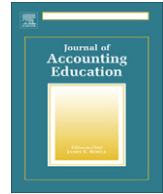




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## Main article

# Accounting education literature review (2006–2009)

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## ABSTRACT

This review of the accounting education literature includes 330 articles published over the 4-year period, 2006–2009, in six journals: (1) *Journal of Accounting Education*, (2) *Accounting Education: An International Journal*, (3) *Advances in Accounting Education*, (4) *Global Perspectives on Accounting Education*, (5) *Issues in Accounting Education*, and (6) *The Accounting Educators' Journal*. This article updates prior literature reviews by organizing and summarizing recent additions to the accounting education literature. These reviews are categorized into four sections corresponding to traditional lines of inquiry: (1) curriculum, assurance of learning, and instruction; (2) educational technology; (3) faculty issues; and (4) students. Each section is further divided by subsections, with empirical and descriptive articles separated within each. Suggestions for research in all areas are presented at the end of the article. In an appendix, additional articles presenting teaching materials and educational cases published in the same six journals during 2006–2009 are categorized by the courses for which they would be appropriate.

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## 1. Introduction

This review of the accounting education literature includes 330 articles published over the 4-year period, 2006–2009, in six journals: (1) *Journal of Accounting Education*, (2) *Accounting Education: An International Journal*, (3) *Advances in Accounting Education*, (4) *Global Perspectives on Accounting Education*, (4) *Issues in Accounting Education*, and (6) *The Accounting Educators' Journal*. The purpose of this review is to organize and summarize the articles added to the body of accounting education literature during the 2006–2009 time period. This literature review is the eighth in a series of accounting education literature reviews first published in 1986. Table 1 summarizes the series of articles and the journals included in each.

Of the 330 articles published, 185 are empirical (i.e., the author(s) present data and/or statistical evidence) and 145 are descriptive (i.e., anecdotal evidence). Eighty-nine instructional cases were published during the 2006–2009 time period. The empirical and descriptive articles are reviewed in the body of this article; the 89 instructional cases are listed in the appendix by topical area. Reviews of empirical articles are necessarily longer than reviews of descriptive articles due to including information about research methods and results, information not included in descriptive articles.

In prior years, non-case articles were approximately 45% empirical and 55% descriptive; however, in this 4-year period the numbers have reversed with 55% empirical and 45% descriptive. One reason for this reversal is that compared to prior years many more primarily descriptive articles contain evidential data about the success of a curricular or instructional approach. Table 2 provides the breakdown of empirical and descriptive articles by journal. More than 700 authors contributed to the accounting education literature during the 4-year period reviewed here, and many authors published more than one article or case.

Reviews of these 330 empirical and descriptive articles are categorized into four sections corresponding to traditional lines of inquiry: (1) curriculum, assurance of learning, and instruction<sup>4</sup>; (2) educational technology; (3) faculty issues; and (4) students. Each section is further divided into subsections, with empirical and descriptive articles separated in each subsection. Suggestions for research for all topical areas are presented in Section 6.2.

## 2. Curriculum, assurance of learning, and instruction

This section covers the following topics: overall curricular issues, assurance of learning, 150-h curriculum, graduate programs, core competencies, instructional approaches, and specific content areas of accounting information systems, auditing and forensic, ethics and professional responsibility, financial, managerial and cost, taxation, international and governmental accounting, business law, and historical perspective of accounting.

Accounting researchers actively pursued curricular and instructional issues during 2006–2009, with 87 empirical articles and 100 descriptive articles published during this period. The articles overwhelming tend to be at one institution in one type of course. A major thrust during the period is that accounting researchers document curriculum and curricular changes. A large number of articles deal with auditing and forensic topics and about ethics and professional responsibilities, which reflect the emergence of forensic programs and faculty and practitioner concern about ethics. Also, many articles address cooperative learning, groups, teams, communication skills development, and mentoring, all of which are topics of interest to accounting faculty.

### 2.1. Overall curricular issues

Mangion (2006) investigates the extent of social and environmental accounting coverage in Australia. Survey evidence for accounting faculty members at 38 institutions (of 39 accredited institu-

<sup>4</sup> In prior iterations of this accounting education literature review series, *assurance of learning* was categorized as *assessment* in its own major section. Because of the small number of articles on the topic published between 2006 and 2009, it now appears as a subsection along with curriculum and instruction.

**Table 1**

Accounting education literature review series and included journals.

Panel A: Accounting education literature review series						
Pre-1985	Rebele and Tiller (1986)					
1985–1991	Rebele, Stout, and Hassell (1991)					
1991–1997	Rebele et al. (1998a, 1998b)					
1997–1999	Apostolou, Watson, Hassell, and Webber (2001)					
2000–2002	Watson, Apostolou, Hassell, and Webber (2003)					
2003–2005	Watson, Apostolou, Hassell, and Webber (2007)					
2006–2009	Apostolou, Hassell, Rebele, and Watson (2010)					
Panel B: Journals reviewed						
	1991– 1997	1997– 1999	2000– 2002	2003– 2005	2006– 2009	Issue years included in current article
<i>Journal of Accounting Education</i>	✓	✓	✓	✓	✓	2006–2009
<i>Accounting Education: An International Journal</i>	× <sup>a</sup>	✓	✓	✓	✓	2006–2009
<i>Advances in Accounting Education</i>	✓ <sup>b</sup>	✓	✓	✓	✓ <sup>e</sup>	2007–2009
<i>Global Perspectives on Accounting Education</i>	× <sup>f</sup>	× <sup>f</sup>	× <sup>f</sup>	✓	✓	2006–2009
<i>Issues in Accounting Education</i>	✓	✓	✓	✓	✓	2006–2009
<i>The Accounting Educators' Journal</i>	✓	✓	× <sup>f</sup>	× <sup>d</sup>	✓	2003, 2006–2009
<i>Accounting Perspectives</i>	✓	× <sup>c</sup>	× <sup>c</sup>	× <sup>c</sup>	× <sup>c</sup>	
<i>Accounting Education: A Journal of Theory, Practice and Research</i>	✓	× <sup>f</sup>	× <sup>f</sup>	× <sup>f</sup>	× <sup>f</sup>	

<sup>a</sup> Only US journals summarized prior to 1997.<sup>b</sup> Formerly *Accounting Education: A Journal of Theory, Practice, and Research*.<sup>c</sup> No longer primarily education-related articles.<sup>d</sup> Omitted inadvertently; included in current review.<sup>e</sup> No issue in 2006.<sup>f</sup> No issues published.**Table 2**Journals and article types by section.<sup>a</sup>

Topical area	JAE <sup>d</sup>		AAE		AE		AEJ		GP		IAE		All Journals		
	D	E	D	E	D	E	D	E	D	E	D	E	D	E	Sum
Curriculum, assurance of learning, and instruction	13	10	12	17	40	26	6	8	3	5	26	21	<b>100</b>	<b>87</b>	<b>187</b>
Educational technology		4	1	1	2	5		3		1		1	<b>3</b>	<b>15</b>	<b>18</b>
Faculty issues	1	5		3	22	8		5	1	1	9	11	<b>33</b>	<b>33</b>	<b>66</b>
Students		8	1	3	6	26		5		2	2	6	<b>9</b>	<b>50</b>	<b>59</b>
Journal Total	14	27	14	24	70	65	6	21	4	9	37	39	<b>145</b>	<b>185</b>	<b>330</b>

<sup>a</sup> JAE<sup>d</sup>, *Journal of Accounting Education*; AAE, *Advances in Accounting Education*; AE, *Accounting Education: An International Journal*; AEJ, *Accounting Educators' Journal*; GPAE, *Global Perspectives on Accounting Education*; IAE, *Issues in Accounting Education*; E, empirical articles report the results of data collection and analysis (including survey-based, archival, experimental, and quasi-experimental research); D, descriptive articles either review literature or describe an issue and/or include suggestions for improvement. This table excludes articles classified as instructional resources or educational cases.

tions) is presented. Data for 67 respondents (of 538 surveyed), a response rate of 12.5%, representing 30 institutions are used. A majority of the respondents (35 of 67) are directly involved in teaching social and environmental accounting. Social and environmental education topics are offered in three institutions as standalone subjects; in 22 institutions the topics are covered in various classes. Mangion compares the Australian results to comparable surveys in Continental Europe and the UK. The survey documents the prevalence of 12 topics, with social accountability being the most referenced, and also provides information regarding why the institution offered coverage of social and environmental accounting topics. The article provides accounting educators with descriptive information about social and environmental education in one country.

Carr, Chua, and Perera (2006) report on a survey of 1995–2003 undergraduate accounting graduates of Massey University in New Zealand, with 233 usable responses (response rate of 25.3%). The

questionnaire addresses the alumni expectations of university accounting programs regarding curriculum content and topic emphasis. Mean responses indicate that accounting, business, and liberal arts components should receive 53.8%, 31.3%, and 14.9% coverage in the curriculum. The recommended coverage is broken down by subtopic and respondent group (in an accounting firm, not in an accounting firm, and unemployed). The results are contrasted with percentages promulgated by professional bodies in New Zealand and elsewhere.

Johnson, Schmidt, Teeter, and Henage (2008) examine whether curricular recommendations by Albrecht and Sack (2000) are generalizable. The authors report about a survey administered to 110 employers (57.3% usable response rate) of accounting graduates regarding 37 topics related to knowledge, skills, and technology abilities critical to hiring decisions. Rankings of the importance of the knowledge and skills differ across types of employers and between large, national, and international employers versus small, local, and regional employers. Johnson et al. conclude that the Albrecht and Sack (2000) findings are best interpreted at the institutional level.

Malgwi (2006) studies students at one university in the US about whether evidence exists to support offering a separate introductory accounting course for accounting majors (including finance and accounting information systems majors). Results of a web-based survey (pre- and post-course) in fall 2003 to sophomores enrolled in the introductory accounting course ( $n = 796$  in 27 sections with a usable  $n = 333$ ) are used. Results suggest no perceived need to segregate accounting majors in a more substantive introductory course, even though accounting majors perceive the course to be more important to their major than do nonaccounting majors.

Jackling and De Lange (2009) investigate whether a gap exists between what accounting graduates perceive they learned and what employers expect them to know with regard to both technical and generic skills. The Australian study uses 12 human resource managers (42% response rate) and 174 alumni (27% response rate). The employer group is evaluated with a semi-structured personal interview technique. The alumni group uses a survey of competencies perceived as learned in college (five-point scale). Both groups agree that technical skills are appropriately addressed in college. In contrast to the alumni, the employers perceive that four areas require more emphasis: (1) team skills, (2) leadership, (3) verbal communication, and (4) interpersonal skills.

Fleischman and Schuele (2006) provide (1) a reading assignment about environmental accounting and (2) results of a pre- and two post-“awareness” surveys administered to students at one university in the US. A total of three surveys are used ( $n = 164$ ): 92 students from the accounting principles I sections and 72 students from the other accounting courses in which the primer is class tested. Results indicate that the reading assignment and related class discussion increase the accounting students’ self-reported awareness of and concern for the importance of environmental action. About 50% of the students believe that the environmental accounting topic is an appropriate use of class time.

### 2.1.1. Descriptive articles

Lavoie and Rosman (2007) describe how the Resource-Enriched Learning Model (RELM), which is a student-centered approach to faculty development and course design, has been applied by the authors to develop a Master’s of Science in Accounting Program. The article also provides instructional design, examples, and qualitative or quantitative evidence of success. Reckers (2006) provides history regarding accounting regulation coupled with his personal observations regarding the academic responsibilities of the American Accounting Association and the National Association of State Boards of Accountancy (NASBA). His commentary is in response to NASBA’s ill-received 2005 curriculum proposal. Leauby and Wentzel (2007) explain how an integrated managerial accounting and financial management course adds value by showing students the importance of the close relationship between the two disciplines. The authors outline La Salle University’s curriculum, course content, benefits, and conclusions drawn. Cohen and Holder-Webb (2006) respond to criticisms that accounting scholarship and teaching are becoming irrelevant to business. They stress the importance of embracing ethical obligations to society as part of the research methodologies employed.

Jackson and Durkee (2008) emphasize the importance of implementing information literacy into the accounting curriculum. Thompson, Fernandez, Budnik, and Boston (2008) describe a panel discussion hosted by the Accounting Program Leadership Group (APLG) of the American Accounting Association at its 2006 annual meeting, with four representatives, each from one of the Big-4 accounting

firms. Panel session topics include special knowledge and skills needed by graduates, value of a stand-alone ethics course, and how changes in the environment have altered the practice of accounting.

## 2.2. Assurance of learning

Despite the intense focus on assurance of learning (AOL) by accreditation bodies (e.g., AACSB), there was a dearth of research on this topic for the period of the current literature review. Two articles describe AOL programs that would be useful for faculty endeavoring to create or improve one. Other articles focus on the usefulness of alternative in-class assessment practices.

Bible, Simkin, and Kuechler (2008) compare multiple-choice (MC) questions to constructed-response (CR) questions to determine whether they assess the same learning. The sample covers four semesters for a total of 238 students in intermediate accounting at one large US university. Correlation analysis suggests that the MC and CR examination formats measure the same level of understanding. A separate study regarding the influence of gender finds that females have a 4% advantage over males on CR questions.

Lusher and Iossifova (2009) report on the design of an outcomes assessment model that consists of four stages: (1) design, (2) measures, (3) reports, and (4) changes. Results of a self-designed survey mailed to 786 university administrators of accounting programs ( $n = 102$ , 13% response rate) are used. The survey results reveal that the model is favorably viewed by the respondents. Faculty interested in formalizing an assessment structure may benefit from the proposed model.

### 2.2.1. Descriptive articles

Beard (2007) proposes a method of assessing students' knowledge and fulfillment gained from an internship. Campbell and Hill (2007) describe how Kennesaw State University implemented an AOL process through the use of structured systems methodology. The article provides background, strategies, objectives, methodologies, and comments to assist others in developing a similar model. Blayney and Freeman (2008) describe an automated approach that allows teachers to deliver individualized questions to students and that permits students to receive individualized help and feedback. Gammie and Joyce (2009) describe a program to assess specific professional competencies as a part of certifying new professional accountants. This program was implemented in 1999 by the Institute of Chartered Accountants in Scotland and reviewed in 2004. The results of the review and recommendation to certifying agencies are presented.

## 2.3. 150-h curriculum

Allen and Woodland (2006) examine the association of the 150-h requirement with the number of Uniform CPA Exam candidates, exam pass rates, and number of candidates passing the exam.<sup>5</sup> Regression analysis is used for the time period of 1991–2002, including 50 states and three US territories. The authors' analysis suggests that the 150-h requirement is associated with (1) a significant reduction in candidates passing the CPA exam, (2) fewer CPA exam candidates, and (3) fewer new CPAs. The study uses data during the widespread implementation of the 150-h requirement and concludes prior to the implementation of the computerized testing environment. However, the results are important for parties who may be re-examining the need for the 150-h requirement.

Duncan and Schmutte (2006) report the results of a survey of 894 heads of accounting programs at US institutions ( $n = 231$ , 28% response rate) regarding (1) the importance of the Accounting Education Change Commission (AECC) recommendations and the 150-h legislation in motivating accounting program changes; (2) how programs have been structured to meet the 150-h requirement; (3) concentrations offered in the programs; and (4) actions used in developing 150-h programs. The authors provide descriptive information related to these questions. For example, most programs that evolved to meet the 150-h requirement are 4 + 1 programs, and larger AACSB accredited schools tend to offer more concentrations.

<sup>5</sup> The content specification outline for the Uniform CPA Exam was updated July 1, 2011: <http://www.aicpa.org/BecomeACPA/CPAExam/ExaminationContent/ContentAndSkills/Pages/default.aspx>.

Boone, Legoria, Seifert, and Stammerjohan (2006) examine Uniform CPA Exam pass rates of graduates from 520 different accounting programs (43,711 first-time candidates) for exams during 1998 and 1999. Correlation and regression analyses are conducted where pass rate is the dependent variable. The results, which are consistent with other pass rate research, show that students from selective schools, those with advanced degrees, and the 150-h requirement are positively associated with improved pass rates. The findings contradict those reported by Allen and Woodland (2006).

Gramling and Rosman (2009) study the supply shortage of accountants by comparing CPA candidacy rates in 120-h and 150-h states. The data are from the Integrated Postsecondary Education Data System (IPEDS). Enrollment data from 1980 and 2002 are compared. The results show a similar decline in both jurisdictions, although the 150-h jurisdictions boast a higher CPA exam pass rate. The authors conclude that the 150-h requirement is not the cause of the decline in the supply of accountants.

## 2.4. Graduate programs

Samuels, Lowe, and Finger (2009) describe a 30-h post-baccalaureate certificate program in accountancy designed for nonaccounting majors. A total of 25 traditional US universities are identified as offering such a program. Information on 22 of the 25 programs is gathered and analyzed. The benefits (revenue source to the provider and lower-cost alternative for the student) and curriculum design issues are described, including criteria that may lead to a successful program. The program is a practical way to increase the supply of qualified entry-level accountants.

### 2.4.1. Descriptive articles

Burns (2006) discusses the design evolution of a graduate capstone accounting course over 3 years in response to input from stakeholders. Materials that may assist other schools considering use of a capstone accounting course in their graduate or 150-h program are included. Pastra (2009) discusses the challenges of teaching in an executive MBA program including student complaints, most of which are related to case and group work. Young (2008) outlines Florida Atlantic University's establishment of an executive master's program in forensic accounting by describing the program, implementation of the model curriculum, and challenges faced.

## 2.5. Core competencies

Fleming, Romanus, and Lightner (2009) investigate whether the professional context (auditing versus corporate accounting) of ethical dilemmas is associated with students' moral reasoning. Four ethical dilemmas are presented in a  $2 \times 1$  between-subjects design to 101 accounting seniors at one university. Four audit cases developed by Thorne (2000) are adapted to create the four corporate accounting cases, which are provided in the appendix to the article. Moral reasoning scores are higher on audit-based dilemmas, suggesting that the students are not able to transfer audit-based ethical knowledge to non-audit accounting contexts.

Matherly and Burney (2009) describe a framework that can be used in accounting courses to improve students' writing. The framework is used in different courses at two universities. Writing guidelines and rules are included in the teaching note. Writing assignments are keyed to the course, and student peer-review is part of the framework, which includes writing, extensive feedback, and re-writing. Writing improves significantly in the revised assignment.

Lynn and Vermeer (2008) describe a workplace writing improvement program implemented at the University of Baltimore. Accounting students completed a total of six business memos over two semesters. In intermediate accounting I the memos deal with adjustments from cash to accrual basis, revenue realization, and bad debt expense; in intermediate accounting II the memos deal with capital versus revenue expenditures, effective interest method, and adjustments to convert a client from cash basis to accrual basis. In each case, the writing assignments represented 15% of each student's course grade. Members of the business advisory board provide feedback on two of the writing assignments, which were on the same cash-to-accrual topic. Board members use several scales to measure organization, style and tone, spelling, punctuation, and grammar. Comparing mean responses, board members rate three of seven organizational variables, two of three style and tone variables, and three of four appro-



priateness/technical correction variables as being significantly higher in the second memo (from intermediate II). The authors conclude that student assignments could improve technical writing over time.

