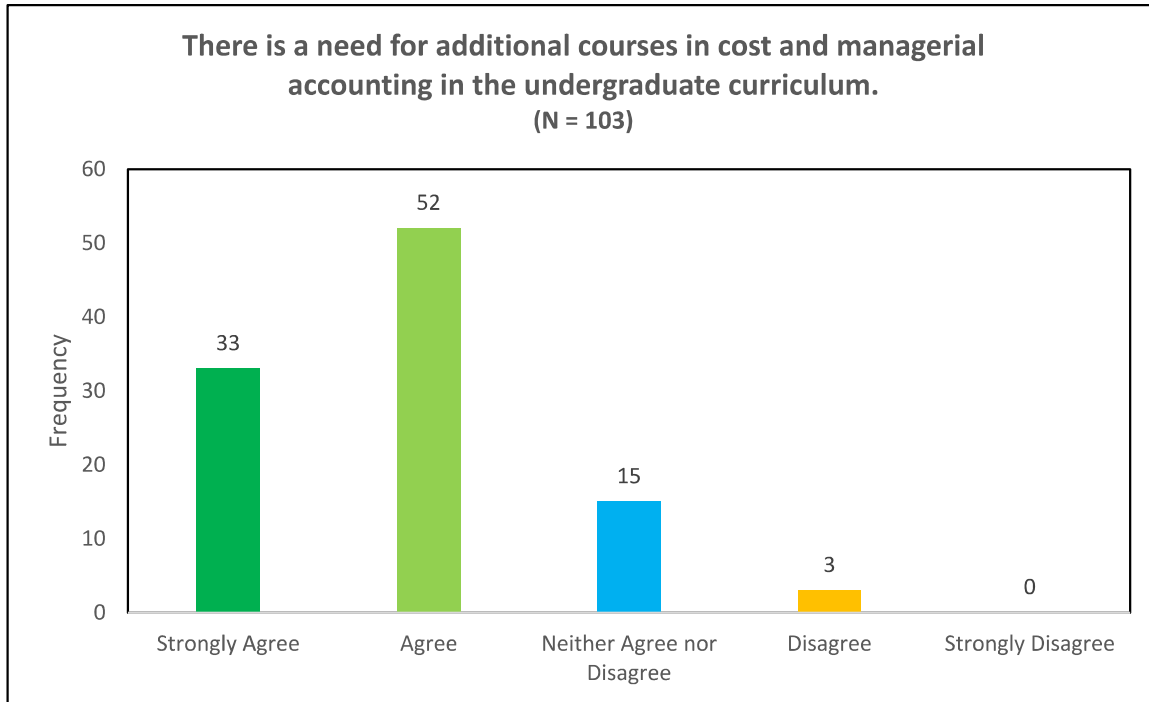
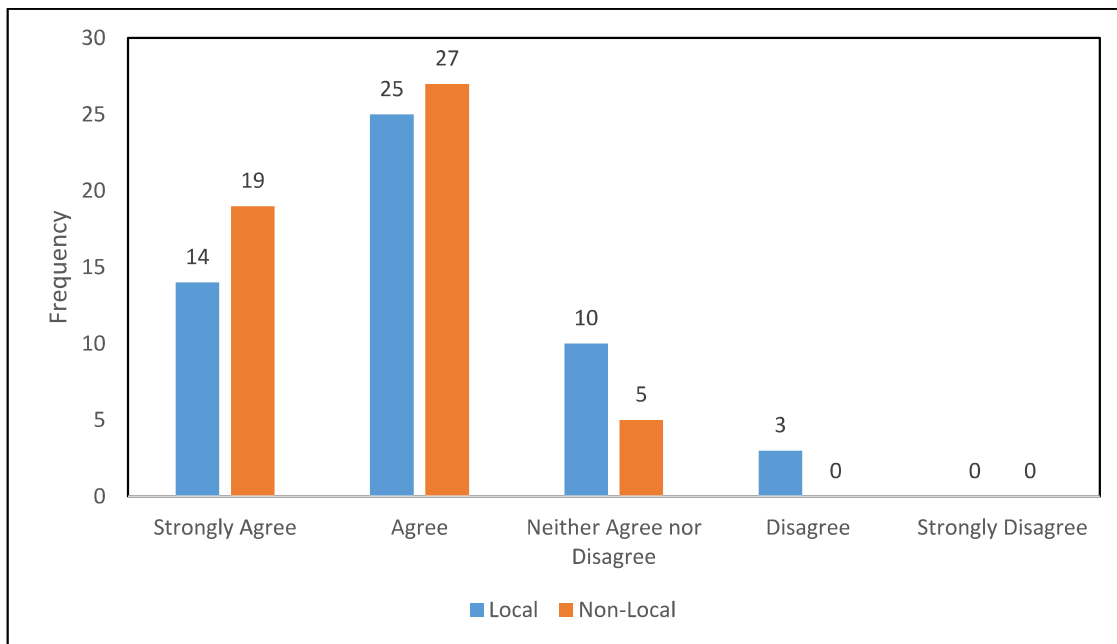


