TRADITIONAL VS. CONTEMPORARY MANAGERIAL/COST ACCOUNTING TECHNIQUES

DIFFERENCES BETWEEN OPINIONS OF ACADEMICS AND PRACTITIONERS[1]

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Abstract

In this empirical study attempts were made to determine whether or not there was a significant difference between the opinions of

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academics and practitioners regarding the usefulness of traditional vs. contemporary managerial/cost accounting techniques. It was also tried to determine the degree of influences of various factors such as age, education, position, size of company, number of products, type of industry and several others on the opinion of 63 participants, 34 academics and 29 practitioners, regarding the above issue. Another attempt that was made in this study was to acquire some information about the opinion of academics and practitioners regarding the degree of importance of eleven skills and ten characteristics for managerial accounting graduates.

The outcomes of this study revealed that out of 38 managerial/cost accounting techniques presented in this research, 16 were rated high by all participants. This ranking was based on the statistical Means calculated for the total of 63 participants in this study. Out of these 16 techniques, 12 were selected by both groups of academics and practitioners. There were, however, seven techniques that ranked very low and viewed the least important by both participants. The outcomes of the research, however, indicated that a few demographic factors had some influence on the decisions and rating of the participants.

The outcomes of this study also revealed that from the 11 preferred skills for managerial/cost accounting graduates, the "thinking skill" was rated top by both the academics and practitioners. It was, then, followed by "listing", "quantitative", "problem solving" and "writing" skills. The three skills that were ranked as less important by both groups were, "reading", "speaking" and "microcomputer" skills. The least important skills by both groups were "management", "social", and "marketing" skills.

In regard to the important characteristics for accounting graduates, the outcomes of this study indicated that both practitioners and academics selected "common sense", "motivation", "ethical awareness", and "intellectual capacity" as the top four important characteristics.In contrast, "professional appearance", "assertiveness", and "pleasant personality" were the three characteristics selected by both groups as less important. Based on the above observations, the main conclusion reached by this research was that no significant differences existed between the opinions of practitioners and

academics regarding the list of the most important managerial/cost accounting techniques in this study.

INTRODUCTION

Since the mid 1980s, the start of new movements in managerial/cost accounting, a gap has been emerged between the opinions of academics and practitioners regarding the degree of usefulness of managerial/cost accounting techniques. According to Drury (n.d.), practitioners have preferred to utilize relatively simple managerial accounting techniques which are mainly based on the "cost and benefit" analysis. Drury, however, believed that rejection of some managerial/cost accounting techniques by practitioners based on the above criterion alone may seem rational, but not complete.

Chenhall and Langfield-Smith (1999) noted in their study that the traditional management/cost accounting techniques are still widely used by many organizations in spite of the fact that in recent years there has been considerable interest in development of new management accounting systems. However, there are authors who believe that traditional managerial/cost accounting techniques are obsolete and not functional any more for managerial decision-making purposes. For instance, Kharbanda (1992) suggested that many of the traditional management/cost accounting practices were obsolete. According to this author, most of the traditional management/cost accounting information was usually too late, too aggregated, and too distorted to be relevant for decision-making purposes. Furthermore, the conventional computerized cost accounting systems seemed to generate highly distorted, dysfunctional, and poor information about individual product profitability, mostly due to poor cost allocation techniques. Johnson and Kaplan, in one of their studies (1987) concluded that current cost accounting systems attempt to satisfy three major goals; allocating a certain period cost for the preparation of financial statements, providing process control information to cost center managers, and providing product cost estimates to managers and decision makers. These authors believed that the traditional managerial/cost accounting system could only accomplish the first goal properly. In a recent study by Hawker, Fowler and Tan (2004), a significant gap was observed between the opinions of practitioners and academics in New Zealand regarding the degree of usefulness of different managerial/ cost accounting techniques.

Based on the above and several other studies, there appears to be a gap between academic and practitioner perceptions of utility of managerial/cost accounting concepts and techniques. The main objectives of this research were to determine (a) whether a real gap existed between academics' and practitioners' perceptions in the USA regarding the utility of traditional and contemporary managerial/cost accounting concepts and techniques and (b) if such a gap existed, should the practitioner follow up the academics' perception or, on the contrary, should the academics modify their theoretical thinking according to practitioners' practical experiences. Resolving these questions should provide information to institutions of higher-education for developing more effective curricula in the field of managerial/cost accounting.

Research Methodology:

In order to gather the date for this research, questionnaires were mailed to academics and practitioners. These questionnaires surveyed participants' opinions about the usefulness of managerial/cost accounting techniques as well as skills and characteristics required for newly graduated management accountants.

Research Questions:

1-Are the contemporary (modern) techniques and developments in the management/cost accounting more important and useful than the old and traditional ones?

2-Is there a significant gap between the opinions of educators and practitioners regarding the importance and utility of various management/cost accounting techniques and topics? (Theory vs. practice)

3-If there is a significant gap between theory and practice, how could this gap be narrowed and possibly eliminated?

Hypotheses:

H 1: There is no statistically significant gap between the opinions of practitioners and educators regarding the usefulness of various managerial/ cost accounting techniques.

H2:There is no statistically significant difference between the usefulness of traditional and contemporary managerial/cost accounting techniques from the view of practitioners and educators.

H3: There is no statistically significant influence of other factors such as respondents' age, education, size of company, etc. on the degree of usefulness of traditional vs. contemporary managerial/cost techniques.

