Distinguishing Characteristics of College-Level Course Work: Faculty Perceptions

by

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ABSTRACT

In an era of growing accountability and limited resources in education, it can be argued that many aspects of the present programs in higher education need to be reassessed in light of current student needs. One area of the higher education structure, college transfer programs, has not kept pace with the changes in higher education and has maintained its antiquated status despite the influx of innovations. Without the transfer function as a significant component of the community college mission, access to higher education may be limited for many students.

The transferability of college course credit is a significant issue in higher education and especially to community colleges. There are no clear guidelines or standards for either the community colleges or four-year
colleges to use in determining the transferability of particular courses. Community colleges need to ensure that every course designated as a transfer course will be transferable to receiving institutions. Four-year colleges should expect that the course they accept in transfer meets the same standards required within their curricula. Transfer credit should be based on equivalent competencies for similar courses.

The purpose of this study was to explore those characteristics that distinguish college-level course work. Data were gathered to answer the research questions by conducting in-depth interviews with twenty-three faculty from the disciplines of biology and history at three community colleges and three four-year colleges. The researcher presented a broad, open-ended question that asked the faculty to describe in detail what they perceived to be the distinguishing characteristics of college-level course work.

The analysis of the interviews included organizing the data into domains; generating categories; and comparing and contrasting the faculty comments from each discipline and
college. The analysis revealed the identification of nine categories of characteristics distinguishing college-level course work. The results showed more similarities than differences in the comments between the groups. The dimensions of similarity across interviews (i.e. common characteristics) provided information for answering the research questions.
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Chapter I

INTRODUCTION

The comprehensive community college's mission is to prepare all citizens of its community for a better life. The community college has a special obligation to fully meet its constituency's needs. According to the American Association of Community Colleges (AACC), community colleges, which constitute a vital segment of American higher education, play a major role in the American system of public education (Doucette & Roueche, 1991). Approximately 1200 community college institutions serve nearly six million credit students. These students represent approximately 45 percent of all students in higher education, and essentially 50 percent of all first-time freshmen each fall term (Doucette & Roueche, 1991; Parnell, 1985). While the mission of the community college continues to change, the direction of change is not clear; a consensus on the current or future mission has not emerged (Clowes and Levin, 1989).
Until the 1950s, community college transfer programs accounted for 60 to 70 percent of total enrollment, and student transfer rates served as an important measure of institutional success (Eells, 1931; Medsker, 1960; Lombardi, 1979). High student enrollments in transfer programs continued to dominate community colleges in both numbers and importance until the early 1970s when liberal arts and general education enrollments shifted downward through the 1980s from 57 percent in 1970-1971 to 28 percent in 1984-1985 (Barry & Barry, 1992). Expansion of the two-year college curriculum during the 1960s and 1970s into noncollegiate areas took a toll on transfer curricula and on the image of community colleges as collegiate institutions (Palmer, 1986). The number of transfer students declined as did the number of course offerings at community colleges. The emphasis on the liberal arts and transfer gave way to career, compensatory, and community education, thus leading many to question the viability of the transfer function (Baron, 1982; Cohen and Brawer, 1982; Kissler, 1982; Knoell, 1982; and Lombardi, 1978a, 1978b, 1979).
The transfer function has always been considered fundamental to the comprehensive community college mission. Knoell and Medsker's 1965 landmark study indicated 62 percent of the seven thousand community college students in the study received bachelor degrees within three years of transfer, with the prediction that at least 75 percent would ultimately graduate (Knoell & Medsker, 1965). Knoell and Medsker write: "Junior colleges have made a fine record in preparing students to transfer to a very diverse group of four-year colleges and universities, but improvement in the record is still possible" (Bernstein, 1986, p. 31).

Currently, approximately 17 to 20 percent of community college students transfer to four-year institutions, with less than 25 percent of these transfer students completing a baccalaureate degree (Hull, 1993). Community colleges are criticized for not sending students forward toward the baccalaureate degree as well as not preparing them for a rigorous academic environment at four-year colleges and universities. Negative impressions with which community colleges must invariably deal are claims of failure of the
transfer mission (Doucette & Roueche, 1991). Recent books such as Brint and Karabel's (1989) *The Diverted Dream* criticize community colleges for sending so few students toward baccalaureate degrees.

