

The Accounting Education Change Commission Grant Experience: A Summary

Chapter 11 UNIVERSITY OF NORTH TEXAS Integration of Classical Learning Core with Professional Learning Core

Type, Size and Mission of Accounting Program

The mission of the Department of Accounting at the University of North Texas (UNT) is to maintain a leadership role in professional accounting education. The department will achieve this mission through the departmental objectives and strategies for teaching, research, and service. The primary educational programs of the department are the programs leading to an MS in Accounting. The programs provide students with the knowledge and skills initially needed for entry into careers as professional accountants. There is special emphasis on the use of technology and developing students' technological expertise. The programs help graduates become effective leaders in the accounting profession and contributors to the effectiveness of business, government, and other non-profit organizations. During the fall of 1995 the department had 153 students in the MS programs.

Another critical teaching objective of the department is to be a leader in the education and development of accounting educators in the United State through offering a high-quality doctoral program. Upon completion of this program, graduates are prepared to take an active role in the accounting academic community. In the fall 1995, the department had 20 students in this program.

A secondary teaching objective of the department is to provide a high quality BS in Accounting Control Systems for those individuals who do not enter the graduate program. This program is designed to prepare students for careers in certain industries and government entities which seek individuals with a strong education in business and accounting but without the degree of specialization provided by the integrated professional program. The program parallels much of the undergraduate portion of the five-year, integrated MS program, but is supplemented with additional credit hours at the undergraduate level.

Characteristics of Program Before the Grant

Although half of the 150-hours integrated program consisted of arts and sciences education, the linkage of accounting to the arts and sciences program was not threaded with a central core. Students took liberal arts courses without any reference to a central purpose. In the accounting portion of the program, lectures and problem assignments were the dominant teaching means. Although analytical skill was emphasized, students basically were conditioned to solve well-defined problems.

Central Objective of Grant

The UNT grant project calls for a logical linkage from the Classical Learning Core (CLC) to the Professional Learning Core (PLC). This linkage was established to accomplish the following goals:

- improve the knowledge base provided, especially with respect to general education and in understanding the way accounting relates to other disciplines.
- enhance capacity for independent learning — learning to learn.
- intensify the desire for continued learning.
- enhance communication skills — reading, writing, speaking, and listening.
- improve interpersonal skills and the capacity to work as a member of a team.

- upgrade competence in the use of abstract logic and the exercise of critical thinking.
- stimulate sensitivity to professional and social responsibilities.

UNT had in place a CLC developed by the College of Arts and Sciences in response to the Carnegie Commission's call for better integration of the core curriculum. The CLC program required six hours of English in the first year. Sophomore PLC students built on the freshman foundation by taking 18 hours, six each in English, history, and political science. All these courses were integrated under the central themes of virtue, civility, and reason, to which was added the theme of "accountability." The CLC continued the same learning themes in the junior year, culminating in a senior-year capstone seminar. A common set of "great books" was used in all of these courses.

Consideration of virtue includes relating contemporary moral problems to notions of virtue embodied in the classics of our cultural history. Civility concerns developing respect for the dignity of others and for rules that express a consensus for achieving a good life in pluralistic societies. Reason involves the two contrasting tendencies that consist of (1) the creative and speculative and (2) the technical and analytical. Accountability, the fourth element added to accommodate the needs of the PLC program, refers to the disposition of a person to accept responsibility for his/her actions in all facets of life.

The PLC portion of the 150 hour program included at least 30 hours from the existing CLC and 12 hours of economics and history/ethics. Existing mathematics and science requirements were continued. There were six hours of general education electives and each student also had 15 hours of electives in general education areas.

The PLC's key elements were (1) providing a solid background in general education, (2) integrating subject matter across courses both horizontally, within a semester, and vertically, from semester to semester, and (3) organization of subject matter around central themes. Putting these elements in place required extensive cooperation with faculty in the College of Arts and Sciences and extensive revision of accounting courses.

Key Means of Accomplishing Grant Objectives

The key to achieving the grant objectives lies in four areas: (1) support and commitment of the accounting faculty, (2) support of the faculty in the College of Liberal Arts and Sciences, (3) teaching material, and (4) support from college and university administrators at UNT. The cooperation of UNT's arts and sciences faculty evolved over a period of time before the grant was received. For a period of 20 or more years, the accounting faculty have been active and influential on this campus. They have taken part in campus-wide lecture series and other events, as well as many social and cultural activities that involve the university community. This interaction with faculties from other colleges created a situation in which the accounting faculty were known outside the College of Business and were respected for their contributions to the intellectual dimension of university life. The Department of Accounting was able to secure support from the Director of the CLC program in designing its grant application. Several meetings and seminars were held during the period of 1990-92, in which accounting faculty and arts and sciences faculty discussed the implementation of PLC courses with the central themes. Three joint two-day faculty retreats between accounting and arts and sciences faculty were held off campus where as many as 50-60 faculty members met to develop implementation plans.