H4:Regarding the skills required for Management Accounting graduates, there is no statistically significant gap between the opinions of practitioners and educators.

H5:Regarding the characteristics required for Management Accounting graduates, there is no statistically significant gap between the opinions of practitioners and educators.

Sample Size:

The sample consisted of 150 accounting professors who taught managerial/cost accounting courses in the USA. The practitioners were selected from managers and controllers of companies operating in the USA. The sample size for this group originally represented almost 10% of the total companies listed in the New York Stock Exchange (NYSE). Due to the lack of responses from the selected companies listed in the NYSE, 100 additional managers and controllers from the membership list of the Institutes of Management Accounting were added to the practitioners' sample. The mailing of 150 questionnaires to academics resulted in 34 usable responses, giving a response rate of 22.7%, while 300 questionnaires mailed to practitioners resulted in 29 usable responses, giving a response rate of 10%.

Survey Questionnaire:

The academics' questionnaire included a series of questions about demographic data, including age, teaching experience, current academic title, type and level of courses taught. The practitioners' questionnaire was similar, but in addition to the demographic questions such as background, age, education, number of years of experience in management accounting, and current job title, it included questions about their companies. These questions focused on

total dollar sales, number of products or services, and the industry classification of their companies. Both groups were asked a series of other questions including the following:

- Level of their degree of familiarity with different managerial/cost accounting topics
- Level of their use of the various topics
- Level of importance of each topics
- Various skills and characteristic (See Appendixes A and B).

To facilitate the comparison of findings of this research with those of a similar research done in New Zeland by Hawker, Fowler and Tan (2004), every attempt was made to duplicate the research methodology that was used by those authors. The questionnaire used in this study was adapted from Hawker et al. with some modifications. One of the modifications was that the practitioners were provided with a space to specify their degree of familiarity with a given managerial/cost accounting technique when ranking the level of usefulness of that technique. The reason for this modification was to determine the degree of reliability of the responses. The reliability of responses from those who have inadequate familiarity with the techniques could, indeed, be highly questionable. The other modification was the number of managerial/cost accounting techniques included in the questioner. The Hawker, Fowler and Tan questioner included only 28 techniques, while in this research questioner 10 more techniques were added.

DATA COLLECTION AND DATA ANALYSIS

Table (1) demonstrates the characteristics of 34 academic respondents for this study. These characteristics are sub-classified in terms of age, practical experience, teaching experience, current job title, course level and type of course taught. For some of the sub-classifications, one of the respondents failed to provide answers to a given question. As a result, the total number of responses dropped from 34 to 33.

As can be seen in Table (1), 29.4% of the participants were below 50 years of age, 55.9 % were between 50 and 59 and 14.7% were over 60 years. Stated differently, about 70% of the educators participated in this study were over 50 years of age.

In regard to practical experience in Managerial/Cost Accounting, 90.9 % of participants had less than 5 years of experience (30 out of 33). Interestingly enough, in this category, **12 out of 30 reported zero years of practical experience.**

The average practical experience for all 33 respondents was 3.5 years, while the average teaching experience was 16.5 years. This comparison indicates that educators who participated in this study had been involved mostly in teaching and rarely in practice.

As far as titles were concerned, 23.5% of the academia participants were associate professors and 52.9% full professors. Furthermore, 42.4% of them taught introductory accounting courses, 33.3% intermediate, and 24.2% advanced level.

Table (2) shows the demography of the 29 practitioners who participated in this study. These practitioners are grouped according to their age, education, experience, sales and number of products of their companies, and their industry.

Out of 29 practitioners participating in this study, 55.1% were below 50 years, 24.1% were between 50 and 59 years and 20.8% were older than 60 years. With regard to their education, 58.6% had bachelor degrees and the remaining 41.4% had master's degrees. In addition, 17 of 29 participants had professional certificates including 10 CAP, 3 CMA and 4 other.

With regard to their accounting and managerial experience, 38.1% of 29 practitioners had more than 25 years of experience, 4.8% had between 21-25 years and 19% between 16-20 years, and 38.1% less than 15 years of experience.

The sales of the companies that the 29 participants worked for demonstrated a broad distribution. These companies represented basically all types of industries including personal and other service industries which ranked at the top with 24.1% of the total companies, followed by manufacturing with 17.2%, property & business services with 13.8%, and finance & insurance with 10.3%. The number of products these companies produced was reported as: 53.7% produced 1-15 products, 35.7% produced more than 75 products, and only 10.7%, which fell in the middle rank, produced 16-30 products. In other words, it was reported that a little over 1/3 of the companies produced a significant number of products, namely more than 75 types.

Data Analysis:

The ranking, in regard to their importance (Mean), for the 38 managerial/cost accounting techniques by the two groups of participants is reported in Table 3. For cross comparison purposes, two additional columns were included in table 3, called P/R (Practitioner Ranking) and A/R (Academic Ranking). For instance, the academics ranked the "performance evaluation" technique number 1, while the practitioners ranked it number 7.