FIGURE 12a
NEED FOR ADDITIONAL COURSES IN COST AND MANAGERIAL ACCOUNTING—
LOCAL VS. NON-LOCAL FIRMS



Strength of Quantitative Skills

Overall, approximately 50% of the managers had no clear opinion regarding the quantitative skills of today's graduates (see Figure 13). However, when the responses from managers of local-based firms (N = 52) were compared with responses from managers of non-local firms (N = 51), approximately 35% of the non-local firms agreed or strongly agreed with the statement as opposed to 17% of the respondents from the local firms. Likewise, approximately 29% of the respondents from the local firms disagreed with the statement as compared to approximately 20% of the non-local respondents (see Figure 13a). The difference was statistically significant at 5% ($t = -2.01$). Additionally, Figure 13b indicates approximately 36% of the respondents with ten years or less of work experience (N = 33) agreed or strongly agreed that current graduates have superior quantitative skills, while only 20% of the respondents with more than ten years of work experience (N = 70) did so. By contrast, approximately 9% of the respondents with ten years or less of work experience disagreed with the statement, while approximately 31% of the respondents with more than ten years of experience disagreed. These results indicate opposing agreement depending on years of work experience. The difference in the results was statistically significant at 1% ($t = 2.67$).

There are two possible implications from these results. First, quantitative skills seem to have more importance for firms that have a more concentrated focus of operations. Second, newly graduated accountants may not be getting an adequate background in the skills necessary to make tactical decisions. These results are consistent with those from the question concerning the strength of decision-making skills. Additionally, they are consistent with previous research studies.

