

## CHAPTER V

### SUMMARY, RECOMMENDATIONS AND, DISCOVERY

The purpose of this study was to explore the defining characteristics of college-level course work. The determination of the defining characteristics of college level is important for at least three reasons. First, defining college level may provide guidelines for post-secondary education to help ensure the success of students transferring to four-year institutions. The second reason is that critics of community colleges question the level of academic work occurring there; indeed, critics question the standards in all colleges and universities today. Third, this study should generate theory as to what constitutes college-level course work.

The literature describing college-level course work is limited. The method used to gather the data was semi-structured elite-interviewing. The units of analysis were business management and accounting faculty at university and community college levels. This procedure highlighted differences and similarities in the responses of interviewees from the different types of institutions and from the different areas of study. The choice of four specific institutions and two areas of study was made to reduce the likelihood of the confounding variables of college culture and area culture influencing the findings.

This chapter consists of two sections. The first presents a summary of findings related to the research question and a comparison of the findings to issues raised in the review of the literature. The

second section discusses interpretations and recommendations for future research.

#### Research Question

This study was designed to explore the defining characteristics of college-level courses. The following research questions were addressed:

1. What are the perceived similarities and differences among community college accounting and business management professors when they identify the defining characteristics of college-level course work?
2. What are the perceived similarities and differences among four-year college and university accounting and business management professors when they identify the defining characteristics of college-level course work?
3. Do similarities and differences exist in the perception of community college and four-year university faculty when they identify the defining characteristics of college-level course work?

#### Research Procedure

Sixteen interviews were conducted and content analysis was used to analyze the interviews. The university and community college for this study were the largest institutions of their type in the state of North Carolina thereby having the potential of providing a sufficient number of individuals from whom the researcher could choose to

interview. The choices for those interviewed were made with the assistance of the Vice President for Undergraduate Studies at the community colleges and through consultation with instructional deans at the universities. The researcher chose the interviewees who were identified as being knowledgeable about and interested in curriculum issues. When contacted, all of the faculty nominated agreed to participate. Appointments were made for the interviews, and letters were sent to the participants confirming the appointment and reiterating the purpose of the study.

The researcher initiated each interview with a broad, open-ended question that asked interviewees to describe the defining characteristics of college-level course work in all the detail they could. Probes were used when the interviewee faltered or did not immediately respond. Similar probes were used in all interviews so that if the interviewee was influenced, all interviewees were influenced in the same way.

The interviews, which proved to be remarkably similar across areas of study and colleges, were transcribed, and analyzed to begin the process of categorizing the data. The researcher provided transcripts of the interviews to each interviewee for confirmation purposes.

#### Data Analysis

Using a cut and paste method, the researcher placed cuttings of the salient points on poster board, developing groups of students related to different characteristics of college level course work.

The researcher proceeded using a content analysis methodology called domain analysis to arrange the data into meaningful categories of information. Several categories developed that did not define college level such as curriculum changes, and the lack of preparation of first year college students.

#### Summary of the Findings

Content analysis of the data was accomplished through domain analysis, a structured methodology for arranging data into meaningful categories of information. This procedure revealed the following ten categories of characteristics:

1. Problem Solving using the higher-level thinking skills
2. Mastery of subject matter
3. Connections within and across disciplines
4. Maturity of the student
5. Essential knowledge base from high school
6. Course content
7. Pedagogical issues of writing, reading, mathematics, student evaluation, and textbooks
8. Rigor
9. Application of the subject matter
10. Interpersonal skills

A further analysis was then conducted looking at the comparisons among and between the community college and the university faculty and the business management and accounting faculty.

Each category of a college-level characteristic was presented using quotations from the interviews and summaries of comments that described, in the words of the faculty, the points they were trying to make. These commentaries were broken into sections based on institution and discipline. The final paragraph in each category was a summary comparing the responses from faculty of each institution by discipline.

#### Findings Related to College Level Course Work

*Problem solving using the higher-level thinking skills* was a characteristic discussed by all of the 16 faculty included in this study. The higher order thinking skills necessary in college-level work are those listed in Bloom's taxonomy: analysis, synthesis, interpretation, evaluation, inference drawing, and conceptualizing; all of which may be used in critical thinking. At least one of these attributes was mentioned by every interviewee.

The point was made that complex problem solving occurs in college-level course work. These problems often involve multiple variables drawn from different sources; students must develop a model for solution, and evaluate their solution.

