

Have Improvements Been Made to Accounting Pedagogy in the New Millennium: A Guide for Accounting Academics

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Based on results of research rather than traditional teaching experience, eight groups of accounting academics have come up with suggested teaching approaches for management accounting in the new millennium, fifteen groups for introductory accounting and three groups for internal auditing. The advantage to readers of this paper is that they no longer need to read a long list of journal articles on accounting education to find out what have been done to improve accounting pedagogy. Accounting academics can go through the summarized changes and suggested teaching approaches to pick out the ones that suit their teaching style and read the cited articles they pick.

INTRODUCTION

The majority of accounting academics do not specialize in accounting education, nor do they wish to read a long list of readings pertaining to accounting pedagogy from accounting education journals. On the other hand, they do have the incentive to improve their teaching strategies or curriculum design as these would affect their teaching evaluations.

The eight initiatives of the Accounting Education Change Commission (AECC) of 1989 have considerable impact on how accounting courses are taught prior to the new millennium and at the turn of the 21st century (Williams, 1993; Sundem, et al 1990; Oliverio and Newman 2001). Based on reviews of existing literature pertaining to accounting pedagogy, this paper summarizes many of the changes and suggested approaches in the teaching of management accounting, financial accounting and auditing, the three major branches of accounting. Three courses are used to represent the three branches, ie. (i) management accounting and finance, (ii) introductory accounting and (iii) internal auditing, respectively.

The advantage to readers of this paper is that they no longer need to read a long list of journal articles on accounting education to find out what have been done or can be done to improve accounting pedagogy. Accounting academics can go through the summarized changes and suggested teaching approaches to pick out the ones that suit their teaching style. Further details can be obtained by reading the cited articles they pick.

CHANGES IN THE TEACHING OF MANAGEMENT ACCOUNTING AND FINANCE

Background

Traditionally, the top priority of universities was the common body of knowledge upon which the examination of the Institute of Management Accountants (IMA) was based. Payne (1998) conducted a study on the top 20 institutions with the largest number of successful CMA examination completers since 1991 and the top 20 institutions with the largest number of examination completers among those taking

the December 1995 examination and found that the University of Wisconsin at Madison historically led the field of management accounting and continued to do so while the University of Texas at Austin and the University of Minnesota were among the top five of both lists.

With technological advances and globalization of business, accountants could provide financial information in record time and at a fraction of its previous cost. Management accounting education, from the way it was taught, no longer served the purpose. Seigel and Kulesza (1996) saw the coming changes in management accounting education in meeting the changing needs of their corporate customers. CPA firms no longer needed entry-level accountants to do mundane accounting and switched their focus to the consulting side of the business, requiring new hires with better communication skills and an understanding of business processes. Management accountants must be able to perform analysis and explain how the data would impact alternative courses of action available to the company. Among those schools that were discussing change, working on change or had recently changed, 43% would implement curricula that put more emphasis on management accounting (Seigel and Kulesza, 1996).

In light of the aforementioned circumstances, Fletcher et al (1995) discussed whether there was a genuine need for a separate managerial track as it was perceived that differences existed in skills and knowledge necessary for entry-level management and public accountants. Although this need was identified in the Siegel and Sorensen (1994) study, the authors refuted the arguments put forward by Siegel and Sorensen on the necessity of a separate track in that the concerns that led to the creation of AECC in 1990 were related to personal rather than technical skills, such as the ability to write and speak effectively, to analyze complex information and reach appropriate conclusions and to work in groups. The work of AECC was geared toward helping students develop these skills rather than what content was taught.

Changes in the Teaching Approaches Prior to the New Millennium

Changes in teaching approaches prior to the new millennium were traditional and procedural in nature to facilitate understanding, and were based largely on teaching experience rather than results from research. For instance, Benke (1995) reported that corporate America viewed accounting graduates under-prepared in product costing as a result of teaching only somewhat related information about costing products and without bringing that information to focus on product costing. The latter is frightfully important for product pricing. As such, not all information about product costing was applied to costing a product. Benke therefore, suggested an eight-step approach in teaching product costing:

- Teach cost behavior—variable and fixed.
- Teach mixed costs, including the high-low method and regression to divide mixed costs into the variable and fixed portions.
- Teach cost-volume-profit analysis.
- Up to this point, fixed costs were treated in total. Reduce the total fixed costs to per unit costs by first covering activity-based costing.
- The remaining portion of fixed overhead costs could be allocated using more arbitrary methods, ie. non-ABC allocations (plant rates, department rates, etc.).
- Cover service department allocations if not covered in the previous step.
- Use all information from the previous six steps to cost products.
- Teach the collection of costs under job and process costing approaches as these are methods of collecting costs and not for costing products.