Schmidt, Green, and Madison (2009) report about a survey of 530 accounting program administrators ( $n = 122$ ; 23% response rate) regarding the perceived importance of the following communication skills in the accounting and business curricula: writing, speaking, listening, interpersonal, and technological. All skills are rated as important (over 4.0 on a 5.0 scale) for both accounting and business majors, with listening rated as most important. Information is reported for public/private and AACSB/non-AACSB schools.

Miller and Stone (2009) describe interventions to lessen public speaking apprehension in master of accountancy students at one institution. Data for interventions in three consecutive years ( $n = 23$ , 14, and 36, respectively) are used. Based upon self-determination theory, the interventions are motivational interviewing-based. Pre- and post-test measures are related to public speaking affect. The authors report that the interventions were successful in improving public speaking motivation and skill and in reducing public speaking apprehension.

### 2.5.1. Descriptive articles

Riordan, Riordan, and St. Pierre (2008) acknowledge the lack of consideration that the discipline of accounting has placed on “groupthink” and offer suggestions to counteract it. Hayes, McGilsky, and Lepisto (2007) describe how the Central Michigan University MBA concentration in management consulting fulfills the AICPA’s competencies and meets the 150-h requirement because of the curriculum, philosophy and competencies it fosters. Kennedy and Sorensen (2006) describe organizational techniques to help teams function effectively. The authors present a framework for problem-solving along with verbal analysis tools and an illustration of how each contributes to decision making in the framework. Tonge and Willett (2009) describe an assignment in which senior undergraduates in the UK are required to write a journal-quality article. Sample assignments, a grading sheet, and 4 years of student results are presented for this assignment. Critical thinking, self-criticism, and reflection are enhanced through the process.

## 2.6. Instructional approaches

### 2.6.1. Group learning, cooperative learning, and internships

Dyball, Reid, Ross, and Schoch (2007) report on a survey of 569 Australian students (80% response rate) in a second-year management accounting course about the perceived benefits of working on group projects. The results validate prior research by affirming positive student perceptions about the learning benefits of group work. The authors include the survey in an appendix.

Reinig, Whittenburg, and Horowitz (2009) examine quiz performance in the readiness-assurance process (RAP) of team learning. RAP requires students to take a quiz individually, which is weighted more in their grade computation, and then again with a small group. The process affords each student an opportunity to adjust the original answers. Students enrolled in an upper-level accounting course ( $n = 101$  with 22 teams) are used. The primary focus is to study answer-switching behavior; thus 14,448 observations are gathered during the semester from the six quizzes offered both individually and in groups. Findings indicate that group disparity does not affect answer-switching behavior. However, lower performers tend to switch from wrong to right answers as a result of RAP. Thus the lower-performing group is perhaps most likely to benefit from the technique.

Sathe (2009) investigates whether a cohort-based graduate program at a private university in the US could successfully develop interpersonal and teamwork skills. The research method includes semi-structured interviews, observations, and documentation of internship experiences. Data show that students view development of interpersonal skills and teamwork as important outcomes of the cohort model. This small sample study ( $n = 19$ ) affirms anecdotal evidence about the value of a well-supervised graduate cohort in accounting.

van der Laan Smith and Spindle (2007) study the impact of group composition in a cooperative-learning setting. Instructor-formed heterogeneous groups are compared to self-selected groups in terms of (1) academic performance and (2) student perceptions of the experience. Heterogeneity is based on the dimensions of gender, declared major, ethnicity, and hours worked per week. Subjects

( $n = 80$ ) are sophomore business students. The significant finding is that self-selected groups may increase the effectiveness of cooperative learning, which challenges the conventional wisdom of instructor-imposed heterogeneity. Students also perceive that self-selected groups are more effective at promoting individual learning.

Gabbin and Wood (2008) replicate Hite's (1996) study of the effectiveness of group exams that permit the exam-retake cooperative learning strategy (i.e., students take individual exams and then re-take the exams in a group). Gabbin and Wood study 68 students enrolled in a financial accounting course and fail to find a significant difference between student performance by those who engaged in the exam re-take and those who did not. This finding is inconsistent with Hite's results and questions whether faculty should invest the additional time required to manage the exam re-take.

Gammie and Matson (2007) evaluate the benefits of a group assessment project in a tax course in the final year of a finance/accounting degree in the UK. Data ( $n = 47$ ) include questionnaire responses, peer assessment, student performance records, and a standard university evaluation (this last item completed by only 23 of the original sample). Significant findings include (1) grades on group work are higher than on individual assignments, and (2) peer assessment does not provide meaningful feedback. Suggestions for improving the quality of peer assessment are offered.

Hwang, Lui, and Tong (2008) replicate and extend prior research on the benefits of cooperative learning strategies in a traditional passive-learning environment ( $n = 110$  students). A  $2 \times 2$  between-subjects experimental design is used with two independent variables: (1) teaching method (cooperative learning or traditional lecture), and (2) knowledge level (application or analysis). Students in the cooperative-learning group significantly outperform the traditional-learning group on assessment scores at both knowledge levels. Assessments are made at the individual versus group level to minimize the free-rider problem sometimes evident in group settings.

Fox and Stevenson (2006) assess the effectiveness of peer mentoring with accounting and finance students at the University of Dundee. The objective of the peer-mentoring project (called MAP) is to assign academically at-risk students (mentees) to work with a student mentor on writing skills, study techniques, and exam preparation. Results show that students in the MAP program ( $n = 26$  in year one;  $n = 24$  in year two) outperform those in the non-MAP program ( $n = 35$  in year one;  $n = 54$  in year two). Separate focus groups with mentees and mentors reveal that both groups benefit from the MAP program.

Ballantine and McCourt Larres (2007) evaluate the effectiveness of group work at developing teamwork, self-management, planning, and organization skills. The results of a questionnaire are used for students ( $n = 84$ ) in a managerial accounting course to measure attitudes about group assessment and the use of learning logs. Results show that students have a positive attitude about the use of group assessment and skills development related to the group experience. However, students' attitudes about the use of group and individual learning logs are negative. The study provides support for the use of cooperative group learning to enhance essential career skills.

Ballantine and McCourt Larres (2009) compare perceptions of learning outcomes between accounting students in a traditional versus cooperative learning setting in the UK. The research design seeks student perceptions about their interpersonal and communication skills during their final year of undergraduate study. Two years of data ( $n = 79$  and  $n = 73$ ) are collected and analyzed. A Mann-Whitney  $U$  test is applied to observe any differences between the traditional and cooperative learning groups. The latter is perceived as having higher learning on all but one of 10 dimensions, conflict-resolution skills.

Cable and Healy (2007) report about telephone interviews conducted with a random sample of 50 administrators at US institutions with AACSB-accredited accounting degree programs to identify key characteristics of student internship programs. Analysis is based on 45 of the 50 schools surveyed that offer internship experiences. The survey reveals that all of the programs are optional; students are compensated; and most offer academic credit, with three credit hours the norm.

Beck and Halim (2008) conduct an exploratory study with 250 students in Singapore to identify learning outcomes from internship experiences. Data come from a 50-item questionnaire (five-point scale) about perceptions of their learning. Factor analysis identifies three key learning outcomes: (1) adaptability, (2) interpersonal skills, and (3) working under pressure. Interns maintain a logbook, which students report aided in the acquisition of these outcomes. Analysis is presented that suggests the logbook aids in reflective learning.



Martin and Wilkerson (2006) investigate how an internship experience alters a student's perceptions about knowledge (e.g., improved understanding of the discipline, new insights) and attitude (e.g., confidence, motivation). Responses from a questionnaire (five-point scale) are used, administered pre- and post-internship ( $n = 132$ ) to students in the Master of Science in Accountancy program at Wake Forest University. The results reveal that the internship experience creates positive perceptions regarding knowledge about accounting, level of business sense, level of confidence, and the value of completing an internship.

Surridge (2009) studies whether internship students have better academic performance than their non-internship counterparts. Three years of data at one university in the UK are analyzed with respect to entrance scores and exam scores at the end of each of the 3 years for undergraduate accounting majors. The sample size varies depending upon group examined and which year, but ranges from  $n = 115$  to  $n = 184$ . The results suggest that internship students achieved higher scores in their final year of study.

**2.6.1.1. Descriptive articles.** Woodland (2009) provides a framework for implementing service learning into the graduate auditing course, including a six-period schedule and discussion questions. Latham (2009) describes a project in which students collaborate with business professionals to solve a realistic problem. Provided are project assignment and deliverables schedules, implementation guidelines, evaluation measures, and feedback from students and professionals, which are useful for both accounting information systems and auditing courses. Jackling and McDowall (2008) demonstrate the effectiveness of a peer-mentoring program among undergraduate accounting majors at an Australian university and provide detailed materials for faculty considering a similar approach. Bryant and Albring (2006) review nonaccounting literature (e.g., sociology, industrial psychology, organizational behavior) on team building to provide guidance to accounting educators who wish to incorporate effective team-building activities in accounting courses. Lipe (2006) attempts to increase the accessibility to cases published in *Issues in Accounting Education* by providing eight categorized tables with references to applicable cases. Chiang (2008) describes community service learning activities for a management accounting course. Clinton and Smith (2009) describe how to give students ownership of their group learning by affording them the opportunity to develop their own contracts and peer-evaluation mechanisms. Examples from actual class experiences are presented.

#### 2.6.2. Other instructional approaches

Kennedy and Dull (2008) report about a survey of 135 students (107 undergraduate, 28 graduate) regarding the exposure to and use of teamwork skills: seven organization techniques (e.g., establishing roles), and six analysis techniques (e.g., brainstorming). The article provides information about the students' familiarity with, training in, and use of the organization and analysis techniques.

Nouri and Shahid (2008) evaluate the effect of providing PowerPoint lecture notes in two sections of accounting principles II, one section with PowerPoint notes provided ( $n = 23$ ) and one without notes provided ( $n = 29$ ). No difference in exam performance is found. However, students who do not receive the PowerPoint notes rate the instructor as significantly more effective and efficient and more responsive to student needs.

Shoulders and Hicks (2008) describe and evaluate the teaching model ADEPT, Analysis of Diagnostic Exam Prompted Teaching and Learning Cycle, in intermediate accounting I. An exploratory study is conducted to compare ADEPT ( $n = 31$ ) and traditional learning environments ( $n = 33$ ). The authors find that ADEPT students perform better on tests in intermediate accounting I and in the subsequent intermediate accounting II course. The latter finding hints that ADEPT may aid in knowledge retention, which indicates that expanded research about its efficacy is appropriate.

Edmonds and Edmonds (2008) investigate whether student response system (SRS) technology increases academic performance. SRS technology promotes active learning by having students communicate with the instructor using wireless response pads. A control group consists of 275 students in three sections of introductory managerial accounting, and a treatment group consists of 279 students in three sections of the same course the following year. The instructional material used in both years and taught by one teacher is the same. Results show that SRS technology is positively associated with increased scores ( $p = 0.0004$ ); those with lower GPAs are aided the most.

Samkin and Francis (2008) introduce the use of learning portfolios into a third-year financial accounting class at University of Waikato, New Zealand. The purpose of learning portfolios is to help students develop a deep approach to learning through critical and creative thought and by tracking their own learning throughout the course. The authors offer an extensive description of the learning portfolio items (e.g., personal journal, summary and reflection, background knowledge probe). Student survey responses ( $n = 80$ , 49% response rate) indicate the learning portfolios are not popular because the emphasis on reflection is perceived as tedious.

Bentley, Brewer, and Eaton (2009) describe a “hot seat” process to motivate students to come prepared for a managerial principles class (six sections) at one Midwestern AACSB-accredited institution. At several points throughout each class, the instructor randomly selects one student voluntarily to be on the hot seat. The student is required to answer a question. If answered incorrectly, another student is on the hot seat. Each question is reviewed by the faculty member after being answered by the student. Only those students who participate in the hot seat are eligible to earn bonus points. Student response confirms that the hot seat motivated them to prepare for class.

Webb, De Lange, and O'Connell (2009) provide extensive information about a 2007 international study tour designed for accounting students at Australia's RMIT University. Grounded in experiential learning, the purpose of the international tour is to study international accounting standards (IFRS and US GAAP) and to visit several countries (e.g., Germany, France, Great Britain) and business organizations to discuss how accounting standards were being implemented in those settings. Questionnaire responses from 49 of 63 students provide positive feedback regarding 15 items. Cost is identified as the only hindrance to an experience that leads to a global and life experience otherwise unavailable in the classroom.

Lindquist and Olsen (2007) investigate test scores and students' satisfaction associated with offering assistance (i.e., solutions and check figures) to intermediate accounting students. The sample ( $n = 75$ ) consists of intermediate accounting I students studying the topic of introductory derivative accounting. The study is conducted under experimental conditions in a single 80-min session. Evidence shows no difference in knowledge gains with or without homework assistance. However, homework assistance results in higher student satisfaction (or lower frustration) with the assignment.

Halabi (2006) reports about an experiment that compares the value of the rich (verification and elaboration) and basic (verification only) forms of feedback to students in the introductory accounting course using computer-based learning materials. The expectation is that rich feedback is better than basic feedback, and that prior knowledge affects the gains made by feedback. The sample consists of 86 students enrolled in an introductory accounting course at a large Australian university. No difference in feedback method effect is found for students with prior subject knowledge. However, the learning benefits of rich feedback to students with no prior knowledge in accounting are significant.

Fordham and Hayes (2009) investigate the association of paper color with student quiz performance: 4000 quiz scores at one institution over 10 years for five instructors in financial and managerial principles of accounting courses are used. White and four pastel paper colors are used (yellow, green, blue, and pink). After controlling for course, instructor, and gender, students with white and pastel yellow paper score significantly higher. The authors suggest that the use of different colors for exam papers deserves additional research.

Springer and Borthick (2007) examine the association of type of principles class (traditional mastery of concepts versus course incorporating cognitive conflict tasks)<sup>6</sup> with grades in the first, junior-level financial accounting class. Students ( $n = 342$ ) are either transfer ( $n = 193$ ) or non-transfer ( $n = 149$ ) students who had zero, one, or two previous cognitive conflict classes. The control courses are the traditional principles of accounting I and II courses, and two principles of accounting I and II treatment courses that had cognitive conflict tasks. The dependent variable in an ANCOVA analysis is grade on the first “review” exam in the junior-level financial accounting course, while covariates are cumulative GPA, university GPA (transfer students will have a different university and cumulative GPA), GPA in accounting principles I and II, number of months since principles I was taken, age, gender, and credit hours per term. Both GPA and

<sup>6</sup> Cognitive conflict tasks are complex, unstructured problems with no correct answer. They require active learning strategies to resolve conflicting perspectives of stakeholders in the problem.

number of cognitive conflict courses taken are positively associated with exam one grade ( $p = 0.000$  and  $p = 0.002$ , respectively). The authors conclude that taking principles courses that include cognitive conflict tasks is associated with better performance in a subsequent course.

Simon (2007) provides an exhaustive discussion of concept mapping in a financial accounting theory course. A concept map is used to provide a visual representation of a student's comprehension of a topic. Three student-prepared concept maps are presented and analyzed. Results of a questionnaire ( $n = 77$  in cohort A;  $n = 92$  in cohort B) are presented, supporting the contention that students find concept mapping helpful for learning.

*2.6.2.1. Descriptive articles.* Coulson and Thomson (2006) encourage accounting educators to use a dialogical approach, which is useful in facilitating learning by finding solutions through reflexive probing. Kastantin and Novicevic (2008) discuss the obstacles of a learner-centered simulation. Palm (2007) describes how engaging students in active learning tasks improves learning and both student and teacher satisfaction with the classroom experience. Holmen (2008) describes successful and unsuccessful techniques to stimulate discussion in an online quantitative-based course. Carson (2006) supports the use of the tool ORID (Objective, Reflective, Interpretive, Decisional) for improving the quality of conversations in classrooms with students of diverse backgrounds. Basioudis (2008) advocates using surprise tests to increase students' learning. Cunningham (2008) describes how action research<sup>7</sup> can be used to correct specific classroom difficulties. The detailed example provided in the article involves a bored class that is disconnected from the professor. Cunningham argues that action research informs professors who seek formative development and facilitates an improved learning environment. Baker and Logan (2006) promote the use of action research in accounting education and describe "Action Research Project," which is in place to assist educationally challenged accounting and business majors. Thompson, Phillips, and De Lange (2006) suggest a conceptual framework to assess students applying for leniency in grading. Fogarty (2006b) emphasizes the importance of the Colloquium, which enables academicians to exchange ideas and learn new teaching methods.

### 2.6.3. Academic dishonesty

Braun and Stallworth (2009) present students ( $n = 468$ ) and faculty ( $n = 177$ , 13% response rate) with several vignettes regarding academic honesty. Vignettes reflect honest behavior, dishonest behavior, or "grey area" behavior. Students respond using a five-point scale (1 = academically dishonest behavior, ... 5 = academically honest behavior). Faculty members are asked their perceptions of how their students would respond. Differences are noted only in "grey area" situations in which faculty did not accurately predict how their students would respond. The authors suggest a dialogue between faculty and students to discuss appropriate responses in "grey area" situations.

Smith, Davy, and Rosenberg (2009) examine the role of academic motivation on cheating behavior of accounting majors. The authors report the results of a survey of 701 accounting students at three universities using self-reported data about intrinsic motivation, extrinsic motivation, amotivation (i.e., the absence of motivation), academic performance, prior cheating, neutralization, and likelihood of cheating. Using a modified version of the cheating model from Smith, Davy, Rosenberg, and Haight (2002) and structured equation modeling (SEM), the authors find significant positive associations between amotivation and prior cheating, likelihood of cheating, and neutralization (i.e., rationalizations and justifications for unethical/dishonest behavior). The descriptions of the relations in the SEM are discussed.

McGowan and Lightbody (2008) describe a process for helping to educate students about plagiarism. Second year accounting students ( $n = 304$ , over 2 years, response rate 53–60%) in Australia respond to an essay and identify and correct deliberate instances of plagiarism. Students then prepare their own correctly referenced essay on the accounting topic. In a follow-up anonymous survey, students note a significantly higher understanding of plagiarism.

Choo and Tan (2008) investigate the relation between the fraud triangle factors and students' propensity to cheating. The authors report the results of a full-factorial, within-subjects design, for

<sup>7</sup> Action research is an iterative approach to learning that involves data collection, reflection, and adjustment to the learning environment based on the reflection. The cycle repeats throughout the course.

182 undergraduate students, with eight vignettes about student cheating using the three fraud triangle variables (i.e.,  $2 \times 2 \times 2$  design, with each factor present or absent). Students' self-reported mean propensity to cheat was 19.8%, ranges from 8.3% (factors absent, absent, absent) to 33.0% (factors present, present, present) in the eight groups. Using propensity to cheat as the dependent variable, all three fraud triangle variables are significant ( $p \leq 0.003$ ), and the three-way interaction is significant ( $p = 0.016$ ).