The practice of open-access, admitting large numbers of students regardless of academic preparation and background, has brought forth criticisms of the community college. Critics have questioned the academic reputation of the community college because of its open-access policy, the predominance of vocational and occupational programs, the extent of remedial education programs, and the decline of academic standards. "The most pervasive and long-lived issue in community colleges is the extent to which their courses are accepted by the universities" (Cohen & Brawer, 1988, p. 285). This study, through the process of identifying the distinguishing characteristics of what constitutes a college-level course, addresses the long-standing issue of what makes a community college course acceptable for transfer credit to senior institutions.

Existing literature suggests that some community
colleges have lowered their academic standards, thus providing less than college-level course work (Richardson, Fisk & Okun, 1983; Eaton, 1994; Cohen & Brawer, 1987). Because community college students must transfer to other institutions in order to earn the bachelor's degree, community college leaders should strive to make the transition from community college to four-year institutions a more efficient process so students do not lose college credits during the transfer. Community colleges may benefit from the identification of distinguishing characteristics of college-level course work in order to address the issues raised by critics concerning academic standards and "social stratification."

A clear understanding of what makes a course "college-level" is useful toward maintaining the university-parallel program and ensuring that students are able to transfer to senior institutions without losing college credits. Courses taught in transfer degree programs are designed to prepare individuals for transfer, as upper-division students, to baccalaureate degree programs in four-year colleges.
However, some four-year colleges and universities will not accept some transfer credits. One reason is the lack of confidence on the part of the four-year college that a course taught at the community college represents truly college-level work. On the other hand community college students take courses under the assumption that courses in the transfer curriculum will be accepted at four-year colleges for credit toward the baccalaureate degree.

Identifying distinguishing characteristics of college-level course work would help in developing guidelines for community college administrators as they plan transfer curricula for those courses intended for transfer. The development of a more efficient transfer process and a precise understanding of what constitutes a college-level course could be accomplished by facilitating faculty dialogue among the various sectors of higher education in an attempt "to determine the proper academic rigor and expected competencies of students completing courses within given disciplines" (Decker and Silverman, 1984, p. 82).
Statement of the Problem

There has been little research to examine what comprises the distinguishing characteristics of college-level course work. No definition of what constitutes "college-level" course work appears to exist in the literature. The lack of understanding college-level course work can pose serious problems both to community colleges and four-year colleges and universities. Without understanding the characteristics of college-level course work, higher education remains unable to develop norms by which to determine if a course is college-level. Eaton (1994) has asserted that community colleges may lack the rigorous academic climate that typically may be found in four-year colleges and that this significantly affects the success rate of community college transfer students. Eaton (1994) says that current transfer practices impede community college students' efforts toward earning a baccalaureate degree because students may have to repeat one or more courses at senior institutions. This practice, she suggests, is costly to both students and taxpayers.
Because there is an increasing need to provide an effective transfer program, community college administrators, faculty, and curriculum designers need to increase their knowledge of effective strategies in addressing the academic quality issues and other transfer issues raised by community college critics, who question the academic quality of community college courses.

The research in this study was a partial replication of Miller’s (1996) study done in Maryland at Montgomery College and the University of Maryland, College Park. This study was designed to identify the distinguishing characteristics of "college-level" course work between the two-and four-year college faculty who teach similar courses.

Purpose of the Study

The specific purpose of this study was to identify the distinguishing characteristics of college-level course work by discovering differences and/or similarities between the perception of selected faculties at community colleges and four-year colleges, who teach similar courses. This was
achieved by conducting in-depth interviews with faculty teaching first-year biology and history courses in community colleges and four-year colleges. A list of interview questions is included in Appendix A.

Research Questions

The study was designed to address the following broad research questions and subquestions that are appropriate to descriptive research:

1. What are the distinguishing characteristics of college-level course work?
   A. What is the theoretical basis of college-level course work?
   B. Is there a uniform definition of college-level course work?
   C. Who are the recognized authorities on college-level course work?

2. What are the perceived similarities and differences among the community college biology and history faculty in identifying the
distinguishing characteristics of college-level course work?

3. What are the perceived similarities and differences among the four-year college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

4. Is there a difference between what community college and four-year college faculty perceive as the distinguishing characteristics of college-level course work?