From the first 10 top techniques selected by both groups reported in table 3, 6 techniques were the same, indicating that both academics and practitioners considered them as the top ten important techniques in the managerial/cost accounting. These techniques are reported below:

1. Ethical Issues (reported in column 7 of A/R and column 2 of P/R)
2. Variance Analysis (reported in column 8 of A/R and column 3 of P/R)
3. Operating Budgeting (reported in column 5 of A/R and column 4 of P/R)
4. Product Costing (reported in column 3 of A/R and column 6 of P/R)
5. Standard Costing (reported in column 10 of A/R and column 8 of P/R)
6. Performance Evaluation (reported in column 1 of A/R and column 7 of P/R)

Table 4, shows the "mean" and "standard deviation" of each 38 techniques by each of the participating groups. The column called "Total" in that table reflects the "mean" and "standard deviation" of the responses of both groups regarding the importance of each 38 managerial/cost techniques. According to this table, the top ten techniques selected by both groups of participant combined were as follows:

Rank	Technique	Mean
1	Performance evaluation	4.21
2	Product costing	4.21
3	Operational budgeting	4.14
4	Ethical Issues	4.08
5	Variance analysis	4.03
6	Cash flow management	3.90
7	Cost-volume profit	3.87
8	Capital budgeting	3.85
9	Activity Based Costing	3.82

The 38 Managerial/Cost Accounting techniques further were grouped into ***traditional*** and ***contemporary*** (modern) techniques. As reported in Table 5, two out of ten first techniques selected by the academics were contemporary, while only one out of ten first techniques selected by the practitioners were contemporary. In regard to activity-based techniques, this study indicated that the academics ranked ABC, ABM and ABB at 4, 6 and 29 respectively. Conversely, the practitioners ranked these techniques at 12, 17 and 11 respectively.

A Comparative Analysis:

The results of this study were compared with those of Hawkes et al. study. This comparison showed the similarities in practitioners' perceptions in both studies and the differences in academics' perceptions. For the academics, only 5 of the first 10 top techniques in both studies were ranked somewhat similarly. These five techniques were: Performance evaluation, Product costing, Activity-based costing, Operating budget, and Activity-based management. For more information, see Table 6.

Skills of the Students:

In regard to the skills requirement by managerial accounting students, this study showed that both academics and practitioners listed "Thinking" as the top skill. However, Academics placed the Problem solving and Quantitative skills in second and third places, while practitioners put Listening and Writing skills in second and third place. Both group agreed that management, social and marketing skills were less important skills required and ranked 9^{th} and 11^{th} in their lists. Tables 7A and 7B show the details of the responses.

Comparison of the results of past studies with the result of this study indicated rather a similar conclusion. In both the Hawkes' et al. (2003) and Novin's (1990) studies, the "Thinking" was listed as the top required skill for management accountants followed by "problem solving" and "Listening" skills. Table 8 shows the comparison of the top three in different studies:

Characteristics of the Students:

The characteristics of managerial accounting graduate preferred by the academics and practitioners in this study, reported separately and combined, are presented in Tables 9A and 9B. As reported in Table 9A, the academics rated "Ethical awareness" as number one but practitioners rated "Common sense" as number one characteristic.

Stated differently, "**Common sense**" and '**Ethical awareness**" characteristics were included in the **top three choices** by both academics and practitioners, though with different ranking. According to Table 9B, **Common sense**" characteristic was ranked number one by all 63 participants combined.

Comparison of the results of this study with those of the past studies indicated some similarity. Practitioners in Novin's (1990) study also rated "Common sense" at the top, followed by "Ethical awareness" and "Motivation". Hawkes' et al. (2003) study showed "Common sense", "Motivation" and "Professional attitude" as the top three Characteristics (Table 10).

One of the major finding in this study, compared to Hawkes et al. was the fact that "Ethical awareness", which was ranked number one by academics and number 3 by practitioners in this study, was rated low in Hawkes' study. In that study, it was ranked 5th and 8th by academics and practitioners respectively.

Statistical Results of Testing the Hypotheses:

Since the size of samples in this study was not lager enough, 34 academics and 29 practitioners with a total of 63 participants, the **t-test** was recommended only for the total variables. This recommendation was based on several reasons. First, running multiple concurrent t-test would inflate the Type I error rate, and second, we may need more subjects to include more variables in the analyses. As a rule of thumb, at lease 15 subjects is needed for each variable, therefore, due to the concern on the ***lack of power*** we decided to do the analyses on the total scores. Furthermore, for testing of hypothesis H0 3, the **correlation analysis rather than the t-test** was deemed more appropriate. In short, the **t-test** was used for testing hypotheses H0 1, H0 2, H0 4, H0 5 and the **correlation analysis** was used for hypothesis H0 3.

As reported in Table 11, at 95% confidence level, the H0 1, H0 2, H0 3, and H0 5 were accepted. At the above level of confidence, however, the H0 4 rejected. The following results were achieved after applying a **correlation analysis** to hypothesis H3.

For Practitioners:

1) *Age* had influence on the selection of *Traditional* managerial/cost accounting techniques.

2) *Education* had influence on the selection of *Contemporary* managerial/cost accounting techniques.

3) The other factors such as *Experience, Size of company, Type of industry, Number of products* showed no significant influence on the selection of *traditional* and *contemporary* managerial/cost accounting techniques.

For Academics:

1) *Course level taught* had influence on the selection of *traditional* managerial/cost accounting techniques.

2) *Current job title* had influence on the selection of *contemporary* managerial/cost accounting techniques.

3) The other factors such as *Age, Practical experience, Teaching experience and Type of course* showed no significant influence on the selection of *traditional* and *contemporary* managerial/cost accounting techniques.