Abdolmohammadi and Baker (2007) investigate the relationship between moral reasoning (as measured by the DIT) and plagiarism (as measured by percentage of words copied without attribution), using students in three undergraduate courses ( $n = 58$ ) and three graduate courses ( $n = 78$ ). The authors use work at the beginning and end of the semester. The authors describe how they made the assignments, gathered data, and determined the degree of plagiarism. The dependent variable is the proportion of text plagiarized; control variables include the score on the DIT (P-score) (significant and negative,  $p = 0.049$ ), age (not significant), GPA (significant and negative,  $p = 0.001$ ), and a dummy variable for beginning/end of the semester (significant,  $p = 0.009$ ). The authors note that plagiarism is inversely related to the score on the DIT and to GPA, and it is significantly higher at the end of the semester than at the beginning, perhaps as a result of end-of-semester pressure.

## 2.7. Specific content areas

### 2.7.1. Accounting information systems (AIS)

Rezaee, Lambert, and Harmon (2006) perform content analysis on 79 e-commerce syllabi, obtained from websites of business schools (80% US, 20% other countries) available in fall 2004, to explore the scope and nature of e-commerce topics in extant courses. Analysis of the syllabi is focused on six key dimensions: (1) course title, (2) curriculum level, (3) description and objectives, (4) structure, (5) content, and (6) reference materials.

2.7.1.1. *Descriptive article.* Hill (2007) discusses the value of various AIS learning objectives that can be met by using transaction-processing software in AIS courses and provides suggestions for obtaining software as well as disadvantages and advantages of using various software packages.

### 2.7.2. Auditing and forensic accounting

Smith and Crumbley (2009) report the results of an email survey to 111 faculty members in the US who teach fraud auditing or forensic accounting courses, yielding a 38% response rate ( $n = 40$ ). The survey consists of 31 questions aimed at describing the fraud/forensic courses. Content analysis is performed on syllabi submitted along with the survey responses. The consensus derived from the analysis is that accounting programs tend to characterize the sub-discipline as "fraud examination" as opposed to the broader study of forensic analysis and litigation support.

LaSalle (2007) reports on two studies that explore whether asset misappropriation risk assessments made by students are affected by a model that students were exposed to prior to making the risk assessment. The two models addressed in the study are (a) COSO and (b) fraud triangle. The subjects are undergraduate students in a fraud examination course ( $n = 214$ ). Findings strongly suggest that exposure to the fraud triangle results in better risk assessments (fewer Type I and Type II errors) than the COSO group.

McDuffie and Smith (2006) describe the use of an expert system, AUDPORT, which is used as a teaching aid in introductory auditing at two US universities. Students are randomly assigned to a group that either use ( $n = 36$ ) or do not use ( $n = 35$ ) AUDPORT to assist in finding answers to complex audit reporting issues. Students using AUDPORT score significantly better than those who did not use AUDPORT, indicating that student learning about audit reporting appears to improve with the expert system application.

2.7.2.1. *Descriptive articles.* Curtis (2008b) describes how Utica College initiated its Economic Crime Investigation major, Master of Science degree in Economic Crime Management, and Master of Business Administration degree program in Economic Crime and Management with its model curriculum, certificate program, and the establishment of the Economic Crime Institute. Kresse (2008) presents the

six stages of development for Saint Xavier University's graduate program in Financial Fraud Examination and Management. Fleming, Pearson, and Riley (2008) report on West Virginia University's addition of a four-course graduate certificate in forensic accounting.

Curtis (2008a) illustrates a model fraud and forensic accounting curriculum that includes criminology and law, legal and regulatory environments, and ethics. Heitger and Heitger (2008) argue for the incorporation of forensic accounting and litigation advisory services into the curriculum by showing the current US environment, the role of accountants in that environment, and the impact of litigation and expert witnessing on curriculum. Ramamoorti (2008) emphasizes that the relationships among criminology, sociology, and psychology must be included in a fraud and forensic accounting curriculum.

Kranacher, Morris, Pearson, and Riley (2008) describe how to add fraud and forensic accounting courses and curriculum in three main phases by providing (1) background and motivation, (2) the model curriculum, and (3) in-depth course material developed by experts. Pearson and Singleton (2008) describe the increased influence of information technology in fraud and financial crimes and provide background, a forensic accounting model curriculum, discussions on the addition of a course in fraud and forensic accounting in a digital environment, factors of implementation, and the application thereof.

D'Aquila (2008) encourages accounting educators to use Accounting and Auditing Enforcement Releases (AAERs) as a way to emphasize the need for ethics and bring realism into the classroom. Reeder (2007) shares his story of how he creatively teaches his students about SOX. Arens and Elder (2006) describe the implications of SOX on auditing education by showing the impact on the profession and the market and how the curriculum for auditing students is altered. Ballou, Cashell, and Heitger (2008) offer four alternatives for teaching introductory auditing, necessary with the increased complexity associated with multiple standard-setters and client types. Roybark (2008) describes how to teach auditor independence in a one-semester undergraduate auditing class by providing an accounting model and six educational interventions, along with supplemental resources for integration.

### 2.7.3. Ethics and professional responsibility

Madison and Schmidt (2006) study attitudes about ethics education via a survey of accounting department chairs ( $n = 122$ , 23% response rate) for the largest programs in the US and Canada. The responses provide benchmark data about current ethics education. The majority of respondents (70%) believe that ethics topics should be integrated within existing courses as opposed to teaching ethics in a standalone course.

Welton and Guffey (2009) report about a longitudinal study of accounting majors at a single US institution designed to ascertain if educators can influence ethical values and whether those influences persist over time. The participants are students enrolled in a graduate accounting ethics course. Pre-tests at the beginning of the course, post-tests at the end of the course, and post-tests 3 years later ( $n = 27$ , 60% response rate) are used. The Accounting Defining Issues Test (ADIT) is used for both pre- and post-tests. Analysis of the ADIT's P-scores shows improved moral reasoning after a classroom intervention and also 3 years subsequent.

Blanthorne, Kovar, and Fisher (2007) use a web-based survey of US accounting faculty ( $n = 279$ , 11.7% response rate) to investigate attitudes toward ethics education (e.g., should ethics be taught, what should be taught, where should it be taught). The article provides extensive descriptive evidence regarding ethics education that would be useful to curriculum committees and administrators considering whether and how to integrate ethics into the accounting curriculum.

Ghaffari, Kyriacou, and Brennan (2008) report the results of a questionnaire of officials at higher-education institutions in the UK to determine how ethics is incorporated in the accounting curriculum. Findings show that about 81% of institutions surveyed ( $n = 36$ ) include ethics education with the primary delivery embedded within the course (versus standalone course). The results indicate that decisions regarding the nature of the ethics component primarily are driven by professional and accreditation bodies; only 32.2% of the respondents report that financial scandals drive the curricular decision to include ethics education.

Hurt and Thomas (2008) report on a descriptive study about implementation of the required three-semester-hour ethics course for Texas CPA candidates. Three methods are used to obtain data:

(1) analysis of syllabi ( $n = 72$ ) from courses approved by the Texas State Board of Public Accountancy (TSBPA); (2) two separate surveys of instructors of the TSBPA-approved ethics courses; and (3) interviews with TSBPA representatives. The article provides useful information to educators who are developing ethics courses, particularly those attempting to reconcile to or satisfy regulatory requirements.

Shawver (2006) analyzes the impact of a 12-week ethics course required of accounting seniors. The research question is whether case studies can promote a change in a student's ethical awareness ( $n = 27$ , 87% response rate). The DIT-2 moral reasoning assessment tool is used to measure moral reasoning. The author suggests that case studies are useful, but are not sufficient in developing ethical awareness over a 12-week course.

Massey and Van Hise (2009a) describe the process of developing a standalone three-credit accounting ethics course that includes cases, reflective writing, student-led classes, and an interview assignment. Anecdotal evidence reveals high student satisfaction with the course and perceived learning. The complete syllabus is included in an appendix.

Feldmann, Koulisch, Osterheld, and Thibodeau (2007) describe a course about corporate social responsibility and how it might be included into an accounting curriculum. The course includes readings, discussion, a service project, and an externship experience. Students are junior business majors in an honors program at a US institution (the majority of those students are accounting majors). Feldmann et al. report the results of a 17-item student feedback questionnaire ( $n = 51$ ) based upon a five-point scale (strongly agree to strongly disagree). The responses indicate high levels of satisfaction with the corporate social responsibility course.

Guffey and McCartney (2008) investigate the perceived personal importance of an ethical issue (PIE) to individuals. PIE is a construct similar to moral intensity except that the focus is on the traits of the person reacting to the ethical issue as opposed to the issue itself. The authors hypothesize that (1) high levels of PIE would result in great condemnation of an unethical act (and vice versa), and (2) high levels of PIE result in greater unwillingness to behave unethically (and vice versa). Data used are for upper-level accounting students ( $n = 397$ ) at seven large public universities in the US who participated by responding to action statements following brief scenarios that depicted questionable acts in an academic setting. The results strongly support the hypotheses.

Haywood and Wygal (2009) develop a classroom game to instruct students about ethical practice. The game is constructed around the Institute of Management Accountants' (IMA's) *Statement of Ethical Professional Practice* for use in managerial or cost accounting classes; however, the game is transferable to any accounting or auditing class because similar codes of conduct exist. Results for two different student groups are used; survey questions are about their learning from the game experience: (a) authors' university ( $n = 198$ ); and (b) 7th Annual IMA Student Leadership Conference ( $n = 64$ ). The responses demonstrate that students perceive the game adds significant value to their understanding of professional ethics.

Guffey, McIntyre, and McMillan (2009) study the influence of two treatments on how students regard the ethics of earnings management using 86 students enrolled in an intermediate accounting course at a large public university in the US. The experiment covers five successive 50-min class periods. Using a five-point scale, students are asked to rate the ethics and professionalism of hypothetical behavior for 13 business scenarios. Interventions include assigned readings and group processes. The conclusion is that group processing of earnings management cases influences ethical judgments subject to limitations that are described by the authors.

O'Leary (2009) studies the efficacy of teaching ethics to senior accounting majors in a single Australian institution. A survey uses five scenarios for which students select one answer from a list of choices. The research design is (1) a survey is administered at the beginning of the semester ( $n = 155$ ); (2) three different instructional techniques to teach ethical decision-making and delivered; and (3) the same survey is administered 6 weeks after the first ( $n = 118$ ). The mean score improves significantly in four of the five scenarios, suggesting that teaching ethics can improve ethical decision-making.

Delaney and Coe (2008) use a quasi-experimental approach to examine the effectiveness of teaching ethics using a combination of pedagogies. One group serves as a control; the other receives the ethics instructional component (treatment) with a pre- and post-test administered to both groups. The sample consists of 121 students from two universities ( $n = 54$  for the control group;  $n = 67$  for the treatment group). Delaney and Coe adapt the DIT to an accounting environment, which they call



the Accounting Moral Reasoning Test (AMRT). This instrument is used to measure moral reasoning via responses to 12 statements in six moral dilemmas. The AMRT scores for the treatment group improve, while those for the control group decline, leading to the conclusion that ethics instruction in accounting courses improves moral reasoning ability.

**2.7.3.1. Descriptive articles.** Mintz (2006) describes how to create and deliver an ethics course using reflective learning techniques.<sup>8</sup> The author provides a description of the pedagogy, assessment techniques, and course modules. Massey and Van Hise (2009b) discuss the challenge of implementing an ethics course into a Master of Science in Accounting Program including how the course was initially team-taught. Langmead and Sedaghat (2007) describe the design and implementation of a new elective course that covers recent financial developments and crises, including the professional and ethical implications. The authors suggest the course is appropriate for a master's program. Fisher, Swanson, and Schmidt (2007) review ethics requirements by state CPA societies and proposed that a standalone ethics course be required early in the accounting curriculum as a foundation of the accounting degree. Cooper, Leung, Dellaportas, Jackling, and Wong (2008) present an ethics education toolkit to encourage and assist educators to implement ethics requirements in accordance with the call for discussion by the International Accounting Education Standards Board (IAESB).

#### 2.7.4. Financial accounting

Hanson and Phillips (2006) investigate, in two studies, whether the use of analogies enhances learning of financial accounting topics. The first study consists of 79 undergraduate volunteers in a between-subjects manipulation. ANOVA results suggest that a brief in-class exercise using analogy improves initial comprehension as measured by test score on the material. The second study consists of 21 student volunteers who were a subset of the first study and returned to the lab after a 2-week absence and again responded to the same questions from the first study. ANOVA results indicate that learning, as measured by test score, is enhanced when analogy was used to introduce a topic.

Comunale, Sexton, and Gara (2008) report the results of a survey to ascertain whether universities have adopted a preparer- or user-approach to teaching introductory financial accounting. Online survey respondents for 115 deans and department chairs (response rate of 14%) are used. The findings include: (1) one-third of the respondents have adopted a user approach; (2) those choosing the user perspective tend to have a lower proportion of accounting majors in the introductory financial accounting course; and (3) those selecting the preparer approach tend to be more focused on preparing students for professional accounting careers.

Yunker, Yunker, and Krull (2009) investigate whether math ability is related to student performance in principles of accounting courses ( $n = 535$ ). No relationship was found between pre-test math test results and performance in introductory accounting courses, although the test is offered as a means to identify areas for remediation of fundamental math skills.

Munter and Reckers (2009) report the results of a survey ( $n = 530$  faculty) conducted jointly by KPMG and the Education Committee of the AAA to explore IFRS integration in US accounting curricula. Respondents recommend a proactive approach. Faculty must be reassigned to specialize into IFRS to ensure that students are prepared as the actual adoptions occur. Notably, faculty members report a dependency upon textbook authors to provide the required course development tools.

Sanders and Willis (2009) report the implementation of a principles-of-accounting competency exam created in response to the high dropout and failure rate in intermediate accounting I. All students are required to take the competency exam before beginning intermediate accounting I, and the exam is graded pass/fail. Several different resources are available to students before taking the exam (self-study, ALEKS<sup>®</sup>, boot camp). Intermediate accounting I data for spring 2006 (comparison group) and fall 2006 (after the competency exam was required) are presented. Students report that the competency exam helped them understand the level of preparation needed to be successful in

<sup>8</sup> According to Mintz (2006, p. 100), "The goal of reflective learning in accounting ethics education should be to help students internalize the virtues that underlie accounting practice by developing a mental image of what action is required when faced with an ethical conflict. This "mapping of the mind" takes place by analyzing and synthesizing experiences and applying that learning to new situations before acting."

intermediate accounting I. The authors report that the percentage of withdrawals decreases significantly after the competency exam is implemented, and the intermediate accounting I grade distribution is different after the competency exam is implemented.

Bruns, Falsetta, and Rupert (2008) present three exercises for integrating tax and financial accounting concepts. Student perceptions are measured on a five-point scale. The results suggest that the exercises are viewed by students as useful and challenging. The three exercises are presented in an appendix.

Garnsey, O'Neill, and Stokes (2009) find that providing students ( $n = 127$ ) with a list of possible query terms over 2 year-period improves their ability to obtain more accurate results when searching the Financial Accounting Research System (FARS) database.

Braun and Titard (2009) study whether the format of the first accounting course impacts student attitude about the profession and learning of the material. The comparison is between students enrolled in the two-semester principles of accounting course as opposed to a one-semester financial accounting course. The sample consists of 380 students in the principles sequence and 563 students in the financial course. Learning is measured with a quiz in the managerial course that requires the first accounting course as a prerequisite. The results show that the one-semester financial group reports a more positive view of the profession. No significant difference on academic performance is noted even though the two-semester course sequence included managerial accounting topics. The authors conclude that one semester of financial accounting can accomplish the same as two semesters of principles with the benefit of a more positive view of the accounting profession.

Johnson, Phillips, and Chase (2009) use an artificial intelligence (AI) application to teach students about the accounting cycle. Students enrolled in a required sophomore managerial accounting course, with 25 in the textbook-only group and 30 in the AI group, are used. The textbook group outperforms the AI group in the pre-test; however, the AI group outpaces gains in learning as compared to the textbook-only group. Thus the AI group is perceived as learning more.

Fischer and Fischer (2009) describe an in-class group case study about earnings management and corporate social responsibility that has been used with success in a variety of undergraduate and graduate accounting courses. A six-question survey is used: 47 undergraduate students ( $n = 27$ , 57% response rate) and 17 graduate students ( $n = 16$ , 94% response rate) respond about how they perceived the experience. Strong favorable anecdotal results are reported. The case materials are presented as part of the article with suggestions for implementation.

DeBoskey (2009) describes a program to enhance teaching effectiveness of financial accounting to executives and includes case learning tools, learning objectives, implementation guidance, and teaching methods. In addition, the results of pre- and post-tests for a group of Chinese executives are presented. Self-reported level of knowledge, ability, and opinion about financial accounting topics indicates significant improvement over the course.

**2.7.4.1. Descriptive articles.** Hughes (2007) describes how using the reconciliation in Form 20-F provided by non-US firms to the SEC can help students in an upper-level undergraduate or graduate accounting course understand the differences between US GAAP requirements and IFRS. The author provides an assignment that includes an outline of the differences underlying specific company financial reporting and helps instructors identify where the differences occur. Thomas (2009) describes the changeover to IFRS and implications for preparation in business schools. Bierstaker (2007) describes two writing assignments used to expose auditing students to articles that appear in academic and professional accounting journals. Baril, Betancourt, and Briggs (2007) provide details on how to effectively teach SFAS 123R using the Black–Scholes–Merton and lattice model approaches.

Hassell and Philipich (2008) introduce a visual exhibit to help accounting students become familiar with ASC 715-30 (SFAS No. 158).<sup>9</sup> Hall and Tucker (2009) illustrate how accounting for stock dividends can be used to teach analytical skill and critical thinking. Fort (2007) presents a handout to use as an adjunct to teaching time value of money concepts in contexts that students are likely to encounter in everyday life.

<sup>9</sup> *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans—an amendment of FASB Statements No. 87, 88, 106, and 132(R).*

Stice and Stice (2006) describe how to use the Enron story as a tool to motivate student interest on the first day of class at any level of accounting education. Sepe and Spiceland (2008) describe a content-rich approach for teaching the income statement in an intermediate accounting course by outlining comprehensive income, income from continuing operations, earnings quality, and separately reported items. Misch and Galantine (2009) present details of a financial statement analysis project used in introductory financial accounting. The materials are provided in appendices for instructors interested in implementing the project. Nikolai (2006) describes how to implement a business plan into an introductory accounting course and provides assignments, suggestions for grading, and course evaluations. James and Birt (2009) describe a financial analysis project in which students conduct ratio analysis on two competing companies and recommend buy/sell/hold to equity investors. Nitkin and Jones (2009) present a spreadsheet tool that demonstrates the effect of journal entries on financial statements without using the mechanics of double-entry bookkeeping; the relative advantages of using this tool in the first accounting course are presented.

