

# **An Integrative Approach to Teaching Advanced Cost Accounting**

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## **Abstract**

This paper discusses an approach for an undergraduate advanced cost accounting course that is based on a model which integrates both the American Assembly of Collegiate Schools of Business (AACSB) required topics and areas of knowledge from the liberal arts core, business core and technical (accounting) core. The paper also describes the current state of advanced cost accounting courses in AACSB-accredited accounting programs. The survey results suggest, not only that there is an increasing preference to offer a second cost accounting course, but that the integration of knowledge is a primary reason for including such a course in the curriculum. Additionally, the paper illustrates teaching strategies and project examples that may be useful to accounting departments currently modifying course curricula and to cost accounting instructors desiring a more versatile cost accounting curriculum.

## **Introduction**

By now most accounting departments have modified (or are in the process of modifying) their curriculum at the fundamental level to address changing environmental demands. For example, many accounting departments have refocused the introductory accounting courses to incorporate a user's, rather than a preparer's orientation [Agrawal, 1996; Fischer, 1990; Williams et al., 1988]. These and other ongoing revisions are the result of recommendations made by the Accounting Education Change Commission (AECC, 1990a; 1992), Big Six Perspectives Paper (1989), and similar other pronouncements. Furthermore, Mock et al. (1991) suggested that the revised curriculum should include (1) a holistic approach; (2) an integrated development of interpersonal skills and communications skills; and, (3) a conceptual approach that is decision-oriented with emphasis on analytical and problem-solving skills. The guidelines of the American Assembly of Collegiate Schools of Business (AACSB, 1996) also stress the need for designing undergraduate business curricula that include a broad range of business "perspectives" (e.g., global issues, computer applications, ethical and demographic diversity). Such modifications and implementation guidelines, coupled with technical training, would appear to be essential if educational institutions are going to produce students/graduates capable of functioning effectively in the business world and understanding how accounting information is used in business and society.

In an opinion survey, conducted by the authors, of AACSB accredited accounting programs, a majority (63%) of the respondents supported the development of knowledge

on an integrated basis in the course curriculum. Additionally, about half the respondents had implemented a second cost accounting course to help achieve this type of knowledge integration and make their students more marketable in terms of their stakeholders' needs. These findings are particularly interesting when put in the perspective of contemporary efforts to improve student quality. For example, in 1997, the AACSB Undergraduate Curriculum Seminar addressed various strategies aimed at preparing graduates to effectively function in a dynamic work environment (Johnson et al., 1997). This seminar was attended by business school administrators who were interested in cultivating a curriculum that could be responsive to stakeholders' changing expectations of academia. One of the recommendations proposed by the administrators called for more integrative courses or modules in the business curriculum. The goal of such courses/sequences is to train students to focus on problems and situations from a holistic business perspective and to enhance comprehensive problem solving skills (Johnson et al., 1997). Notably, over twenty colleges and universities have adopted some form of integrated courses and course sequences in response to academic research and industry demands (See Johnson et al., 1997; Keller, 1993; Savery and Duffy, 1994; Porter and McKibben, 1988). Based on the available evidence and emerging trends it seems reasonable to suggest that an increasing number of integrated accounting courses will be included in the accounting curriculum; and, that suggestions for course designs and implementation will be useful to educators in meeting the demands of a complex business environment. Accordingly, this paper discusses the approach utilized by the authors for an undergraduate advanced cost accounting course based on a model which integrates both the AACSB required topics and areas of knowledge from the liberal arts core, business core and technical (accounting) core.

The paper is organized into five sections. The second section discusses the integrating framework. The third section establishes the need, supported by empirical data, for a second cost accounting course. The fourth section describes the structure and topical coverage of an integrated advanced cost accounting course. The last section, the summary, discusses the implications of the course and explores areas for future research.

### **The Integrating Framework**

The emerging theme from the evaluations of the American Accounting Association (AAA, 1986), Big Six Perspectives Paper (1989), and AECC (1990; 1992), including comments from academia (e.g., Choi, 1993; Kinney, 1990), revolves around accounting graduates' *lack* of broad-based knowledge, communication, interpersonal and intellectual skills. One of the reasons for this status quo may be the independent development of conceptual and complementary knowledge. To address these deficiencies our cost accounting course focuses on the AACSB suggested topics and the topical areas within the liberal arts core, business core and technical (accounting) core. Figure 1 illustrates the integrative dynamics of these components. Conceptual knowledge is defined as the expertise in tools and techniques to solve accounting problems. Related components that assist in developing the conceptual knowledge area include the introductory accounting

courses and the technical or accounting core (i.e., other accounting courses).<sup>1</sup> Complementary knowledge is described as the sum of non-accounting courses, which includes economics, management, marketing, statistics, mathematics, computer science, and the liberal arts curriculum. The interaction of the conceptual and complementary knowledge areas are then used to make reasoned decisions which results in the “application knowledge”

This type of integration develops and enhances application knowledge serving to mitigate the isolated development of knowledge skill. Such integration provides students with a much richer, more complicated and broader perspective. A basic advantage of such integration is to prepare students to think of accounting in terms of both business and nonbusiness implications when applying knowledge to make decisions.<sup>2</sup> Understandably, conceptual knowledge and complementary knowledge may be gained independently when a course structure and/or a curriculum sequence negate opportunities for effective integration of knowledge. However, such an isolated process fails to account for a holistic approach that is essential in the complex “real-world” decision-making environment.

