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Management Accounting Education at the Millennium

Michael W. Maher

ABSTRACT: This article examines the "journey" of management accounting education over the past 50 years, evaluates the state of the field today, and presents my personal observations about teaching approaches. I observe that we have seen a substantial addition of management accounting courses to business school curricula, and changes in what was conventionally known as "cost accounting" courses, over the past 50 years. In recent years, innovative topics have come primarily from practice and from empirical research about practice. The introduction of these innovations into courses, and the expansion of management accounting in business school curricula, has resulted in a field that is alive and well in academia. The future demand for management accounting courses may be in some jeopardy, however, because students might not see good job opportunities in management accounting. Management accounting educators must address these problems to avoid enrollment declines in management accounting. The way we teach management accounting can increase the value of our students and mitigate possible enrollment declines. By focusing on problem-solving skills and the organizational context of decisions, rather than the "facts" of management accounting methods, we can educate students to be creative problem solvers who add substantial value to their organizations.

INTRODUCTION

I am pleased to have the opportunity to comment on the past, present, and future of management accounting education. My objective in writing this paper is to review the journey of management accounting education over the past 50 years, examine where the field is today, and present some personal observations about teaching in the field.

I emphasize the teaching side of the field in this discussion, paying particular attention to changing curricula. Research and practice influence teaching, so my discourse naturally reaches into those areas, too. But my primary emphasis is on developments in teaching.

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The distinction between management accounting and cost accounting is fuzzy in many curricula and textbooks. To some management accounting educators, cost accounting essentially plays the same role on the management accounting side of the curriculum as intermediate accounting does on the financial accounting side. To others, cost accounting is quite a different thing from management accounting. I tend to align with the former group, using the term "management accounting" to refer generally to the provision of information for management use. Recording costs solely for external financial reporting would not fit my sense of management accounting, but most other topics in today's cost accounting textbooks would. My bias, therefore, means that my exploration of the management accounting journey includes forays into courses and books titled "Cost Accounting."

This paper is organized as follows. In the first section, I review the "journey" of management accounting education from the late 1940s—which is arguably the start of management accounting in business school curricula—to the present day. I believe that understanding where the field has been is essential for understanding where it is going. In the second section, I evaluate where we are today with an assessment of the strengths and weaknesses of management accounting in both academia and practice. In the third section, I present personal observations about teaching approaches that I believe will educate students to be creative problem solvers who add substantial value to their organizations. I conclude on an upbeat note for management accounting education.

THE JOURNEY

As disciplines go, management accounting has had a short and exciting history. While many management accounting concepts can be traced back at least to the beginning of the Industrial Revolution, management accounting as a teaching discipline appears to have gotten off the ground in the late 1940s. William J. Vatter's teaching notes at the University of Chicago and subsequent book is perhaps the seminal work in introducing "management accounting" into business school curricula (Vatter 1950).

New Courses

At Harvard, the faculty introduced management accounting into the curriculum immediately after WWII. The faculty at MIT started a similar course about the same time (Anthony 1989). The teaching method at Harvard emphasized the use of cases, managerial uses of information, and behavioral considerations in the management control function (Anthony 1989). Whereas conventional "cost accounting" courses and textbooks at that time focused on procedural issues, management accounting concentrated on managerial and behavioral issues. Budgeting is an excellent example. Whereas cost accounting focused on obtaining, compiling, reconciling, and reporting accounting numbers in the budget, management accounting focused on behavioral and incentive effects of budgeting.

The experience of an entering M.B.A. student, named Chuck Horngren, in the Harvard program in 1950 exemplifies the contrast between managerial and cost accounting. Chuck was shocked to find that his first-year accounting course (called "Control" in the Harvard M.B.A. program) espoused the use of direct costing for decision making over absorption costing (Horngren 1989). This seemed to be heresy in view of his prior CPA training, which emphasized absorption

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costing as the correct way to compute product costs.

New Textbooks

Robert Anthony's (1956) *Management Accounting* departed significantly from prior cost accounting textbooks. This book focused on management accounting instead of cost accounting, used cases instead of problems, and provided a three-way classification of cost concepts—full costs, differential costs, and responsibility costs—that is still the foundation of many management accounting courses and textbooks. Anthony's textbooks and his book, *Planning and Control Systems: A Framework for Analysis* (Anthony 1965), had a major influence on a generation of management accounting teachers, and continue to affect the way educators think about management accounting.

