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ENCOURAGING UNDERGRADUATE-FACULTY COLLABORATIVE RESEARCH

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This paper is the result of the authors' participation in a panel session at the Southwest Regional Meeting of the American Accounting Association in Houston, Texas in March 2008. Robert J. Walsh presented an earlier version of this manuscript at the Northeast Regional Meeting of the American Accounting Association in Newport, Rhode Island in November 2008. The authors wish to recognize the contributions of the program chairs, anonymous reviewers, and panel session participants for their helpful comments and suggestions.

The purpose of this paper is two-fold. The first objective is to highlight how undergraduate research can be utilized to develop the technical and communication skills necessary for a career in accounting, as well as to outline some of the tangible benefits that can be enjoyed by students, professors, and their institutions by formalized efforts of research with faculty and undergraduate students. Second, specific examples of some initiatives in undergraduate research are discussed, along with the benefits to both students and faculty.

INTRODUCTION

Accounting professors have historically provided opportunities for graduate and doctoral students to engage in research activities. However, anecdotal evidence suggests that undergraduate accounting majors have become more involved with their professors in formalized research projects. For example, the American Accounting Association Northeast Meetings in 2004 and 2005 offered sessions with panel discussions and presentations by undergraduate accounting students.

The current era of accounting education, launched in 1989 with the "White Paper" produced by national accounting firms, recognizes the need for accounting students to successfully handle unstructured problems. Opportunities for students to work closely with professors on research projects would seem to address this need. It also appears to be become more evident in recent years that undergraduate research programs can also benefit faculty and educational institutions, as well. This paper examines the advantages enjoyed by students, professors, and colleges and universities resulting from undergraduate research activities.

This paper is organized as follows. Section two provides a general overview on the ways in which research in accounting by undergraduates benefits the students, and provides some background as to how these benefits have been required by the accounting profession over the past two decades. Section three briefly addresses some of the general benefits which accrue to the faculty and the educational institution. Section four describes some specific initiatives in undergraduate accounting research that may serve as useful examples. Section five provides some concluding thoughts.

GENERAL BENEFITS TO STUDENTS

Accounting literature over the past 20 years has focused on the importance of developing the "whole accountant," one who not only knows the rules and regulations in accounting, but who can also write, reason, and research unstructured problems (for example, see the AECC, 1990).

The Big Eight White Paper entitled "Perspectives on Education: Capabilities for Success in the Accounting Profession" (1989) specifically addressed the acquisition of knowledge and skills, rather than the length of time required to complete a degree. So, in the midst of pressures for a fifth year of accounting education designed to increase the prestige of professional graduate study, the Big Eight firms instead implicitly recognized that undergraduate education should prepare accounting students:

- 1. "To present and defend their views through formal and informal, written and oral, presentation" ...
- 2. "To locate, obtain and organize information from both human and electronic sources"...
- 3. "To solve diverse and unstructured problems in unfamiliar settings"...
- 4. "To comprehend an unfocused set of facts, identify and if possible, anticipate problems, and find acceptable solutions" ...
- 5. To understand "the determining forces in a given situation and the ability to predict their effects."

Even the view of accounting content learning in the White Paper (p. 8) lends support to the proliferation of undergraduate research. "The focus should be on developing analytical and conceptual thinking – versus memorizing rapidly expanding professional standards." Undergraduate research provides experience in producing

focused, in-depth knowledge that emphasizes the process of knowledge development over memorization of facts.

Since the White Paper, the theme of accounting academia has become educational innovation, evidenced by the curriculum projects of the Accounting Education Change Commission (AECC) (Sundem 1999) and the published responses to the 2001 American Accounting Association Presidential Address' call for zero-based curriculum design (Entwistle 2003, Arya et al. 2003, Kinney 2003).

The AECC's (Objectives 1990, p. 5) own list of the intellectual skills needed by accounting graduates mimics that of the White Paper and motivates the authors to include opportunities for undergraduate research in the accounting curriculum to help students develop their:

- Capacity for inquiry, abstract logical thinking, inductive and deductive reasoning, and critical analysis.
- Ability to identify and solve unstructured problems in unfamiliar settings and to apply problem-solving skills in a consultative process.
- Ability to identify ethical issues and apply a value-based reasoning system to ethical questions.
- Ability to understand the determining forces in a given situation and to predict their effects.
- Ability to manage sources of stress by selecting and assigning priorities within restricted resources and to organize work to meet tight deadlines.