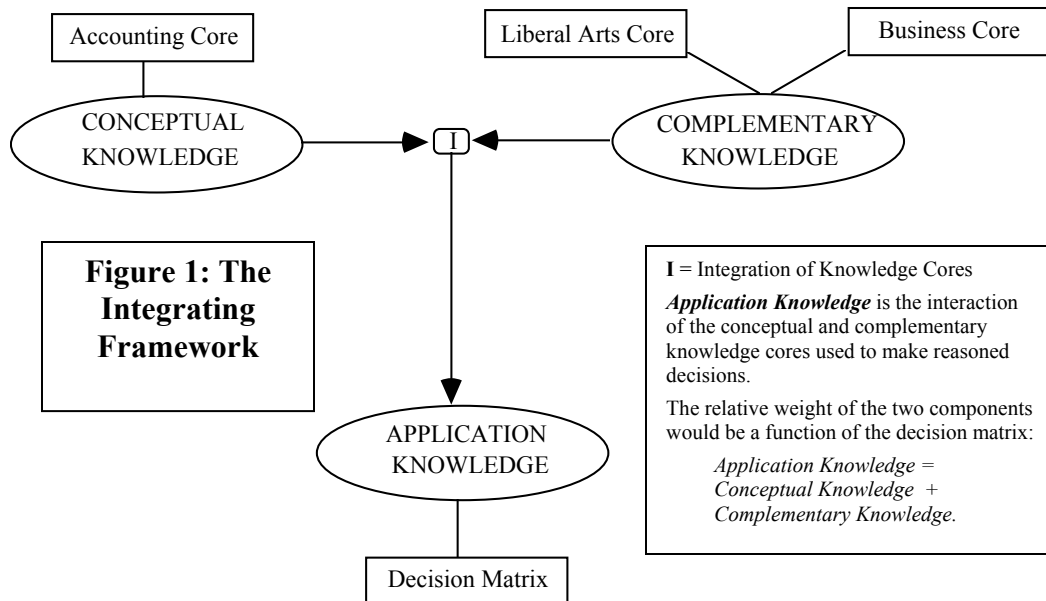
### **The Need for an Integrative Advanced Cost Accounting Course**

Since the first cost accounting course relies on exercises (memorized algorithms) to develop fundamental cost accounting skills, a truly integrative process seldom occurs at this level. To develop critical thinking, while incorporating several aspects of knowledge, the student must be exposed to complex unstructured accounting issues, which challenge and improve problem solving skills (Kimmel, 1995; Arunachalam et al., 1997). To enhance students’ skills in these areas the advanced cost accounting (ACA) course discussed in this paper was designed to achieve the simulated effect of business conditions. Accordingly, the extended focus of the second cost course is to provide an opportunity for the application of different knowledge areas to many new decision-

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1 The introductory accounting course is treated as a separate component because of recent efforts to emphasize user’s orientation as opposed to technical rules.

2 For a review of the literature on conceptual and/or complementary knowledge in classroom settings/curricula, refer to Mautz (1968); Shute (1979); Flaherty (1979) and Usoff and Nixon (1997).



making situations.<sup>3</sup> Furthermore, according to the stage of intellectual development described by Kurfiss (1988), the student in the first cost course will recognize ambiguity and resolve this ambiguity with “unsupported opinions”. The student in the ACA course, however, is at a higher intellectual level and will be able to use an integration process to gather information to support decisions, recognize the validity of alternative solutions, weigh opposing arguments and “commit to a position” (Kimmel, 1995, 305).

To assess the current state of ACA courses in accounting programs, the authors surveyed accounting department chairpersons and cost instructors. A questionnaire was mailed to 110 of the 1996-97 AACSB American schools with accredited accounting departments. Sixty-one questionnaires were returned by the accounting department chairpersons/cost instructors, for a response rate of 55%. Approximately, forty-nine percent of the responding schools offered an ACA course. As shown in Table 1, Panel A, the most popular reason for including an ACA course in the curriculum was to foster knowledge integration (63%) and a close second was to provide more accounting electives (57%). The impact of industry influence has also been reflected in the implementation of ACA courses since forty-seven percent of the schools included the course because of “industry demand” and the need to simulate real-life experience (37%).

<sup>3</sup> Increased global activity, international competitive forces, and technological advancements have led organizations to reengineer their production and service processes. These production and service changes have had major effects in the theory and practice of cost accounting (Shultz, 1997). Moreover, much of the rationale for changes in trans-national tax policies and differential disclosure standards can be linked to either changes in cost accounting practices or the cost structure. Thus, discussing changes at the cost accounting level is likely to have a new comprehensive and sustained impact on learning.

Although, several reasons were given, as summarized in Table 1 (Panel B), regarding why departments (51%) did not offer an undergraduate ACA course, the most popular was lack of student interest (26%) followed by insufficient faculty resources (23%) and lack of public/private interest (8%). Additional reasons (36%), provided by the respondents, indicated that, “the course was offered at the Master’s level”, “the course was not shown in the AACSB guidelines”, “the department was currently rethinking implementation”, “no room or time existed for the course in the curriculum” and “the school’s overall student enrollment was insufficient”.