The success of the AECC and other parties in exciting the accounting community, with regard to making massive changes in accounting curriculum and in improving pedagogy, had a significant effect on the PLC as implementation progressed. A new introductory text developed by the University of Southern California made it convenient to (1) adopt a user approach, (2) introduce the entire discipline of accounting quickly, (3) use student-centered pedagogy, and (4) intensify the development of interpersonal skills.

The implementation of the grant project coincided with a time of budget reduction in the university and a continuing decline in the number of accounting majors. The project put a great strain on the department's resources. While the university required the department to observe the policy of averaging 300 semester-credit hours per faculty member, we had to offer PLC courses in a small class size. Fortunately, the department was encouraged by the central administration to continue the experiment regardless of the financial constraint.

Major Changes from Pre-Grant Conditions

The heart of the UNT curriculum change in accounting was to embrace the CLC as the essential liberal arts component of the program and to integrate into the PLC courses aspects of the same learning themes used in the CLC. The project also included some fundamental changes in how various parts of the accounting and business curriculum components were delivered.

In the freshman and sophomore years, PLC students were required to take the following CLC courses which were structured around the themes of virtue, civility, reason, and accountability:

- Economics 1100 and 1110
- English 1311 and 1321
- Western Civilization (Hist 1051 and 1061)
- Classical Argument (Comm 1400)
- American Government (Psci 2041)
- U.S. History to 1865 (Hist 2611)
- Classical Argument (Comm 1400)

In the sophomore year, they took the first two PLC accounting courses (financial accounting and managerial accounting). A user approach was adopted for the two courses, with the first course designed so that students would understand financial statements without the use of the double-entry accounting system. The final part of the first course and the second course switched to the use of accounting information for making managerial decisions. Concern for the capture and compilation of information is delayed until the third accounting course in the program.

The "use of management information" (UOMI) segment began after students had completed an introduction to entity financial reporting, about two-thirds of the way through their first semester of accounting. At this point, students were familiar with an entity's financial and operating cycles, the three basic entity financial statements and how they related to each other, and basic financial statement analysis techniques.

The UOMI segment began with a review of the history and purpose of organizations. This tied in to parts of an economics course they took in their first university semester, as well as to their history and literature courses. This also allowed discussion of the Professional Learning Core themes of reason, civility, virtue, and accountability that continued to receive emphasis and reinforcement throughout the semester. Then, organizational needs for information were covered, including the role that accounting could play in serving those needs. The principal information need was to help plan future activities and predict future results of different sets of activities. The rest of the first accounting semester was spent describing and using cost-volume-profit techniques to quantify the expected results of planned operating activities, compare actual results to the plan, identify differences (variances), determine reasons for the differences and use all of this information to plan the next operating cycle's activities. The emphasis was on activity planning and measurement, and a series of cases were used. The cases started with planning a new service business, and continued through its first few operating cycles.

The teaching model in the second semester was to assign a reading/writing assignment on a subject before discussing it in class. Class time was primarily devoted to extending (rather than reiterating) the concepts covered by reading/writing assignments. The emphasis remained on activity planning and evaluation, rather than on financial planning/evaluation. The emphasis was also on the use of information to make decisions about the future rather than on the process of producing information from data.

Also during the second semester, students were divided into small groups (four or five students) and assigned a group research project. The goal of this activity was to learn about an assigned industry, identify the industry's principal revenue and cost drivers and relate them to the managerial information tools studied during the semester. Students prepared both written and oral presentations of their findings.

At the completion of the UOMI segment, students understood the structures, needs, and uses of information in business, the role of managers in an organization, the flows of revenues and costs in

an organization, and the tools to help make decisions about future activities and evaluate results.

Following the second semester, students take a group of PLC accounting courses designed with similar learning tools, such as cases and team projects. These courses were:

- Accounting Systems
- Managerial Accounting
- Intermediate Accounting
- Professional Responsibilities
- Taxation
- Capstone Seminar

Beginning in the Fall 1994, the sequence of the first two accounting courses (Financial Accounting and Managerial Accounting) was reversed. The logic in teaching accounting to business students is to start from a micro perspective (activities within an organization) to a macro perspective (across the organizations, i.e. firm-wide).