Consistent with the goals of the White Paper and the AECC, students benefit in a variety of ways from engaging in research projects. For example, students obtain experience in applying the technical and communication skills acquired in their coursework to real world problems that don't come with a solution manual. Students benefit from one-on-one exposure with professors. This personalized experience provides feedback to students that is more directed and detailed than in an ordinary classroom activity. Further, they learn about the work of an accounting professor, and may consider such a career in the future by earning advanced degrees, including the Ph.D.

Students may also enter into regional or national competitions, or present papers at regional or national meetings. One of the greatest benefits here is that students can see the "best and the brightest" in accounting on a regional or national level, which is much greater in number than their accounting or business peers at their home university. Many practitioner and academic journals provide opportunities for student authors to gain national or international recognition by publishing the results of their research activities. Examples of "student-friendly" competitions, conferences, and journals are presented in Appendix A.

GENERAL BENEFITS TO PROFESSORS AND ACADEMIC INSTITUTIONS

While not as widely discussed or documented as benefits to students, undergraduate research projects can bring benefits to professors and their universities. The authors own experience in this area shows that undergraduate students can provide assistance to professors in their ongoing projects, at little or no cost to the professor. Obviously, the undergraduate may not be as "seasoned" of a researcher as a doctoral student. On the other hand, many undergraduates enjoy the challenge, and are able to utilize the research experience in their future careers in professional accounting.

Faculty members also benefit from mentoring students in undergraduate research. The opportunities exist to publish articles with students, and pilot test ideas for the professor's possible future research projects. Another advantage to the professor is the potential for additional compensation in terms of stipends or course releases for "directed readings" or "independent studies." Additionally, instructors can discover information that is helpful for teaching, as well as develop friendships with exceptional future professionals.

Advantages also accrue to the academic institution. Publicity from entering (and/or winning) student competitions brings positive attention to the university, and may help in the recruitment of new students. Similar benefits are earned from participation in national or regional academic conferences, particularly for small and mediumsized "teaching" institutions which emphasize opportunities for undergraduate students to work closely with faculty, in contrast to the environment at large "research" institutions.

SPECIFIC INITIATIVES IN UNDERGRADUATE RESEARCH PROJECTS

The opportunities for students to engage in research can come from a variety of sources and range from students assisting in faculty research to students actively pursuing their own research agendas with specific anticipated objectives. Potential student research activities include class assignments, program or degree theses, funded undergraduate research projects, and journal articles, among others. Examples of research projects in each of these areas, as well as specific benefits, are discussed below.

Class Assignments

Many instructors are hesitant to assign writing projects in their classes due to the time commitment required to prepare students to perform the assignments, as well as to critically review and grade the assignments. Just as accounting students need practice in preparing journal entries, trial balances, and financial statements, they also need practice in writing. The National Commission on

Writing's 2004 report indicates that writing is a "threshold skill" for salaried employees and half of the respondent companies took writing into account in promotion decisions.

Accounting professors can make their own involvement in writing assignments much less stressful and time book and article reference list, examples of referencing and bibliography pages, and a grading rubric. Requiring students to submit an early stage of their paper encourages them to begin the project by a certain date, as well as allows the instructor to provide detailed feedback on a shorter document. Typically, areas where students need guidance are in making sure they are on track with the purpose of the assignment, as well as providing sufficient and appropriate referencing.

The following are two example class assignments from tax courses.

 Undergraduate (Junior-level) Advanced Tax Course.

The project assigned was a term paper on "Limited Liability Companies." The required topics included an attention-getting introduction, comparing an LLC to a regular C corporation, comparing an LLC to an S corporation, comparing an LLC to a partnership, recommendations, and a summary and conclusion. A list of suggested references and referencing formats was provided. An example grading rubric is provided in Appendix B of this manuscript.

This particular topic was beneficial to students in preparation for taking an undergraduate business law course, as well as for the Business Environment and Concepts (BEC) segment of the CPA Exam; however, instructors can easily adapt this type of assignment to other accounting subjects. Students read and analyzed published technical articles and research guides, which exposed them to accounting practice experience. Further, students also learned to write and reference in a traditional format acceptable for accounting journals.

2) Fifth Year/Graduate-level Tax Policy Course.

The project assigned was a term paper proposing a specific change in the federal income tax law. The required topics included an attention-getting introduction, background information on the issue/problem, a review of published literature addressing the issue, a review of current tax law (Internal Revenue Code) on the issue, a presentation and discussion of the student's proposal, and a summary and conclusion. With the professor's assistance, two student papers were accepted for presentation at a regional academic conference, and the presentations were made by the student authors.

Students performed their own published literature and technical resource searches, which was valuable practice for the Regulation (REG) segment of the CPA Exam. The conventional styles of writing and referencing in the

consuming if they provide some structure to the assignment. Resources that are helpful to students' preparation of writing assignments include: a suggested outline of topics, writing guidelines, an example paper (or partial examples), a starter

accounting profession were reinforced from the junior-level tax course. Students were exposed to both practitioner and academic publications. As grading rubric for the course appears in Appendix B.