In 1962, Chuck Horngren published the first edition of his now famous and highly successful *Cost Accounting: A Managerial Emphasis* (Horngren 1962) text, which provided a formal vehicle for introducing management accounting concepts into the curriculum. Although titled *Cost Accounting*, the book placed a reduced emphasis on procedural methods for inventory valuation and a greater emphasis on management accounting for decision making. Horngren's (1962) book, along with books by Anthony (noted above) and Shillinglaw (1961), clearly reflected and re-enforced the "new wave" of management accounting thinking that had developed during the late 1940s and 1950s.

Even taking into account the continued publication of procedurally oriented books, the overall content of cost accounting textbooks changed dramatically during the 1950s and 1960s. According to a study by George Foster, reported in Horngren (1989), in the late 1940s, 73 percent of the material in cost accounting textbooks dealt with inventory valuation (n = 7 books studied). By the 1960s, material dealing with inventory valuation dropped to 46 percent (n = 14 books). The content dealing with management decision making increased from 6 percent in the late 1940s to 33 percent in the 1960s. (The remaining content dealt with cost control topics such as variance analysis, which remained about the same from the late 1940s through the 1960s.)

Meanwhile, courses called "Management Accounting," based on books such as Anthony (1956), which emphasized management use of financial information and not cost accumulation and allocation for financial reporting, began to enter M.B.A. curricula. It would be the 1990s, however, before a full-term introductory management accounting course would be required in most undergraduate business programs.

Impact of the Business School Reforms of the 1950s

Management accounting got a boost from the reform activities promulgated by the Ford Foundation during the 1950s. Those activities re-oriented business school research from descriptive and thought-provoking conceptual work toward empirical, analytical, and experimental research methods, with much emphasis on such outside disciplines as economics and psychology. The impact on management accounting research was dramatic (Maher 1997), with much greater attention paid to decision making and planning and control, and less to product costing (Klemstine and Maher 1984). The impact on teaching was slower, but could be seen in curriculum changes at many of the Ford Foundation-supported

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schools such as the University of Chicago, Carnegie-Mellon University, and Stanford University. These schools produced Ph.D. students who did research on management accounting topics and sought to teach management accounting with a focus on decision making vs. conventional cost accounting with its focus on inventory valuation.

The Disconnect

Although the Ford Foundation's efforts had a positive effect on the development of management accounting education, over time, the research and teaching arms of the field grew farther and farther apart. In the 1960s and 1970s, the management accounting research literature increasingly emphasized mathematical-modeling topics, with particular emphasis on applications of operations research to management accounting (Maher 1997). Only a few schools, however, and then primarily at the graduate level, taught applications of operations research to accounting and similar topics drawn from the management accounting research literature.

By the 1980s, a substantial share of the management accounting literature published in top journals in the United States applied agency theory concepts drawn from economics, yet little of this material was found in the top-selling management and cost accounting texts during this time. I know from personal experience that Ed Deakin and I received considerable criticism from reviewers of our textbook on cost accounting (Deakin and Maher 1987) for including a relatively small amount of agency theory material in the planning and control chapters. Organizational studies and laboratory experiments also had little influence on management accounting curricula in most schools.

To be sure, some textbooks did incorporate the management accounting research of the post-Ford Foundation era: Robert Kaplan's (1982) *Advanced Management* text, which integrated operations research and decision-analysis ideas from the research literature with management accounting; and Robert Magee's (1986) *Advanced Managerial Accounting,* which integrated information choice, decision analysis, and agency theory with management accounting. These books, along with Dopuch et al.'s (1982) cost accounting text, were used almost exclusively in advanced courses, including M.B.A.-level offerings. In general, the insights provided by management accounting research and theory development in the post-Ford Foundation era did not have the impact on mainstream management accounting education that they had in other fields such as finance.