#### 2.7.5. Managerial and cost accounting

Cooper (2006) reports results of a survey of the UK's Chartered Institute of Management Accountants' members on how important 37 accounting topics were to respondents' employing organization. The web-based survey yields 1620 usable responses. Among those topics ranking most important are budgeting, decision making, forecasting, and implementing and controlling plans. Those at the bottom, which ranked between "very important" and "of some importance," include the macroeconomic framework, tax planning, social impact of information technology, and the law of employment. The importance rankings are compared across industry and sector and, in a separate analysis, across three economic regions (UK, non-high income, and other high-income regions). The results demonstrate a broad knowledge base needed for management accountants and a management accounting curriculum and relative differences based on industry and the local economy.

Barsky, Catanach, and Lafond (2008) present an experiential learning assignment useful for teaching the Balanced Scorecard. The exercise involves students engaging the student bookstore managers to develop a Balanced Scorecard. Student and bookstore manager feedback is positive, which suggests that the realistic setting created in the assignment is more meaningful than a textbook-only approach.

Bots, Groenland, and Swagerman (2009) test an adapted version of Birkett's (2002) competency framework for management accountants. The objective is to determine if practitioners agree with the competencies as ranked, and if the timing of the acquired competency impacted its importance. Survey results for 695 randomly selected management accountants in the Netherlands (final sample of 224; response rate 32.2%) are used. The results affirm the competencies as ranked, but evidence about whether the most recently acquired competencies are more important is mixed.

Nikias, Schwartz, and Young (2009) describe a method to teach the formal analysis of a management control system. Classroom experiments are used to give students exposure to the practical aspects of the topic, followed by the assignment to read case materials provided by the instructor. When surveyed after the experience, students report a greater understanding and appreciation for budgeting and associated ethical issues.

**2.7.5.1. Descriptive articles.** Woodroof, Ward, and Burg (2003) demonstrate that bootstrapping is superior to the high-low method for estimating budgeted breakeven values when teaching cost or managerial accounting. Tippet and Wright (2006) present a framework, based on the approach by Hirshleifer (1956, 1957), for teaching transfer pricing in an advanced accounting class at the undergraduate or graduate level. The authors include examples that show how removing elements of the Hirshleifer approach affect optimal transfer pricing rules, emphasizing a focus on the lack of goal congruence introduced by agency considerations and how accounting can alleviate these issues.

Adler (2006a) provides an argument as to why discounted cash flow (DCF) capital budgeting is not suitable for business and why it should no longer be taught. Numerous authors comment on Adler's position, including Wouters (2006), Weil and Oyelere (2006), Simga-Mugan (2006), Jones (2006), Paisey (2006), and Fogarty (2006a). Adler (2006b) responds to these criticisms of his position regarding DCF-based capital budgeting.

Blocher (2009) describes a strategy-based method of teaching cost management; after developing the concept of strategy, diagrams of cost and advanced cost courses are included along with a table indicating the shift in the CMA exam toward strategy. Bamber and Bamber (2006) describe how instructors can use 10-K reports to create mini-cases to illustrate cost and management accounting more effectively. The authors also provide descriptions and illustrations of cases that have been tested and that can be used in undergraduate and MBA courses. Stout, Qi, Xie, and Liu (2008) discuss how to incorporate real options when teaching capital budgeting; a lesson plan and case materials are included.

#### 2.7.6. Taxation

Heath (2008) investigates the differences in students' perceptions of accuracy on tax returns and cognitive effort exerted between groups of students who prepared paper tax returns and those who used tax software. In addition, Heath examines the association between cognitive effort and both inferential learning and factual learning. The Volunteer Income Tax Assistance (VITA) materials and software are presented over six class periods to 140 students in the first income tax course. Students are then surveyed about (1) their attitude about using computers, and (2) self-confidence in preparing an accurate return manually versus using tax software. The two treatment groups complete follow-up surveys about cognitive effort exerted and treatment of tax issues (inferential learning). Hypothesis testing indicates that student confidence in accuracy is greater using software than paper, and the actual accuracy of returns is higher when using software, with ability (GPA) also related to accuracy. In addition, students preparing paper returns report exerting more cognitive effort than those using software.

Larkins (2008) describes a website entitled "Evaluating Tax Authority" and five related assignments developed to conduct tax research. Assignment topics include evaluating authority, drawing conclusions, and communicating results. To test the effectiveness of the website, two graduate tax courses are compared: one using the website (17 students) and one using a traditional textbook approach (24 students). Students in both classes use the Internal Revenue Code (IRC) to answer 15 multiple-choice questions in two consecutive weeks (pre- and post-test). In between, the treatment group completes the website assignments and self-assessment tests while the control group completes textbook discussion questions. Students using the website show higher post-test scores in two areas; scores improve for both groups as a result of the formal assignments.

*2.7.6.1. Descriptive articles.* Price and Smith (2008) describe alternative models of delivering the VITA program as a service learning opportunity. Dennis-Escoffier, Kern, and Rhoades-Catanach (2009) describe an approach to teaching tax using the revised Model Tax Curriculum developed by the American Institute of Certified Public Accountants (AICPA) (2007); an appendix demonstrates how the approach addresses core competencies and technical topics. Newmark, Hutton, and Cruz (2007) describe a research-reviewer approach to teaching tax research. Their suggested approach includes research memoranda, reviewer comments prepared by students, class discussions, and client letters. The authors provide a timetable for assignments (six cases in a semester), reviewer guidelines, student and instructor tasks, and point allocations for the assignments. End-of-semester evaluation results indicate that students believed they learned job skills by preparing, reading, and reviewing memos.

#### 2.7.7. International and governmental accounting

Daniels, Gupta, and Pridgen (2007) investigate the perceptions of government/nonprofit accounting (GNA) professors about the relative importance of GNA topics (181 professors, 36.9% response rate). The three topics with the highest score (1 = unimportant to 5 = very important) are government-wide financial statements, fund accounting, and financial statements; the next six are all standards-related, and ethics ranks 16th. Analysis of differences among faculty level (assistant, associate, and full) and accreditation level reveals that the top 10 topics remained the same, but in varied orders.

*2.7.7.1. Descriptive articles.* Durkee (2006) provides outlines for teaching international accounting to business majors using a concept-based method requiring only the introductory financial course. Sikka, Haslam, Kyriacou, and Agrizzi (2007a) suggest that accounting textbooks emphasize technical mate-

rial at the cost of topics (e.g., ethics, globalization, scandals) that could promote students' socially reflective practices in "Professionalizing claims and the state of UK professional accounting education: Some evidence." This article results in many commentaries: Allison (2007), Gallhofer and Haslam (2007), Hatherly (2007), Newberry (2007), Robb (2007), Turley (2007), Walsh (2007), Parker (2007), and Hunt (2007). Sikka, Haslam, Kyriacou, and Agrizzi (2007b) offer a rejoinder.

#### 2.7.8. Business law

Kocakülâh, Austill, and Long (2008) report survey results from 380 accounting chairpersons about business law education (final sample of 58; 15.2% response rate). Statistics about university size, accounting program size, accounting hours required, and business law hours required are presented. Rankings for CPA exam topics and other business law topics are presented. Coverage of CPA exam business law topics is summarized by type of course (required, elective) along with chairpersons' perceptions about business law education. The authors also compare and contrast business law education in the US with international programs.

#### 2.7.9. Historical perspective on accounting descriptive articles

Van Wyhe (2007a) reviews the history of accounting, starting in the 17th century and going forth; discussions include the beginning of higher education requirements, the rise of managerial accounting, the Perry Commission, the Foundation Reports, and the current resultant confusion in the profession. Van Wyhe (2007b) describes the history of accounting higher education and its part in reforming accounting starting in the 1970s; distinguishes accounting from other business disciplines; shows the move toward accreditation; describes the push for extended education resumes; shows the development of the 150-h rule; and reflects on the past and future of the accounting profession.

Sangster, Stoner, and McCarthy (2007) seek to broaden the learning from accounting history to current accounting education through the works of Luca Pacioli. Turner (2006) highlights the accounting profession's past mistakes, particularly recent scandals, by enumerating the issue of managing earnings in light of business failures, Congress's intervention into standard setting, massive company failures, the fluctuation of trust and confidence, and the search for continuous improvement. Merino (2006) notes historical events that have led to financial scandals and argues that through these events, the accounting profession has failed to change from its technical curricula and limited reference to teach social obligation. Evans (2008) provides the history of the Australian Society of Accountants' difficulty to establish a qualifying exam for professional accountants. Fessler (2008) encourages accounting professors to develop post-modern techniques to teach accounting to current students. Gallhofer, Haslam, and Kamla (2009) provide a rich historical narrative of the development of accounting education in Syria. In a series of interviews, the authors explore questions about limitations of accounting education in Syria, the role of the profession in facilitating education and training, and the developing alliance between the profession and educators.

### 3. Educational technology

Eighteen accounting education articles focusing on educational technology are reviewed in this section, 15 empirical and 3 descriptive. The first subsection reviews articles about technology that assist or enhance the education process. These technologies are useful in traditional or distance education. The second subsection reviews articles about distance education only.

#### 3.1. Technology-assisted education

Calk, Alt, Mills, and Oliver (2007) investigate the effect of the presenter on streaming video course lectures. Students ( $n = 40$ , 87% response rate) taking the first accounting course in a traditional format complete one study objective using asynchronous online course delivery in the form of a streaming video. Four videos are created on the same topic. All videos have the same slides and script and vary only by who spoke: two accounting faculty (one male, one female) and two actors (one male, one female). After watching the video, students take a quiz and answer evaluation questions about their learning experi-

ence. No statistical differences are found in student test scores or evaluations among the four videos, indicating that faculty can spend time developing content while actors spend time recording.

**Moustafa and Aljifri (2009)** compare student grades in a traditional classroom setting to students in an experimental setting of the same managerial course. The treatment includes an in-class factory, real product data used for job order and process costing, electronic simulations on laptops in class, in-class writing, and group projects plus traditional lecture. For three different course topics, the two groups' test grades are compared to examine the difference between traditional delivery (control) and the delivery type used in the treatment course for that topic: traditional learning (TL), cooperative learning (CL, group work), and laptop active learning (LAL). Students in the treatment group have significantly higher scores on the topic for which they used LAL, but not CL or TL. In addition, the three scores of the treatment group are compared to each other with the LAL score being significantly higher than the CL and TL scores.

**Apostolou, Blue, and Daigle (2009)** investigate students' perceptions of computerized testing by surveying students in introductory managerial accounting after they had completed two computerized mid-semester exams. Students are given a 3-day window to take each 2-h, computer-generated exam at the university's testing center. Survey results for 223 students who were present in class on the survey day are presented. Both positive and negative perceptions are revealed. Among the negative, which are more common than positives, are greater stress and anxiety, elimination of judgment in grading and partial credit, and elimination of the in-class return and review. Students also do not like the mechanics of computerized testing, such as looking at the screen for extended periods, not being able to scan the entire test first, and not being able to write on the test. Some positives are revealed, such as flexibility in scheduling, prompt feedback, and elimination of essays and long problems. Students also note it is harder to find opportunities to cheat with computerized testing. When comparisons were made among student means by instructor, differences are found, indicating that the instructor can manage negative perceptions. Some suggestions for managing perceptions are included.

**Marriott and Lau (2008)** study the effect of online assessments on student engagement and performance in an introductory financial accounting course. The 54 students completing the course during this study took five online exams under proctored conditions instead of one end-of-year exam as in previous terms. Pass rates of the financial accounting course are higher than the other accounting courses, indicating to the researchers that the use of online assessment can improve the teaching/learning process. In addition, student feedback indicates the treatment improved their engagement, self-assessment, motivation, and time management skills.

**Potter and Johnston (2006)** investigate the association between use of an online learning system and both exam-based and self-assessed measures of learning. The online learning system, which supplemented a cost management lecture course, has three components: (1) required pre-lecture questions and tasks, (2) a discussion board for student questions answered by instructors, and (3) a self-paced multiple-choice assessment tool with immediate feedback. Data for 1116 students are used. The mean system usage is just under 2.5 h per week, and the average final exam score is 53.6%. Controlling for prior knowledge (i.e., grade in prerequisite course), increased usage of the online system is associated with increased final exam scores, including both calculation-based and non-calculation questions. In addition, usage is significantly higher for the following students: those with better grades in the prerequisite, international students, and females (marginally significant).

**Love and Fry (2006)** investigate whether students perceive a virtual learning environment (VLE), such as Blackboard™, as supporting or enhancing their learning experience. A total of 36 students taking a level-one accounting class that used a VLE are asked to discuss their perceptions of the VLE in one of four focus groups. Students' comments are classified as either springboard or safety net, as engagement or disengagement, as tutor or computer, and as maze or dumping ground. In general, students perceive the VLE as an online textbook: a safety net, disengaged, dumping ground. Though limited to a small sample of students and one accounting class, the authors conclude on the basis of student perceptions that pushing information via VLE may not have the intended effect.

**McDowall and Jackling (2006)** examine whether student perceptions of computer-assisted learning (CAL) are related to academic performance. The study includes all students in the second accounting course for a Bachelor of Commerce degree in an Australian institution in a given semester; 280 usable responses (59% who took the final exam) are obtained. Two CAL programs are implemented during the



semester: a general ledger (GL) program and Quickbooks™. Student perceptions of both are determined by questionnaire. After controlling for gender, English-as-a-second-language (ESL), and secondary education in accounting and information systems, only two independent variables are significantly correlated with the dependent variable, overall course grade. Results indicate that students find the GL package useful in acquiring and understanding the course and ESL students have lower performance. Perceptions of Quickbooks™ are positively, but not significantly, correlated with overall course grade. The results indicate a potential for CALs to positively impact academic performance.

Friedman, Rushinek, and Rushinek (2006) investigate the relationship between using an automated-feedback case study and student performance (grade on final exam). The case is assigned to students in multiple sections of a managerial accounting course, and 309 students complete both the case and the final exam. The automated features of the online case include generating a unique case for each student; graded student submissions while giving feedback 24 h a day, 7 days a week; and unlimited attempts with unlimited feedback. The online site keeps track of the number of attempts and the most recent case score. Regression analysis reveals that an increase in the number of attempts is a marginally significant factor in increasing the exam score, which covers more than the case, and that the case grade itself is not associated with exam grade. The authors conclude that number of attempts represents the student's motivation to succeed.

Carnaghan and Webb (2007) investigate whether student response systems (clickers) improve student engagement and feedback. Students ( $n = 186$ ) in four sections are given four to six multiple choice questions in lecture meant to stimulate discussion and questions. Two sections use clickers to answer during the first half of the semester while the remaining sections use clickers in the second half. Participation and clicker use account for 10% of the students' grades. Students report that clickers helped them learn the material, encouraged them to work harder to prepare for class, and encouraged them to answer questions correctly. Student engagement (number of questions asked and answered in discussions) decreases when using the clickers, which is attributed to the increased feedback (histogram of answers) provided by the clicker software. Student performance on two exams, one after half the semester and the other at the end of the semester, between the clicker and non-clicker groups is comparable. However, the only difference is that the clicker group performs better on multiple-choice final exam questions. In general, students enjoy the use of clickers in the class.

Sugahara and Boland (2006) investigate the relationship between preference for PowerPoint and course performance in a course using PowerPoint with students receiving hard copies of the slides. Surveys about their PowerPoint preferences are collected from students ( $n = 132$ , 70% response rate) in the introductory accounting course at a Japanese university. With final exam score as a dependent variable, regression analysis reveals the effects of five independent and control variables. The four controls (attendance, females, aptitude for accounting, and preference for accounting) are positively related to final exam score. The variable of interest, preference for PowerPoint, is negatively correlated with final exam score indicating students who prefer 'whiteboard' lectures over PowerPoint scored higher. Students' likes and annoyances about PowerPoint are also presented. The authors suggest that instructors should be aware of the limitations of PowerPoint for student learning.

### 3.1.1. Descriptive articles

Goldwater and Fogarty (2007) ensure individual effort in accounting classes through computer technology. McVay, Murphy, and Yoon (2008) discuss the benefits of using technology in the classroom to enhance students' learning. Lillie (2008) describes the elements of a technology-mediated learning environment and the development of an auditing and advanced auditing course that uses technology to create a practice-feedback-interaction process.

### 3.2. Distance education

Chen and Jones (2007) evaluate MBA student satisfaction with a traditional classroom course ( $n = 38$ ) and a blended learning class ( $n = 58$ ) that includes distance-learning elements. The course content is identical; only the delivery method is altered. A five-point scale (strongly disagree to strongly agree) is used to measure satisfaction on 16 questions grouped by (1) class meeting effective-

ness, (2) group work, and (3) technology. The results show that students tend to prefer the traditional classroom, with the exception of some preferences for group work in the blended-learning model.

Jones and Chen (2008) compare feedback between students in two MBA accounting courses: a traditional lecture course ( $n = 34$ ) and a blended course, which includes a limited number of class meetings and an online component ( $n = 30$ ). The blended course students are more satisfied with being informed of their progress, availability of the instructor to answer questions, and prompt feedback; they also are generally more satisfied with group work. However, blended-course students are less satisfied with instructor explanations; 90% of all students preferred traditional in-class delivery. Though tradeoffs occur between blended and traditional courses, this study provides some evidence of preferences for elements of blended courses.

Keller, Hassell, Webber, and Johnson (2009) compare academic performance (course grade) of introductory managerial accounting courses in a traditional, lecture-based classroom to performance in a hybrid section of the same course. The instructor, lectures, assignments, and exams are the same for both classes. The only difference is that every other day, the students in the hybrid section worked problems in groups and submitted them electronically. Students self-selected the hybrid class as the nature of the class was published in the schedule of courses. Other independent variables include grade in the prerequisite accounting course, SAT score, gender, and a dummy variable for transfer students. The class section variable is not significant in either regression model tested, which suggests that the blended course format does not affect student performance when effort is taken to make the content the same as a traditional course.

Kidwell and Kent (2008) investigate the differences between cheating behaviors of distance and traditional students. Of 1500 surveys, 210 responses from traditional and 248 from distance students attending an Australian university are used. Respondents indicate whether they had committed 17 cheating behaviors, the perceived severity of each behavior, and how they would respond to witnessing the behavior. The results indicate that the average respondent engaged in more than two cheating behaviors at least once. Analysis indicates that distance students cheat less frequently than traditional students. In addition, distance students are involved in serious cheating (as defined by prior literature) less frequently. For 10 of the 17 behaviors, distance students perceive the behavior as being more severe than traditional students, but in general, their responses to witnessing the behaviors are not significantly different. In addition to proximity to peers, the authors speculate that maturity, lack of opportunity, and other factors may explain why distance students are less involved in cheating activities.

Charron and Koo (2007) report on a survey of 156 accounting students about their demand for distance education (DE) accounting courses; 73 respondents (47%) previously took a DE course and were the only responses used. The significant determinants increasing demand for DE accounting courses are full-time status, years in school, and hours working. Factor analysis reveals three perception factors related to DE: (1) attitude, (2) time management, and (3) technology. When the three factors are added to the model along with overall satisfaction with DE, significant determinants of demand for accounting DE are full-time status, years in school, overall satisfaction with DE and two factors (attitude and time management); hours working was no longer statistically significant.