Significance of the Study

During the 1970s and 1980s, the community college population changed significantly from predominately full-time students to one consisting of many part-time, adult students, who worked full-time. It is well known that many students at community colleges are underprepared for the academic rigor of college-level work (Bernstein, 1986; Clowes and Levin, 1989; Eaton, 1994). Eaton (1994) argued
that a combination of lower ability community college students and their socio-economic background has resulted in a less rigorous academic climate than may be found in four-year colleges, producing a detrimental effect on the community college transfer programs. Other critics have also noted a perceived decline in the quality of baccalaureate preparation on the part of community college students (Richardson, et al., 1983; Clowes & Levin, 1989; Cohen & Brawner, 1989; Bernstein, 1986).

Current literature suggests that community colleges have lowered their academic standards, providing less than college-level course work (Richardson, Fisk & Okun, 1983; Clowes & Levin, 1989; Cohen & Brawner, 1989; Bernstein, 1986). According to this literature, the decline in standards has tended to make it more difficult for equivalent transfer courses to be accepted by senior institutions.

The goal for two- and four-year colleges is to make the students' journey to completion of a baccalaureate degree as efficient, educationally rewarding, and challenging as
possible (Bernstein, 1986). Identifying the distinguishing characteristics of college-level course work will be valuable for two major reasons. First, the absence of a generally accepted definition of what constitutes a college-level course affects the transfer of credit from community colleges to senior institutions. Thus community college transfer students may have to repeat one or more courses at senior institutions, delaying degree completion. If transfer of college credit were automatic and not on a course by course, school by school basis students would better understand their transfer status. Delay in completing a baccalaureate degree economically impacts the student in terms of additional tuition and delayed entry into the job market, as well as major implications for federal financial aid recipients and cost to taxpayers (Bender, 1990).

Second, the academic image of the community college has been questioned by senior institutions because of its open-access policy, the predominance of vocational programs, the extent of developmental education, and the alleged declining
academic standards. University faculty have argued that many community college courses, though comparable, based on catalog descriptions, lack the depth, rigor, and breadth of subject matter taught in the first two years of a senior institution (Dziech & Vilter, 1992). Because of the limited academic preparation of many of their students, it is alleged, community college instructors have lowered academic standards and student requirements (Eaton, 1982; Richardson, et al., 1983). Bernstein (1986) cited evidence that some community college instructors have required little if any outside reading, and objective tests have been utilized rather than essays because of the poor performance by students on essay exams. Because of the reliance on rote memory, often students have not been required to synthesize information or think critically (Bernstein, 1986). As a result of these lowered academic standards, students planning to transfer, or to sit for certifying exams, may not have the prerequisite preparation to succeed at the junior level of four-year colleges and universities.

Many state legislatures are mandating the strengthening
of academic programs in high schools and colleges (Bender, 1990). However, without understanding the distinguishing characteristics of college-level course work, there is no objective way to determine if appropriate standards are being met. It is important to be able to verify the quality of lower division collegiate level courses with the establishment of rigorous standards in order to satisfy the four-year critics (Bender, 1990). The distinguishing characteristics of what constitutes "college-level" course work should be identified if transfer of course credit is to be equitable and transfer students are to be prepared academically to pursue a baccalaureate degree.

The attitude or perception of faculty as it relates to what constitutes "college-level" is the key to identifying the characteristics of college-level course work. To gain such an understanding calls for qualitative research that can specifically address this problem. If faculty, administrators, and curriculum designers can develop articulation programs that provide effective avenues of credit transfer, it may be possible to increase the
enrollment in transfer programs and thereby increase
transfer rates to senior institutions. This, in turn, could
increase the number of students completing the baccalaureate
degree and bring that portion of the community college
mission, transfer, to the forefront once again.

Limitations of the Study

The study is limited to institutions of higher
education with a similar student population and geographic
location. The study is further limited to freshman biology
and history courses at community and four-year colleges.
Finally, the study may be limited because approximately
forty percent of community college courses are taught by
adjunct faculty and, for the purpose of this study, only
full-time teaching faculty were interviewed. Never the
less, the findings of the study may be generalized, with
cautions, to apply to other populations with very similar
characteristics.

Definitions Used in the Study
The following definitions refer to terms as they are used in this study:

**Transfer program**: a program of instruction, at the post secondary instructional level, yielding credits which are normally acceptable by four-year colleges and universities for full (or virtually full) value toward a bachelor's degree (Good, 1973, p. 449).

**Elites**: individuals considered to be the influential, the prominent, and the well-informed people in an organization or community who are selected for interviews on the basis of their expertise in areas relevant to the research (Marshall and Rossman, 1995, p. 83).