**Table 1: Survey Results of the Advanced Cost Accounting (ACA) Course**

<u>Factor &amp; Grouping</u>	<u>Frequency</u>	<u>Percentage</u>
<b>Panel A: Reasons for Offering ACA course* (30 Respondents)</b>		
Foster Knowledge Integration	19	63.3
Provide More Accounting Electives	17	56.6
Industry Demand	14	46.7
Independent Knowledge Formation	11	36.7
Simulate Real-life Situations	11	36.7
Course Needed for 150 hr. Curriculum	5	16.7
Course Needed for AACSB Guidelines	2	7.0
Feedback from Public Accounting	2	7.0
<b>Panel B: Reasons for Not Offering ACA course* (30 Respondents)</b>		
Lack of Student Interest	8	25.8
Lack of Faculty Resources	7	22.5
Lack of Public/Private Interest	2	7.5
Other reasons	11	35.5
<b>Panel C: Methods Used to Teach ACA course* (30 Respondents)</b>		
Text-Based	18	60.0
Journal Articles	13	43.3
Case Method	11	36.7
Real-Life Company Analysis	1	3.3
Other**	5	16.7

\* May not sum to 100% as respondents indicated more than one reason.  
 \*\* Other methodologies included lectures, research projects and analytical model building.

Interestingly, of the thirty-one schools without an ACA course, eleven intend to include the course in their undergraduate curriculum within the next two years. Given the current environment, it appears that in the near future the majority of AACSB accredited accounting departments plan to include an ACA course in either the undergraduate or graduate accounting curriculum. As such, the continued development and refinement of this course is, and will be, essential for the following reasons. An ACA course (1) provides an outlet for the coverage of several functional areas; (2) provides, if not a required course, a diversified accounting elective; (3) satisfies the academic expectations of businesses; (4) simulates real world experiences; and, (5) provides a broad-based knowledge course for the 150-hour curriculum.

## Developing an Integrative ACA Course

### Approval and Objectives

The initial design for an ACA course, which also included grading criteria and pedagogy, was submitted to our departmental executive committee. Once the executive committee suggestions were incorporated into the course design, departmental approval was obtained. The business school faculty and university curriculum committees subsequently approved the course during the 1996-97 academic year. The approved course description was broad in scope:

The course covers contemporary issues/problems in cost and managerial accounting in the context of the modern business environment. Emphasis is given to cost information systems, analytical models, global aspects in management accounting, decision models, nontraditional accounting systems and other specialized cost topics. Case methodology and computer analysis are utilized (1997-99 *Undergraduate Bulletin*, 1997, 286).

The prerequisites for the ACA course include senior class status and the successful completion of the first cost course (minimum grade of "C").

The primary goal of the course is to motivate students to think critically, integrate and apply knowledge from different disciplines. Accordingly, the objectives of the course are:

- To provide the student with an opportunity to apply conceptual and complementary knowledge within a decision framework.
- To expose the student to contemporary and innovative managerial/cost issues.
- To develop creative and critical analytical skills.

Additionally, the course seeks to augment student awareness about critical business topics, such as ethics, internationalization and cultural diversity.

### Pedagogy and Grading Criteria

The selection of pedagogy may be one of the most challenging decisions to be made by instructors designing a new course curriculum. We considered the fact that the case-based (e.g., *Harvard's Business Cases*) method has proven to be an effective tool for transmitting knowledge and that the model has been used/accepted by most schools, regulatory bodies and professional organizations. Unquestionably, the case approach is an effective conduit for real-world scenarios (AECC, 1993a) and for practicing creative and critical thinking skills of students (Buckless et. al., 1997; Wolcott, Forthcoming; Abdolmohammadi et al., Forthcoming). Additionally, many of our survey respondents (37%), as reported in Table 1, Panel C, also use the case method as a teaching approach.<sup>4</sup> It is especially noteworthy that during the planning stage for our course a more structured method was also selected, the textbook based approach, in addition to cases from

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<sup>4</sup> It is paramount, however, that methods of case instruction be clearly understood by the instructor. Fortunately, the body of literature is replete with information on how to effectively use classroom cases (See Barnes et al., 1994; Godiwalla, 1998; Tagiui, 1995; Christensen et al., 1992; Hammond, 1987; and Bruns, 1993).

textbooks, casebooks and the financial press. This approach seemed reasonable since the majority (60%) of our survey respondents also cited the textbook-based approach as one of their teaching tools for the ACA course.

The analyses of managerial/cost articles from research publications or the business/financial press are also used in our course to assist students in applying concepts. We decided to include this approach since forty-three percent of our survey respondents used the journal/article delivery method in their ACA course. Our additional strategies include brief lectures, which clarify or introduce new concepts about a topical area, and activities that incorporate real-life experiences, such as guest lecturers and field trips. The first cost accounting class text is also utilized as a reference source, since the majority of the students still possess or have access to the text.

Grading criteria was developed that would encourage student participation and involvement in the learning process. For instance, 20% of the grade was allocated to active class participation and class readiness; 30% of the grade was assigned to cases and articles. Cases and/or articles which are assigned to groups comprise approximately half of this 30%; thus, motivating the student to enhance team-playing or interpersonal skills. Earmarking 10% of the grade to the project paper further developed writing skills. The balance of the total grade (30%) was assigned to quizzes and examinations (mid-term and final).

### **Skill Building Activities**

Tables 2 and 3 summarize examples of projects, materials and delivery techniques used in the authors' ACA course to achieve the course objectives. To illustrate the integrated framework, these Tables further pair the elements of conceptual and complementary knowledge to the delivery techniques and projects.