#### 4. Faculty issues

This section reviews articles on faculty issues, including research productivity, evaluation of faculty performance, accreditation, job market, and textbooks. A total of 66 articles, 33 empirical and 33 descriptive, are reviewed. Many articles deal with research productivity and the research process, topics of great importance to faculty. Surprisingly, during 2006–2009 no published articles directly addressed the topic of promotion and tenure.

##### 4.1. Research

###### 4.1.1. Research productivity

Lowe and Van Fleet (2009) examine the research records of accounting faculty on editorial boards for nine academic accounting journals. The percent of the board members publishing in their journals and in other journals is reported as well as the median number of articles published and median num-

ber of citations. The editorial boards of *Journal of Accounting and Economics* and *Journal of Accounting Research* have the highest adjusted article counts, citations, and Corrected Quality Index scores.

Burke, Fender, and Taylor (2008) report the results of a survey of accounting faculty ( $n = 468$ , 11.2% response rate) in 2004 to determine the factors that influenced the ability of accounting faculty to publish in the 10 top accounting journals (92 had published in the top 10). Factors positively associated with publications in the 10 top accounting journals are Ph.D. quality, number of coauthors, having a summer research stipend, and having made research presentations. Factors negatively associated are teaching load (both undergraduate and graduate), committee work, and being department chair.

Urbancic (2009) identifies the individuals and institutions contributing to the accounting education research published during 1998–2007 (868 articles) in six accounting education journals: (1) *Accounting Education: An International Journal*, (2) *The Accounting Educators' Journal*, (3) *Advances in Accounting Education*, (4) *Global Perspectives on Accounting Education*, (5) *Issues in Accounting Education*, and (6) *Journal of Accounting Education*. The contributions of the top 25 individuals and top 40 institutions are identified.

Chow, Haddad, Singh, and Wu (2007) examine whether the journal in which an accounting article is published (journal ranking) proxies for quality (citation counts used to measure quality). Using 8 years of citation data from the Social Science Citation Index® (SSCI) for nine academic accounting journals published in 4 years (1992, 1994, 1996, and 1997), the authors examine and present descriptive information about citation counts for this set of journals. The authors also report the results of a Google™-based citation count for 20 academic accounting journals, including the nine journals followed by SSCI. The authors conclude that there are substantial classification errors from using journal ranking as a proxy for an article's contribution. This finding applies across all of the articles as a whole as well as within accounting sub-areas (e.g., financial accounting, auditing).

Glover, Prawitt, and Wood (2006) provide substantial descriptive information about the publication records of accounting faculty at the top-75 accounting research schools over the period 1995–2003. Distributional information is provided in quintiles (e.g., top 15-schools) and by quality of journal (viz., top-3 journals, top-6 journals, and top-25 journals). The data are particularly useful in providing benchmark information for accounting departments and for accounting faculty being considered for promotion and tenure.

Lowensohn and Samelson (2006) report the results of a survey of accounting faculty ( $n = 517$ ) about their perceptions of academic journal quality in specialized areas (behavioral, government and nonprofit, information systems, managerial, and tax). The data are useful in understanding how faculty members in various areas perceive journal quality. For example, while the traditional top-three accounting journals are highly rated, *Accounting, Organizations and Society* is the third highest rated journal for behavioral and managerial researchers; the *National Tax Journal* is the third highest rated journal for tax researchers, followed by *The Journal of the American Taxation Association*; and *Journal of Accounting and Public Policy* is the highest rated journal for government and nonprofit researchers.

**4.1.1.1. Descriptive articles.** Fogarty (2009) likens the reason and need to conduct and publish accounting research to amassing an academic currency that, like real currency, stratifies the population of accounting academicians. Gordon and Porter (2009) provide a comprehensive tutorial to facilitate practitioner understanding of academic publications. Riordan and Riordan (2009) describe the process of Institutional Review Boards (IRB), which approves research involving human subjects and provides information on when IRB approval is necessary for research projects. St. Pierre, Wilson, Ravenscroft, and Rebele (2009) discuss the challenges of conducting accounting education research (AER), offer evidence of institution and professional support for AER, and give some reasons why AER deserves equal standing with other branches of research in accounting.

#### 4.1.2. Other research issues

Stout, Rebele, and Howard (2006) offer information about why papers are rejected for publication at accounting education journals. Based upon their work as editors of two major accounting education journals, the authors identify three primary reasons: (1) a poorly motivated study, (2) a poorly designed study, and (3) lack of significant contribution to the accounting education literature. For

resubmission, the major reason for rejection is not appropriately responding to the reviewers' and editor's concerns. Descriptive information is provided about the editorial review process.

Mathews (2007a) examines the publishing pattern of Australian researchers (academic staff) during 1999–2003. Mathews provides descriptive data about publication rates in six top Australian journals and about staffing at Australian universities. Mathews recommends that a national panel be established to review research. The panel could deem research worthy of publication in learned journals, and then the author(s) could submit the paper to an academic journal. Several articles comment on Mathews (2007a). Bline (2007) discusses Mathews' article and points out several flaws in Mathews' arguments. Craig (2007) notes that Mathews does not address the purpose of modern accounting research and the policy agendas responsible for the publish-or-perish pressure. Hussey (2007) criticizes the obsession with measuring publication activity, and he comments that the majority of academic staff does not consistently publish. St. Pierre (2007) discusses some of Mathews' assumptions and urges academics to address larger issues related to the profession. Smith (2007) notes that Mathews does not address the quality dimension in the publication process and that, in his opinion, the views of Mathews are overly parochial in nature. Stainbank (2007) provides institutional background for South African universities and comments on several of Mathews' assumptions. Wells (2007) questions whether Mathews discusses the full magnitude of the potential problem or whether he provides a valuable solution, and critiques several of his assumptions. In a rejoinder, Mathews (2007b) presents some reactions to these commentaries.

Bailey, Hermanson, and Louwers (2008) examine accounting faculty perceptions about the peer-review process. A survey of all doctoral-qualified accounting faculty listed in Hasselback's 2005 *Accounting Faculty Directory* ( $n = 4472$  with 544 usable responses) is reported about 26 peer-review process behaviors. Factor analysis results in five peer-review process factors: (1) selfish or cliquish acts, (2) violation of blind review process, (3) subversion of anonymity, (4) editor obstructions or delays, and (5) violating the spirit of the review process. Seven questions related to selfish or cliquish acts are rated as the most troublesome behaviors. Open-ended questions also provide useful information. For example, providing faster reviews is an important theme. The authors also provide a starting point for a "peer-review code of conduct," which is motivated by existing codes of ethics for other journals (e.g., *Academy of Management Journal*).

Howard and Stout (2006) provide information about why accounting case/instructional resource papers are rejected ( $n = 156$ ) for publication during 1999–2004 at *Issues in Accounting Education*, where Howard and Stout were past editors. Primary reasons for rejection are failure to provide evidence regarding educational value, case material not "rich" enough, failure to provide implementation guidance, and poor writing such as incompleteness and lack of sufficient detail. Detailed descriptive information is provided.

Matherly and Shortridge (2009) refine a model by Bean and Bernardi (2005) to predict the quality of publication outlets. The model explains 57% of the composite journal perception score. Based upon self-reported responses by 291 accounting faculty members about where they published, the authors apply their model to predict the quality scores and quality ranking of most of the journals listed by the faculty. The model's independent variables are (1) the article page length, (2) where the journal is indexed (e.g., ABI-Inform), (3) whether the journal is included in the Social Sciences Citation Index®, and (4) whether there is a submission fee for the journal in question. Quality scores for the top-30 accounting journals are reported. Also listed are the journals in which faculty most frequently published.

Fogarty and Liao (2009) study the editorial review board of *The Accounting Review* at three points over a 20-year period (1985, 1995, and 2005). Editorial board members tend to be concentrated in the most prestigious schools (Ph.D. degrees from those institutions and working at those institutions), although the magnitude of the concentration declines over time. The percentage of financial accounting researchers increases over time. Editorial board members are well-published in top accounting journals prior to appointment.

**4.1.2.1. Descriptive articles.** Wilson, Ravenscroft, Rebele, and St. Pierre (2008) present arguments supporting the importance of accounting education research. Jalbert (2008) describes an educational program that allows faculty to work with undergraduate accounting and finance students to create a joint

peer-reviewed journal publication and discusses issues, concerns, and strategies that are successfully and unsuccessfully used in conducting and publishing research with a sample of those students from a single institution. [Brasel and Hentz \(2006\)](#) provide useful information on how to access accounting articles to better utilize the wealth of research (publications) in the accounting field.

## 4.2. Evaluation of faculty performance

### 4.2.1. Teaching skills

[Fogarty and Hogan \(2009\)](#) describe a teacher's instructional value-added as the difference between the student ratings of the instructor and the student ratings of the course (and course material). Course evaluations for 2510 sections of 209 courses taught at one school over the period 1997–2004 are used to measure “instructional value-added.” For the business school as a whole, instructional value-added is not associated with smaller class size, does not vary significantly across departments, is associated with undergraduate course level (significantly higher for 100, 200, and 300-level classes), and varies across degree programs (i.e., is higher for the undergraduate program). The authors conclude that instructional value-added is a reasonably stable construct.

[Albrecht and Hoopes \(2009\)](#) compare the professor evaluations on a commercial evaluation service, RateMyProfessor.com with official university teaching ratings, which are not publicly available, from one private university and one public university. The authors make adjustments to make the ratings comparable, and ratings are averaged across all disciplines to obtain an overall school rating. The mean of the official school evaluations are significantly higher than the mean for RateMyProfessor.com; however, the relative rankings of individual faculty across the two methods are positively correlated.

**4.2.1.1. Descriptive articles.** [Christ and Stuck \(2007\)](#) describe the increase in demand for accounting professors due to the Westernization of China. [Bloom \(2009\)](#) describes the teaching style of the late Carl L. Nelson, accounting academician, who encouraged his students to question and critique everything. Interviews with a few of Nelson's former students, some of whom are accounting educators, also are presented. [Simon \(2009\)](#) illustrates how concept maps created by individual faculty members can help combine the best of different pedagogies, giving those who focus on the basics an opportunity to expand and those who often go over students' heads an opportunity to start with the basics. [Brightman \(2006\)](#) discusses how to help faculty become more effective teachers and improve student learning. He makes three recommendations: (1) the college must use a valid, reliable student evaluation instrument, (2) the evaluation instrument must be normed, and (3) the college should have a mentoring process.

## 4.3. Other faculty issues

### 4.3.1. Accreditation

[Gaharan, Chaisson, Foust, and Mauldin \(2007\)](#) report the results of a survey of accounting programs that had achieved or were in candidacy for AACSB accounting accreditation ( $n = 71$ , 42% response rate). The authors provide descriptive information about the schools, and about responses to various questions (e.g., the number of activities needed to remain academically qualified, how faculty maintained professional qualifications).

**4.3.1.1. Descriptive article.** [Shaftel and Shaftel \(2007\)](#) introduce educational assessment and AACSB standards by reviewing history, outcomes, and potential pitfalls in regards to post-secondary business education.

### 4.3.2. Job market

[Fogarty and Markarian \(2007\)](#) use data from 1982, 1992, and 2002 to determine how the various attributes of accounting faculty have changed over time. Fogarty and Markarian report that (1) the number of accounting faculty went up in 1992 and down in 2002 at both doctoral-granting and non-doctoral-granting schools; (2) the percentage of faculty across ranks has changed, with a larger proportion as full professors; (3) the percentages of graduates of low-prestige doctoral programs

has increased; and (4) accounting is the only faculty group in AACSB accredited schools to experience a drop in the numbers of faculty from 1992 to 2002. Additional descriptive data regarding faculty and doctoral graduates are provided.

Plumlee, Kachelmeier, Madeo, Pratt, and Krull (2006) report the results of a survey of accounting department heads/chairs, accounting doctoral program directors, and accounting doctoral students to assess the shortage of accounting faculty. The authors note a shortage of accounting faculty, particularly audit and tax faculty, and make recommendations to reduce the costs imposed on doctoral students (e.g., personal costs, stress).

Stammerjohan, Seifert, and Guidry (2009) examine accounting doctoral student placement from 1990 to 2001 (per Hasselback's (2010) *Accounting Faculty Directories*): 1357 graduates accepted tenure-track jobs at US institutions within 2 years of graduation. The authors hypothesize that (1) graduation from higher-status (prestige) doctoral programs is associated with placement at higher-status institutions, and (2) individual factors would also affect job placement, after controlling for granting institution status. Survey responses from 432 individuals (32%) from e-mail and telephone contact are used. Two different metrics are used as proxies for prestige: (1) *US News and World Report* Best Colleges classification (Stammerjohan & Hall, 2002), and (2) a metric from Hasselback and Reinstein (1995) based upon a weighted average publication score of faculty. As hypothesized, prestige of the employing institution is associated with the doctoral granting school prestige ( $p < 0.0001$ ). Significant control variables ( $p < 0.022$ ) are (1) whether the graduate submitted a resume to the AAA placement service, and (2) whether the graduate's application was sent under a faculty cover letter. For those graduates who subsequently left for other institutions, graduates initially placed at higher-prestige schools are more likely to leave. For the 79 graduates who placed either at higher- (lower-) prestige schools than predicted, significant factors are (1) those placing higher than expected cite choosing a school based upon research support, and (2) those placing lower than expected cite quality of life. Finally, leaving ABD is associated with future turnover from the initial placement institution.

Hunt, Eaton, and Reinstein (2009) report the results of a survey of accounting faculty taking their first academic job ( $n = 34$ ) and relocating faculty ( $n = 64$ ) during 2002–2004 about 37 factors associated with their job search. The top-five factors for new faculty are (1) teaching load, (2) research support, (3) compatibility with other faculty, (4) availability of travel funds, and (5) background, interests, and research orientation of other faculty. Ten of the 37 factors are ranked in the top-five factors for each group, with teaching load being the most important factor for three of four subgroups. Slight differences in importance are associated with gender.

Weisenfeld and Robinson-Backmon (2007) report the results of a survey of 4958 AAA faculty members about diversity issues and the current academic environment. Responses from 1329 faculty (26.9%) are used, with 216 minority faculty (16.3% of sample) and 36% female faculty. Descriptive data are provided for three groups: (1) Caucasian men, (2) Caucasian women, and (3) non-Caucasians (minorities). Women and minorities perceive (1) a greater need for attention to and support for diversity issues, and (2) a lack of diversity in rank, tenure, and administration. A significant number of women (30%) perceive gender discrimination, and minorities (23%) perceive ethnic discrimination. Women and minorities report higher aspirations to obtain tenure and higher rank than men. Men report that they are more likely to remain at the current institution than women, and women report that they are more likely to remain than minorities.

Behn, Carnes, Krull, Stocks, and Reckers (2008) report the results of a survey of 90 schools with accounting Ph.D. programs, with 89 (98.9%) responses. Descriptive information is provided about the Ph.D. programs: number of students enrolled, planned admissions, average GMAT, qualities sought in candidates, level of stipends, student and faculty research areas, and student and faculty research methods. The article provides a comprehensive snapshot of accounting Ph.D. programs in 2006.

**4.3.2.1. Descriptive articles.** Almer (2007) writes an executive summary of the key findings of research conducted by the AICPA related to human resource policies and progress in women's advancement, leadership development, and work/life effectiveness. Almer and Single (2007) summarize research from the AICPA's work/life and Women's Initiatives Executive Committee and highlight the results, show trends, give advice on improving retention and what professionals want, and note parallels with female academic accountants. Trapnell, Mero, Williams, and Krull (2009) offer six recommendations that would



change the current model of the accounting doctoral program with the intention of correcting the shortage of accounting Ph.Ds. One recommendation is to provide a new, extramurally funded research program for accounting doctoral students. This suggestion mirrors current doctoral support in the sciences in which institutions, faculty, and doctoral students have access to funding by grants and data.

#### 4.3.3. Textbooks

Ferguson, Collison, Power, and Stevenson (2006) examine the contents of introductory accounting textbooks used in the UK, and they interview 12 textbook authors and editors. The discussion of the structured interviews uses three constructs: (1) the contents of financial accounting textbooks, (2) homogeneity in financial accounting textbooks, and (3) ideology and accounting textbooks. The authors conclude that complex social and cultural relations influence textbook development. The article describes the process and the relationship between authors and editors.

Tietz (2007), motivated by previous research in gender stereotypes (sexism), uses qualitative and quantitative analysis to investigate the representation of gender in homework items, pictures, and story narratives in 19 introductory accounting textbooks. Quantitative analysis shows that males are significantly overrepresented in total; women are significantly overrepresented in pictures; males are represented in a significantly larger number of occupations; males are more likely to be represented as active versus passive; both genders are equally likely to be depicted as independent; and men are depicted as having significantly more power. Based upon qualitative analysis of textbook material, Tietz notes three themes: (1) men succeed in the public sphere; (2) women bear responsibility in the private sphere; and (3) historical contributions of men are more valued than those of women.

Milner and Hill (2008) review textbooks ( $n = 180$ ) available at two Scottish universities across two time periods (1990–1996, 1997–2002), across geographical boundaries (most in the US and the UK), and across disciplines (most in economics, business, which includes accounting, health and social science) for support for graphicacy (graphical displays). The authors find little support is provided to students in fundamental concepts underlying good graphing practice.

Stokes (2008) uses Bloom's Taxonomy to review the learning objectives and questions in 24 accounting textbooks from various functional areas (e.g., tax, financial). Verbs used by textbook authors tend to be in the lower level of the cognitive domain (i.e., knowledge and comprehension), although managerial accounting has higher percentages of verbs related to analysis. Further, textbooks used in upper-level courses tend to use verbs at the same level as in introductory textbooks.

Chiang, Englebrecht, Phillips, and Wang (2008) implement four evaluation methods to investigate the readability of seven financial accounting principles textbooks. Overall readability differs significantly among these textbooks on three of the four measures. Readability for three of four selected chapters differs across the examined set of textbooks for at least three of the four evaluation methods. Of the seven textbooks, one textbook (Harrison) is judged significantly easier to read.

Bates and Whittington (2009) examine a set of managerial accounting textbooks to determine whether they include a focus on customers (e.g., customer profitability). Despite marketing research showing a shift toward a customer focus, managerial accounting textbooks are found to have little or no coverage of this topic.

Laksmana and Tietz (2008) investigate differences in managerial and cost accounting textbooks with respect to topical changes over time (temporal), timing of new materials (time-lag), and topical comparisons among books (cross-sectional). Temporal examination using 11 editions of two popular texts reveals that significant changes occurred including managerial accountants and the business environment, absorption versus variable costing, the balanced scorecard (BSC), non-financial measures, and in one text customer profitability, pricing decisions, and process costing. Time-lag analysis using the same texts reveals that the average time for an emerging topic to be covered in a text is two publishing cycles, ranging from one edition (3 years) to five editions (13 years). In addition, recent editions of six different texts are compared in a cross-sectional analysis revealing similar coverage; however newer entrants are more likely to cover unique topics.