FIGURE 13
STRENGTH OF CURRENT GRADUATES' QUANTITATIVE SKILLS

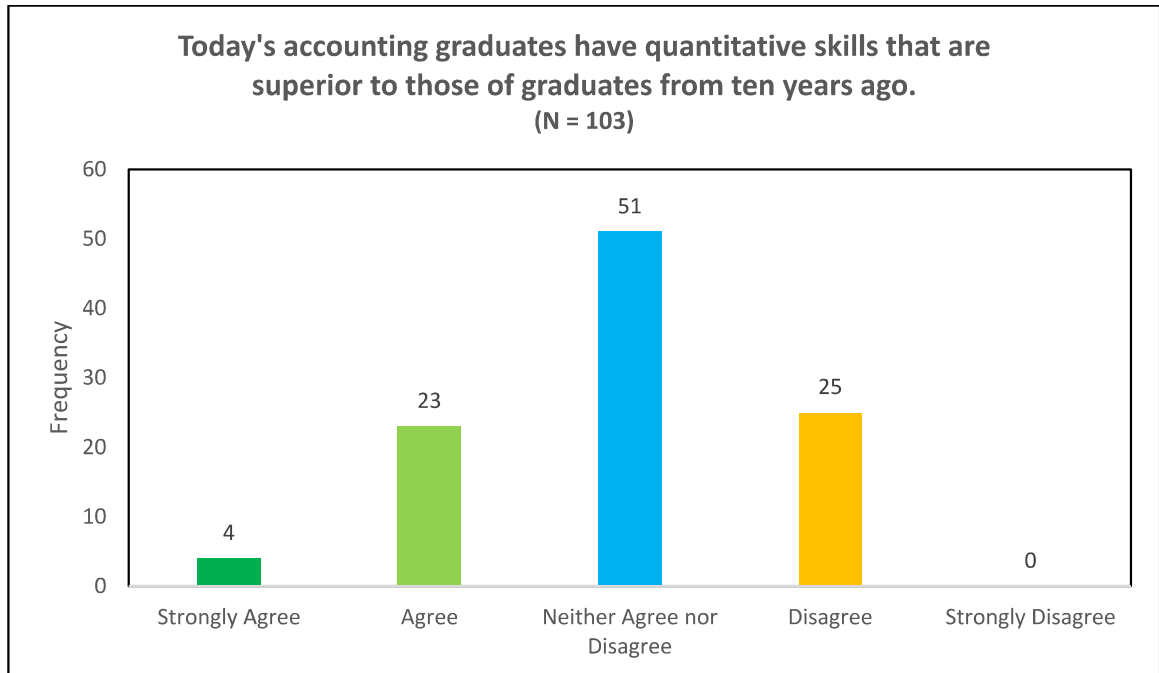


FIGURE 13a
STRENGTH OF CURRENT GRADUATES' QUANTITATIVE SKILLS—
LOCAL VS. NON-LOCAL FIRMS

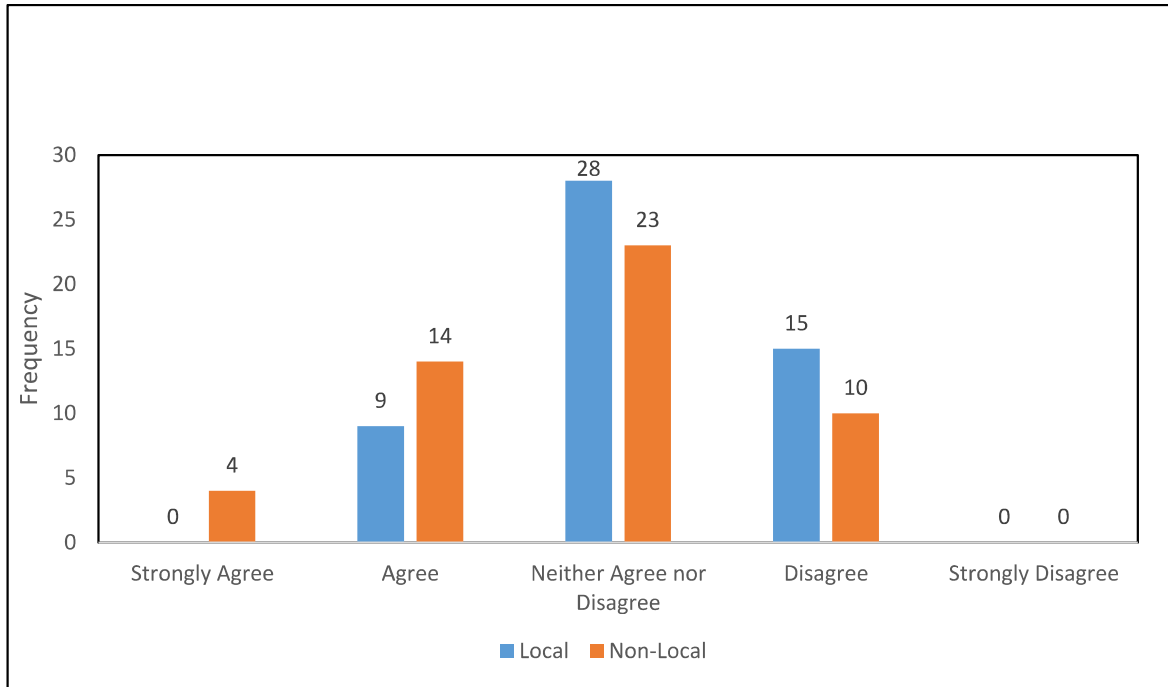
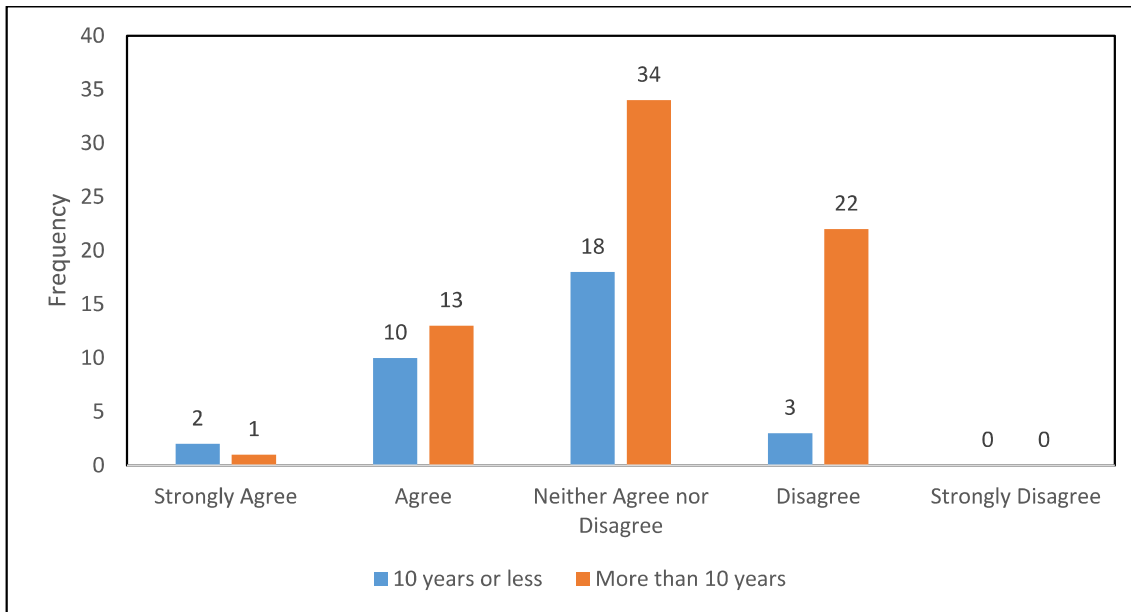


FIGURE 13b
STRENGTH OF CURRENT GRADUATES' QUANTITATIVE SKILLS—
YEARS OF EXPERIENCE



Strength of Work Ethic

As a whole, 51% of the respondents believe that today's accounting graduates do not have a superior work ethic compared to graduates from ten years ago, while approximately 42% expressed no clear opinion (see Figure 14). Approximately 58% of respondents in non-manufacturing firms (N = 66) disagreed or strongly disagreed with the statement versus 39% of the respondents in manufacturing firms (N = 36) (see Figure 14a). This difference was statistically significant at 10% ($t = 1.97$). Likewise, approximately 63% of the respondents with more than ten years of work experience (N = 70) disagreed or strongly disagreed with this statement versus 28% of the respondents with ten years or less of experience (N = 32) (see Figure 14b). Again, this difference was statistically significant at 1% ($t = 3.47$). Finally, approximately 59% of the respondents with ten years or less of experience expressed no clear opinion. The increased disagreement expressed by respondents from non-manufacturing firms and those with more work experience has two possible implications. First, it might mean that accounting graduates are not prepared for the specialized work environment of non-manufacturing firms. Second, it might also reflect an overall shift in the definition of what an effective work ethic represents to more recent accounting graduates.