#### ***Conceptual Knowledge***

Although cases were not the most frequently used method, by our survey respondents, it appears that field-based researched cases should be included to assist students in achieving the application process. As a result, we have integrated cases into our ACA course. In order to pull from the conceptual knowledge (accounting core), cases should require an understanding of quantitative accounting and cost techniques but limited actual calculations. The student conceivably will recognize the result of such (quantitative) application and/or recommend a quantitative technique that will support a decision choice. For example, CVP analysis requires manipulation of break-even formulas. However, in a real-world application of CVP analysis, the focus is not to execute formulas but rather to logically identify and synthesize the models' elements or inputs (e.g., variable cost per unit, fixed dollar cost). The key is to motivate the student to think beyond the basic schedule, quantitative model or financial statement.

#### ***Complementary Knowledge***

The complementary knowledge core consists of a myriad of different elements which include the liberal arts core, such as writing and speech courses (e.g., communication skills), history, and the business core elements (e.g., economics, computer systems,

statistics). The following sub-sections, although not all-inclusive, discuss simple approaches, which are used within each of the following knowledge cores to incorporate these disciplines into the course.

### ***Liberal Arts Core, Non-Accounting Business Core***

Our integrative approach requires the student to write and present to other class members his/her own cost accounting problem or essay question and solution. Such an approach encourages the student to evaluate scenarios that are not explicitly described in problems or pre-structured cases (Krumwiede and Bline, 1997). Assignments may focus on open-ended requirements, such as the ramifications of a cost-volume-profit decision in a "not-for-profit" entity. To further stress communication skills, the students are required to determine whether or not a presenting class team supplied all relevant details in their analysis and/or proposal. The class members also suggest other detailed information needs. A research project (paper) is another approach that further requires our students to decipher evidence that is necessary to support a decision. Another example of a project is case-related and requires the student to complete the financial analysis, propose and write-up the management financial controls for the business entity. The student is also required to identify the advantages and disadvantages of the financial controls. Notably, the writing of case summaries extracts from the complementary knowledge core while developing writing skills, sometimes neglected after the basic freshman English course. Moreover, previous research supports the correlation between writing and the thinking process [McKay, 1995].

Although often neglected in some courses, history becomes an integral part of our integrative process. Selected cases depict competitive industry trends or an evolutionary description of companies. Typically, sequential cases are more appropriate for summarizing and contrasting trends. Such cases may report (1) the initial structure or preliminary factors of the company that lead to a revised system (e.g., ABC system) and (2) the after-effects of the decision-making process. For example, a well-selected case may focus on the strategic issues associated with decisions to incorporate a computer-integrated system and an ABC accounting system in a manufacturing environment. The student has to examine historical factors, existing components and future modernization proposals. The student then integrates the resulting evaluation with other information to determine how management should deal with the consequences that automation and a new accounting system will have on the workforce.

### ***Quantitative Core***

The course also provides opportunities to apply mathematical and economic concepts. During a CVP analysis, for example, a student may consider the economic supply and demand factors that could have an impact on pricing decisions. Additionally, a quantitative analysis (or sensitivity analysis) is often used to relate the changes in the CVP model with proportional changes in the customer market base. Analytical models provide another opportunity to enhance the students' quantitative skills. Using actual quantitative data of a company, the student derives the optimal level of production, profit maximization, or other factors, by employing maximum and minimum constraints. The tracking or understanding of the analytical model, which is the basis for the analysis, integrates not only quantitative skills but also develops students' critical thinking skills.

### ***Computer Core***

The course also incorporates computer skills since twenty-four (80%) of our surveyed respondents incorporate technology in their second cost accounting course. In addition to the basic word-processing type projects, the computer was used by the survey respondents in the learning process for statistical regressions, linear programming, spreadsheets, messaging and business simulations. Computer software is also used in our ACA course to bring together assigned tasks. For instance, case assignment solutions are displayed after executing a macro (short computer programs) in a software application, such as word-processing, spreadsheet and databases. The macro-library in EXCEL conveniently contains macros for break-even analysis. These macros enhance the application process since decision-making procedures are written into a macros' procedures. Several cases allow our students to design power point charts and spreadsheets. Students often diagram the proposed ABC system and explain how costs are assigned to products within a computer-integrated environment. A useful suggestion, provided by the authors of one particular case, is to require the students to evaluate the new ABC system using Cooper's Cost Hierarchy (Copper, 1990). A task of this type motivates the students to integrate or apply relevant research to case solutions. A few cases, appropriate for undergraduate use, also employ computer simulation models. Typically, the entire production process can be modeled from the materials receiving area to product shipping and transfer points. Moreover, the student can visualize the operating improvements and the significance of non-financial performance measures. An advantage of such projects is that an instructor can dedicate a couple of hours with the software and competently instruct the case. Another advantage of many of these cases is that students do not have to purchase the software since the instructor can present the case to the entire class using projected images from a computer monitor.

Various on-line services also provide an abundance of useful resources. For example, COMPUSTAT can be a useful source for additional information about a company mentioned in a case. Access to this type of information allows the student to obtain a wide range of information, which may include items such as organizational changes, new products of a company, market shares or segment information, for CVP analysis. Furthermore, these databases, including Internet resources, challenge the students' ability to distinguish between relevant and irrelevant decision information.

### ***Critical Issues***

The global or international cost issues are also incorporated into the course since the student can use selected data (e.g., CVP inputs) to determine transfer-prices. Additionally, an internationally focused case can require students to analyze the effects of inflation, foreign exchange or tax rates on CVP analysis. Another challenging case assignment, for our students, is to evaluate the performance of managers within a multicultural and foreign-based company. Historical evolution, a topic which is also incorporated, appears to be integrally related to sociological and cultural patterns that define business dynamics. Therefore, our class discussion themes often include the uniqueness of foreign management styles.