4.3.3.1. *Descriptive articles.* Wouters (2008a), in the article 'The order of teaching accounting topics—why do most textbooks end with the beginning?' argues that cash flows should be the central theme

in introductory finance and accounting courses. Several authors comment on the Wouters article, including Bhimani (2008), Noreen (2008), Gowthorpe (2008), Christensen (2008), and Abraham (2008). Wouters (2008b) responds to these comments.

#### 4.3.4. Other

Zajkowski, Sampson, and Davis (2007) report the results of a survey of faculty ( $n = 66$ , with 88.1% being members of a professional accounting organization) in Australia and New Zealand about their participation and perceptions of continuing professional development (CPD). The respondents report that CPD helps to improve technical accounting skills that are relevant to their teaching responsibilities.

Tourna, Hassall, and Joyce (2006) use a questionnaire and personal interviews with seven experienced European accounting educators (three each from the UK and Greece and one from Spain) about their professional development as accounting educators. Professional development captures knowledge, skills, and attitudes associated with a profession. Using grounded theory, two dimensions are used to discuss the results of the professional development of accounting academics: the professional identity of the accounting educators and the personal systems of beliefs and values about professional development.

Baker, Karcher, and Tyson (2007) report the results of a survey of accounting chairs about whether the department has an advisory board: 91 (64%) departments report having an advisory board and 41 (36%) departments do not. Larger schools and larger departments are more likely to have advisory boards. The article provides details about the boards. For example, the median number of advisory board members is 15, and members are not required to make a financial contribution. Most boards do not have formal bylaws. The three most important activities of the boards are (1) strategic planning (including mission development), (2) curriculum development (and review), and (3) assessment-related activities. The authors report some common themes expressed in follow-up telephone interviews. This article may be particularly useful to faculty in academic units planning to create an advisory board.

Rezaee, Elmore, and Spiceland (2006) report the results of a survey of 198 accounting faculty who hold academic chairs. The authors provide a great deal of descriptive data about the group (e.g., purpose of establishing chairs, compensation, teaching loads, research productivity).

4.3.4.1. *Descriptive articles.* Berg (2007) agrees with the International Federation of Accountants' stance to maintain and continue to develop professional competence throughout one's career. Hermanson (2008) provides commentary, primarily for Ph.D. students and junior faculty, to inform them about the labor market, employer culture, and how to maintain a personal focus on critical goals. Wygal (2006) briefly discusses the impact that the Shared Experience Committee of the AAA has had on professors' ability to converse about teaching methods. Fessler (2006) expresses the opinion that it is acceptable to befriend students if the time and situation are appropriate. Carabetta (2006) reflects on his own experience as an educator in the importance and difficulty of balancing an open and effective relationship with students.

## 5. Students

This section reviews articles related to student issues. Of the 58 articles reviewed, 50 are empirical. Students are an important focus of research questions because understanding their motivations, skills, and career interests inform the academy. The articles related to students are subdivided into four areas: (1) choice of major and career, (2) student skills and characteristics, (3) learning styles and approaches, and (4) recruitment and career opportunities. Suggestions for research in the area of students are presented following the reviews.

### 5.1. Choice of major and career

#### 5.1.1. Major

James and Hill (2009) investigate the role of race in accounting career choice in view of the fact that African-Americans represent only 1% of CPAs. Social cognitive career theory is used to develop a

survey on two key personal variables, self-efficacy and outcome expectations. Students enrolled in introductory accounting courses at two universities are sampled ( $n = 214$  African Americans;  $n = 172$  Caucasians). Results reveal that African-Americans (1) are more likely to perceive a match between personal work values and a career in accounting, and (2) do not have the belief that they can effectively fulfill the accounting degree requirements. Suggestions to address these issues and improve diversity representation in the CPA profession are provided.

Sugahara, Boland, and Cilloni (2008) explore the factors that influence Australian students' selection of accounting as a major. A total of 114 usable survey responses received from graduate and undergraduate students are used. In addition to demographic information, respondents (1) rate the importance of 18 factors (e.g., job availability, flexible career options, gender equality) on accounting career choice, (2) compare opposing adjectives (e.g., challenging/easy, dynamic/static, details/overview) as to their relevance to an accounting career, and (3) choose which of 30 creative personality adjectives (e.g., cautious, clever, humorous) applied to them. Using principal components analysis, four factors for career choice (intrinsic value, career status, work environment, and job market) and four perceptions for the profession (procedural, precision, static, and structured) are identified. Regression analysis results show that four independent variables are indicators of accounting as a career choice: higher perceived intrinsic value of the career and of the job market are positive indicators, while higher creativity and perceived procedural aspects are negative indicators.

Mohrweis (2006) examines the results of writing letters to selected pre-business majors who made an A or B in principles of accounting I as a recruitment tool for accounting programs. The letter encourages students to enroll in the first upper-division accounting course by touting the usefulness of accounting knowledge in career development. The letter also directs the student to the accounting department's website. Of the 148 students receiving an A or B, 74 are selected for the control group (no letter) and 74 for the treatment group (received letter). Students who received a letter are more likely to enroll in further accounting courses than those who do not. The effect was more significant for B students than for A students.

Saemann, Crooker, and Kreissl (2007) investigate (1) whether accounting programs have been successful in attracting creative students to the profession, (2) the effect of the Enron scandal on the perceived attractiveness of the profession, and (3) the effect of accounting courses on students' perceptions of accounting. Survey results from 1007 students in a variety of accounting courses offered at 10 universities are used. Comparing the creativity of accounting students in this study to prior studies does not reveal an increase in creativity over time. There also continues to be a significant gap in creativity between accounting and nonaccounting majors. Perception of accounting (structured, precise, solidarity, dull) by nonaccounting majors does not vary across class level; however, there are significant variations among accounting majors. As class level increased, student perceptions are more positive (less structured, less precise) except for the dull perception, which increases. Finally, the authors discover that students with higher creativity scores are more likely to express an interest in accounting as a career if they have knowledge of the Enron scandal.

Guney (2009) examines, for a sample of 357 nonaccounting majors, the effect of several endogenous and exogenous factors on success in undergraduate accounting courses. Endogenous variables having a significant positive effect on accounting grades include age, attendance, score on a standardized test, and plans to work in finance or accounting; negative effects are found for working part time and health or other personal problems. Thirteen exogenous variables (e.g., availability of tutors, size of class, structure of exams) are reduced to three factors using factor analysis: (1) lectures and assessments, (2) teaching materials, and (3) teaching environments. The first two factors are found to be related to accounting performance, but the third is not.

Tan and Laswad (2006) investigate factors affecting intention to major in accounting by surveying 1422 introductory accounting students, yielding a usable sample of 1009 (71% were returned; 215 of the respondents self-reported accounting as their major). In addition to demographic data, the survey poses questions used to develop three independent variables, all of which represent differentials between perceptions of accounting and nonaccounting majors: personal perceptions (e.g., boring, academic workload), perceptions of referents (e.g., parents, friends), and perceived control (e.g., job opportunities, required math skills). Differences in the three perception variables are significant between accounting majors and others; all three variables are related to choice-of-major intentions.

Tan and Laswad (2009) investigate students' attitudes, beliefs, and major choice by collecting data when they enrolled in the introductory accounting course and again 2 years later to determine whether these variables changed. Questionnaire responses by 1009 introductory accounting students in class are used, and responses from 304 students who were mailed a copy of the instrument 2 years later are used. Two models are tested. In one model, attitude toward accounting (e.g., higher salaries, higher social status, heavy workload), referents (e.g., parents, relatives), and perceived control (e.g., skills in math, interest, less time for extracurricular activities) are related to major intention (declared major on first survey); attitude and referents are significant. In another model, major intention and control are found to be choice of major (declared major on the second survey). A higher proportion of accounting majors select their major prior to entering the university, and accounting majors are less likely to change to nonaccounting than the reverse.

Sugahara and Boland (2009) report the results of a survey of accounting ( $n = 99$ ) and nonaccounting ( $n = 274$ ) students to determine the factors affecting their selection of major. The respondents rate 18 attributes on a five-point scale (1 = no importance on career choice to 5 = very important). Two separate factor analyses are conducted, one for accounting majors and one for nonaccounting majors. Six factors emerge for accounting majors: intrinsic value, career prospects, job market, working environment, financial rewards, and influence of others. Five factors emerge for nonaccounting majors: long-term career prospects, working environment, job market, influence of others, and initial advantages. These results indicate that different factors influence choice-of-major for accounting and nonaccounting majors. Additional tests for the effect of prior work experience find significant differences in perceptions regarding good initial salary, job availability, and interaction with others.

*5.1.1.1. Descriptive article.* Needles (2008) discusses differences in creativity and perception of the accounting profession among domestic and international students, and the effect of these differences on the students' decision to major in accounting.

#### *5.1.2. Career awareness*

Jackling and Calero (2006) report the results of a survey of 1782 introductory accounting students about their perceptions of the accounting profession and attributes needed for success in accounting. Of the 1736 usable responses, 31.5% intend to become a professional accountant. The survey asks students the extent to which they agree with the necessity for several attributes of accounting and accountants (e.g., honesty, accuracy, creativity) and the important influences (e.g., accounting studies, career counselors) on their decisions to seek an accounting career. In a regression analysis, with intent to become an accountant as a binary dependent variable, the most significant predictor of intent is satisfaction with the course. Other significant determinants include enjoyment of the topics, belief that the subject requires creativity, and belief that the profession requires generic skills such as numerical and communication skills. Salary is not a significant determinant of intent to pursue an accounting degree.

Danziger and Eden (2006) examine Israeli students' career aspirations and perceptions of public accounting firms (PAFs) and how the aspirations and perceptions differ across levels of education (first year, advanced, and post-graduate). Questionnaires responses are used for 1000 business students (806 usable responses). Results indicate that the higher the education level of the students, the more likely they are to desire a career in business (industry) and the less likely they are to want to work in a PAF. Several PAF characteristics (e.g., promotion opportunities, job security, work hours, treatment of employees, use of technology) also are examined. The authors conclude that students' perceptions and job aspirations change during their studies, indicating that career aspirations are left open and that students evaluate alternatives as the alternatives arise.

Janvrin, Gary, and Clem (2009) examine whether AICPA and state society career websites are useful to students. The results are based on a sample of 616 students who were tasked with reviewing two websites and completing an online questionnaire with 25 quality statements about the website. The results show that students value the career information, although the quality per website varies.

Sugahara, Kurihara, and Boland (2006) investigate educators' perceptions of the accounting profession as compared to other professional fields. Subjects are Japanese secondary school educators

responsible for career counseling ( $n = 87$ , 38% response rate). Respondents evaluate 24 attributes (e.g., social status, job security, earnings potential) for four professions: accounting, law, medicine, and engineering. For 22 of the 24 attributes, the perceptions for accounting are significantly different from at least one of the other careers; no difference is detected for quality of life and advancement potential. For several attributes (e.g., challenging work, long work hours) assessments for accounting are lower than they are for the other three professions. Comparisons to similar studies in the US and New Zealand are presented.

Wilburn, Amer, and Kilpatrick (2009) describe the infrastructure of an eMentor program for accounting students to interface with professionals via email during the academic semester. Results of surveys administered at the end of the semester to both students ( $n = 108$ , 85% response rate) and professionals ( $n = 101$ , 80% response rate) are used. Both groups report a very strong preference for the program and its perceived benefits.

Law, Shaffer, and Stout (2009) describe a day-long conference called “Accounting Student–Practitioner Day” (ASPD) at Youngstown State University, which provides a collaborative setting for a wide range of constituents to network. A sample of 31 peer institutions is evaluated to determine the extent to which similar programs may be in place. While some degree of student–practitioner interaction is formalized in 65% of the schools included in the sample, the ASPD program appears to be unique. The program is described along with details about how its desired outcomes are assessed. Recommendations are offered by the authors to faculty interested in developing a similar program.

*5.1.2.1. Descriptive article.* Crosser and Laufer (2007) discuss the use of writing assignments to inform students about accounting careers, and to improve their communication, critical thinking, and social skills. The authors provide a specific writing process, assignment, and instructor rubric.

#### *5.1.3. Recruitment and career opportunities*

Mauldin, Zachry, and Morris (2006) study the effect of college job experience on hiring decisions made by CPA firm recruiters using four hypothetical student profiles distributed to 500 CPA firm recruiters (125 of each of the four profiles). The final sample represents a 38% response rate ( $n = 175$  across all four profiles). The recruiter reviews the profile and then responds with the degree to which the recruiter would actively recruit the candidate. The results suggest that accounting internship experience is more important than other types of job experiences; this result is consistent across type and size of CPA firm.

Almer and Christensen (2008) investigate the traits desired by public accounting recruiters by having 45 (of 115) respondents assess the likelihood that a hypothetical audit job candidate would (1) be hired, (2) fit the company's culture, (3) need excessive training, (4) interact effectively with clients, (5) be recommended for an audit team, and (6) voluntarily leave. The 16 hypothetical candidates represented both genders, two age groups (traditional early 1920s and non-traditional 1930s), and four different education paths: (1) dual accounting and mixed degree, (2) dual accounting and liberal arts degree, (3) accounting undergraduate and Master of Accountancy (MAcc), or (4) philosophy degree with post-baccalaureate accounting courses. Students with MAcc degrees are ranked higher in all six areas; after that, accounting-MIS combinations are more favorable than post-baccalaureate accounting. Younger students score higher in three categories (i.e., hired, culture, audit team) with no difference in the other three categories. No significant gender effects are found.

Chen, Jones, and McIntyre (2008) examine students' ( $n = 556$ ) perceived benefits and costs of becoming an accountant in relation to their experiences in secondary-school accounting and introductory university accounting. Accounting majors perceive higher benefits and lower costs than nonaccounting majors did. Students who took secondary-school accounting perceive marginally higher benefits compared to those who did not, but there is no perceived difference in costs. When comparing sophomores to seniors, sophomores perceive higher benefits and lower costs. A good experience in the introductory university accounting course leads to higher perceived benefits and lower perceived costs, suggesting that course experience affects student perceptions of what is needed to obtain an accounting degree and the related benefits of obtaining this degree.

#### 5.1.4. Post-graduate career issues

Charron and Lowe (2009) survey accounting alumni to learn about efforts to pass the Uniform CPA Exam and whether these efforts were successful. Survey results of a self-designed survey of three business school alumni groups ( $n = 1163$ ) during the period 2003–2006, with a usable response rate of 15.6% ( $n = 181$ ) are used. The conclusion is that while interest in the CPA exam is high, motivation to prepare for and take the exam is low. The implication is that faculty should encourage follow-through when students graduate and begin their careers.

Wessels (2007) reports about a survey of North Carolina CPAs ( $n = 1957$ ) regarding the effectiveness of mandatory continuing professional education (CPE). Wessels presents descriptive statistics about various measures of effectiveness and discusses deterrents to CPE effectiveness.

Paisey, Paisey, and Tarbert (2007) describe the continuing professional development (CPD) policies of four professional accounting bodies in the UK. The authors survey members of the professional bodies ( $n = 236$ ) and present descriptive information about the amount and types of CPD experiences.

Jackling, De Lange, and Rav On (2007) report about a survey of recent Australian accounting graduates ( $n = 310$ , years 1999–2003) regarding their (1) intentions toward continuing postgraduate studies and (2) their employment destinations. Descriptive statistics are presented.

Dunn and Hooks (2009) explore the costs of an accounting education and the expected cash flow of 10 years in public accounting along with CPA exam pass rates. Significant detail is provided about universities with 40 or more students taking the CPA exam in 2006 ( $n = 279$ ). The data reveal that (1) an advanced degree is associated with better performance on the CPA exam; (2) college cost is not associated with CPA exam pass rate; and (3) success can be achieved with a range of cost options.

Coetzee and Oberholzer (2009) examine the perception of trainers regarding how well prepared trainee accountants are in South Africa, where accountants must have the equivalent of 4 years of accounting education plus 3 years in a training contract with a registered training office before becoming a chartered accountant (CA). Survey results of public-practice training offices are used ( $n = 18$ , 38% response rate). Respondents are asked to rate the existing tax knowledge (1 = no knowledge; 5 = thorough knowledge) of contracted trainees on 28 tax topics. Mean responses of preparedness ranged from 1.56 to 3.47. On only four topics do trainers give a ranking of 5. In general, trainee knowledge is viewed as adequate, but areas needing improvement are identified. Comparisons by firm size reveal that smaller firms gave higher preparedness scores.

5.1.4.1. *Descriptive articles.* Peek et al. (2007) compare requirements for acquiring the US's CPA designation, Mexico's Contador Público Certificado, and Canada's Chartered Accountant, as well as pass rates on the international certifying exams (used for reciprocity) to help accounting educators prepare students for an international career. Saville (2007) briefly explains the International Education Standards for Professional Accountants concerning the standards for pre-qualification education and continuing professional development for professional accountants.

### 5.2. Student skills and characteristics

#### 5.2.1. General skills

Bay and McKeage (2006) assess the emotional intelligence (EI) of a sample of cost accounting students from a single institution and compare this assessment to the EI of international marketing students. Students ( $n = 54$  for marketing;  $n = 47$  for accounting) are given course credit for completing an online EI survey at the beginning and at the end of the semester. Results reflect low EI among all students, but significant differences between genders and majors are found.

Byrne and Flood (2008) test four hypotheses regarding factors related to first-year academic performance (i.e., overall, in financial accounting, and in managerial accounting). Independent variables included prior academic achievement (performance on a national high-school exit examination), prior study of accounting, gender, and motives, expectations, and preparedness for higher education. Prior knowledge of accounting is a significant determinant of overall academic performance, but not in either accounting course. A significant determinant of all three performance measures is students' beliefs that they possessed the abilities needed for success.



Leitsch (2006) investigate six dimensions of moral intensity (magnitude of consequences, social consensus, probability of effect, temporal immediacy, concentration of effect, and proximity) and whether any of the dimensions are predictive of a student's moral decision making. The context is a small business college in the US ( $n = 110$  accounting undergraduate accounting majors in one of their accounting classes; class level varied). After reading four scenarios (approving a questionable expense report, manipulating the books, violating company policy, and extending questionable credit), respondents rate the six dimensions of moral intensity for each scenario and three states of moral decision making: (1) whether the situation involves an ethical problem (sensitivity), (2) whether they agreed with the action taken (judgment), and (3) whether they would make the same decision (intention). Regression results indicate that perceived corporate concern and sensitivity were significant predictors of moral judgment.

Brandon, Kerler, Killough, and Mueller (2007) investigate the effect of cognitive moral development and audit client attributes on ethical judgments. A case is used in which sales with questionable collectability (meant to represent earnings management) are recorded ( $n = 186$ , 91% response rate). Among other questions, students evaluate the partner's decision to accept the client's reporting and the likelihood they would engage in a similar action. To measure the subjects' cognitive moral development (CMD), students also respond to the DIT. Students with higher CMD scores are less likely to approve of the partner's decision and less likely to engage in a similar decision themselves. A similar interaction effect between CMD score and client risk level is found to affect approval of the partner's decision and likelihood of a similar personal decision.