Program or Degree Theses

Many colleges have "honors programs" for academically gifted students, and these activities often require a senior thesis. At a small private university in the northeast, the honors program is operated by the liberal arts faculty, and business students often struggle to maintain sufficient interest to complete the program. However, even when business majors do complete the honors coursework, it is difficult to have a business topic approved for their senior thesis.

An accounting research topic, and a plan of research activity, that meets the standards of academic accounting research has a great possibility of being accepted in fulfillment of senior theses requirements in liberal arts programs. An example of a successful project was a descriptive study that investigated the accounting principles and practices of Latin American countries. The project also addressed how the environmental factors identified in prior research affected the accounting measurement and reporting requirements of Latin American countries.

The student researcher was able to deepen his understanding of U.S. Generally Accepted Accounting Principles, become conversant in International Financial Reporting Standards, and witness how accountants in real countries develop their own standards and adapt to the two major sets of standards. The student presented the results of the study separately to a mixed group of business faculty and also to the honors program directors. More importantly, a reduced version of the paper was accepted for presentation at a regional academic conference, and the presentation was made jointly by the student and professor authors.

Funded Undergraduate Research Projects

A medium-sized state university in the mid-west sponsors a funded research program for undergraduate students. Participation in the program is competitive, although the majority of students who complete the application process are accepted. The program begins in mid-May, with all research activities to be completed by August 1st. The student is then expected to spend the month of August writing and completing the research paper. Both students and faculty mentors agree to several obligations in order to participate in the program. Students agree to attend an overnight fieldtrip in mid-May, meet with their faculty

mentor regularly throughout the summer, participate in a weekly meeting with all other students admitted to the program from across campus, and commit a minimum of 20 hours per week to the research project throughout the summer. Students are also obligated to present their papers orally or in poster form at the University's Fall Research

Faculty members agree to be available to mentor the students regularly throughout the summer. Faculty members also consent to attend a number of the regular weekly meetings. Faculty members were paid a stipend of \$1,800 to mentor students in the summer of 2008.

Students are exposed to academic research as insiders, and, in the feedback of the accounting faculty member sponsoring the projects, some student participants expressed that they were considering pursuing a Ph.D. in accounting and entering academia. The faculty member also reports that students seems to mature academically and professionally in ways that classroom experiences cannot produce. They appear to become much more comfortable in conversation with accounting faculty and professionals, and develop stronger connections with their research advisors and with the university, again in the opinion of the sponsoring accounting faculty member.

Students are required to apply tools developed in their undergraduate program. Students are writing to inform or convince the reader, rather than for a grade, and are required to revise their work product until it meets these objectives. Students must utilize their knowledge of statistics to solve a "real world" issue and not just to solve a textbook problem or case—with a handy answer in a solution manual. Further, students must choose a research methodology that will lead to discovery of new information for which they are searching.

One benefit to a faculty member is having undergraduate students pilot test ideas. An example of this was an exploration of the question, "Are traditional accounting numbers useful for high-tech (especially dot com) firms?" One student investigated the ability of financial statement numbers to predict bankruptcy in hightech firms, and another chose to examine the ability of accounting numbers to predict corporate takeovers. The studies were performed on the financial services industry because it has a high incidence of dot com companies. In the case of bankruptcy, analysis showed that the high-tech firms examined had very little debt. Most of the debt carried by these firms was in the form of loans from officers or shareholders. Thus, a model could not be created to predict bankruptcy for these high-tech firms. On the other hand, the study revealed a high incidence of corporate takeovers in the industry, as well as some interesting results for continued research. Pilot testing of these ideas by undergraduate students enables a professor to zero in on the ones that would be most fruitful.

Research advisors can also benefit from the discovery of information that improves their effectiveness as teachers. For example, one student surveyed local companies to

Symposium and Spring Student Research Day. In addition, students are expected to submit their papers to the National Conference on Undergraduate Research, and attend the conference if their papers are accepted. Undergraduate students were paid a stipend of \$3,000 to participate in the program in the summer of 2008.

determine what costing method they used. The idea was to create a model with the costing method as the dependant variable and analyze which firm characteristics would best predict costing method used. The student surveyed all manufacturing firms in the region with more than 50 employees, receiving 23 responses. The results showed that two of the firms had no formal costing method, one used activity-based costing, and all 20 of the other firms used standard costing. This knowledge motivated the professor to approach the discussion of costing differently in class.