SUMMARY AND CONCLUSIONS:

This study attempted to determine whether or not there was a significant difference between the opinions of academics and practitioners regarding the usefulness of traditional vs. contemporary managerial/cost accounting techniques. It also tried to determine the degree of influences of various factors such as age, education, position, size of company, number of products, type of industry and several others on the opinion of the academics and practitioners regarding the above issue. Another attempt that was made in this study was to acquire some information about the opinion of academics and practitioners regarding the degree of importance of eleven skills and ten characteristics for managerial accounting graduates. The pursuing conclusions are result of opinions of 34 academics and 29 practitioners participated in this study.

Conclusions

The outcomes of this study (reported before in Table 3) revealed that out of 38 managerial/cost accounting techniques presented in this research, 16 were rated high by all participants. This ranking was based on the statistical Means calculated for the *total* of 63 participants in this study. Out of these 16 techniques, 12 were selected by *both* groups of academics and practitioners. These 12 techniques included Performance Evaluation (1 & 7), Cost Volume

Profit (2&15), Product Costing (3&6), Activity-Based Costing (4&12), Operating Budget (5&4), Ethical Issues (7&2), Variance Analysis (8&3), Flexible Budgeting (9&14), Standard Costing (10&8), Job Costing (11&8), Capital Budgeting (12&8), and Customer Profitability Analysis (15&10). The remaining 4 techniques that were not selected by *both groups* included Activity-Based Management (6&18), Responsibility Accounting (14&20), Strategic Management Accounting (16&17), and Cash Flow Management (17&1). Even though the latter 4 techniques were not included in the top 12, their ranks fell rather in the middle of the spectrum of 1 to 38. **The first and second numbers in the prentices represent the ranking assigned by the academics and practitioners respectively for a given technique.**

A close look at the highly rated 16 techniques by the both groups of participants indicates that 9 of the techniques were traditional and 7 were contemporary. The traditional techniques included, Cost-Volume Profit Analysis, Product Costing, Operating Budget, Ethical Issues, Variance Analysis, Standard Costing, Job Costing, Capital Budgeting, and Cash Flow Management. The contemporary techniques consisted of Performance Evaluation, ABC, ABM, Flexible Budgeting, Responsibility Accounting, Customer Profitability, and Strategic Management Accounting.

In contrast to the above 16 techniques, seven techniques were among those which ranked *very low* and viewed the *least important* by both participants. These techniques included Agency Theory (35&38), Linear Programming (38&36), Environmental Cost Management (36&33), Life Cycle Cost Management (32&31), Regression Analysis (30&30), Reciprocal Method of Cost Allocation (37&37), and Joint/by Product Costing (34&28).

The outcomes of the research, however, indicated that a few demographic factors had some influence on the decisions and rating of the participants. For practitioners, the factor of Age had influence on the selection of traditional and the factor of Education had influence on the selection of contemporary managerial/cost accounting techniques. For academics, the Course level taught had influence on the selection of traditional and the Current job title had influence on the selection of contemporary managerial/cost accounting techniques.

selection of techniques. These results were different from those of previous studies, where size of the organization, number of products and type of industry had not effect on the degree of usefulness of traditional and contemporary managerial/cost accounting techniques

The outcomes of this study (Table 7, as reported before) also revealed that from the 11 preferred skills for managerial/cost accounting graduates, the "*thinking skill*" was rated top by both the academics and practitioners. It was, then, followed by "*listing*", "*quantitative*", "*problem solving*" and "*writing*" skills. The three skills that were ranked as less important by both groups were, "*reading*","*speaking*" and "*microcomputer*" skills. The leàst important skills by both groups were "*management*", "*social*", and "*marketing*" skills.

In regard to the issue of important characteristics for accounting graduates (Table 8,as reported before), the outcomes of this study indicated that both practitioners and academics selected "*common sense*", "*motivation*", "*ethical awareness*", and "*intellectual capacity*" as the top four important characteristics. In contrast, "*professional appearance*", "*assertiveness*", and "*pleasant personality*" were the three characteristics selected by both groups as less important. Based on the above observations, the main conclusion reached by this research was that *no significant differences existed between the opinions of practitioners and academics regarding the list of the most important managerial/cost accounting* techniques in this study.

Recommendations

For a long time, the following criticisms have been received from both practitioners and academics about the usefulness of managerial/cost accounting techniques and practices. The practitioners have believed that academics usually develop new accounting techniques, which are highly theoretical and not easily and economically applicable by all companies. The academics, on the other hand, have believed that because of resistance to change, practitioners are not willing to try new techniques wholeheartedly.

The outcomes of this study have revealed some reconciliation between the above two conflicting believes. As was discussed before, practitioners and academic selected the same16 managerial/cost, accounting techniques as the top rated techniques. Based on this outcome, therefore, it is recommended that these16 techniques

business schools for managerial and cost accounting courses. Despite the above 16 techniques, there were 7 techniques, including Agency theory, Liner programming, Environment cost management, Life cycle cost management, Regression analysis, Reciprocal method allocation, and Joint / by product/ costing, that received the least important rating by both practitioners and academics. Based on this outcome, the authors have a tendency to recommend the elimination of Agency theory, Linear programming, Environment cost management, Life cycle cost management, Reciprocal method allocation, and Joint / by product/ costing from the list of topics taught in courses on the principles of managerial/cost accounting. However, the application of regression analysis should be discussed in those courses. The authors' experience, as well as the empirical outcome, indicates that educators have not performed an adequate job in regard to the regression analysis. Usually, instructors present the regression formulas and students memorize them. After applying the formulas to a few textbook problems, students tend to forget them without understanding the real power and application of this statistical tool for formulating cost equations and preparing more realistic operating budgets. It should be noted that a regression line is nothing more that an average line between two or more variables (Best Linear Unbiased Estimation, BLUE) that separates fixed from variable elements. The concept of average is, indeed, very essential in accounting and the separation of fixed from variable elements (or cost) is necessary for planning and decision making purposes. Thus, how one can downgrade this concept and eliminate its use in managerial and cost accounting.