Burnett, Friedman, and Yang (2008) report the results of a survey of students ( $n = 62$ , 92% response rate) in an intermediate accounting I course, which includes both accounting majors ( $n = 42$ ) and non-accounting majors ( $n = 20$ ) regarding their perceptions of their accounting skills in four topical areas: (1) journalizing, (2) preparing financial statements, (3) interpreting financial statements, and (4) financial statement analysis. Students' survey results (18 questions) at the beginning of the course, and again after 3 weeks are used. For both accounting majors and non-majors, the responses to the questions about perceived skill are higher after 3 weeks, which indicates that students believe that the 3-week introductory process in intermediate I improved their skills.

Wells, Gerbic, Kranenburg, and Bygrave (2009) report on a survey of chartered accountants in New Zealand ( $n = 26$ , 86% response rate) 3–5 years post-graduation to explore three issues: (1) capabilities required of new hires; (2) relative curricular emphasis that should be placed on those capabilities, and (3) advice on how to improve curricula. Two key areas noted as needing improvement are (1) teamwork and (2) experience with real-world problems.

Stoner (2009) investigates the self-reported technology skills of students in the first accounting course and how these skills may have changed over a 10-year period. Students are asked about seven skills: Windows, spreadsheets, word processing, email, Internet, statistical analysis, and database. For each skill, students rate their skill (non-existent to excellent), usage (never to a lot), and confidence (none to very). Results are reported for three periods, 1996–1997, 2001–2002, and 2006, and the results are compared. In general, self-reported skills have increased to varying degrees, but three notable findings are reported: (1) significant gender differences in the early cohorts are insignificant in the most recent survey; (2) database skills have not changed; and (3) spreadsheet skills have progressed slowly. The survey results indicate that entry-level accounting students still have a wide variety of technology skill levels, yet database and spreadsheet skills are not improving before the students get to the university.

### 5.2.2. Problem-solving

Jones and Davidson (2007) compare high-performing and low-performing students by examining three measures of student ability: (1) idea density (ID), (2) grammatical complexity (GC), and (3) paragraph completion (PC). Eleven tests taken by participating students ( $n = 112$ ) in a variety of accounting and business courses and collected from professors are used. The student responses are used to develop ID and GC scores for each student. Test questions are categorized as either structured or unstructured, and separate test scores are calculated for structured and unstructured questions. Separate comparisons are made between student test scores by dividing students into high-performing (top third of ID, GC, and PC) and low-performing (bottom third); this comparison is made for both

unstructured and structured questions, for a total of six comparisons (e.g., test grade on structured questions compared between high- PC and low-PC). Results show that students with high paragraph completion scores and idea density scores earned significantly higher test grades.

### 5.2.3. Communication

**Marshall and Varnon (2009)** study communication apprehension of students ( $n = 221$ ) enrolled in an accounting information systems (AIS) course during the period of 2001–2006. Writing and oral communication apprehension surveys, which were administered at the outset of the semester, are used. In addition, knowing the number of senior-level accounting courses the student had already completed allows the researchers to determine how many writing assignment they had been assigned for those classes. Findings include (1) 17% of the students experience high writing anxiety, and (2) increasing the number of writing assignments does not reduce writing anxiety.

### 5.2.4. Characteristics

**Nelson, Vondryk, Quirin, and Kovar (2008)** compare characteristics (e.g., demographics, education, career aspirations) of accounting students in 2000 with students in 2006. The study consists of 986 seniors and 398 master's students in 2000 and 1005 seniors and 607 master's students in 2006. Significant changes are detected from 2000 to 2006, including an increase in the percent of minority undergraduate students, increase in the number of males in graduate programs, higher high school and undergraduate GPAs, higher standardized test scores, and a greater intent to pursue a CPA (graduate student) or CIA (undergraduate students). Other significant changes include when and why students chose accounting as a major and the types of accounting (e.g., public, private) undergraduate students want to practice.

**Sweeney and Costello (2009)** study the relationship between degree of moral intensity and the ethical decision-making process of business students. Seven hypotheses are tested to understand the interplay of ethical dilemma, perceived moral intensity, ethical interventions, and ethical decision-making. The participants are business students in Ireland ( $n = 191$ , 52% response rate) who completed a questionnaire consisting of four case scenarios with ethical dilemmas (i.e., approving questionable expense report, manipulating company books, bypassing capital expenditure policy, and extending questionable credit). Results indicate that students perceived differences in moral intensity across the cases; students perceived social pressure as the most important factor of moral intensity. The results affirm prior research about the impact of moral intensity on ethical decision-making.

**Bealing, Baker, and Russo (2006)** attempt to (1) correlate personality type to freshmen who choose accounting as a major, and (2) determine if accounting and nonaccounting majors have different personality types. The Keirsey Temperament Sorter (KTS), used as a proxy for personality type, was administered to three groups: (1) freshmen accounting majors ( $n = 56$ ); (2) nonaccounting business majors enrolled in the introductory financial accounting course ( $n = 54$ ); and (3) sophomore accounting majors ( $n = 27$ ). Consistent with prior literature, the dominant accounting personality type for freshmen and sophomores is ESTJ, the KTS classifications of extraversion, sensing, thinking, and judging. Nonaccounting majors show similar results.

**Milliron (2008)** compares the values of millennial students to values of non-millennial students, specifically the expectation of higher grades and lower workload. By survey, 275 students (83% millennials) enrolled in both upper- and lower-level accounting courses evaluate 14 course characteristics in terms of how important the characteristics were to them. Based on prior literature, it is predicted that millennials would attach more importance to higher grade and lower workload than the non-millennials; however, only lower workload is significantly more important to the millennials. Also noted, millennials value higher grades and lower workloads more than opportunities to develop analytical and communication skills, and the difference was much greater than that observed in the non-millennial subgroup. The results suggest that millennial students select courses for reasons that are contrary to their long-term interests, which gives educators a challenge in motivating students and an opportunity for mentoring.

**5.2.4.1. Descriptive article.** **Fogarty (2008a)** argues that the rising generation known as the “millennials” is a catchy name that has been over-hyped and has created generalizations, problems, and incor-

rect assumptions that Fogarty asserts is contrary to the tech-savvy, team player, and accountable true nature of the so-called “millennials.”

### 5.3. Learning styles and approaches

#### 5.3.1. Learning styles

Wynn-Williams, Whiting, and Adler (2008) investigate the effect of case-based studies on student learning styles. Results are used for students in an intermediate-level accounting course assigned 10 case studies during the semester and submitting a written response to one case. Results for two assessments of learning style are used, measured twice during the semester, after the first seven cases and at the end of the course, using the Learning Styles Inventory (LSI), with 92 usable matched assessments (response rate of 50.7%). Student data are divided into three groups: (1) those who did all their casework prior to the first assessment, (2) students who did all their casework after the first assessment, and (3) students who did casework both before and after the first assessment. Analysis between groups indicates that active involvement in case studies appears to lead to a more balanced indicated learning style. Duff, Dobie, and Guo (2008) comment on the stream of research that includes Wynn-Williams et al. (2008). Duff et al. (2008) criticize the methodology and interpretation of LSI scores and their null results. They suggest several methodological problems including the use of LSI. Adler, Whiting, and Wynn-Williams (2008) reply to the comments of Duff et al. (2008) and defend their conclusion given their acknowledged limitations.

Nouri and Clinton (2006) examine the interaction among student gender, media presentation, and concern for correct use of words, and how this interaction may affect accounting students' recall when English-as-a-second-language instructors are involved. Two sections of principles of accounting II are used, one as a control ( $n = 38$ ) with black and white overhead presentations and chalkboards and the other as treatment ( $n = 36$ ) with color, animated PowerPoint presentations. The dependent variable, recall, is measured as performance on weekly quizzes. Independent variables consist of gender, media presentation format (control or treatment), and the student's concern for correct use of words measured by 10 items on a questionnaire. After controlling for GPA and grade in principles I, an interaction among the three independent variables is found for the first two of seven quizzes only. For those two quizzes, females in the treatment class with higher concern for word usage have the lowest scores. The interaction is not statistically significant for the remaining five quizzes indicating the ability of students to adapt to media presentations and to the lecturer's usage of words.

Lord and Robertson (2006) report on a survey of third-year management accounting students ( $n = 49$ ) to compare conceptions of learning to learning approaches and to perceptions about the role of lecturers, lectures, and tutorials. Each week, students attended two lectures and one tutorial, a student-led case. The questionnaire consists of five questions: what is learning?, how do you learn?, what is the role of lecturers?, what is the role of lectures?, and how is learning different in lectures and tutorials? Student responses are sorted into one of six conceptions of learning: increasing knowledge ( $n = 15$ ), memorizing ( $n = 8$ ), applying ( $n = 8$ ), understanding ( $n = 16$ ), seeing in a different way ( $n = 2$ ), and changing as a person ( $n = 0$ ). Students are also categorized into a variety of surface (e.g., reading, memorizing, listening) and deep (e.g., linking, discussing, and applying) approaches. Comparing the students' approaches and conceptions reveals that, with one exception, the only students who exhibit deep approaches have the conceptions of understanding and seeing in a different way (the more complex conceptions). All students exhibit surface approaches.

Schleifer and Dull (2009) investigate the relationship between metacognition (self-awareness of learning) and student performance in accounting classes using data gathered over the course of a decade (1995–2004) across three different accounting courses and collegiate levels at one US university for a total sample of  $n = 1201$ . Metacognition data are from the 52-item Metacognitive Awareness Inventory, which produces two measures: (1) knowledge of cognition, and (2) regulation of cognition. The regression model uses course grade as the dependent variable; independent variables include the two metacognition measures and controls variables for course level and gender. The model and metacognition variables are statistically significant, showing a positive association between cognition and course grade. That is, the higher the self-awareness about learning, the higher the course grade and vice versa.

### 5.3.2. Studying and learning approaches

**Ballantine, Duff, and McCourt Larres (2008)** examine changes in the learning approach of students in a case-based strategic management accounting course that was designed to encourage a deep learning approach. Data come from a research instrument at the beginning and at the end of the course to determine students' approaches to learning (strategic, surface, or deep). Several hypotheses are tested including three related to change in learning approach from the beginning to the end of the course, three related to the effect of gender on the change, and two related to effect of major (accounting versus nonaccounting) on the changes. The only hypothesis supported indicates a shift toward a strategic approach to learning (organized, time management). Though the authors hypothesize that the case-based class would encourage students away from surface learning (i.e., memorizing, lack of purpose), the surface learning scores actually increases over time. No gender or major effects are found.

**Abeysekera (2008)** examines the differences between international (mostly Asian) and domestic (Australian) students' preferred learning modes: (1) traditional instructor-dominated, (2) instructor–student interactive, and (3) small-group, case-based. Abeysekera reports that students had experienced all three learning modes in prior courses. A brief definition of intellectual capital is given, and students are asked the degree to which they agree with three questions, each of which indicates that 2 h should be devoted to each of the three modes. There is no difference in the preference for traditional lectures. However, international students, who comprised 46.4% of the students, are more likely to prefer interactive and case-based classes as compared to the domestic students. This finding suggests that accounting educators may need to offer more opportunities for interaction when presenting new topics.

**Phillips and Phillips (2007)** examine the use of textbooks by 172 introductory accounting students. Data come from student created learning journals; for each of the 13 chapters students indicate how much of each assigned text section was actually read, when started and finished relative to the lecture, and how the students felt about the section. Students submitted their journals twice during the semester. Additional questions report how students use the self-study quizzes, demonstration problems, and end-of-chapter homework. The learning journals are analyzed using grounded theory (reading, categorizing, and relating categories). The researchers find an association between better course performance and the following behaviors: reading before lectures instead of after and reading the whole chapter in one sitting versus multiple sittings. The authors suggest that instructors develop an ongoing strategy for stressing the importance of the course textbook; suggestions and strategies are presented.

**Abdolmohammadi, Fedorowicz, and Davis (2009)** consider cognitive style and ethical reasoning skills among accountants and compare results from 1990 to the present sample conducted in 2005. The Myers/Briggs Type Indicator (MBTI) is used to assess cognitive style; the DIT is used to measure ethical reasoning ability. The 1990 sample consists of 165 professional accounting staff and students; the 2005 sample consists of 168 staff and students. The authors report that (1) dominant cognitive styles for accountants have remained stable in the SF/ST category of the MBTI, and (2) ethical reasoning scores have declined significantly. The latter finding begs reflection on curricular inputs because accrediting bodies have prescribed more ethical emphasis since 1990.

**Rotenstein, Davis, and Tatum (2009)** study the relationship between procrastination and academic performance as measured by course grade. Students ( $n = 297$ ) in three graduate financial accounting courses for non-majors are given seven homework assignments worth 30% of the course grade; the high percentage served as an incentive to promote completion of the assignments. A web-based assessment program is used to monitor timing of the homework process and submission. The results show that procrastination had a negative association with academic performance, even after controlling for student quality. The results support the idea that procrastination negatively impacts academic performance.

**Bealing, Staley, and Baker (2009)** investigate the relationship between questions on the Keirsey Temperament Sorter (a questionnaire used to assess 16 personality classifications) and performance in introductory financial accounting. Data are from 95 students at a single US university. Initial analysis indicates that only sensing and intuitive categories are significant. Additional results show that students who selected more sensing questions have statistically higher grades in the introductory accounting course.

Brown (2006) develops and tests the Metacognitive Pattern Indicator (MPI) questionnaire, which identifies unconscious thinking or sorting preferences and beliefs about intelligence, both of which may help explain how students learn. Data come from 862 students in accounting, business, and non-business disciplines at levels from foundation courses to Master's courses. The instrument contains 92 items and assessed several patterns or beliefs (e.g., proactive or reactive, intelligence is fixed or developed). Students indicate that the results could help them understand and improve the way they learn. Though the MPI is still an exploratory instrument requiring further research, this developmental study indicates significant differences in preferences for lectures, with some preferring rules or step-based presentation while other prefer a variety of views. Instructor awareness of students' learning preferences should, according to Brown, lead to flexibility in classroom approaches.

Collett, Gyles, and Hrasky (2007) study the relationship between class attendance and performance on optional, online, multiple-choice self-study quizzes. Students (usable  $n = 68$ ) in a sophomore management accounting course at the University of Tasmania comprise the sample. While the students are expected to attend lectures and tutorials, attendance is not rewarded and absences are not penalized. Students are offered WebCT self-study questions to enhance learning. Student grade is the dependent variable, with use of assessment options, attendance, and other demographic data as independent variables (data were analyzed with ANCOVA). Conclusions include (1) both attendance and use of formative self-study improved course grade; and (2) attendance and self-study cannot supplant each other to achieve academic success.

*5.3.2.1. Descriptive articles.* Lyons (2006) uses interviews with students and their accounting instructors to explore the factors that impact nontraditional students' engagement and detachment from learning. Fogarty (2008b) suggests that because of students' inability to budget time they are unable to prepare for class as necessary to achieve their desired grades. Duff and McKinstry (2007) summarize students' approaches to learning and the related literature and offer suggestions for future research.

## 6. Conclusion and suggestions for future research

### 6.1. Conclusion

During 2006–2009 over 700 authors contribute to 330 empirical and descriptive articles and 89 cases to the six journals examined in this article. The number of articles and cases per year observed during this period are both slightly higher than the same rate per year in the 2003–2005 review. Article topics tend to shift with trends in academia. For example, in 2006–2009, an increase in articles related to fraud and forensic issues and ethics reflects the changing emphasis on these topics.

### 6.2. Suggestions for future research

Reflection on the empirical and descriptive articles published during 2006–2009 reveals some persistent trends in the literature. There continues to be a tendency to study one class, course, or institution, with reports of results only at the local level. To be influential, research must expand to include studies that cross institutional and geographic lines to assess whether an innovation that works in one context is effective in other contexts. That is, contextual effects are potentially important and worthy of empirical study. Studies to examine the impact of a treatment over time also are needed. Research suggestions for all key areas reviewed in this article are presented herein because in many cases these topics should be studied together (e.g., assurance of learning and curriculum).

Because accounting education research generally is conducted at one institution by one faculty member in one course, results are not generalizable to other institutions, courses, and faculty. Creating a multi-institution research process would be difficult to achieve, but the academy would be better served if at least some research into course and curriculum development was conducted at multiple school types (e.g., private and state, large and small, geographically diverse). Perhaps the Teaching, Learning, and Curriculum (TLC) section of the AAA, or the editors of leading accounting education

journals, could be helpful in requesting, screening, and selecting research proposals to be conducted at several schools as part of a more comprehensive approach to research in accounting education.

Special issues of education journals could to be designated to draw attention to important research topics. As an example, assurance of learning is one area in critical need of understanding for implementation that meets accreditation requirements. The extensive work that goes into accreditation has laid the groundwork for future accounting education research. Some possible research agendas may include comparisons between pre- and post-implementation, longitudinal studies as students' progress through the curriculum, and comparisons between accredited and nonaccredited departments. Editors of the accounting education journals could identify major topics that would warrant a special issue of a journal, which will motivate research on the topic.

Every AACSB-accredited institution must demonstrate an effective assurance of learning (AOL) program that documents the achievement of relevant and important educational objectives. Accounting educators have tremendous potential for research to identify appropriate direct and indirect measures of learning that would reliably assess student performance. Investigating the linkage between student performance and accomplishment of identified educational goals and objectives is important. Empirical data on the effectiveness of AOL programs can be gathered, and these results shared with other accounting educators. Faculty can also share their experiences with effective AOL plans and procedures via descriptive articles. In addition, accounting programs that are covered by more than one accrediting body may have competing AOL issues and plans that may be addressed. Aside from the mandate for AOL for accreditation purposes, little guidance is offered by accrediting institutions on the best ways to demonstrate it, and research is encouraged to assist the academy in streamlining approaches.

Education technology research designs tend to incorporate student feedback and perceptions as evidence of the implementation's success. Comparisons of two or more technology implementations or a technology implementation to a more traditional (less technology) classroom are included in the literature. The comparison models are much more difficult research programs to implement because of the need for multiple sections with different delivery but similar evaluations; however, it is these research designs that provide insight into the effect of changing technology on learning outcomes of interest to educators.

The variety of technologies available for use in education is growing, and students are becoming much more technologically savvy. Textbook homework aids, course management systems (e.g., Blackboard™), websites, software, and hardware (e.g., clickers) lead to complexity that can either distract from or enhance student learning. Research into the effectiveness of combinations and complexities of multiple technologies would be useful. Further, some technologies automate processes that students formerly did for themselves. Some examples are (1) general ledger software that posts journal entries and that automatically generates financial statements, and (2) textbook companion websites that outline material from each chapter (or topic), generate flashcards, and set up study plans. The availability of handouts of lecture slides and notes or even recorded lectures (allowing students to watch multiple times) may alleviate the need for students to attend class. Changes in how faculty and students communicate, and in how students access and review course material, will likely alter the learning environment with implications for students' development of important work-related skills. Research into how professional competencies can be developed in an electronic learning environment would therefore be valuable.