The aforementioned steps in teaching product costing were fairly standard among management accounting textbooks prior to the new millennium. An example would be the earlier editions of the Horngren textbook on “Cost Accounting – A Managerial Emphasis”.

In another example, Reider and Saunders (1988) reported on a perceived weakness in error of management accounting education being the use of direct labor as an allocation base to the exclusion of other bases. In fact, students were taught to select a base out of several bases that was relevant to the specific circumstances. This time, it was the accountants and decision makers who had failed to use the appropriate management accounting techniques that they had been taught were at fault.

Suggested teaching approaches in the new millennium

The following examples from the new millennium were based on research and represented innovative teaching strategies:

- Maher (2000) suggested that by focusing on problem-solving skills and the organizational context of decisions, rather than on management accounting methods per se, students are trained to be problem-solvers with added values to their organizations.
- Other teaching approaches in management accounting include the use of co-operative learning. For instance, Grudnitski (2000) studied the impact on individual achievement when co-operative learning groups were provided different incentives. The result indicated that performance in that learning environment can be enhanced with better sharing when group incentives are offered. On the other hand, Lancaster and Strand (2001) compared exam performance and attitudes of students in two types of managerial accounting classes and found that academic performance did not decline when using the Team-Learning model comparing with a group that used the more traditional format. This outcome eliminated the concern of some faculty that group work takes too much time away from coverage of technical content which should not be covered to that extent in the first place.
- Van Den Brink et al (2003) used a case approach to teaching managerial accounting in an attempt to change a perception that managerial accounting is merely about crunching numbers.
- Hoffjan (2005) described the use of a business game in a cost accounting course to illustrate the concepts of relevant costs, opportunity costs and determination of optimal internal transfer prices with positive student feedback.
- Barsky and Catanach (2005) suggested employing a business planning model for teaching introductory management accounting and met with positive students' responses as well.
- Brewer (2000) discussed benefits derived from alternative approaches to organizing management accounting curricula, such as less redundancy, logical distinctions between topics and in-depth coverage of specific content areas.
- Kennedy and Sorensen (2006) adapted a framework used in organizations for problem-solving for classroom use. This was followed by a description of verbal analysis tools and an illustration of how each contributes to organizational decision making within the problem-solving framework.
- The above examples are by no means exhaustive, but do represent a concerted effort on the part of accounting academics in using research to teach management accounting.

Changes Implemented At Schools Prior to the New Millennium

Some schools such as Southwest Missouri State University were involving corporate executives in their curriculum change process. Others such as University of Rhode Island had started the total quality management (TQM) process. Courses in management accounting were integrated with other disciplines such as industrial engineering. Northeastern Illinois University placed more emphasis on management accounting, liberal arts and sciences, with learning and instruction based on student projects, case studies and continuous interaction with accounting professionals and financial executives in industry, rather than the straight traditional lectures (Seigel and Kulesza, 1996).

The future

Management accounting has been termed "strategic finance" in the new millennium. Volpe and Chen (2001) identified Finance as a missing link in accounting education and recommended its inclusion in the accounting curriculum. As previously discussed, preparation of financial statements was no longer the main thrust of accounting firms as they commenced to explore other avenues for their services. In the 1980s and 1990s, many such services were related to personal financial planning. Thus, the incorporation of more finance in addition to the one course in basic Business Finance, in the accounting curriculum, became a necessity. AICPA offered the PFS specialty certification to CPAs and the IMAs added the CFM professional certification for those whose specialty was in finance. Unfortunately, instead of adding breadth, most schools merely added more in-depth coverage of various accounting topics to suit the

interest of faculty. Faculty members had limited real world exposure and tried to avoid making curricular changes in eliminating certain courses and adding others (Volpe and Chen, 2001). This latter view was also presented earlier by Strait and Bull (1992) and Usry et al (1993) when they discussed the use of assistants and graduate students in teaching accounting.

CHANGES ON THE TEACHING OF INTRODUCTORY ACCOUNTING

Background

The teaching of introductory accounting presents a great challenge as a mix of instructional approaches must be used to balance the non-technical skills needed by successful professional accountants with the basic technical accounting skills required, and in serving both non-accounting majors (non-technical user-approach) and accounting majors (an appropriate blend of both).