*Mastery of subject matter* is a characteristic of college-level course work discussed by 11 of the 16 faculty interviewed. Mastery of subject matter means that the students have a deep understanding of the subject; it is not memorizing bits and pieces, out of context. No probe was used in the interviews that addressed mastering subject matter; thus, if a topic was not mentioned in the open-ended

interviews the assumption was made that the interviewee simply had not considered it.

*Connection within and across disciplines* is a characteristic cited by 11 of those interviewed. Connections within the discipline means that students must draw on previous knowledge across a semester in preparation for comprehensive examinations. Connections also means across disciplines, i.e., mathematics is used in many fields such as the study of economics or chemistry. Similarly, connections should be made between college work and future employment. Five of the university faculty mentioned the importance of making connections within and across disciplines, as did 6 of the community college accounting instructors.

A relationship seems to exist between the third characteristic, *mastery of subject* and the fourth characteristic, *connections within and across disciplines*. Students must master course work so that this mastery becomes part of long term memory; and, therefore, information learned is retrievable in order to make connections within and across disciplines.

*Maturity of the student* was cited by 14 of the 16 faculty. All of the university business management faculty discussed aspects of maturity necessary in college-level course work. Student's maturity includes the willingness to take responsibility for their learning. The interviewees were in agreement that maturity is necessary in making judgements, and drawing inferences. In the words of a community college business management instructor: "You would not expect someone

who is 15 to be able to draw the same conclusions as someone who is 25."

Thirteen of the 16 faculty in this study talked about how college-level course work builds on an *essential knowledge base*; six were from the community college and seven from the university. Faculty comments were similar across disciplines and institutions. As one community college business management instructor explained "college-level is one that builds on all those standard high school courses."

*Course content* which was included as a characteristic of college-level course work by all of the interviewees. A business management professor explained, "it is both the content as well as how you approach the content and what you do with it." The university faculty had a second perspective. According to a university business management professor college students "will not have had most of what I teach [when they were] in high school, basically because it is too hard." A university business management instructor illustrated the point saying, "A college-level course is more sophisticated [than a high school course]...with more complex and subtle concepts." So a difference of opinion appears to exist between institutions on this point with the community college expressing that college level is reflected in the approach to teaching, while the university faculty cited the complexity of the course content.

The pedagogical issues were subdivided and were comprised of *writing, reading, math, evaluation of the student, and the textbook*. While these topics were not discussed by everyone, there was great

similarity across the disciplines and across the institutions in the comments made.

The discussion of *writing* in college was included in all of the business management interviews at the community college, but only three accounting instructors mentioned it. The accounting instructor commented that "the biggest complaint about the writing was not that they had to write but that I would correct their spelling." According to one university accounting instructor, "students are often surprised that papers are required in accounting courses." She went on to say that "it is entirely different than anything they have had before. The university accounting instructors use writing, papers, and take-home examinations which require clearly written approaches to problem solutions."

*Reading* was discussed by all of the four community college business management faculty, but only three of the accounting faculty. The researcher attributes this to the fact that accounting instructors were responding from the area perspective, and freshman and sophomore courses are not usually reading intensive. This does not apply to the university accounting interviews since all of the four university instructors discussed reading. All of those who talked about reading in college agreed that it greatly exceeds what students have done in high school both in quantity and in complexity.

*Student evaluation*, as a characteristic of college-level course work, was a concept included in all four of the community college business management interviews. The instructors' comments were mostly directed at evaluating writing. All of those who talked about

evaluation described evaluating a mid-term, a comprehensive final, and at least one paper. The university model for mid-term and final examinations was comprehensive essay evaluation. The accounting instructors from the community college and the university described evaluation in college-level accounting as very different from anything that occurs in high school. In college the tests are not like the homework; students must draw from what they have learned and apply this in "slightly new settings" ... "so the students have to think."

Discussions about the *textbook* took place in nine of the fourteen interviews. The comments were similar across institutions. The business management faculty do not rely heavily on textbooks. The accounting faculty rely more heavily on textbooks, believing that this reliance, while it may drive the course, does not completely define the course. The university accounting department uses the same textbook for each course in all freshman and sophomore accounting, because of the large number of different teachers. While this is a group of experienced professors, a common text and a common syllabus helps to ensure that material required for the next level is covered.