FIGURE 14
STRENGTH OF CURRENT GRADUATES' WORK ETHIC

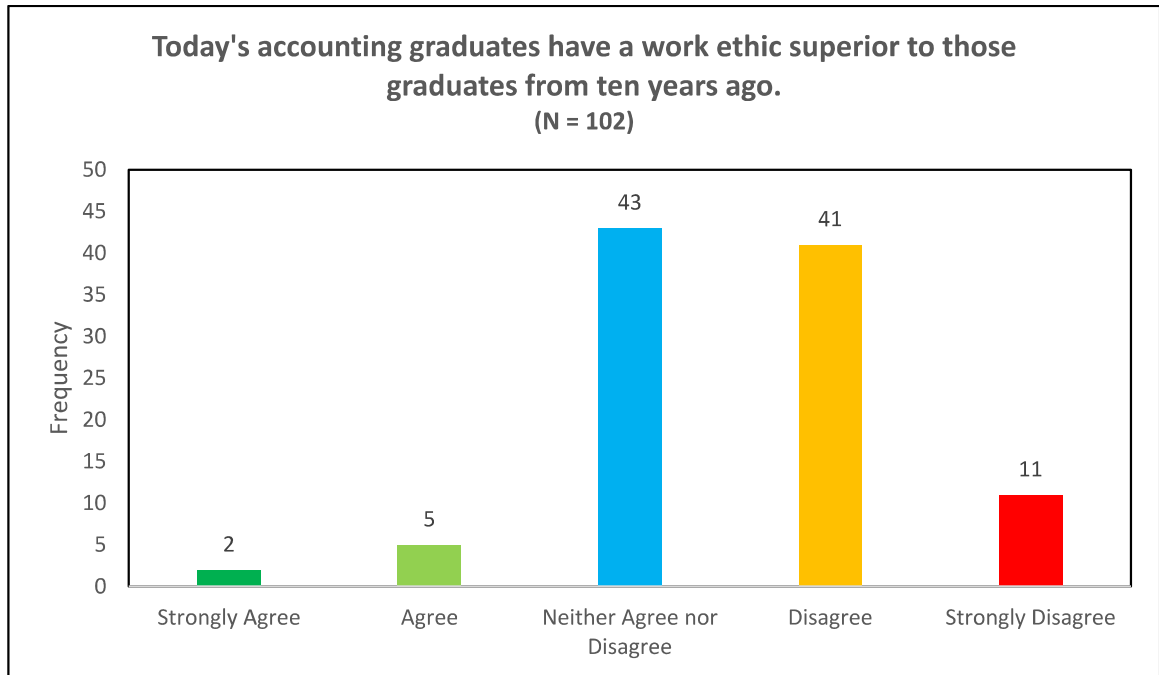


FIGURE 14a
STRENGTH OF CURRENT GRADUATES' WORK ETHIC—
MANUFACTURING VS. NON-MANUFACTURING FIRMS

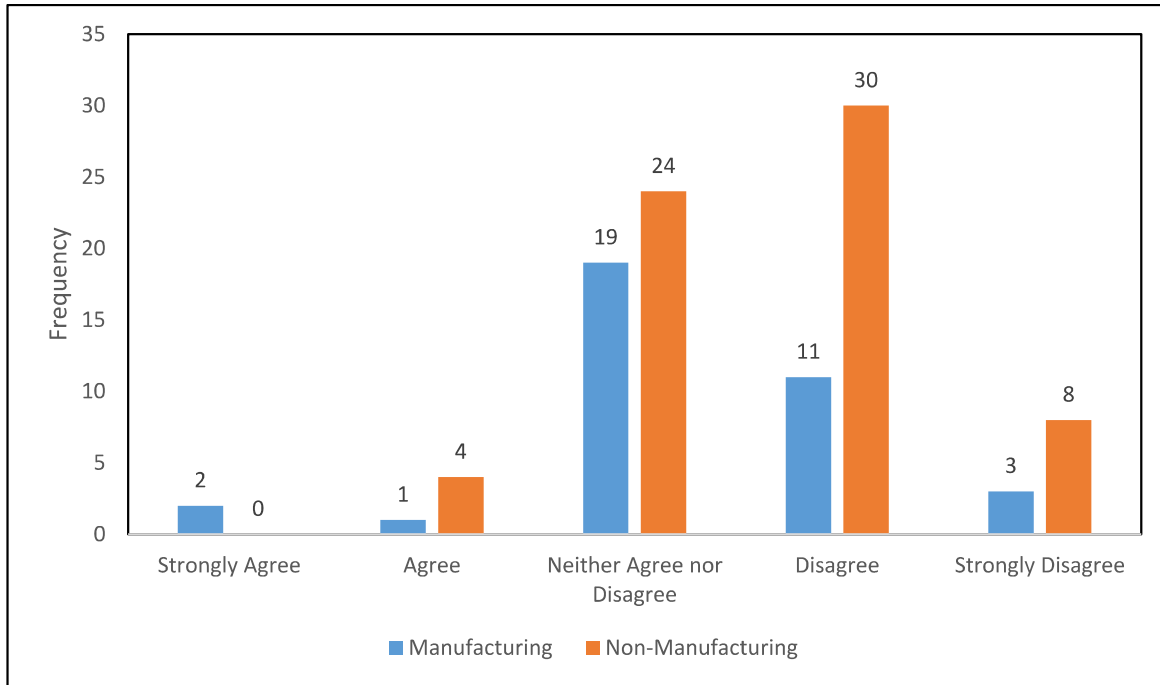
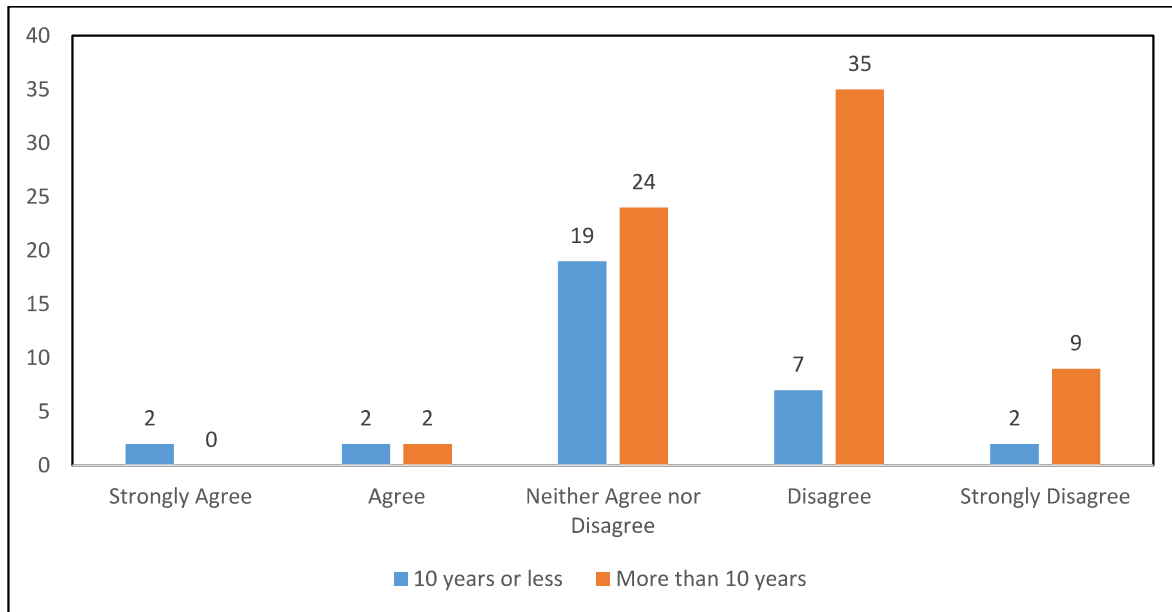


FIGURE 14b
STRENGTH OF CURRENT GRADUATES' WORK ETHIC—
YEARS OF WORK EXPERIENCE



Need for Additional Training and Supervision

Overall, approximately 45% of the respondents agreed or strongly agreed that today's accounting graduates require more training and supervision than those from ten years ago, and another 45%

expressed no clear opinion (see Figure 15). However, Figure 15a shows that when the responses were partitioned by manufacturing (N = 36) and non-manufacturing organizations (N = 66), approximately 55% of the respondents from non-manufacturing organizations agreed or strongly agreed with the statement as opposed to 28% of the respondents from manufacturing organizations. This implies that there may be a need for a more specialized skill set in non-manufacturing organizations. This difference was statistically significant at the 5% level ($t = -2.08$).

Likewise, approximately 53% of the respondents with more than ten years of experience (N = 70) agreed or strongly agreed that more training and supervision is needed versus 28% of the respondents with ten years or less of experience (N = 32); this difference was statistically significant at the 5% level ($t = -2.23$). Also, approximately 56% of the respondents with ten years or less of experience expressed no clear opinion on the statement; this compares with approximately 40% of the respondents with more than ten years of experience (see Figure 15b). These results are consistent with previous research as well as with the responses to other research questions in this study. A potential implication of the results is that there is a pressing need for a clearer definition of the roles of the cost/managerial accountant.