Methods of Achieving Faculty and Administrative Support for Changes

The accounting faculty at UNT had long been discussing fundamental changes in curriculum at the time the AECC grant were announced. A five-year program was implemented in the early 1980s. By the time of the curriculum change proposal to the AECC, the five-year program was flourishing and graduated more students each year than the undergraduate program. However, the accounting faculty were satisfied with neither the content nor the approach to teaching many of the individual courses in the accounting sequence, nor were they satisfied with the liberal arts component of our program. Even before the AECC grant, the accounting faculty were searching for ways to enhance students' liberal arts education while at the same time improving the business and accounting curriculum. At the same time, the accounting faculty became aware of criticisms of accounting graduates by employers as well as by various educational groups. Both groups felt that business curricula were too technical and restrictive. It was apparent that major restructuring was necessary in both accounting and business education.

In a situation where the faculty is dissatisfied with the current situation and where external constituents are also dissatisfied, the perfect opportunity for change exists. All that is needed is a catalyst to cause change. In the UNT case, the catalyst was the AECC. The decision to apply for the AECC grant was supported unanimously by all accounting faculty. As explained earlier, the accounting faculty had developed close relationships with the faculty of the College of Liberal Arts and Sciences and, consequently, they were able to get some key liberal arts faculty to join the effort to develop the AECC grant proposal and, later, to implement the proposal. Of course, the CLC program was a premier program in the university at the time of the AECC grant announcement, and the proposal to incorporate the CLC program into accounting education was welcomed by the deans of the College of Business Administration and the College of Arts and Sciences, and also by the provost and the chancellor of the university.

Change Activities That Worked Well and Which Others Might Copy

Although the experiment and assessment are not complete at this time, some preliminary judgments about the results have emerged.

1. We have gained sufficient experience to begin restructuring accounting courses for all our students. This will include coordination of each accounting course with non-accounting courses. We believe that these ideas about program change are transferable to other programs.
2. Certain features of the department's coordination efforts with the CLC program appear to offer opportunities for other programs. A strong alliance with the College of Arts and Science is essential for this type of project.

3. The user orientation to the first two accounting courses — Introduction to Financial Accounting and Introduction to Managerial Accounting — appears to be more effective than the traditional approach.
4. New teaching approaches, including extensive use of cases and student groups, appear to be more effective than the traditional lecture approach.
5. The emphasis on acquisition of communication, group work, analytical, and learning to learn skills can be achieved with the new teaching approaches.

Change Activities Undertaken That Did Not Work

Certain aspects of the experimental program have not worked well in the UNT environment. Since our environment is similar to many other public institutions, an awareness of potential problems can help others programs avoid these difficulties. Of specific concern are freshman only admission, a full-time lockstep program, open admission, and four hour courses.

The experiment required the department to recruit only freshmen into the five year lockstep accounting program. The results suggest that it is difficult to recruit large numbers of students into a program like the PLC program as freshmen. Typically, "real" decisions about a college major are made only after one or more years of college study. The first accounting course is probably the most important for helping choose accounting as a major. Consequently, we need a program that allows students more flexibility.

Given the UNT student body, a lockstep program also creates major limitations. A large percentage of the students work and therefore take limited course loads. The lockstep program was one main reason for the high exodus of students from the PLC program.

The experiment called for open admissions. The goal was to determine whether a program like the CLC was feasible for all students. The "average" student appears to have particular difficulty with the CLC phase of the program. The accounting faculty do not believe that open admission is feasible. This concern appears to be pervasive across the CLC and is not limited just to PLC students. (Over 50% of the entering CLC students dropped out before the end of the first year.) The entire CLC program was replaced with an honors program in 1994.

The AECC proposal we submitted called for teaching four-hour courses in Accounting Information Systems, Managerial Accounting, and Intermediate Accounting. Due to various constraints, such as limitation of physical space and inflexibility of computerized course scheduling in the university, the four-hour course concept was very difficult to implement. Another difficulty encountered was the budget reductions in the university. It was costly to offer PLC courses which had only 10 to 15 students enrolled.

Unexpected Benefits

Several unexpected benefits have emerged from the AECC grant. First, the grant added additional credibility to the already well-known reputation of accounting programs on the UNT campus in the Dallas Fort Worth area. A tremendous amount of respect for accounting faculty by other faculties and university administrators on the campus has been very visible. Second, the user approach to the first two accounting courses has generated a heated discussion among accounting faculties in the community colleges in Texas. A seminar course has been held at UNT during the summer for the past three years for community college faculty. The purpose of the seminar was to inform community college professors about the new approach to these courses at UNT and to encourage change in the community colleges. The reaction was generally favorable. Third, the AECC grant led to obtaining an additional grant from the Halliburton Foundation. Fourth, through the AECC project experiment, it was concluded that the first financial accounting course should be preceded by the first managerial accounting course. The faculty now believes that the micro-to-macro sequence is the proper way to teach accounting to all business majors, and that, in conjunction with the user approach, this sequence will attract more talented students into accounting programs.