Critical issues, such as ethics and diversity, are necessary elements that must be considered by students when making decisions. For example, culturally diverse cases are useful in analyzing the role of ethnicity as a factor facilitating or handicapping the activities of a business. Such cases focus on companies that are operated by a particular racial or ethnic group. In these unique cases, the application of knowledge, just as in the international settings, is utilized within a unique management environment. Two of our class cases, *Salem Mutual Savings Bank (Anysansi-Archibong et al., 1997)* and *Sigcom, Inc. (Ugboro et al., 1998)*, strategically outline multiple issues involved in a bank acquisition and an expansion decision, respectively. For example, a commercial bank, in the *Salem Mutual* case, must decide whether to purchase a troubled "savings and loan" bank. The banks are minority-owned and primarily serve a minority-based population. The banks' under-representation in the banking industry makes the students' valuation process of the targeted bank more difficult and the strategic acquisition and revitalization plans that they recommend more complex.

Various cases that emphasize ethical dilemmas and suggested resolutions further stimulate both creative and critical thinking. The students are provided with the opportunity to distinguish between proper professional and ethical behavior of management. For instance, one ethical-dilemma requires the student to decide if he/she should behave unethically (e.g., accept a bribe) to gain the approval of the host country or host manager.

### ***Practice Forum***

The list of examples that can be used to integrate the elements of the knowledge cores is unquestionably diverse. The case approach is one teaching method that will allow the integration of knowledge to occur and develop decision-making skills for unstructured real-world problems. The majority of the decisions to be made in an ACA course should be new and challenging. If new decisions are to be made, a new information search/ application process must be used. However, if such an information process is to be completed, a meaningful link to an application of prior knowledge (conceptual and complementary) must occur. This ensures that learning has taken place. Since learning skills will not be embraced if presented in a compartmentalized and fragmented style (Milne and Adler, 1995) the process demands several iterations of

integration or “application knowledge”. The type of ACA course described in this paper attempts to provide such a practice forum.

## **Implications and Conclusions**

Due to recent organizational recommendations (e.g., AECC, 1993b), industry’s demand for knowledge/skills (Siegel et al., 1997) and requirements of accrediting bodies, undergraduate schools must cover a broad spectrum of topics and skills. The integrative framework presented in this paper for an accounting education process addresses this concern. It would also appear that an integrated framework will continue to be particularly important as schools develop innovative curriculums for a 150-hour structure and continually seek new pedagogical techniques.

The advanced cost accounting course discussed in this paper illustrates how a course can provide a forum for integrating knowledge. As a result, the course does not focus on one specific core of accounting knowledge. Alternatively, the course seeks to cultivate skills that will allow the student to make novel decisions in the presence of ambiguous information by (1) applying knowledge from other disciplines, and (2) incorporating other elements into the decision-making process such as ethical values, globalization and demographic diversity.

Additionally, the survey results, from AACSB accredited-accounting department chairpersons and cost accounting instructors, suggest that (1) cost accounting instructors use similar teaching methods; (2) integration of knowledge is a primary reason for including an advanced cost accounting course in the curriculum; and (3) there is a growing preference among schools to offer a second cost accounting course. Additionally, many of the teaching strategies, project examples and other suggestions, illustrated in this paper, may be useful to accounting departments currently modifying their course curriculum. With little modification, the approach utilized in this paper may be generalized to other courses. Moreover, the ideas and reference materials may prove valuable to cost accounting instructors desiring a more versatile and relevant cost accounting curriculum.

Lastly, an extension of the present topic would be an investigation of students’ perception regarding the importance of skills learned in an advanced cost course. One measurable factor, once they graduate, would be their perception of the impact of such a course on their career/graduate school success or satisfaction. This will enable educators to better decipher the needs of entry-level professionals and the need for sequential (i.e., advanced level) accounting courses. Future research should also focus on cost accounting curriculum development. Unfortunately, much research, to date, that advocates the integration of knowledge into practical applications, has centered on application improvement, redesigning or reengineering strategies for accounting principles and intermediate accounting classes (e.g., Abdolmohammadi et al., Forthcoming; Saudagaran, 1996; Ainsworth, 1993). As a result, only a limited amount of cost accounting curriculum-related research and workshops have focused on the integration process. Therefore, it appears that curriculum-related research efforts in the cost accounting area would help to mitigate the amount of limited research.