FIGURE 15
COST MANAGERS' PERCEPTIONS OF TRAINING AND SUPERVISION

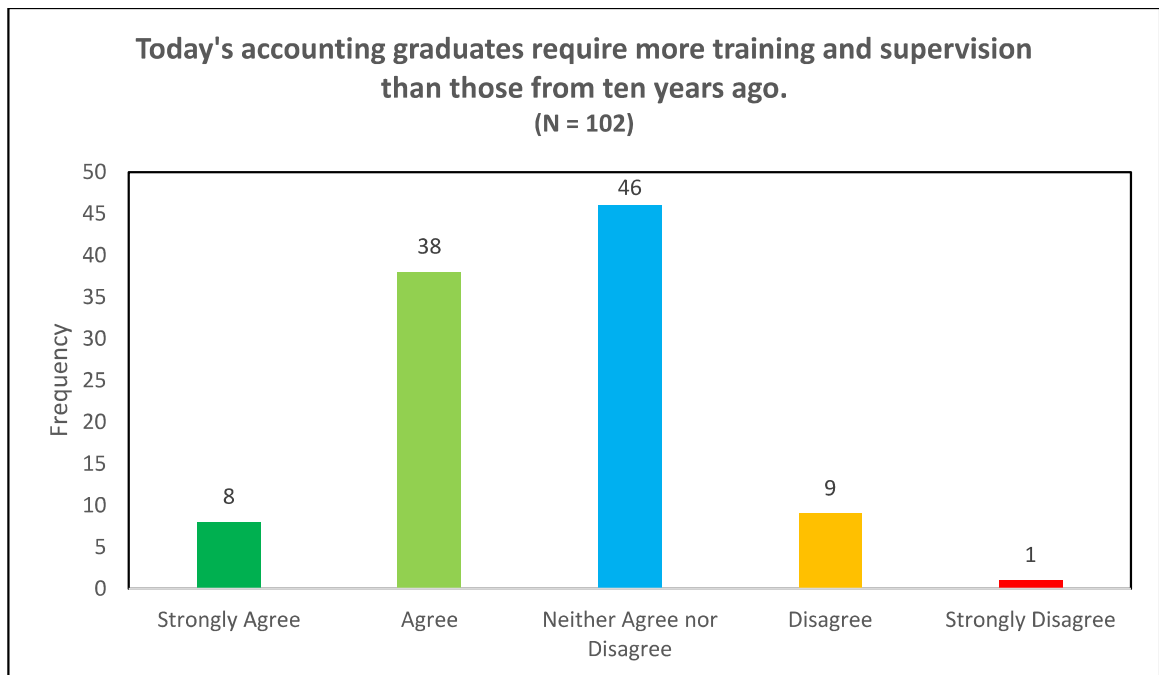


FIGURE 15a
COST MANAGERS' PERCEPTIONS OF TRAINING AND SUPERVISION—
MANUFACTURING VS. NON-MANUFACTURING FIRMS

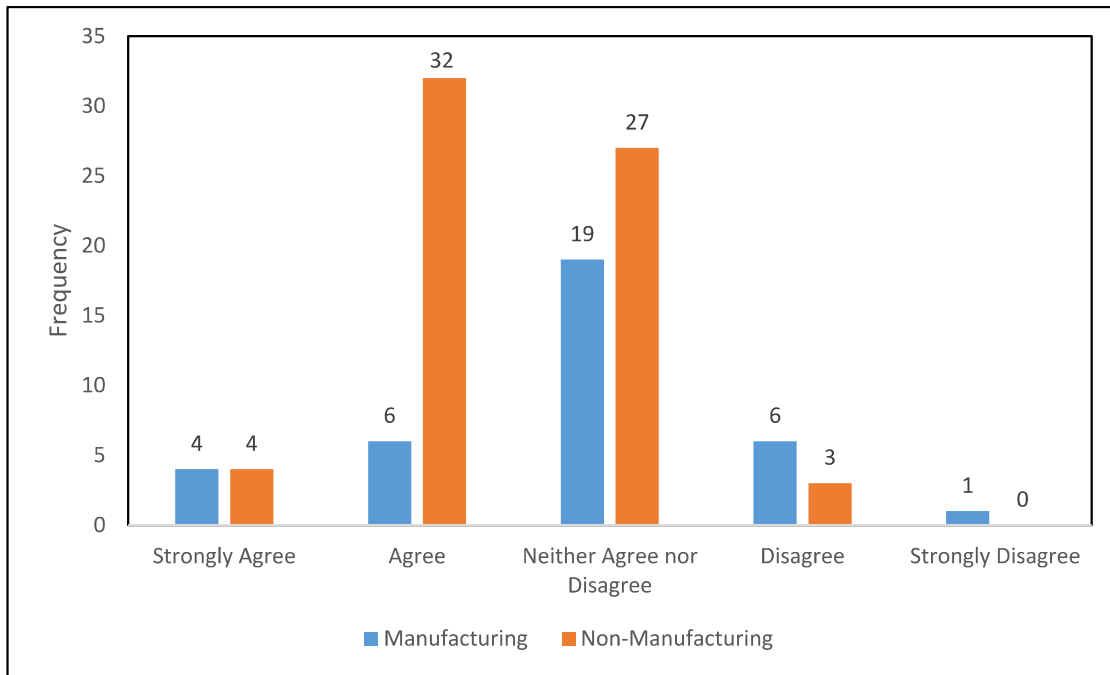
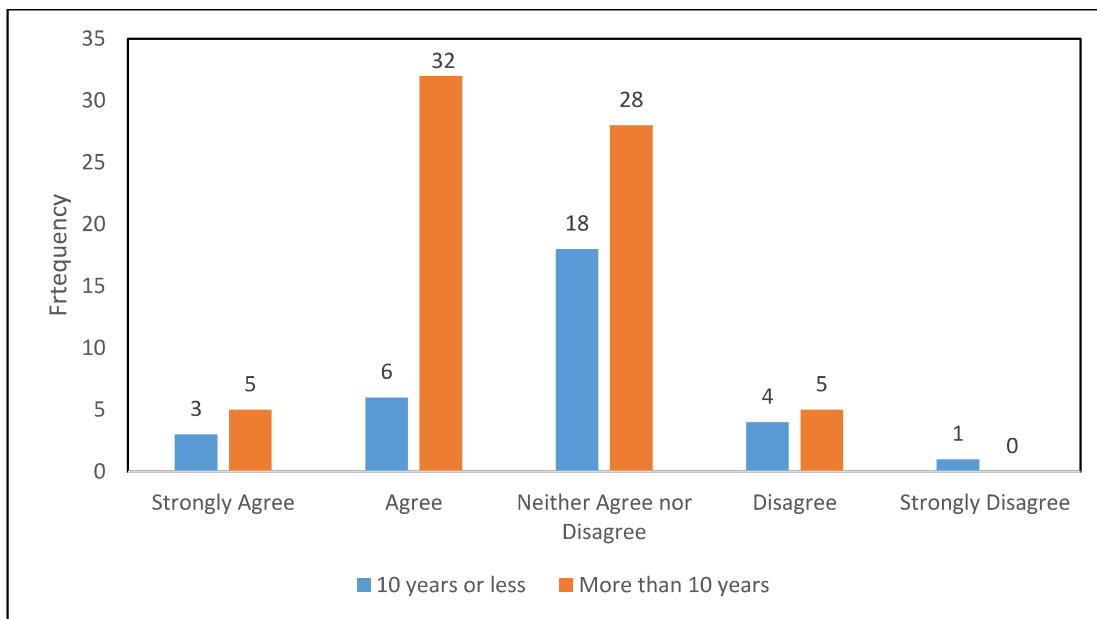