Journal Articles

Professors can work with students to publish in peerreviewed practitioner journals, such as The CPA Journal. Two example articles concern service projects in which the student authors were involved: Volunteer Income Tax Assistance (VITA) and Financial Literacy. The published articles were show-cased at a University luncheon for scholarship donors. For the VITA article (Doyle at al. 2005), the professor worked up the background information and statistics on VITA in general, and the students submitted detailed information on operation of the program and their personal reflections. For the Financial Literacy article (Anders and Crawford 2005), the student author and professor worked jointly to research background information and statistics, and describe the operation of the program. The student author and professor continued the research stream and a second follow-up manuscript was presented at a regional academic conference.

The student authors of the VITA and Financial Literacy articles received immediate benefits in terms of job offers from Big Four accounting firms. They were also able to further develop their research and writing skills, as well as an interest in a potential future academic career. The professor gained a more detailed knowledge about the volunteer programs, as well as a closer relationship with the student authors, and the university benefited from the public attention that accompanies the intellectual contributions of its members.

Many academic journals are also open to encouraging student submissions. A funded undergraduate research project (discussed above) asked the question, "Do the new rules for goodwill improve financial reporting?" The paper resulting from this study was published in *the Research Journal of Business Disciplines* (Sanson and Hall 2004). Another project addressed the effect on the local economy of the opening of a Wal-Mart store or Supercenter in local communities. The student utilized a simple regression model from his undergraduate coursework, which was

sufficient for the sponsored research project. This provided a starting point for the faculty advisor to use the data in a more sophisticated pooled regression model, and perform the level of analysis expected for publication in an academic journal.

CONCLUSION

The purpose of this paper is to draw the academic accounting profession's attention to the importance of undergraduate research activities. Many benefits accrue to students from engaging in research projects, from applying and improving communication and technical skills to exposure to the work activities of accounting professors. Faculty benefit on a scale beginning with assistance on their own research projects to partnering with students as coauthors. Colleges and universities can demonstrate to prospective students that they provide a unique learning environment.

In preparing accounting students to become professional accountants, accounting faculty will find student research projects to be a valuable tool. However, general encouragement to faculty to participate in undergraduate research is not sufficient. While student research activity can take many forms, four specific outlets have been addressed: class assignments, program or degree theses, funded undergraduate research programs, and journal articles.

Class assignments and program or degree theses require that students be able to locate resources and appropriately communicate the results of their inquiries. Particularly with class assignments, the results tend to be "known"—at least by the instructor. While these projects are valuable professional skill-building activities, "original research," such as the funded undergraduate research projects and journal articles may be of the greatest value to the professor-advisor and may more directly develop the student-researcher's interest in pursuing doctoral studies.

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 http://aaahq.org/AECC/big8/cover.htm

Appendix A: Student-Friendly Competitions, Conferences, and Practitioners' Journals

Conferences and Competitions

American Accounting Association (AAA)

Regional Meetings http://aaahq.org/calls/default.cfm

Beta Alpha Psi (BAP)

Annual Competitions www.bap.org/competitions.htm

Institute of Management Accountants (IMA)

Annual Student Leadership Conference www.imanet.org/student_conference.asp

National Student Case Competition and Student Manuscript Award

www.imanet.org/membership_helping_student_scholarship.asp

National Conferences on Undergraduate Research (NCUR)

www.ncur.org

Conferences with Journals

Academy of Accounting, Finance and Economics http://ocs.sfu.ca/aafe

Academy of Business Disciplines www.abdwebsite.org

Business Research Consortium of Western New York www.businessresearchconsortium.org

Northeastern Association of Business, Economics and Technology www.nabet.us

Journals

The CPA Journal www.cpaj.com

Journal of Accountancy www.journalofaccountancy.com

New Accountant www.newaccountantusa.com

Today's CPA www.tscpa.org/resource/news

Appendix B: Grading Rubric

Instructor's review sheet:

• Editorial corrections and comments are written directly on the manuscript.	
The paper is rated on the criteria below using the indicated scale where 1 = very poor and 10 = excellent:	
1) Introduction is interesting	
2) Body of paper a) Well-organized b) Easy to read c) Quickly readable	
3) Conclusion rounds out the paper	
4) Paper is well-written: a) Overall b) Sentence structure c) Spelling d) Grammar e) Word usage/language e) Subject/adjective agreement f) Subject/verb agreement g) Paragraph length/structure	
5) Written at a "non-expert's" level	
6) Information provided is accurate	
7) Referencing is sufficient and consistent	
8) Referenced sources are of sufficient quality	
9) Bibliography is complete and consistent	
10) Addresses all points stated in assignment a) Content/topical coverage b) Format/appearance	
Other comments to student:	

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