### References

- Abdolmohammadi, J., Brown, C, Feldmann, D. & Haselkorn, M. (Forthcoming). Designing and implementing an AECC complying introductory accounting course: A four-year perspective. *Advances in Accounting Education*.
- Accounting Education Change Commission (AECC). (1993a, April). *Improving The Early Employment Experience of Accountants: Statement No.4, 5*.
- Accounting Change Commission (AECC). (1993b, April). *Evaluating and Rewarding Effective Teaching: Issues Statement No.5, 3*.
- Accounting Education Change Commission (AECC). (1992, Fall). The first course in accounting: Position statement no. 2. *Issues in Accounting Education, 7, 249-251*.
- Accounting Education Change Commission (AECC). (1990a, Fall). Objectives of education for accountants: Position statement no. 1. *Issues in Accounting Education, 5, 307-312*.
- Accounting Education Change Commission (AECC). (1990b, Fall). AECC urges priority for teaching in higher education. *Issues in Accounting Education, 5, 330-331*.
- Agrawal, S.P. (1996). *Introduction to Financial Accounting*. Houston: Dame Publications.
- Ainsworth, P.L. & Plumlee, R..D. (1993, Spring). Restructuring the accounting curriculum content sequence: the KSU experience. *Issues in Accounting Education, 8, 112-128*.
- American Accounting Association (AAA) Committee on the Future Structure, Content and Scope of Accounting Education --The Bedford Committee. (1986, Spring). Future accounting education: Preparing for the expanding profession. *Issues in Accounting Education, 1, 168-195*.
- American Assembly of Collegiate Schools of Business—International Association for Management Education (AACSB). (1996). *Business Accreditation Standards—Curriculum Content and Evaluation*. St. Louis: AACSB.
- Arthur Andersen & Co., Ernst & Whinney, Arthur Young, Peat Marwick Main & Co., Coopers & Lybrand, Price Waterhouse, Deloitte Haskins & Sells, and Touche Ross (Big Six Perspectives Paper). (1989). *Perspective on Education: Capabilities for Success in the Accounting Profession*. New York: Authors.
- Anyansi-Archibong, C., Brewer, B., Ugboro, I., & Robinson-Backmon, I. (1997). Salem Mutual Savings Bank Inc. (SSB). *African American Enterprises Casebook, 1, 13-21*.
- Arunachalam, V., Sweeney, J. & Kurtenbach, J. (1997, Spring). The relationship between cognitive problem-solving style and task structure in affecting student performance. *Accounting Educators' Journal, 9 (1), 1-13*.
- Barnes, L.B., Christensen, C. R & Hansen, A.J. (1994). *Teaching and the Case Method*. Boston: Harvard Business School Publishing.
- Buckeless, F., Ravenscroft, S. and Zuckerman, G. (1997, Summer). Student team learning: replication and extension. *Proceedings of the AAA Annual Meeting*. Sarasota: American Accounting Association.
- Burns, W.J. (1993). *Why I Use the Case Method to Teach Accounting*. Boston: Harvard Business School Publishing.
- Christensen, C.R., Garvin, D.A & Sweet, A. (1992). *Education for Judgment: The Artistry of Discussion Leadership*. Boston: Harvard Business School Publishing.

- Choi, F. S. (1993, Fall). Accounting education for the 21<sup>st</sup> century: Meeting the challenges. *Issues in Accounting Education*, 8, 423-430.
- Cooper, Robin. (1990, Fall). Cost classification in unit-based and activity-based manufacturing cost systems. *Journal of Cost Management*, 4-14.
- Fischer, M. (1990, Spring). CPA exam influence on classroom testing. *Journal of Accounting Education*, 127-136.
- Flaherty, R. (1979). *The Core of the Curriculum for Accounting Majors*. Sarasota: American Accounting Association.
- Godiwalla, Y. (1998). International business cases: framework for class discussion. *Proceedings of the Society for Case Research (SCR)*. Chicago: SCR.
- Hammond, J.S. (1987). *Learning by the Case Method*. Boston: Harvard Business School Publishing.
- Johnson, M., Johnson, O. & Gagon, R. (1997, May). *Summary Report of the AACSB Undergraduate Curriculum Seminar—Southern Methodist University*. Greensboro: North Carolina A&T State University.
- Keller, T.F. (1993, April). The evolving MBA. *Chief Executive*, 48-64.
- Kimmel, P. (1995). A framework for incorporating critical thinking into accounting education. *Journal of Accounting Education*, 13 (3), 299-318.
- Kinney, W.R. (1990, Fall). Some reflections on a professional education: It should have been more positive. *Issues in Accounting Education*, 6, 293-301.
- Krumwiede, T.& Bline, D.(1997, Fall). Encouraging active learning through the use of student developed problems. *Accounting Educators' Journal*, 9 (2), 116-129.
- Kurfiss, J.G. (1988). Critical thinking: Theory, research, practice, and possibilities. In P. Kimmel (ed.). *Journal of Accounting Education*, (Vol.13, pp.299-318). Newark, DE: University of Delaware.
- Mautz, R.K. (1968). The direction of accounting education. *International Journal of Accounting*, 37-46.
- McKay, Ellen F. (1995, January). Writing across the curriculum. *The Accounting Educator*, 6-7.
- Milne, M.J. & Adler, R.W. (1995, January). Learning to learn in an undergraduate management accounting course: Some instructors' experiences. *Accounting and Business Review*, 2 (1), 125-145.
- Mock, T.J., Pincus, K.V. & Andre, J.M. (1991, Fall). A systems approach to accounting curriculum development. *Issues in Accounting Education*, 6, 178-192.
- North Carolina Agricultural and Technical State University. (1997, August). Bulletin of North Carolina Agricultural and Technical State University – Undergraduate Programs 1997-99. Greensboro: A&T State University.
- Porter, L.W. & McKibben, L.E. (1988). *Management education and Development: Drift or Thrust into the 21<sup>st</sup> Century?* New York: McGraw-Hill.
- Saudagaran, S.M. (1996, Spring). The first course in accounting: An innovative approach. *Issues in Accounting Education*, 11, 83-94.
- Savery, J.R. & Duffy, T.M. (1994, August). Problem based learning: An instructional model and its constructivist framework. *Educational Technology*.
- Schultz, J.(1979). *Accounting Students and Abstract Reasoning*. Sarasota: American Accounting Association.