Winds of Change

In August 1983, Robert Kaplan presented a plenary address at the American Accounting Association Annual Meeting that signaled a new direction for management accounting curricula. In his address, published in *The Accounting Review*, Kaplan (1984) pointed out that the cost accounting and management control procedures developed to support mass production of products with a high labor content were no longer appropriate for contemporary companies. He called for a broadening of management accounting into nonfinancial areas and field research to better understand contemporary problems and information needs of managers, as well as innovative practices. Kaplan himself, his colleagues at Harvard, his students, and other researchers began engaging in field-based research, examining

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nonfinancial as well as financial topics in management accounting. By the mid-1990s, field research and research into nonfinancial performance measures had come of age. As discussed below, this research had an impact on management accounting teaching.

A "New Wave" of Management Accounting Topics

I view the introduction of management accounting topics into curricula and textbooks in the 1950s and early 1960s as the "new wave" of management accounting. If that is so, then I should label the period from 1983 to the present as the second "new wave." Over this latter period, management accounting teachers introduced many new topics into the classroom, including topics like activity-based costing (ABC) and EVA® that build on prior accounting conventions, and newer ideas such as the balanced scorecard (BSC) and target costing. Meanwhile, courses devoted entirely to management accounting were added to more and more curricula, including undergraduate curricula.

Cost accounting textbooks became more managerially oriented during this second new wave. For example, Table 1 presents the topics in the 10th edition of Horngren et al.'s (2000) *Cost Accounting: A Managerial Emphasis* that were absent from Horngren's (1982) 5th edition. Even without counting expansions of business responsibility material and a generally increased managerial orientation, approximately 22 percent of the latest edition of Horngren's cost accounting textbook covers managerial accounting topics that were not in the 5th edition.

Other recent textbooks, such as Hansen and Mowen (2000) and Hilton et al. (2000), claim to have pushed the curriculum frontier even further by focusing on management issues and presenting less coverage of traditional cost accounting. These books have changed their titles from "cost accounting" to "cost management" to reflect their management orientation.

Source of New Topics for Management Accounting Education

Where have these new topics come from? In most cases, the answer is practice and empirical research about practice. As Kaplan (1984) predicted, innovations in management accounting practice that lead to new topics in textbooks and the classroom have come primarily from business, not from academia. In the 1980s and 1990s, companies in the U.S. and other developed industrial nations faced increasing competition both from competitors in other industrialized countries and from emerging economies. To meet competition, innovative companies implemented new cost management and incentive tools such as those noted above (target costing, ABC, BSC, and EVA®). In some cases, the source of the original idea may have been from academics, but these ideas took root in practice.

Recent empirical studies, including field studies, also appear to be influencing curricula, either directly or through textbooks. For example, Hilton et al. (2000) reference more than 30 empirical research articles, several books based on empirical research, and more than 100 case studies of management accounting practices. Some of this research, such as articles by Noreen and Soderstrom (1994) and Anderson (1995), use empirical work to explain cost structures in organizations. Other articles examine appropriate organizational structures for modern industrial and information-age firms (e.g., Selto et al. 1995; Widener and Selto 1999).

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TABLE 1
New Topics in *Cost Accounting*

Topics added to *Cost Accounting: A Managerial Emphasis* between the 5th edition (Horngren 1982) and the 10th edition (Horngren et al. 2000).[a]

Topics Added	Number of Text Pages Covered[b]
Activity-based costing/management	25
Backflush costing/JIT	12
Balanced scorecard	8
Customer profitability analysis	11
Economic value added	3
Kaizen budgeting/costing	3
Life-cycle budgeting/costing	3
Nonfinancial performance measures, including time and quality	12
Quality and time costs	11
Strategic profitability analysis	12
Supply chain	3
Target costing	7
Throughput costing	5
Value chain	3

[a] The 10th edition of the textbook also included expanded coverage of ethics, global issues, and computer-based analyses. The list in Table 1 is limited to new management accounting business practices added to the textbook.

[b] Number of pages listed excludes assignment and self-study materials.

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Examining the Efficacy of New Ideas

The motivation for some empirical research in management accounting has been to test the claims of consultants who propose "new" management methods. For example, Ittner and Larcker (1998) examine the linkage between nonfinancial and financial performance measures, which is the foundation for the BSC. They found, in fact, some linkage between nonfinancial performance measures and financial performance, as predicted by the BSC. Biddle et al. (1997) examine the efficacy of EVA® and found little evidence that EVA® correlates better with stock returns than do conventional accounting measures. Maher and Marais (1998) examine the efficacy of ABC and found limitations of ABC when resources used do not match resources supplied.