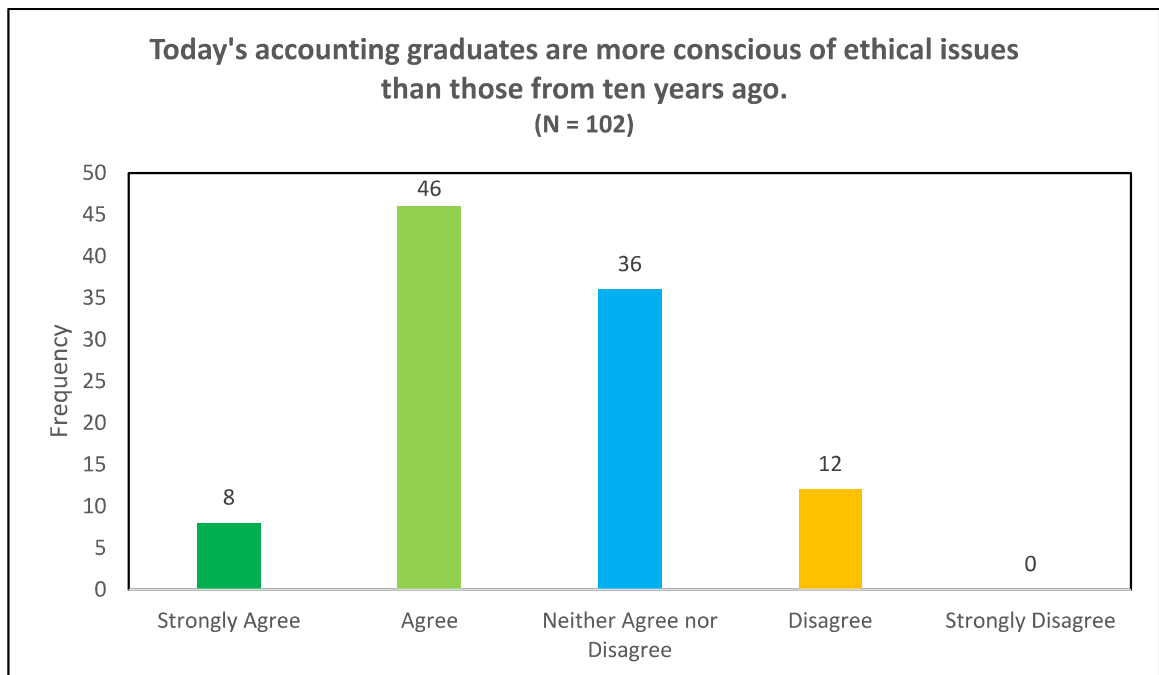
FIGURE 15b
COST MANAGERS' PERCEPTIONS OF TRAINING AND SUPERVISION—
YEARS OF EXPERIENCE



Consciousness Toward Ethical Issues

Figure 16 indicates that approximately 53% of the respondents agreed or strongly agreed with the statement that today's graduates are more conscious of ethical issues. There were no statistically significant differences between groups based on location, industry, years of experience, and number of accounting personnel. This implies one of two things. First, there may be some areas where recent graduates need to be more aware of ethical issues relating to managerial and cost accounting. Given that most ethics training focuses on malfeasance in financial reporting, there may be a need for addressing potential ethical issues in such areas as cost allocation, budgeting, and vendor selection. The other possibility is that ethics-related issues may not elicit the same level of concern in managerial and cost accounting that they do in the external reporting arena, when, in fact, there are many opportunities for ethical lapses in non-manufacturing environments.

FIGURE 16
COST MANAGERS' PERCEPTIONS OF ETHICAL ISSUES



SIGNIFICANCE OF RESULTS

As a whole, the survey results support a need for improvement in the educational process for cost and managerial accountants. The perceived need for increased emphasis on decision-making skills and for additional courses in cost and managerial accounting are the areas for which the respondents expressed the strongest opinions. There is also an apparent need for increased supervision of entry-level accountants. These results are consistent with results of previous research.