Furthermore, there were four other techniques (Behavioral implication, Transfer pricing, Balance scorecard, and Value chain), which received higher ratings by the academics than practitioners. According to the authors, the latter two techniques, Balance scorecard, and Value chain, are very important techniques and concepts which should be communicated more closely to practitioners.

Based on the other outcomes of this study, the following skills and characteristics are also recommended for greater emphasis and development at business schools in order to produce better accounting graduates: *"thinking", "listing", "quantitative", "problem solving"*

and "*writing*" skills; "*common sense*", "*motivation*", "*ethical awareness*", and "*intellectual capacity*".

The final recommendation of this study is directly related to accounting educators. Accounting faculties need to have more practical involvement with what they preach. According to the findings of this research, the average practical experience of educators in this study was 3.5 years, while their average teaching experience was 16.5 years. Some of these participants, surprisingly enough, had zero years of experience.

In regard to the practical experience of academics, Zimmerman and Summon in their study (2001) suggested that today's business schools should encourage their faculties to conduct more practical and less theatrical research. This should narrow down the gap between theory and practices as well as the differences of opinion between practitioners and academics.

Limitations and Suggestion for Future Research

The first limitation in this study was a low rate of response. Only 34 academics and 29 practitioners responded to the questionnaires of this research. The second limitation was the interpretation of questions asked in this research and the understanding of some modern accounting techniques and technical terms, especially by practitioners. Even though a glossary of terms and accounting techniques was attached to the questionnaires, it appeared that some participants had difficulties with the terms. Consequently some misinterpretation is deemed to have occurred in the process. As an example, the practitioners ranked activity-based budgeting at number 11, while the academics ranked it at 29. Due to the above limitations, some caution should be used regarding some of the generalizations in this research.

TABLES

Table 1 - Academic Participants' Demography

Age

	Frequency	%	Cumu
30-39	4	11.8	12
40-49	6	17.6	29
50-59	19	55.9	85
Over 60	5	14.7	100
Total	34	100	

Practical Experience

	Frequency	%	Cumu
0-5	30	90.9	91
6-10	1	3.03	94
11-15	1	3.03	97
26+	1	3.03	100
Total	33	100	
	Frequency	%	Cumu
0-5	3	9.09	9.1
6-10	10	30.3	39
11-15	3	9.09	48
16-20	5	15.2	64
21-25	6	18.2	82
26+	6	18.2	100
Total	33	100	

Current Job Title

		%	Cumu
Assistant. Professor	8	23.5	24
Associated. Professor	8	23.5	47
Full Professors	18	52.9	100
Total	34	100	

Course level			
	Frequency	%	Cumu
Introductory	14	42.4	42
Intermediate	11	33.3	76
Advanced	8	24.2	100
Total	33	100	
Type of course			
	Frequency	%	Cumu
Core	29	90.6	91
Elective	3	9.38	100
Total	32	100	

Table 2 - Practitioner Participants' Demography

AGE			
	Frequency	%	Cumu
30-30	7	24.1	24.1
40-49	9	31	55.2
50-59	7	24.1	79.3
Over 60	6	20.7	100
Total	29	100	
Education			
	Frequency		
Bachelors	17	58.6	58.6
Masters	12	41.4	100
Total	29	100	
Experience			
	Frequency	%	Cumu
0-5	3	14.3	14.3
6-10	2	9.52	23.8
11-15	3	14.3	38.1
16-20	4	19	57.1
21-25	1	4.76	61.9
25+	8	38.1	100
Total	21	100	

Sales of the organizatio

	Frequency	%	Cumu
Lees than $100,000	1.	3.6	3.6
$100,000-250,000	3	10.7	14.3
$250,000-$1 million	1	3.6	17.9
$1 million -$5 million	3	10.7	28.6
$5 million -$25 million	4	14.3	42.9
$25 million -$100 million	3	10.7	53.6
$100million -$ 500 million	1	3.6	57.1
$ 500 million -$ 1 billion	4	14.3	71.4
$I Billion and above	8	28.6	100
Total	28	100	

Number of Products

	Frequency	%	Cumu
1-15	15	53.6	53.6
16-30	3	10.7	64.3
75+	10	35.7	100
Total	28	100	

Industry

	Frequency	%	Cumu
Agriculture, Forestry	2	6.9	6.9
Manufacturing	5	17.2	24.1
Electricity, Gas, Water supply	2	6.9	31
Construction	1	3.45	34.5
Accommodation, Cafes Restaurants	1	3.45	37.9
Communication Services	1	3.45	41.4
Finance & Insurance	3	10.3	51.7
Property & Business Services	4	13.8	65.5
Gov. Administration & Defense	2	6.9	72.4
Health & Community Services	1	3.45	75.9
Personal & Other Services	7	24.1	100
Total	29	100	

Table 3 - Managerial/Cost Accounting Techniques Cross Ranking Academics vs. Practitioners