Research examining the efficacy of innovative management methods not only informs educators about the usefulness of the methods, but also helps students to evaluate critically the claims of proponents of these innovative practices. My experience tells me that students, even M.B.A. students, are too willing to accept new ideas and methods. Research questioning the efficacy of management accounting methods creates a healthy skepticism about the usefulness of these new methods.

Summary Observations About the Journey

Placing the beginning of the journey in the late 1940s, we have seen management accounting education evolve into a major discipline in business school curricula. In early years of the journey, particular management accounting topics were tucked under the guise of "cost accounting" (e.g., Horngren 1962). Management accounting in business school curricula gradually spread through the 1980s until, in the 1990s, it became a full-fledged discipline, fully out of the cost accounting closet.

WHERE WE ARE

At the close of the 20th century, management accounting in academia was alive and well in business school curricula. The model in most business schools 20 years ago was to require students to take one year of introductory accounting, allocating 70–80 percent to financial accounting with only 20–30 percent to management accounting. Today, a common model is the "splits" approach with a 50-50 allocation of management and financial accounting. Both accounting majors and nonaccountants are exposed to more management accounting today than they were 20 years ago.

I continually learn about innovative courses and major changes in textbooks and in other teaching materials in management accounting. For example, more and more educators include field trips and field studies in their management accounting classes. These activities increase students' understanding of real-world problems. An increasing number of management accounting educators require students to work in groups, which increases their ability to work in teams on the job. Many management accounting educators require writing assignments and/or student presentations to improve presentation skills. Management accounting educators continue to decrease their emphasis on cost accounting—which is consistent with the reduced need for accumulating and ordering data in companies—while increasing their emphasis on cost management and management accounting.

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Management Accountants in Practice

Whereas management accounting in business schools appears to be alive and well, management accounting in practice faces problems. These difficulties may reduce the future demand for management accounting courses because students might not see good job opportunities in management accounting. The first problem is downsizing. Many executives have informed me that they plan to downsize the finance and accounting function in their company. For example, one of the high-tech companies in my geographic region plans to cut its total finance function (including accounting) from 4 percent of revenue in 1995 to less than 1 percent of revenue by the year 2002. Improvements in data collection and reporting technology make such reductions possible and threaten the traditional role of accounting and finance people as information providers (Siegel and Sorensen 1999).

The second problem is due to the different labels given to management accounting topics in practice compared to academia. What we call "management accounting" in business schools is usually called "corporate finance," "financial analysis," or "financial consulting" in the business world. Students who concentrate in management accounting in college and who seek jobs in the field find few companies or consulting firms advertising for "management accountants." My observations are based on the job descriptions and job titles of my "management accounting" students who have taken jobs in industry and consulting. Further evidence that management accounting, by that name, is not a business function has been provided by a recent study commissioned by the Institute for Management Accountants (IMA). This study found that *no* respondents to the survey referred to themselves as "management accountants" (Siegel and Sorensen 1999).

A third problem is that the term "accountant" appears to have an increasingly negative connotation in practice. At my institution, less than 5 percent of the students select accounting as their primary concentration or take jobs that have "accountant" in the title. They view accounting as a field that is not in on the action, and accountants as passive bystanders who keep score while others "play the game." The Siegel and Sorenson (1999) study reported similar findings among management accounting practitioners. Recognizing this image problem, Rick Swanson, the editor of *Strategic Finance*, commented "IMA is repositioning itself—by design—because members' careers have been repositioned. We aren't leaving 'management accounting' but extending beyond it" (Swanson 1999, 6).[1]

These last two problems present academic management accountants with a labeling dilemma. By referring to ourselves as management accountants, do we lose students who seek careers in corporate finance, financial analysis, or financial consulting? If so, do we do business a disservice because students are not trained in management accounting when they take jobs in corporate finance or financial consulting? At best, this labeling problem causes confusion that must be addressed by academic advisors and career counselors. At worst, it negatively affects the education of our students.