- Schultz, J. (1997, Summer). President's message. *Accounting Education News Annual Meeting Issue*. Sarasota: American Accounting Association.
- Siegel, G, Kulesza, C. & Sorensen, J. (1997, August). Are you ready for the new accounting? *Journal of Accountancy*, 184 (2), 42-46.
- Tagiui, R. (1995). *Guidelines for Observing and Instructor's Case-Teaching Approach and Behavior*. Boston: Harvard Business School Publishing.
- Ugboro, I., Brewer, B., Anyansi-Archibong, C. & Robinson-Backmon, I. (1998). Sigcom, Inc. In P. Wright, M. Kroll and J. Parnell (eds). *Strategic Management Cases*, (Fourth Edition, pp.124-136). Upper Saddle River, NJ: Prentice Hall.
- Usoff, C. (1997, Summer). Leadership and technical ability: determinants of student project team effectiveness. *Proceedings of the AAA Annual Meeting*. Sarasota: American Accounting Association.
- Williams, J.R., Tiller, M.G., Herring, H.C. & Scheiner, J.H. (1988). A framework for the development of accounting education research. Sarasota: American Accounting Association.
- Wolcott, S. (Forthcoming). Critical thinking development in the accounting curriculum: Focusing on ambiguity in introductory accounting courses. *Federation of Schools of Accountancy*.

**Table 2: Magazine and Journal Articles**

<b>Knowledge Core Coverage And Other Issues</b>	<b>Components of Coverage Content</b>	<b>Title</b>	<b>Publication Details</b>
Complementary knowledge: ---Historical evolution	Innovative manufacturing approaches	<i>Note on the Confrontation Strategy</i>	Cooper, R.1994. In <i>Cost Management in a Confrontation Strategy: Lessons from Japan</i> . Harvard Business School Publishing: pp 5-20.
Conceptual Knowledge: --Cost Techniques	References to and/or comparisons of International and U.S. systems		
Critical Issues	Global Issues	<i>Cost/Management Accounting-The 21<sup>st</sup> Century</i>	Ferrara, J. 1995. <u>Management Accounting</u> . (December): pp 30-36.
		<i>The Tools of Just-In-Time</i>	Deluzio, Mark.1993. <u>Cost Management</u> . (Summer): pp 13-20.
		<i>The Evolution of Quality Control Costs in U.S. Manufacturing</i>	Pasewark, William.1991. <u>Journal of Cost Management</u> .(Spring): pp 46-52.
		<i>Is Japan the Key to Our Future?</i>	Slipkowsky, John.1993. <u>Management Accounting</u> . (August): pp 27-30.
		<i>The Problems of Transfer Pricing</i>	Carter, W., D. Maloney and M.Van Vranken. 1998. <i>Journal of Accountancy</i> . (July). pp 37-40.
Complementary knowledge: ---Historical evolution	Management accounting background	Accounting for Accounting: A Story About Managerial Accounting <i>The Evolution of Management Accounting</i>	Hayes, 1983. <u>Accounting Organizations, and Society</u> . Vol. 8. pp 241-249. Kaplan, Robert. 1984. <u>Accounting Review</u> . (July): pp 304-418.
Critical Issues	Types and Magnitude of Business Fraud	KPMG Fraud Survey	KPMG Forensic and Investigative Services. 1994. (KPMG) Montvale, NJ: pp 1-16.

**Table 2 continued: Magazine and Journal Articles**

<b>Knowledge Core Coverage And Other Issues</b>	<b>Components of Coverage Content</b>	<b>Title</b>	<b>Publication Details</b>
Critical Issues	Types and Magnitude of Business Fraud	KPMG Fraud Survey	KPMG Forensic and Investigative Services. 1993. (KPMG) Montvale, NJ: pp 1-15.
Critical Issues	Business Ethics	Auditing Corporate Ethical Compliance  <i>Survey: Ethics in Corporate America</i> <i>Ethical Compliance at Tenneco, Inc.</i>	Ponemon, Lawrence A. 1995. <u>The Auditor's Report</u> . American Accounting Association: Vol. 18, No.3. (Summer): pp 3-4. Sweeney, Robert B. and Howard Siers.1990. <u>Management Accounting</u> . (June): pp 34-40. Milan, Edgar and Larry Ponemon. 1995. <u>Management Accounting</u> : Vol. LXXVI, No.14. (August): p 59.
Complementary knowledge: ---Math applications Conceptual Knowledge: ---Cost/Quantitative Techniques	Costing Practices	<i>From Activity-Based Costing to Throughput Accounting</i> <i>Designing Your New Cost Management System Is Simple, But Not Easy</i>	MacArthur, John. 1996. <u>Management Accounting</u> . (April): pp 30-38. Pryor, Tom. 1990. <u>Journal of Cost Management</u> (Winter): Vol. 3, No. 4. (Warren, Gorham & Lamont).
	Management Controls	<i>Start with ABC</i> <i>Target Costing at Toyota</i>	<u>Industry Week</u> , September 6, 1993. Tanaka, Takao.1993.. <u>Cost Management</u> . (Spring). pp 4-11.
Complementary Knowledge	Computer Usage---Internet References	<i>The Internet Guide for Accountants</i>	Kogan, A., Sudit, E.F. and Vasarhelyi, M. 1998. New Jersey: Prentice Hall, Inc. pp 1-252.
Complementary knowledge: ---Historical evolution	Transfer pricing	<i>Transfer Pricing in the 1990's</i>	Tang, Roger Y. 1992. <u>Management Accounting</u> . (February): pp 22-26.