	Academics					Practitioners			
Rank	Contemporary = C	N	M Mean	P/R	Rank	Contemporary = C	N	Mean	A/R
1	Performance evaluation	34	4.41	7	1	Cash flow management	29	4.52	17
2	Cost-volume profit	34	4.29	15	2	Ethical issues	29	4.38	7
3	Product costing	34	4.24	6	3	Variance analysis	29	4.31	8
4	Activity Based Costing C	34	4.12	12	4	Operational budgeting	29	4.28	5
5	Operational budgeting	34	4.03	4	5	Capital budgeting	29	4.17	12
6	Activity Based Management C	34	3.88	18	6	Product costing	29	4.17	3
7	Ethical issues	34	3.82	2	7	Performance evaluation	27	3.96	1
8	Variance analysis	34	3.79	3	8	Standard Costing	28	3.75	10
9	Flexible Budgeting	34	3.74	14	9	Job Costing	29	3.69	11
10	Standard Costing	34	3.65	8	10	Customer profitability C	29	3.66	15
11	Job Costing	34	3.59	9	11	Activity Based Budgeting C	28	3.46	29
12	Capital budgeting	33	3.58	5	12	Activity Based Costing C	27	3.44	4
13	Behavioral implications	34	3.53	21	13	Variable/Absorption costing	28	3.39	21
14	Responsibility accounting	34	3.5	20	14	Flexible Budgeting	29	3.38	9
15	Customer profitability C	34	3.47	10	15	Cost-volume profit	29	3.38	2
16	Strategic management accounting C	33	3.39	17	16	Economic value added C	27	3.37	23
17	Cash flow management	34	3.38	1	17	Strategic management accounting C	27	3.37	16
18	Balanced Scorecard C	34	3.24	24	18	Activity Based ManagementC	29	3.31	6
19	Value chain concept C	34	3.12	32	19	Costs of quality C	29	3.28	26
20	Transfer pricing	33	3.09	22	20	Responsibility accounting	29	3.24	14
21	Variable/Absorption costing	34	3.09	13	21	Behavioral implications	28	3.18	13
22	Just in time effects (JIT) C	34	3.09	29	22	Transfer pricing	28	3.18	20
23	Economic value added C	34	3.06	16	23	Enterprise Resource Planning. C	27	3.15	33
24	Target Costing C	34	2.97	27	24	Balanced Scorecard C	27	3.11	18
25	Process Costing	34	2.94	25	25	Process Costing	28	3.11	25
26	Costs of quality C	34	2.91	19	26	Direct method cost allocation	29	3.07	28
27	Theory of Constraints C	34	2.91	34	27	Target Costing C	27	3.04	24
28	Direct method cost allocation	34	2.76	26	28	Joint / by product/ costing	29	3	31
29	Activity Based Budgeting C	33	2.73	11	29	Just in time effects (JIT) C	28	3	22
30	Regression analysis	34	2.56	30	30	Regression analysis	29	2.79	30
31	Joint / by product/ costing	34	2.5	28	31	Life cycle cost managementC	28	2.71	32
32	Life cycle cost management C	33	2.45	31	32	Value chain concept C	27	2.67	19
33	Enterprise Resource Planning (ERP)... C	34	2.35	23	33	Environment cost management C	28	2.64	36
34	Step Down Method Allocation	34	2.29	35	34	Theory of Constraints C	27	2.59	27
35	Agency Theory C	34	2.21	38	35	Step down method cost allocation	28	2.57	34
36	Environment cost management C	34	2.18	33	36	Liner programming	29	2.52	38
37	Reciprocal method allocation	34	2	37	37	Reciprocal method allocation	27	2.41	37

Table 4 - Comparison Between Two Groups of Participants and Combined Results Of The 38 Managerial/Cost Accounting Techniques

		Academics		Practitioners		Total	
	Techniques	Mean	S.D	Mean	S.D	Mean	S.D
1	Activity Based Costing	4.12	0.9134	3.44	0.9337	3.82	0.9748
2	Process Costing	2.94	1.0714	3.11	1.0306	3.02	1.0479
3	Standard Costing	3.65	0.8836	3.75	0.8444	3.69	0.8606
4	Cost-volume profit	4.29	0.8359	3.38	1.2075	3.87	1.1143
5	Performance evaluation	4.41	0.7434	3.96	1.126	4.21	0.9507
6	Operational budgeting	4.03	0.9688	4.28	0.8822	4.14	0.9308
7	Capital budgeting	3.58	1.2755	4.17	0.8481	3.85	1.1286
8	Cash flow management	3.38	1.4567	4.52	0.6336	3.9	1.279
9	Product costing	4.24	0.6541	4.17	0.9662	4.21	0.8064
10	Variable/Absorption costing	3.09	1.111	3.39	0.956	3.23	1.0468
11	Transfer pricing	3.09	0.9475	3.18	1.0203	3.13	0.9743
12	Behavioral implications	3.53	1.0797	3.15	0.9074	3.36	1.0171
13	Job Costing	3.59	0.7434	3.69	0.9675	3.63	0.8482
14	Joint/by product/costing	2.5	1.0225	3	1	2.73	1.035
15	Enterprise Resource Planning (ERP)	2.35	1.0977	3.15	1.0991	2.7	1.1597
16	Responsibility accounting	3.5	0.8257	3.24	1.2146	3.38	1.0228
17	Activity Based Management	3.88	0.946	3.31	1.2278	3.62	1.1134
18	Variance analysis	3.79	0.8083	4.31	0.8906	4.03	0.8793
19	Ethical issues	3.82	0.8338	4.38	0.8625	4.08	0.8854
20	Customer profitability analysis	3.47	1.2119	3.66	1.1734	3.56	1.1884
21	Strategic management accounting	3.39	1.2976	3.37	1.0057	3.38	1.1658
22	Costs of quality	2.91	1.0551	3.28	1.0656	3.08	1.0671
23	Target Costing	2.97	1.1411	3.04	1.0554	3	1.0954
24	Balanced Scorecard	3.24	1.1297	3.11	1.2506	3.18	1.1763
25	Theory of Constraints	2.91	1.138	2.59	1.0473	2.77	1.1014
26	Economic value added	3.06	1.2046	3.37	1.0432	3.2	1.1375
27	Activity Based Budgeting	2.73	1.0975	3.46	0.9616	3.07	1.0934
28	Agency Theory	2.21	1.0949	2.15	0.7845	2.18	0.9654
29	Flexible Budgeting	3.74	0.7511	3.38	1.2653	3.57	1.0273
30	Just in time effects (JIT)	3.09	1.138	3	1.0887	3.05	1.1078
31	Life cycle cost management	2.45	1.0923	2.71	0.8968	2.57	1.0076
32	Environment cost management	2.18	1.1927	2.64	0.9894	2.39	1.1214
33	Direct method cost allocation	2.76	1.0462	3.07	1.0667	2.9	1.0582
34	Step Down Method Allocation	2.29	1.0307	2.57	0.9201	2.42	0.9843
35	Reciprocal method allocation	2	1.0445	2.41	0.7971	2.18	0.9576
36	Liner programming	2	1.1547	2.52	1.0896	2.24	1.146
37	Value chain concept	3.12	1.2001	2.67	0.8771	2.92	1.0847
38	Regression analysis	2.56	1.2837	2.79	1.0135	2.67	1.164