*Of the 16 interviews, 13 contained references to rigor; 6 from the community college and 7 from the university.* Examples of what the instructors said are as follows. A community college business management instructor related that: "It must make one very, very uncomfortable and I think the over-used and trite word is challenging." According to her colleague from the accounting department, the rigor of college work is in "the type of testing that takes place, the way students are expected to perform in examinations

and the level of response that is required, and how deeply they understand the topic." Business management instructors from the university commented that the rigor is there because college instructors often "do not supply an answer in a box," leaving the student to "find the answer," and "be comfortable with the fact that there may be more than one correct answer." Application of the subject matter was mentioned by 15 of the 16 professors interviewed. The emphasis here was that at the college level students need the opportunity to actually use what they have learned. The development and use of interpersonal skills at the college level was pointed out by 15 of the 16 professors. They noted that the emphasis in business is on team work. It is mandatory that students at the college level have many opportunities to acquire and develop these skills.

#### Findings Compared To The Literature

The research findings were compared with the literature. The results of this systematic study are reflective of the opinions of the following writers. Eaton (1994), in Strengthening Collegiate Education in Community Colleges, makes the point that "the term college-level is central to description of the collegiate role" in community colleges (p.110). Eaton states that the college level of the curriculum refers to the intellectual goals set by classroom faculty for the course content and academic tasks that assigned. These academic goals have two characteristics: (a) they encompass subject matter that goes beyond the level of high school general education yet precedes the academic specialization characteristic of

the upper-division and graduate-level university work and (b) they incorporate qualitative and quantitative skill development aimed at ensuring that students can complete baccalaureate liberal arts and career studies if they wish. Eaton goes on to characterize college-level course work as that which incorporates "tasks that require creative thinking, the ability to coherently articulate ideas orally and in writing, and the ability to reach and defend conclusion" (p. 110-111). She describes academic tasks as those that enable students to develop analytic and systematic reasoning abilities, to understand and replicate theory, and to function at a conceptual level that reflects creative thought and careful scrutiny of intellectual constructs.

Cohen and Brawer (1989), in the second edition of The American Community College, discuss the collegiate function of the community college as one which "has tended to center on courses based on reading and writing, textbooks and examinations" (p. 292). The authors state, "One test of the level of a course is the degree to which it makes intellectual demands of its students" (p. 303); and go on to say that "the collegiate function, the higher learning, teaches reflection, [and] use of the intellect" (p.304).

The academic Crises of the Community College by McGrath and Spear (1991) presents an interesting point regarding the issue of course content versus approach to teaching the course, making the distinction between

"skills" and "content," between "method" and "findings." On that grid, courses are of two basic sorts: those that teach how

to think, read, or write, or compute (skills courses), and those that provide information, that teach what to think (content courses). When that conceptual division has been made, the big question that teachers dispute is whether skills and content are necessarily intertwined, or whether they might be taught effectively in isolation from each other. (p. 190)

A commentary of the Carnegie Foundation for the Advancement of Teaching entitled Missions of the College Curriculum (1987) included several points that the researcher found relevant to this study. College faculty and administrators "should formulate more clearly the advanced learning skills necessary in college" (p. 264). This was followed by the statement that the same group should "make integrative courses a more central feature of intellectual activity--concentrating on broad structures of thought as well as on areas of more specific analysis" (p. 264).

It was further suggested that college administrators "assist the primary and secondary school in teaching basic skills and providing compensatory training in them, when necessary, at the college level. (p. 264)

"In 1954, a committee was appointed at the University of California at Berkeley to formulate, among other things, a statement defining the objectives of its College of Letters and Science" (Carnegie Foundation for the advancement of teaching, 1987, p. 153). The following excerpt from Missions of the College Curriculum, (1987) reports three of the recommendations of this committee. These recommendations reflect problem solving using higher order thinking

skills, and reading characteristics of college-level course work found in this study. They include: (a) the development of intellectual curiosity and the wakening of new intellectual interests; (b) the development of the ability to recognize facts and their relationship, with consequent liberation from uncritical loyalties evidenced by prejudice and provincialism; and (c) the development of mature habits of reading and observation. (Carnegie Foundation for the advancement of Teaching, 1987)

In the 1970's, the Dean of the Faculty of Arts and Sciences at Howard University suggested some criteria of an educated person. The first criteria was "an educated person must be able to think and write clearly and effectively" (Carnegie Foundation for the Advancement of Teaching, 1987, p. 156). The second criteria was "an educated person should have a critical appreciation of the university, of society, and of themselves..." (Carnegie, 1987 Foundation for the advancement of Teaching, p. 157). He cited as a third characteristic that "an educated individual should have achieved depth in some field of knowledge" (Carnegie Foundation for the Advancement of Teaching, 1987, p. 157).