Courtaeu and Rennie (1997) were of the opinion that the primary objective of the first course in accounting was to learn about accounting as an information development and communication function that supported economic decision-making in accordance with AECC Position Statement No. 2 (1992). Thus, both the relevance of accounting information to decision-making as well as its preparation must be focused. Quoting Scott and Tiessen (1994), the authors felt that the first accounting course should offer a combination of a structured accounting course as involving sequential introduction of more and more difficult topics with the building of procedural and automatic skills and an unstructured accounting course in developing students' meta-cognitive skills by encouraging different points of view and group discussion. While no optimal mix of structured and unstructured aspects has ever been determined, they found that introductory accounting courses were mostly highly structured and procedural and not in accordance with AECC spirit.

Quoting Friedlan (1995) the authors found that students who took a less structured and less technical introductory accounting course were more realistic of the skills and abilities required by accounting professionals. Quoting Sundem (1994) they suggested that the first accounting course should not teach students the mechanics of accounting, but to provide an introduction to what accounting was all about, bearing in mind that the practice of accounting required a certain level of technical accounting knowledge.

Another issue was that accounting educators must serve the needs of both accounting majors and non-accounting majors with different objectives of learning. In the view of the authors, Michael Gibbons' Financial Accounting: An Integrated Approach, 2nd edition (Scarborough, Nelson Canada, 1995) presented a balanced and an integrated view of financial accounting, aiming at both accounting majors and non-majors.

Earlier, Smigla (1995) reported that many colleges and universities in the US adopted the users' approach in teaching introductory accounting by either: (a) ignoring the procedural aspects of accounting and focusing solely on accounting terminology and the analyzing and interpreting of accounting data, or (b) less emphasis was placed on detailed preparation functions, thus allowing more time to analyze and interpret accounting information. Many employers and educators felt that the traditional approach was not providing students with the necessary skills. Although students preferred the user's approach as opposed to the traditional approach, the higher levels of learning under the user's approach caused the grades to be slightly lower. With weaker technical skills, the approach would also necessitate students entering intermediate accounting to take make up classes (Courtaeu and Rennie, 1997).

Suggested teaching approaches in the new millennium

As introductory accounting is considered one of the most important accounting courses because it could either arouse students' interest in accounting to continue on or cause students to dislike accounting to the point of dropping accounting, numerous studies have been conducted in the new millennium in the areas of assessment, curriculum, instruction, etc. The following is a list of examples.

- Cornick et al (2003) described two classroom assessment techniques that provided accounting faculty with information to evaluate the effectiveness of accounting principles courses and to make continuous improvements in the content and delivery of material.

- Aisbitt and Sangster (2005) suggested an Internet-based assessment of student performance in introductory accounting, which was implemented in a one-year case study for the purpose of reinforcing basic principles.

- Hartnett et al (2003) investigated the relationship between instruction style and student performance among 360 first-year accounting students and found that the presence of an instructor and the approachability of an instructor are both positively associated with a students' task performance.

- Turetsky and Weinstein (2003) studied the impact of student performance in two prerequisite introductory accounting courses (financial and managerial) on subsequent performance in an upper level financial management course and found that a strong, positive correlation between the grades in the prerequisites and the grades in the financial management course, suggesting that these prerequisites were relevant.

- Dillard-Eggers and Wooten (2003) described the evaluation of a peer-tutoring program for introductory accounting and found that a significant positive relationship between peer tutor usage and course grade existed.

- Halabi et al (2005) compared the worked examples and problem-solving exercises approaches to learning a highly-structured introductory accounting topic using computer-based learning materials and found that the worked examples were more efficient than problem-solving exercises for students who had no prior knowledge of accounting while the two methods were equally efficient for those with prior accounting knowledge.

- Edmonds et al (2003) explained the use of problem-based learning in accounting courses and asserted that the benefits far outweighed the initial complaints from students who preferred the lecture method. Milne and McConnell (2001) also described use of problem-based learning and related research and concluded that this increased motivation, developed clinical reasoning skills and served as a bridge between higher education and professional life.

- David et al (2003) described an introductory financial accounting course that integrated business processes with enterprise-wide technology.

- Hall et al (2004) used a group-learning environment in an introductory accounting course in an attempt to change students' learning approaches and concluded that the learning environment changed the students' motives in that they were less likely to be studying for surface reasons, but the environment was not successful in changing students' interest in the course.

- Murdoch and Guy (2002) hypothesized that students in small sections of introductory accounting will perform better than students in a large section of the same course when group activities make up a substantial portion of course time. They found that class size was significant as smaller classes led to higher scores, as were age, GPA and homework completion.