Table 5 - Practitioners' Perceptions and Ranking This Study Hawkes Study

	Techniques	Rank	Mean	Rank	Mean
1	Cash flow Management	1	4.52	1	4.29
2	Variance Analysis	3	4.31	3	4.14
3	Operating Budgeting	4	4.28	2	4.24
4	Capital Budgeting	5	4.17	5	3.97
5	Product Costing	6	4.17	8	3.88
6	Preference Evaluation	7	3.96	4	4.06
7	Customer profitability	10	3.96	7	3.91

Table 6 - Academics' Perception and Ranking

		This Study 2004		Hawkes Study 2003	
	Techniques	Rank	Mean	Rank	Mean
1	Performance evaluation	1	4.52	3	4.06
2	Product costing	3	4.31	4	4.27
3	Activity based costing	4	4.28	2	4.35
4	Operating budgeting	5	4.17	5	3.83
5	Activity based management	6	4.17	6	3.83

Table 7 A - Skills Required For Management Accountants

	Academics				Practitioners				
Rank	Skill	N	Mean	Prac. rank	Rank	Skill	N	Mean	Acad.rank
1	Thinking	34	4.79	1	1	Thinking	29	4.79	1
2	Problem solving	34	4.74	4	2	Listening	29	4.72	4
3	Quantitative	34	4.5	5	3	Writing	29	4.52	6
4	Listening	34	4.5	2	4	Problem solving	29	4.52	2
5	Reading	34	4.44	7	5	Quantitative	28	4.5	3
6	Writing	34	4.35	3	6	Speaking	29	4.14	7
7	Speaking	34	4.29	6	7	Reading	29	4.07	5
8	Microcomputer	34	4.26	8	8	Microcomputer	29	4.03	8
9	Management	34	4.24	10	9	Social	29	3.97	10
10	Social	34	3.91	9	10	Management	29	3.83	9
11	Marketing	34	3.03	11	11	Marketing	29	2.86	11

Table 7 B - Comparison between two groups of participants and combined result regarding Required Skills of Managerial Accounting Students

Skills	Academics		Practitioners		Total	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Listening skill	**4.5**	0.6155	**4.72**	0.5276	**4.6**	0.5831
Management	**4.24**	0.7808	**3.83**	0.9662	**4.05**	0.8877
Marketing Skill	**3.03**	0.8343	**2.86**	0.8334	**2.95**	0.8314
Microcomputer Skill	**4.26**	0.7511	**4.03**	0.823	**4.63**	3.8408
Problem solving skill	**4.74**	0.511	**4.52**	0.6336	**4.63**	0.5765
Reading Skill	**4.44**	0.6126	**4.07**	0.7987	**4.27**	0.723
Social Skill	**3.91**	0.6682	**3.97**	0.823	**3.94**	0.7378
Speaking Skill	**4.29**	0.5789	**4.14**	0.7894	**4.22**	0.6826
Thinking Skill	**4.79**	0.4104	**4.79**	0.4123	**4.79**	0.4079
Writing Skill	**4.35**	0.6458	**4.52**	0.5745	**4.43**	0.6147
Quantitative Skill	**4.5**	0.5075	**4.5**	0.6383	**4.5**	0.5654

Table 8 - Top Three Skills Practitioners' Perception

Rank	This study (2004)	Hawkes study (2003)	Novin study (1990)
1	Thinking	Thinking	Thinking
2	Listening	Problem solving	Problem solving
3	Writing	Listening	Listening

Table 9 - Academics & Practitioners Cross Ranking of Characteristics Required For Management Accounting Graduates