Technology represents a huge financial and human capital investment with an unknown rate of return. Identifying the most successful uses of technology for improving student learning is perhaps the most important near-term research issue facing accounting educators. However, the effective use of technology is not an issue isolated to accounting education, and so researchers must expand the context of research questions and studies to consider how other academic disciplines use technology to improve student learning. The use of more technology in courses by accounting faculty has resulted in a large investment of time and energy into learning the new technologies. Understanding the effect of this human capital investment on faculty and accounting departments is important.

Much of the research in educational technology focuses on using technology for educational purposes. Developing students' technology skills is another avenue for educational technology research. Research into effective use of spreadsheets, databases, integrated accounting software, and other tech-



nologies would provide insight into whether students are using technology to learn about accounting or just using the technology to satisfy course requirements. Those interested in researching in this area may wish to examine the effectiveness of introducing modules into classrooms that require use of technology where the goal is not to use the technology *per se*, but rather to prepare accounting deliverables and to make accounting decisions. Surveying employers or recent graduates about the technology needs or the incoming skill levels of entry-level employees would provide insight into ways that technology in the classroom transfers to career preparedness.

In the series of literature review articles published over time in the *Journal of Accounting Education*, accounting researchers have pursued the topics of research productivity and journal quality, overall and by specialty area; faculty evaluation by administrators, by students, and in the promotion and tenure process; and the job market. These issues are important to academic careers, and the articles have helped accounting faculty understand the issues. These articles are particularly important in the promotion and tenure (P&T) process for candidates, for administrators and accounting faculty who are voting on the candidate, for senior faculty and/or administrators who wish to serve as mentors for junior faculty, and for senior faculty who often are called upon to write external letters for P&T cases. It is critical that faculty-related research be kept current to ensure its continued relevance in a changing higher education environment.

Demographic trends continue to affect accounting departments. During the past few decades, accounting departments have relied more on non-tenure-track faculty (e.g., lecturer/instructor, academic specialist, clinical faculty). Understanding how this change affects accounting curriculum, accounting research productivity, the mix of academically qualified and professionally qualified faculty, and other aspects of accounting departments is important. The period from 2011 to 2015 will see the retirements of a large number of accounting faculty. Understanding how this change affects accounting education is paramount. The retirement of many faculty members will exacerbate the current imbalance between the supply of Ph.D. faculty and demand.

Research related to students offers insight to improve how accounting students are best educated. The objective of a typical accounting program is to attract students who have the potential and desire to succeed in a professional accounting career, including the successful completion of the CPA exam and other professional examinations. Personal contact with excellent students may be one way to recruit these individuals. Research into the best way to identify and attract the appropriate talent is needed. Accounting internships provide a clear linkage to success; therefore, it is useful to understand the best way to implement an internship program to afford maximum participation. Programs similar to the one described by Law et al. (2009) that provide an opportunity for faculty, students, and professionals to interact should be established and empirically evaluated.

Research has found that students report improved learning when classes are interactive with multiple forms of presentation. Adapting traditional instructional styles to the on-demand technology to which students are accustomed should be studied. For example, ways to encourage students to read the textbook and assimilate information should be identified and researched. Attendance is reported to improve course grade, but ways to incentivize it are needed.

Recent studies suggest that students appreciate and benefit from mentoring by practitioners. Alternative programs should be identified and tested for efficacy. Finally, ways to encourage the development of the behavioral competences required of the profession (e.g., teamwork, leadership, communication) are essential, especially in the face of larger classes at many universities.

## Acknowledgement

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## Appendix A. Summary of instructional cases

In addition to the 330 empirical and descriptive articles referenced in the body of this literature review, 89 instructional cases were published in the same journals. These cases are presented in

the appendix and are categorized into five tables: (1) auditing (18 cases); (2) financial accounting and reporting (34 cases); (3) corporate governance (5 cases); (4) managerial accounting (25 cases); and (5) taxation (7 cases). Twenty (22.5%) of the cases published in this 4-year period were distinctly international in nature. With the globalization of the economy, the movement toward convergence with International Financial Reporting Standards, and the requirements of accrediting agencies that global awareness be a part of the curriculum, this trend in writing international cases is needed. For that reason, the tables that contain a global or international emphasis are segregated into Panel B of each table. These 20 international cases can be found within financial accounting and reporting (12 cases); corporate governance (2); managerial accounting (2); and taxation (4).

These 89 instructional cases were authored and coauthored by 170 authors. Of the 724 authors represented by this literature review, 22 (3%) published both a case and an article that appears in the body of this literature review. Seventeen authors wrote more than one case (see [Tables A.1–A.5](#)).

**Table A1**

Cases in auditing.

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|------|--|
| [1]  | Asare, S. K., & Wright, A. M. (2007). Identifying and evaluating audit issues: The case of VITALOGISTICS. <i>Issues in Accounting Education</i> , 22(1), 79–88   |
| [2]  | BeMiller, S. M., Wirtz, R., & Lindberg, D. L. (2009). Sky Scientific, Inc.: An auditing minefield. <i>Issues in Accounting Education</i> , 24(2), 219–236  |
| [3]  | Boylan, S. J. (2008). A classroom exercise on unconscious bias in financial reporting and auditing. <i>Issues in Accounting Education</i> , 23(2), 229–246   |
| [4]  | Braun, R. L., & Stallworth, H. L. (2009). If you need love, get a puppy: A case study on professional skepticism and auditor independence. <i>Issues in Accounting Education</i> , 24(2), 237–252  |
| [5]  | Brown, K. F., & Tsakumis, G. T. (2007). Assessing business risk: The case of Premier Punch, Inc. <i>Journal of Accounting Education</i> , 25(4), 168–192   |
| [6]  | Cohen, J., Krishnamoorthy, G., & Wright, A. (2008). Waste Is Our Business, Inc.: The importance of non-financial information in the audit planning process. <i>Journal of Accounting Education</i> , 26(3), 166–178  |
| [7]  | Cunningham, G. M., & Harris, J. E. (2006). Enron and Arthur Anderson: The case of the crooked e and the fallen a. <i>Global Perspectives on Accounting Education</i> , 3, 27–48  |
| [8]  | Earley, C. E., & Phillips, F. (2008). Assessing audit and business risks at Toy Central Corporation. <i>Issues in Accounting Education</i> , 23(2), 299–308  |
| [9]  | Gramling, A. A., & Karapanos, V. (2008). Auditor independence: A focus on the SEC independence rules. <i>Issues in Accounting Education</i> , 23(2), 247–260   |
| [10] | Jones, III, A., & Norman, C. S. (2006). Decision making in a public accounting firm: An instructional case in risk evaluation, client continuance, and auditor independence within the context of the Sarbanes–Oxley Act of 2002. <i>Issues in Accounting Education</i> , 21(4), 431–448 |
| [11] | Kohlbeck, M. J., Cohen, J. R., & Holder-Webb, L. L. (2009). Auditing intangible assets and evaluating fair market value: The case of reacquired franchise rights. <i>Issues in Accounting Education</i> , 24(1), 45–61   |
| [12] | Martin, R. D., & Phillips, F. (2006). Aerospace Lighting, Inc. (ALI): Linking business strategy to audit planning. <i>Issues in Accounting Education</i> , 21(3), 313–321  |
| [13] | McKnight, C. A., Manly, T. S., & Carr, P. S. (2008). Maxwell and Company: Staff auditor embezzlement at a small client. <i>Issues in Accounting Education</i> , 23(2), 291–298   |
| [14] | Miller, C. R., & Savage, A. (2009). Vouch and trace: A revenue recognition audit simulation. <i>Issues in Accounting Education</i> , 24(1), 93–103   |
| [15] | Norman, C. S., Payne, M. D., & Vendrzyk, V. P. (2009). Assessing information technology general control risk: An instructional case. <i>Issues in Accounting Education</i> , 24(1), 63–76  |
| [16] | Sanchez, M. H., Brown, K. F., & Agoglia, C. P. (2007). Consideration of control environment and fraud risk: A set of instructional exercises. <i>Journal of Accounting Education</i> , 25(4), 207–221  |
| [17] | Smith, M. (2006). Alumina plc: A case study of the post-audit of capital investment expenditure. <i>Accounting Education: An International Journal</i> , 15(2), 217–225  |
| [18] | Tate, S. L., & Grein, B. M. (2009). That's the way the cookie crumbles: An attribute sampling application. <i>Accounting Education: An International Journal</i> , 18(2), 159–181  |
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**Table A2**

Cases in financial accounting and reporting.

*Panel A: Financial accounting and reporting*

- [1] Bowrin, A. R. (2008). Petroleum Services Enterprises Limited (PSEL): A case in financial reporting and analysis. *Accounting Education: An International Journal*, 17(4), 359–368
- [2] Carlson, R. L., & Vogel, T. J. (2006). Restricted stock versus stock options: The case of Jones Apparel Group, Inc. *Issues in Accounting Education*, 21(4), 449–459
- [3] Ferris, K. R., & Rankine, G. W. (2008). Statoil ASA: Global energy company. *Issues in Accounting Education*, 23(3), 467–480
- [4] Forsyth, T. B., & Dugan, M. T. (2006). Inconsistencies in US GAAP: Accounting for executory contracts. *Issues in Accounting Education*, 21(3), 291–295
- [5] Gujarathi, M. R., & Kohlbeck, M. (2007). Reliance corporation: Inventory write-downs and reversals. *Issues in Accounting Education*, 22(3), 503–514
- [6] Gujarathi, M. R., & McQuade, R. J. (2009). Amazing Deals Auto Mart: Financial reporting and analysis of receivables and securitization. *Issues in Accounting Education*, 24(1), 77–91
- [7] Holder-Webb, L., & Kohlbeck, M. (2006). The hole in the doughnut: Accounting for acquired intangibles at Krispy Kreme. *Issues in Accounting Education*, 21(3), 297–312
- [8] Jennings, J. P., & Henry, E. G. (2008). Safety Products, Inc.: A case in financial analysis of a failing company. *Journal of Accounting Education*, 26(1), 34–53
- [9] Kimmel, P. D., & Warfield, T. D. (2008). Accelerating corporate performance: Stock buybacks with zip. *Issues in Accounting Education*, 23(1), 119–128
- [10] Krishnan, S., & Mintz, S. M. (2007). Using case materials to research professional standards on revenue recognition issues. *Issues in Accounting Education*, 22(1), 89–104
- [11] Krumwiede, T., & Giannini, E. (2008). First Motors Corporation: A classroom case on impairments. *Global Perspectives on Accounting Education*, 5, 17–25
- [12] Margheim, L., Hora, J. A., & Kelley, T. (2008). The preferred stock dilemma of Appllo Technology: The impact of SFAS #150. *Global Perspectives on Accounting Education*, 5, 55–62
- [13] Mohrman, M. B. (2009). Depreciation of airplanes and garbage trucks: Information value and fraud prevention in financial reporting. *Issues in Accounting Education*, 24(1), 105–107
- [14] Mooney, J., & Borowski, B. M. (2007). The cash balance retirement plan conversion—A fully supported case. *The Accounting Educators' Journal*, 17, 71–94
- [15] Nurnberg, H., & Sweeney, J. (2007). Understanding accounting for business combinations: An instructional resource. *Issues in Accounting Education*, 22(2), 255–284
- [16] Phillips, F., & Kalesnikoff, D. (2006). Q-Dots Incorporated: Assurance for nanotechnology buyout. *Issues in Accounting Education*, 21(2), 147–155
- [17] Smith, P. A., & Kohlbeck, M. J. (2008). Accounting for derivatives and hedging activities: Comparison of cash flow versus fair value hedge accounting. *Issues in Accounting Education*, 23(1), 103–118
- [18] Stallworth, H. L., & Braun, R. L. (2007). Computone Corporation: An instructional case in earnings management and revenue recognition. *Issues in Accounting Education*, 22(2), 319–332
- [19] Stuebs, Jr., M. T. (2008). Simply academic: Linking reporting environments. *Issues in Accounting Education*, 23(3), 455–466
- [20] Tarca, A., Brown, P. R., Hancock, P., Woodliff, D. R., Bradbury, M. E., & Van Zijl, T. (2007). The matrix format income statement: A case study about earnings management and reporting financial performance. *Issues in Accounting Education*, 22(4), 607–623
- [21] Vinciguerra, B. M., & Sanchez, M. H. (2006). Accounting for contingencies: Exploring accounting choice, subjectivity, and reporting issues. *Global Perspectives on Accounting Education*, 3, 115–121
- [22] Young, M. (2008). Using experiential learning to teach earnings management: A comprehensive earnings management case. *Global Perspectives on Accounting Education*, 5, 63–71

*Panel B: International financial accounting and reporting*

- [23] Carslaw, C. A., & Purvis, S. E. C. (2007). Megascreeens USA Inc.—a foreign operations case. *Issues in Accounting Education*, 22(4), 579–590
- [24] Charkey, B., & Hadden, L. (2006). Closing the gap when moving from UK GAAP to IFRS: A case for the introductory financial accounting course. *Global Perspectives on Accounting Education*, 3, 23–26
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**Table A2** (continued)

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[30]	Henry, E., & Yang, Y. (2007). Making the right comparisons: Novartis AG. <i>Issues in Accounting Education</i> , 22(4), 721–733
[31]	Henry, E., Lin, S. W., & Yang, Y. (2007). Weak signal: Evidence of IFRS and US GAAP convergence from Nokia's 20-F reconciliations. <i>Issues in Accounting Education</i> , 22(4), 709–720
[32]	Knapp, M. C., & Knapp, C. A. (2007). Europe's Enron: Royal Ahold, N. V. <i>Issues in Accounting Education</i> , 22(4), 641–660
[33]	McConomy, B. J., & Xu, B. (2007). Beijing Biotechnology Company: Financial reporting issues of expansion to the west. <i>Issues in Accounting Education</i> , 22(4), 675–684
[34]	Moreland, K. A. (2007). International financial reporting–inventory costing at Exxon and BP. <i>Issues in Accounting Education</i> , 22(4), 549–561

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**Table A3**

Cases in corporate governance.

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<i>Panel A: SOX, controls, and corporate governance</i>	
[1]	Pforsich, H., Peterson Kramer, B. K., & Just, G. R. (2008). Establishing an internal audit department: The case of the Schwan Food Company. <i>Global Perspectives on Accounting Education</i> , 5, 1–16
[2]	Ripka, D., & Busta, B. (2009). Jones Company: A case on corporate governance, SOX and audit committee protocol. <i>Global Perspectives on Accounting Education</i> , 6, 77–81
[3]	Samson, W. D., Flesher, D. L., & Previts, G. J. (2006). Corporate governance and external and internal controls: The case of the Baltimore and Ohio Railroad, ca. 1831. <i>Issues in Accounting Education</i> , 21(1), 45–62
<i>Panel B: Non-US governance</i>	
[4]	Austen, L. A., Reisch, J. T., & Seese, L. P. (2007). Actions speak louder than words: A case study on Mexican corporate governance. <i>Issues in Accounting Education</i> , 22(4), 661–673
[5]	McInnes, M., & Shaw, L. (2008). Teranga West Africa: Building business controls in a developing country environment. <i>Global Perspectives on Accounting Education</i> , 5, 27–41

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**Table A4**

Cases in managerial accounting.

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<i>Panel A: Managerial and cost accounting</i>	
[1]	Bailey, C. D., Collins, A. B., Collins, D. L., & Lambert, K. R. (2009). An analysis of Southwest Airlines: Applying the Horngren, Datar, and Foster (2006) strategic profitability analysis approach. <i>Issues in Accounting Education</i> , 24(4), 539–551
[2]	Ballou, B., & Heitger, D. L. (2008). Kofenya: The role of accounting information in managing the risks of a new business. <i>Issues in Accounting Education</i> , 23(2), 211–228
[3]	Blocher, E., Shastri, K., Stout, D. E., & Swain, M. R. (2009). Instructional case: Blue Ridge Revisited—Integrating ABC and OROS Quick® software. <i>Journal of Accounting Education</i> , 27(2), 85–103
[4]	Bradford, M., Samuels, J. A., & Wood, R. E. (2008). Beta Auto Dealers: Integrating disparate data to solve management problems. <i>Issues in Accounting Education</i> , 23(2), 309–326
[5]	Brewer, P. C., Garamoni, M. A., & Haddad, J. (2008). University Tees: Introducing fundamentals of management accounting in a small business. <i>Journal of Accounting Education</i> , 26(2), 91–102
[6]	Bushong, J. G., Talbott, J. C., & Cornell, D. W. (2008). Instructional case—Activity-based costing incorporating both activity and product costing. <i>Accounting Education: An International Journal</i> , 17(4), 385–403
[7]	Danvers, K., & Brown, C. A. (2009). Out-West Products, Inc.: A financial modeling and decision analysis case. <i>Journal of Accounting Education</i> , 27(1), 40–57
[8]	Dunn, K. A., & Bhattacharya, S. (2007). Cost-allocation decisions in member controlled country clubs: A case analysis. <i>Journal of Accounting Education</i> , 25(3), 118–136
[9]	Everaert, P., Bruggeman, W., & DeCreus, G. (2008). Sanac Inc.: From ABC to time-driven ABC (TDABC)—An instructional case. <i>Journal of Accounting Education</i> , 26(3), 118–154
[10]	Heitger, L. E., & Heitger, D. L. (2008). Jamestown Electric Supply Company: Assessing customer profitability. <i>Issues in Accounting Education</i> , 23(2), 261–280
[11]	Janvrin, D. J. (2008). Detecting spreadsheet errors: An education case. <i>Issues in Accounting Education</i> , 23(3), 435–454
[12]	Joseph, G. (2009). Mapping, measurement and alignment of strategy using the balanced scorecard: The Tata Steel Case (and Accompanying Teaching Notes). <i>Accounting Education: An International Journal</i> , 18(2), 117–157

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**Table A4** (continued)

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  - [14] Krehbiel, T. C., Eighme, J. E., & Cottell, P. G. (2009). Morgan Systems, Inc.: Application of Six Sigma to the finance function. *Journal of Accounting Education*, 27(2), 104–123
  - [15] Lamberton, B. A. (2008). Baier Building Products, Inc.: Performance incentives and variance analysis in sales distribution. *Issues in Accounting Education*, 23(2), 281–290
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*Panel B: International managerial accounting*

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  - [25] Gujarathi, M. R., & Govindarajan, V. (2007). Falcon, Inc.: Performance evaluation of foreign subsidiaries. *Issues in Accounting Education*, 22(2), 233–245
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**Table A5**

Cases in taxation.

*Panel A: Taxation of entities in the US*

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- [1] Kalesnikoff, D., & Phillips, F. (2009). Detail Plus Inc. (DPI)—Auditing the income taxes of a family owned business in the Caribbean. *Global Perspectives on Accounting Education*, 6, 47–52
  - [2] Lightner, T., & Ricketts, R. C. (2007). Tax implications of participating in reality television. *Issues in Accounting Education*, 22(2), 247–254
  - [3] Randolph, D. W., & Seida, J. A. (2007). Balancing tax and financial reporting objectives: Effective tax planning within the property and casualty insurance industry. *Issues in Accounting Education*, 22(2), 285–318

*Panel B: Taxation of entities operating in multiple tax jurisdictions*

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