I do not have concrete suggestions for dealing with the potentially negative effects of business downsizing and the "management accounting" label on

[1] I am grateful to Mark Penno for bringing this article to my attention.

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student demand for management accounting courses. I do believe that we management accounting academics must address these challenges or watch a decline in student interest in management accounting courses. We should give serious thought to creating a new title for the field in academia that parallels the title(s) used in practice. We should also market management accounting courses to students who are not majoring in accounting or finance, or even in business. For example, we could seek opportunities to offer management accounting courses for engineering, science, and other nonbusiness majors. At my institution, the business school is proposing an undergraduate minor in technology management that includes a course in cost management for engineering and science majors. I believe there are many opportunities such as this to build enrollments in management accounting courses (by whatever name).

As discussed in the next section, I further believe that the way we teach management accounting can increase the value of our students and mitigate possible enrollment declines. By focusing on problem-solving skills and the organizational context of decisions, rather than on the "facts" of management accounting methods, we can educate students to be creative problem solvers who add substantial value to their organizations. I have no doubt that this type of education will be in high demand in the coming years.

PERSONAL OBSERVATIONS ABOUT TEACHING MANAGEMENT ACCOUNTING

When I first encountered management accounting courses taught by Kasi Ramanathan at the University of Washington (Seattle), I was amazed that management accounting was so different from financial accounting and had so many diverse facets. These diverse facets have made it possible for me to work on a wide range of problems that I could bring into the classroom, including civil service reform, healthcare reform, defense contracting, high-tech education, international transfer pricing, and care of the homeless.

Although the specific topics that I teach have changed considerably over my nearly 30 years in the business, my style of teaching has not changed much over the years—I still use cases and as much experiential learning as possible. And I am even more convinced than ever that our primary job as educators is not to teach the "facts" of management accounting methods, but to teach problem-solving skills and the organizational (and social) context in which economic activities are conducted.

Employers increasingly ask that business school graduates seek out ways to add value to organizations, not just work competently on projects that superiors assign to them. Focusing on problem-solving skills and the organizational context of decisions will serve current and future students well in responding to employers' expectations.

For example, the study of ABC, BSC, EVA® and similar concepts should not be primarily about making computations. The primary objective in studying these concepts should be about understanding the organizational issues that created a need for implementing such concepts and the prospects for their success or failure in light of the organizational environment in which these concepts are implemented. I have learned of many examples in which thoughtful practitioners spent an immense amount of time developing complex ABC, BSC, EVA® and other management accounting methods only to

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have them fail in implementation. These methods did not fail because of technical problems in computations. They failed because the people who developed these methods did not sufficiently understand the problems that needed to be solved or the organizational factors that would foster success (or cause failure) in implementation (e.g., buy in from both top management and the people who might implement the method).

There are new opportunities for our students to add value to organizations after they graduate, if they will just seek them out. For example, an obvious opportunity is to close the gap between information technology and strategic decision makers in organizations. Anybody who has spent a reasonable amount of time in business must be amazed and appalled by decisions affecting substantial resources that are made with minimal information. Business executives point out that they cannot wait until they have all the information to make decisions—opportunities will be gone or crises will have occurred while they wait for the appropriate information. Such statements indicate that customers of information are not seeing their needs met by current information systems. I believe there is considerable untapped value in organizations because of inadequate information.

Many management accounting academics are already partnering with information technology experts on the one hand, and strategic thinkers on the other hand, to better understand how to teach students to address this gap. This type of academic partnering will likely have valuable payoffs for students who are fortunate enough to participate in such interdisciplinary education.

CONCLUSION

I am optimistic about the future of management accounting. We have made substantial progress since the first new wave of management accounting 50 years ago. We are presently going through a critical self-evaluation, which is an important first step to problem solving.

The label "management accounting" might not have much brand equity in the future. But a field that is dynamic and strategically oriented, and addresses the information needs of business, will be a valuable enterprise by whatever name.

As management accounting educators, we should continue to observe business practice, as Kaplan (1984) urged many years ago, but we should not limit ourselves to observing and reporting practice to students. Our educational priorities should be to help students develop life-long problem-solving skills and to understand the organizational and societal context in which decisions are made. Students educated along these lines will be well equipped to add value to organizations and society, whatever their job titles.

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