	Academics					Practitioner			
Rank		N	Mean	P/R	Rank		N	Mean	A/R
1	Ethical awareness	34	4.74	3	1	Common sense	29	4.83	2
2	Common sense	34	4.56	1	2	Motivation	29	4.48	4
3	Professional attitude	34	4.5	6	3	Ethical awareness	29	4.34	1
4	Motivation	34	4.44	2	4	Intellectual capacity	29	4.31	5
5	Intellectual capacity	34	4.26	4	5	Confidence	29	4.31	6
6	Confidence	34	4.03	5	6	Professional attitude	29	4.28	3
7	Leadership	34	3.76	7	7	Leadership	29	4.24	7
8	Professional appearance	34	3.74	8	8	Professional appearance	29	3.86	8
9	Assertiveness	34	3.62	10	9	Pleasant personality	29	3.72	10
10	Pleasant personality	34	3.59	9	10	Assertiveness	29	3.69	9

Table 9B
Comparison of Two Groups of Participants and Combined Result of Required Characteristics for Managerial Accounting Graduates

Characteristics	Academics		Practitioners		Total	
Assertiveness	**3.62**	0.8881	**3.69**	0.7608	**Rank 3.65 9**	0.8262
Common sense	**4.56**	0.6126	**4.83**	0.3844	**4.68 1**	0.5336
Confidence	**4.03**	0.6735	**4.31**	0.7608	**4.16 6**	0.723
Ethical awareness	**4.74**	0.511	**4.34**	0.8567	**4.56 2**	0.7134
Intellectual capacity	**4.26**	0.7904	**4.31**	0.6038	**4.29 5**	0.7055
Leadership	**3.76**	0.6989	**4.24**	0.7395	**3.98 7**	0.7512
Motivation	**4.44**	0.5609	**4.48**	0.6336	**4.46 3**	0.5909
Pleasant personality	**3.59**	0.7831	**3.72**	0.8822	**3.65 10**	0.8262
Professional appearance	**3.74**	0.7904	**3.86**	0.8334	**3.79 8**	0.8064

Table 10 - Comparison of Top Three Characteristics Based On Different Studies

Rank	This study(2004)	Hawkes study (2003)	Novin study (1990)
1	Common sense	Common sense	Common sense
2	Motivation	Motivation	Ethical awareness
3	Ethical awareness	Professional attitude	Motivation

Table 11 - Results of Testing the Hypotheses

Rank	Hypotheses	Result of test		Significant Ratio
1	H0 1	Accepted at 95% confidence level	(a)*	More than .05
2	H0 2	Accepted at 95% confidence level	(a)	More than .05
3	H0 3	Accepted at 95% confidence level	(b)**	More than .05
4	H0 4	Rejected at 95% confidence level	(a)	Less than .05
5	H0 5	Accepted at 95% confidence level	(a)	More than .05

* Based on t-test for group of variables as total (the independent t-test gives a different result)

** Based on correlation analysis

Table 12 - Traditional/ Contemporary Techniques Rankings & Mean

#		Academics			Practitioners			Total	
	Techniques/skill/char.	Mean	Rank		Mean	Rank		Mean	Rank
1	Activity Based Costing	**4.12**	4		**3.44**	12		**3.82**	**9**
2	Standard Costing	**3.66**	10		**3.75**	8		**3.69**	**10**
3	Cost-volume profit	**4.29**	2		**3.38**	15		**3.87**	**7**
4	Performance evaluation	**4.41**	1		**3.96**	7		**4.21**	**3**
5	Operational budgeting	**4.03**	5		**4.28**	4		**4.14**	**5**
6	Capital budgeting	**3.58**	12		**4.17**	5		**3.85**	**8**
7	Cash flow management	**3.38**	17		**4.52**	1		**3.90**	**6**
8	Product costing	**4.24**	3		**4.17**	6		**4.21**	**4**
9	Job Costing	**3.59**	11		**3.69**	8		**3.63**	**11**
10	Responsibility accounting	**3.50**	14		**3.24**	20		**3.38**	**15**
11	Activity Based Management	**3.88**	6		**3.31**	18		**3.62**	**12**
12	Variance analysis	**3.79**	8		**4.31**	3		**4.03**	**2**
13	Ethical issues	**3.82**	7		**4.38**	2		**4.08**	**1**
14	Customer profitability analysis	**3.47**	15		**3.66**	10		**3.56**	**14**
15	Strategic management accounting	**3.39**	16		**3.37**	17		**3.38**	**16**
16	Flexible Budgeting	**3.74**	9		**3.38**	14		**3.57**	**13**

Table 13 – Traditional/ Contemporary Techniques Cross Ranking Academics vs. Practitioners

Traditional					Contemporary			
.	Techniques	Acad. Rank	Prac Rank.			Techniques	Acad. Rank	Prac Rank.
1	Cost-volume profit	2	15		10	Performance Eva	1	7
2	Product costing	3	6		11	ABC	4	12
3	Operating bugt	5	4		12	ABM	6	18
4	Ethical issues	7	2		13	Flexible Budgeting	9	14
5	Variable analysis	8	3		14	Responsibility Acct	14	20
6	Standard costing	10	8		15	Customer Profitability	15	10
7	Job costing	11	9		16	Strategic Mgt. Acct	16	17
8	Capital budgeting	12	5					
9	Cash Flow Mgt	17	1					

Table 14 - Techniques Ranked Very Low and Viewed the Least Important by Both Participants

	Techniques	Academic ranking	Practitioner ranking
1	Agency theory	35	38
2	Liner programming	38	36
3	Environment cost management	36	33
4	Life cycle cost management	32	31
5	Regression analysis	30	30
6	Reciprocal method allocation	37	37
7	Joint / by product/ costing	34	28

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