- In investigating the differences in problem-solving and conceptual recall between three groups of: (a) lecture only, (b) lecture plus instructor-manipulated conceptual model, and (c) lecture plus student-manipulated model of introductory accounting students whose exposure to inventory cost allocation was experimentally manipulated, Kern (2002) found that the learning scenario was a significant factor in the score on the problem-solving questions, but not the conceptual questions.

- Etter et al (2000) used supplemental instruction on introductory accounting classes and found that attrition rates declined, suggesting that it might be a good approach for institutions seeking to reduce attrition rates in introductory accounting courses. Jones and Fields (2001) also investigated whether supplemental instruction enhanced student performance in the first accounting course and performance increased in step fashion with increased levels of participation in supplemental instruction.

- Boyd et al (2000) offered suggestions pertaining to time, content and process for effective delivery of introductory accounting and promoted the use of visual aids and the concepts approach.

As the list is long for this course, the above 13 examples are summarized in a table at the end of this paper.

The above examples of assessments and innovative teaching approaches all serve as incentives for better performance in the introductory accounting course. Depending on the type of students served and the specific learning environment they are in, selective use of these techniques can be considered.

IMPACT OF CHANGES ON THE TEACHING OF OPERATIONAL AUDITING

Background

I concur with Fernandes et al (1995) that students ought to be exposed to the audit environment rather than relying on auditing textbooks to become an effective internal auditor. The authors suggested that partnership between educators and internal auditing professionals as in the case of the Institute of Internal Auditors (IIA) and the University of Central Florida (UCF), combining individual study with hands-on classroom simulation of real internal auditing situations in UCF's operational auditing course, could help with the learning process. They further reported that many colleges and universities gave students the required knowledge in internal auditing by either adding breadth to their traditional auditing course or by adding a single course in internal auditing to the curriculum as opposed to IIA's requirement of having two internal auditing courses. The UCF course had two primary objectives, being: (a) enhancing the student's understanding of both the conceptual and practical aspects of the internal audit function, and (b) enhancing the student's analytic, critical thinking, written and oral communication and group / teamwork skills. These objectives were in line with AECC objectives and the objectives of the internal audit professionals.

Suggested teaching approaches in the new millennium

In the new millennium, approach to teaching has been emphasized as this has a significant impact on the learning of auditing. Examples follow:

- Stuart (2004) examined whether immediate feedback has an effect on student performance and the results suggested that feedback improved performance significantly while training alone did not. This appeared to endorse what the employers were doing in giving new internal auditing staff immediate feedback on their performance as described by Fernandes (1994).
- Nelson et al (2003) studied whether the formal teaching of logic (valid and invalid argument forms) to auditing students would reduce audit judgment errors and found that the inclusion of formal logic instruction in accounting programs had a positive impact on audit judgments.
- Braun and Simpson (2004) studied the impact of the pause method of stimulating learning in the undergraduate auditing course and concluded that students' exam performance was better when the pause activity was their choice (written versus oral), insinuating that learning outcomes improve when the active learning environment coincides with the students' preference.

Educators could see that curricula changes enhance internal audit student capabilities in organizational behavior, communications, decision analysis and the development of business-oriented skills. Partnership formation with practitioners in facilitating student internships would help the future internal auditing professional.

Also in the new millennium, Johnson et al (2003) found that there were substantial changes in content (new or expanded coverage of fraud, information technology, and assurance services) and pedagogy (increase use of team projects, student presentations, cases and the Internet) in both the introductory and advanced auditing courses over the past several years. These reflected the trend towards innovative teaching strategies and were discussed previously under the teaching of other accounting sub-disciplines, and therefore, would not be unique only to auditing.

I now look at how internal auditing could be affected by the then educational changes in accounting in general.

Educational changes of internal auditing prior to the new millennium and beyond

The AACSB, AICPA, AAA, and the major international CPA firms, all had an impact on accounting education. Those proposed changes in internal auditing included: (a) an emphasis on breadth; to help

students to cope with the demands of the auditing environment, involving financial, compliance and operational audits and to adapt to modern technological developments, (b) updating the content of the accounting curriculum, placing more emphasis on concepts and less on rules and procedures, and (c) the need to employ innovative and more interactive teaching methods to develop analytical, communications, and creative thinking skills as internal audit reports were not structured like those of external auditors and they were often presented orally and in writing. (Crockett, 1993). Curriculum reform is closely linked with changing teaching methods. Problems envisaged by the authors as a result of the reform were threefold:

- The curriculum could become softer when made broader and more conceptual. However, the 150-hour requirement of the AICPA should enable accounting educators to design a curriculum that would equip graduates with both a broad and technically competent education.