Measurement of the Effects of Changes Accomplished

Four groups of students were admitted into the CLC-PLC program in 1990-93 with each group consisting of about 40 students. The first group graduated in December 1995. An outcome assessment will be performed on each group on their achievement of the purposes of the CLC-PLC program. At this time, the outcome assessment of the first group has not been completed. However, in the spring of 1994 (the junior year for the first group), the ten students who were still in the program were tested and the results are presented below:

Test 1 — A simple one tail paired T test between the pre and post scores for the experimental group. This test was the first necessary condition for an experimental effect. The differences were substantially and statistically significant. But obviously, the test is not sufficient. The difference could be attributed to maturation.

Test 2 — An F test of the differences and in the variances, covariances, and distributions of the experimental group and the control groups. The test was statistically significant and analytically substantive. Our experimental group had much smaller variance than the control juniors and seniors. Our experimental group differed significantly from normality while the other groups did not. This may indicate a differential mortality.

Test 3 — A multivariate regression (equivalent to a MANOVA) of the groups on the six raw (unpartialled) subset scores on the COMP. This test showed a difference between the experimental and control accounting juniors and seniors on most of the scales including the total COMP score.

Test 4 — A multivariate regression (equivalent to a MANOVA) of the groups on the six subset scores with the effects of the covariates (sex, ethnic group, GPA, SAT, English as the first language, and test effort partialled). This test showed nothing.

Test 5 — A multivariate regression (equivalent to a MANOVA) of the groups on the six subset scores with the effects of all the covariates except GPA partialled. This test was run on the assumption that some of the hypothesized effect might be embedded in the GPA. Partialling the GPA might miss the effect. This test showed a significant effect on the value clarification scale.

Test 6 — A multivariate regression on three groups (experimental, juniors, seniors) matched for GPA on the six sub-set scores partialled for all the covariances except GPA. This test showed significant effects. On the three scales, Social Institutions, Science and Technology, and Value Clarification, the experimental group was statistically and substantively different from the control juniors. They were not different from the control seniors. On balance, given the small sample, the results are interesting, perhaps even exciting.

By 1998, all four experimental groups will have completed their PLC program and data will be gathered on all four groups of experimental students. The first group of students indicated that the PLC program had prepared them well for their entry to an accounting career. The ten students in this group were placed in either accounting firms or major industrial firms.

Special Insights from Carrying Out Our AECC Grant

Several lessons have been learned from the experiment. The first important lesson is that teaching accounting with the traditional lecturing mode is not as effective as other teaching methods such as case study, group project, group discussion in class, class presentation, etc. Today, lecturing in class is no longer the dominate mode in teaching accounting classes at UNT. Second, the use of multiple teaching methods in class can make students think while they are learning — learning to learn. Communication skills, team work attitude, and work ethics also can be developed through a mixture of teaching methods. Third, students would learn accounting better — although there was no test to prove this point — without exposing them to how to prepare accounting reports at the beginning. Instead, they would understand accounting better if they could first learn how to use accounting information for various business decisions. Another very important lesson learned from this experiment is that a large number of students in the first accounting class do not have a good understanding of how a business firm operates in a competitive environment. Understanding the underlying forces behind business transactions has been wrongly assumed for students taking the

first accounting course. To address this concern, the sequence of the first two accounting courses has been reversed, so that managerial accounting now precedes financial accounting.

Plans to Perpetuate the Changes That Worked Well

The lessons learned as described immediately above will guide future curriculum changes. Many additional curriculum changes have already been implemented. Communication skills, professional ethics, team work, analytical reasoning, professionalism, and accountability are now emphasized in accounting programs, based on the four themes of the CLC — virtue, civility, reason, and accountability. Also, the lecture method has been replaced with many tested and effective teaching methods. The experiment will continue and the faculty will continue to learn from it.

Major Reports and Articles Generated From Grant Activities

"An Analysis of Career-Relevant Skills Among Students at Different Stages in an Accounting Program," by Frieda Bayer, William Luker, Robert Michaelsen, and Neil Wilner. (Has been submitted to an educational journal for publication.)

"Curriculum Changes in a Professional Accounting Program: An Evaluation Model," University of North Texas Working Paper, October, 1991, by William Luker, Frieda Bayer, Barney Coda Jr., Alan Mayper, and Robert Michaelsen.

"Project Report, 1995" Department of Accounting, University of North Texas, August 1, 1995. (This report was prepared for the Accounting Education Change Commission.)

Materials Available to Send to Others and How to Get Them

Copies of the above materials and report are available upon request. In addition, copies of course materials and syllabi for the PLC courses can be made available for the cost of copying. Any other reasonable request will be honored. Send your request to:

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