The free response questions also provided insight into the attitudes of the managers. The skills gap in cost and managerial accounting techniques was mentioned by several respondents as a serious deficiency. One comment was that colleges have "abandoned the need for cost accounting," and this has resulted in some managerial accountants who have no understanding of inventory valuation and some external auditors who are also lacking in that area. Another respondent stated that new graduates are "intelligent, enthusiastic, and hard-working" but are also lacking in cost accounting knowledge for internal decisions. Other areas of concern mentioned included the overemphasis of financial accounting theory and the push

toward careers in public accounting at the expense of minimizing careers in other areas such as cost and managerial accounting.

HOW CAN THE EXPECTATIONS GAP BE NARROWED?—AN INDUSTRY PERSPECTIVE

The body of knowledge that is addressed in managerial and cost accounting research is essential to the education of an entry-level accountant regardless of the direction of his or her career. For an accountant in a public setting, this knowledge helps one to understand the processes of cost measurement and management within a client company and can help the auditors detect irregularities in production and reporting of manufacturing and service costs. For an accountant who pursues a career in industry, he or she will have to be trained in cost measurement and decision-making strategies for that specific industry. Without a solid foundation in these areas, the learning curve may be much steeper, and employers may face higher training costs and potentially increased employee turnover.

The consensus seems to be that managerial and cost accounting need additional coverage and that decision-making techniques need to be emphasized to a greater extent. However, accomplishing this effectively and efficiently will require a joint effort between accounting and other business-related disciplines. Previous research has addressed the need for additional courses that are interdisciplinary and oriented toward application of principles to actual practice. Another possible suggestion is to make internships mandatory and have them focused upon some of the fundamental decisions that entry-level managerial accountants will face and the problem-solving tools that they may use. This is a model similar to that used in technical school programs; it is feasible that it could also be implemented to some extent in a higher-level academic setting.

There is a need for increased communication between all groups (employers, faculty, and graduates) involved in the education and careers of entry-level accountants to achieve meaningful progress toward narrowing the gap between education and the profession. These communication channels should lead to creating long-range plans for transforming accounting education from a primarily theoretical approach to one that allows students to develop solid decision-making skills while they are still in school. Such channels may be difficult to develop and maintain on a long-range basis because contact between employers and faculty, as well as between accounting graduates and faculty, is often limited to such activities as advisory board meetings. There is a potential need to set up company-based focus groups composed of employers, accounting faculty, and employees that could evaluate the effectiveness of employee skills and suggest ways in which that accounting curricula could be enhanced to maximize skill development. Future research should focus on ways in which the communication channels could be improved.

The limited response rate may limit the ability to generalize the study results. However, given that the results are consistent with previous research findings, the current study does support the need for improvement in managerial and cost accounting education. We could gather more insight on managerial attitudes through in-depth interviews with accounting managers that would help chart a course for future improvement.

This article has addressed the perceptions of cost accounting managers toward the education process and the extent to which entry-level accountants are prepared to enter the workforce. A future article will address a theoretical framework for accounting education as well as the extent of managerial and cost accounting coverage on professional certification examinations. Finally, it will address the attitudes of managerial and cost accounting faculty toward accounting education as well as the extent to which managerial and cost accounting topics are addressed in university accounting curricula.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the assistance of Dr. Kip Krumwiede and the IMA Research Foundation for their invaluable contribution to this project.

REFERENCES

- Bedford, N., Bartholomew, E. E., Bowsher, C. A., Brown, A. L., Davidson, S., Horngren, C. T., . . . & Wheeler, J. T. (1986). Future accounting education: Preparing for the expanding profession. *Issues in Accounting Education*, 1(1), 168-195.
- Clinton, B. D., & White L. R. (2012). The role of the management accountant: 2003-2012. *Management Accounting Quarterly*, 14(1), 40-74.
- Lawson, R. A., Blocher, E. J., Brewer, P. C., Cokins, G., Sorensen, J. E., Stout, D. E., . . . & Wouters, M. J. F. (2014). Focusing accounting curricula on students' long-run careers: Recommendations for an integrated competency-based framework for accounting education. *Issues in Accounting Education*, 29(2), 295-317.
- Pathways Commission. (2012). *Charting a national strategy for the next generation of accountants*. Sarasota, FL: American Accounting Association.
- Siegel, G., & Sorensen, J. E. (1994a). *What corporate America wants in entry-level accountants: A joint research project of the institute of management accountants and the financial executives institute*. Montvale, NJ: IMA.
- Siegel, G., & Sorensen, J. E. (1994b). What corporate America wants in entry-level accountants. *Management Accounting*, 76(3), 26-31.
- Siegel, G., Sorensen, J. E., Klammer, T., & Richtermeyer, S. B. (2010a). The ongoing preparation gap in accounting education: A call to action. *Management Accounting Quarterly*, 11(3), 41-52.
- Siegel, G., Sorensen, J. E., Klammer, T., & Richtermeyer, S. B. (2010b). The ongoing preparation gap in management accounting education: A guide for change. *Management Accounting Quarterly*, 11(4), 29-39.
- Trueblood, R.M. (1963). Education for a changing profession. *Journal of Accounting Research*, 1(1), 86-94.