**Table 3: Cases**

<b>Knowledge Core Coverage And Other Issues</b>	<b>Components of Coverage Content</b>	<b>Title</b>	<b>Publication Details</b>
Complementary and Conceptual Knowledge	Acquisition and Merger	<i>Salem Savings Bank (SSB)</i>	Anyansi-Archibong, Chi, et al. 1997. <i>African American Enterprises - Casebook</i> . Vol. 1. DE: Delaware State University. pp.13-21.
Critical Issues	Cultural Diversity	<i>Anne Livingston and Power Max Systems Sigcom, Inc.</i>	Gentile M. and P.J. Maus. (Harvard Business School Publishing). Ugboro, Isaiah, et.al. 1998. In <i>Strategic Management Concepts and Cases</i> . 4 <sup>th</sup> Edition. (Prentice Hall) pp 123-136.
Conceptual Knowledge:	Innovative Cost Practices	<i>Cost Management in a Confrontation Strategy: Lessons from Japan</i>	Cooper, Robin.. (Harvard Business School Publishing) – contains 23 cases on Japanese cost/management practices separated into six subsets.
Cost/Quantitative Techniques	Expansion	<i>Cases from Management Accounting Practice</i>	Institute of Management Accountants and American Accounting Association. 1996. 9th Management Accounting Symposium. (IMA) – four cases.
Complementary Knowledge ---Math, Economics	International systems	<i>Arkansas Foods, Inc.</i>	Pendley, J. And P. Tronlinger. 1997. Professor/Practitioner Case Development Program. AICPA Academic and Career Development Division. (AICPA)
	Cost Terms and Concepts	<i>Vincent's Cappuccino Express</i>	<i>Chow, C.W., 1995 . Issues in Accounting Education</i> . (Spring): pp 173-180

**Table 3 continued: Cases**

<b>Knowledge Core Coverage And Other Issues</b>	<b>Components of Coverage Content</b>	<b>Title</b>	<b>Publication Details</b>
Conceptual Knowledge: --Cost/Quantitative Techniques	Acquisition, Expansion and Merger	<i>Should the Scuba Business Dive into the Expansion?</i>	Morris, M. H. And A. M. Crowe. 1997. Professor/Practitioner Case Development Program. AICPA Academic and Career Development Division. (AICPA)
Complementary Knowledge ---Math, Economics	Analytical Models	<i>The New Boeing</i>	Savey, R. N., S. V. Senge, and D. L. Sjogren. 1997. Professor/Practitioner Case Development Program. AICPA Academic and Career Development Division. (AICPA)
		<i>Transfer Pricing</i>	Aranoff, G. 1990. <i>Journal of Cost Management</i> . (Fall). pp 37-43
Conceptual Knowledge and Conceptual Knowledge Critical Issues	Business Ethics	<i>Anne Livingston and Power Max Systems</i>	Gentile M. and P.J. Maus. (Harvard Business School Publishing)
		<i>AES Honeycomb</i>	Paine, L.S. and S. Mavrinac. (Harvard Business School Publishing)
Conceptual Knowledge: --Cost Techniques --Quantitative analysis --History	Product Costs	<i>Implementing Activity-Based Cost Management</i>	Institute of Management Accountants. (IMA). 1997 – eight cases
	Company/industry evolution	<i>East River Manufacturing –A &amp; B</i>	
	Other Costing (litigation and company valuation)	<i>What's it Worth?</i>	Kunz,D.1996. <u>Management Accounting</u> . (January): pp 48-51.
Complementary and Conceptual Knowledge	Potpourri	<u><i>Cases in Management Accounting and Control System</i></u>	Rotch, William, Brandt Allen and Richard Brownlee II. 1996. (Prentice Hall) – Forty one cases
	Financial, auditing, costing issues.	<i>Cases in Cost Management: A Strategic Emphasis Babyboomers, Inc.</i>	Shank, John. 1996. (South-Western College Publishing) – Thirty five cases. Cohen, J.R. and G.M. Trompeter. 1997. <i>Issues in Accounting Education</i> (Fall): pp 413-434.

**Table 3 continued: Cases**

<b>Knowledge Core Coverage And Other Issues</b>	<b>Components of Coverage Content</b>	<b>Title</b>	<b>Publication Details</b>
<u>Critical Issues</u>	Global Topics	<i>Becton Dickinson's "Strategic, Operational and Financial Process Perform, Inc.</i>	Simmons R.L. and A. Mohammed. (Harvard Business School Publishing)
	Strategic Decisions	<i>A New Golf Ball at Wilson</i>	Pray, B. B., R. L. Wyatt and B. Thurman. 1997. Professor/Practitioner Case Development Program. AICPA Academic and Career Development Division (AICPA).
	Integrated financial accounting and product costing	<i>Cases from Management Accounting Practice</i>	Edited by Nanni, A., P.E.Juras and P.A. Dierks. 1998. Institute of Management Accountants. Vols. 12 & 13: pp 1-158. Variety of cases from which to select.
		<i>Startup, Inc.: Linking Financial Accounting, Managerial Accounting and Strategic Management</i>	Ruhl, J.M. and J.G. Kreuze. (1997). <i>Issues in Accounting Education</i> , (Fall).pp 436-456.
		<i>Economic Value Analysis, Inventory Accounting, and the Ambitious Accounting Graduate</i>	Graham, R. C. and R. E. Wiltbank. 1997. Professor/Practitioner Case Development Program. AICPA Academic and Career Development Division. (AICPA)