- As tenure and promotion decisions were made by academic committees and administrators who were not familiar with the trend in accounting education, accounting faculty focusing on curriculum development might find themselves at a disadvantage.

- Unless internal audit organizations made their professionals and records more accessible to academicians, the benefits of research would be limited.

The last two problems were almost impossible to resolve.

While Crockett (1993) did not provide suggested solutions to the last two problems, McCartney et al (2002) in the new millennium, investigated whether a gap existed between content being taught in internal auditing courses and practitioner needs and found that a high level of agreement between academics and practitioners existed: (a) on the curriculum emphasis on the 25 topics, (b) on the use of case studies, and (c) on the use of practitioners as guest lectures. This indicated that accounting educators are now more sensitive to market demand in their course design and pedagogical considerations. More recently, Still and Clayton (2004) called for accounting education to move beyond number crunching to critical analysis and problem-solving. They discussed the use of service-learning in accounting curricula and cited specific examples of successful implementation of service-learning projects in auditing and governmental accounting.

DISCUSSION

This paper presents many of the teaching approaches suggested or implemented at the turn of the 21st century in the areas of management accounting, introductory accounting and internal auditing as a result of research and not through teaching experience. Some of these approaches observe the AECC spirit. The eight initiatives of AECC all pertain to accounting pedagogy and curriculum and appear to have led to many of the innovations presented.

Since 2012, Pathways Commission is emphasized in accounting education. However, this paper does not present any possible innovations in accounting teaching strategies in recent years as of the seven recommendations, only two deal with pedagogy and curriculum, while others deal with the integrating of accounting research, education and practice, exploring alternative pathways to terminal degrees and attracting high-potential, diverse entrants into the profession (Pathways Commission on Accounting Higher Education Final Report 2012).

CONCLUSION AND FUTURE RESEARCH

This paper highlights the possible innovative teaching strategies that accounting academics may be interested in pursuing in improving accounting pedagogy to meet the demands of the market. However, it does not show in detail how each approach or strategy is to be used. Readers interested in certain types of approaches such as problem-based learning, group learning, etc., will need to read the cited articles shown in the reference list and to decide whether they wish to carry on with that particular approach.

Several teaching approaches, e.g. co-operative learning, supplemental instruction, etc., have been successfully tested by more than one group of accounting academics and hence, their validity is proven.

Other approaches have been tested by only one group of accounting academics. For future research, readers may wish to select certain approaches for testing in their classrooms. With positive results, the validity of the remaining approaches will be enhanced for universal adoption.

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TABLE 1
SUMMARY OF ASSESSMENT, CURRICULUM, INSTRUCTION, ETC. FOR INTRODUCTORY ACCOUNTING

Authors	Reports or Findings
Cornick, Bhamornsiri and Malmgren (2003)	Described techniques to evaluate effectiveness of accounting principle courses
Aisbitt and Sangster (2005)	Suggested an Internet-based assessment of student performance in introductory accounting
Harnett, Romcke and Yap (2003)	Found that presence and approachability of an instructor are positively associated with students' performance
Turetsky and Weinstein (2003)	Found strong positive correlation between grades in the prerequisites and grades in financial management
Dillard-Eggers and Wooten (2003)	Found a significant positive relationship between peer tutor usage and course grade
Halabi, Tuovinen and Farley (2005)	Found that worked examples were more efficient than problem-solving exercises for student with no background in accounting
Edmonds, Edmonds and Mulig (2003) Milne and McConnell (2001)	Found that problem-based learning in accounting courses outweighs lectures
David, Maccracken and Reckers (2003)	Described an introductory accounting course that integrated business processes with enterprise-wide technology
Hall, Ramsay and Raven (2004)	Found that a group-learning environment in an introductory accounting course changed the students' motives
Murdoch and Guy (2002)	Found that smaller classes led to higher scores as were age, GPA and homework completion
Kern (2002)	Found that learning scenario was a significant factor in the score on problem-solving questions, but not conceptual questions
Etter, Burmeister and Elder (2000) Jones and Fields (2001)	Found that supplemental instruction on introductory accounting classes enhanced student performance
Boyd, Boyd and Boyd (2000)	Offered suggestions for effective delivery of introductory accounting pertaining to time, content and process with the use of visual aids and the concepts approach.

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