The faculty interview comments made in this study were similar across interviewees in nature and touched on many of the things covered in the review of the literature. Almost no differences surfaced between the responses from the community college faculty and those of the university faculty. In the area of pedagogy, limited discussion occurred which the researcher attributes to lack of probing questions regarding pedagogy. One area where comments differed

between the community college and university faculty was on the subject of content versus approach to teaching content as defining college-level course work. The community college faculty stressed approach to teaching content and the university discussed the complexity of course content.

This study will also have an indirect effect on education. Being aware of the characteristics discussed in this study, educators will take them into consideration when doing things like developing curriculum, training teachers, and administrators.

#### Recommendations for Further Study

The articulation effort put forth at the University of North Carolina at Greensboro resulted in the completion of 55 articulation agreements out of the 58 community colleges within the state. The problems of credit transfer are far from being over for the state. The researcher feels that the data collected in this research will go a long way in helping to resolve some of the obstacles between the two systems in these technical programs. There has never been a study completed in the technical area of the community college and the four-year institutions before that attempted to define the characteristics of college-level course work. This study should generate theory as to what constitutes college-level course work. The outcomes should also provide a basis for developing general theory relevant to identifying characteristics of what constitutes college-level course work.

This researcher conducted interviews at colleges with four different recruiting pools of students. This created an opportunity to interview professors with an abundance of experience working with different types students. The researcher felt that this added to the richness of the data. Therefore, further study is recommended at colleges with diverse geographical locations and socio-economic levels. The size of the institutions should be varied. Further research at different types of higher education institutions is also suggested such as private institutions, urban research institutions, small liberal arts institutions, engineering colleges, and technical community colleges, as well as comprehensive community colleges in different geographical and socio-economic settings. Research should include faculty from areas of study other than business management and accounting. These two subject areas are used in other classes throughout the business curriculum and are used in life and in the workforce. For example, research in other disciplines may not include the category of Interpersonal Skills, which is emphasized in this study. In addition, business management and accounting are cumulative subjects, building on previous knowledge where the previous knowledge is essential. Disciplines other than the study of business may not require the same degree of essential knowledge base.

One area for further research is the determination of the college instructor's role. The role of the professor at the college level differs from the secondary teacher or the trainer. This is an area not addressed in this study but indications are that it is worthy of

further research as to its relationship to college-level course characteristics. Clearly, if a college-level course must require the exercise of higher-level thinking skills, then the professor must do more than convey information.

A final reason that additional research is necessary is to confirm or fail to confirm the findings of this research study. Research at differing institutions and in differing disciplines would determine the extent to which those variables affect the findings in this study.

#### Discussion

The need for this study arises out of the the issue of transferability of course credit. The transferability of college course credit is a significant issue especially to community colleges. No clear guidelines or standards exist for either the community colleges or universities to use in determining the transferability of particular courses. This absence makes course transferability a growing area of confusion.

The potential of this study is that the defining of college-level characteristics may lead to a definition of college-level acceptable for transfer by all institutions of higher education. A system may be developed whereby courses are evaluated using characteristics whose presence would identify that course as college-level and mandatorily transferable within a state system and conceivably nationwide.

Although the two subject areas within the discipline of business studied, business management and accounting are offered and usually

not required at the high-school level, it was clear from the interviews that a higher level of thinking is expected at the college level. Properly taught, a college-level course should not enable a student to succeed using memory alone.

No attempt was made to measure the levels of agreement among the interviewees. But, when they did describe characteristics of college level course work, they did so in a similar manner. The two characteristics that link all ten of the characteristics enumerated by the professors were the problem solving using higher-level thinking skills along with course content and faculty expectations. Clearly these are the elements of college-level courses that the interviewees perceived distinguished them from high school courses and from training courses.

The outcomes of this study can serve as the basis for curriculum development at the collegiate level. In today's climate of ever expanding delivery methods, including those used for distance learning and for computer assisted instruction, establishing a clearly understood definition of college-level course work is essential. Individuals involved in developing and evaluating college-level curriculum can use the descriptions of characteristics of college-level course work identified through this study as a standard for assuring curriculum and course quality.

A college course should present concepts to be understood rather than to be memorized. Students should synthesize information and be able to comprehend and apply abstract ideas. The student should

become informed through analysis and synthesis, through determining why "x" and not "y".

If one accepts the premise that to be a college-level course, content must require the use by the student of higher-level thinking skills, there are evident ramifications for evaluating both courses and students. As to the former, whether, for example, a course meets transferability requirements, an analysis of its content would indicate the necessity for the use of higher-level thinking skills. As to students, a far more sensitive but nevertheless necessary determination may be whether they have the capability to perform the higher-level thinking skills required by the course.