**Open-access policy**: a policy of some colleges and universities of accepting any candidate who presents a high school diploma or high school equivalency certificate; nonselective admission, instituted in some cases to make higher education more accessible to minority group students; occasionally referred to as open-door admission (Good, 1973, p. 16).
Organization of the Study

This study is organized into five chapters. Chapter I presents the rationale for the study. Chapter II reviews the literature relating to standards in higher education; the history of the development of community colleges; tracing the evolving academic reputation of the community college; articulation agreements; and characteristics distinguishing college-level course work. Chapter III describes the design of the study, the selection of the sample, and the procedures for collecting and analyzing the data. Chapter IV discusses the findings and presents data related to the research questions. Chapter V summarizes the study, provides interpretations related to the research questions, and presents recommendations for further research.
Chapter II

REVIEW OF LITERATURE

This chapter provides a conceptual background for questions addressed by the study as well as the theoretical basis for the research design. The review of literature focuses on the following: 1) an historical perspective of the community college development in the United States, 2) the academic reputation of the community college, 3) the issue of academic standards in higher education, 4) the issue of articulation agreements, and 5) the current references in the literature to the distinguishing characteristics of college-level course work, including issues related to the need for an exploration of the distinguishing characteristics of college-level course work.

An Historical Overview of the Community College

An historical view of the development of the community college is important to understanding the rise of the two-year college. Various social, economic, and political
forces have contributed to the rapid growth and expansion of the comprehensive two-year community college. Society believed that opportunity for a college education should be available to a substantial number of students who had a desire to attend college, and who could profit from the experience because of the belief that higher education leads to upward mobility and a better way of life. A casual reading of history seems to justify that belief and to support reliance on education as the path to upward mobility and economic status in our society (Wilson, 1986).

In the early nineteenth century very few people graduated from high school; even fewer people graduated from four-year colleges or universities. Higher education centered around wealthy men in America and was limited to the higher socio-economic classes.

In the early part of the twentieth century changes occurred that enhanced the outlook for educational access for many men and women in America. Several educational leaders in the last half of the nineteenth century and the early part of the twentieth century, mainly influenced by
the German university model, advocated removing the first two years of higher education from the university setting and placing them in separate institutions called junior colleges. The early educational leaders planned to focus the universities on research and the discovery of new knowledge. Early leaders believed two-year colleges could concentrate on the "less demanding", basic first-two-years of college, referring to the foundation of a liberal education.

Students underprepared to compete at the university level or unable to gain admission to the university because they were not part of the very rich now had an opportunity for at least two years of college. Separating the senior level from the junior level was primarily a means of diverting students away from the university, thus freeing universities of their obligation to provided the first-two-years of college and allowing them to pursue research and advanced professional training (Brint & Karabell, 1989). The two-year colleges did offer a university-parallel (transfer) program designed to prepare students to transfer
to senior institutions.

Thomas Jefferson believed education should be practical as well as liberal and serve the individual as well as society. Modern community colleges echo Jefferson's philosophy. Egalitarianism is the hallmark of the community college mission. The influence of World War II and industry's demand for trained technicians has provided students the need for an education. Such influences have also given local control to the educational system and provided relevant curriculum, designed to meet the needs of both the individual and the nation.

The historical evolution of the community college started with the Morrill Act of 1862 which was intended to establish colleges to train men and women in agricultural and mechanical arts (Monroe, 1972). Because it provided low cost college education to the lower socio-economic classes, this act had a great impact on higher education in America. This was the first time federal money was allocated for vocational programs, and provided for the establishment of college programs that would emphasize practical vocations,
engineering, and agriculture (Monroe, 1972). Although the Morrill Act did help to provide higher education to a larger number of young men, most of the students attending college were still from the higher income families. The lower socio-economic classes still had very limited access to higher education.

In 1900, the principle of free, tax-supported high schools was accepted throughout the nation. Since the community college was destined to grow out of the local high schools, the principle of tax-supported secondary education was a vital step in the development of local community colleges. The Morrill Act of 1862 and the "second Morrill Act" of 1890 were the most important moves by the Federal Government into the field of higher education in the nineteenth century. These provided the philosophical base on which later federal aid to higher education would rest.

Community colleges were established in the early 1900s as junior colleges, their main purpose being to relieve the four-year institutions from the task of orienting first and second year college students to higher education and to free
the university to do research and teach advanced studies (Brint & Karabel, 1989). The early junior colleges were founded as relatively small institutions, for traditional college-age students, and provided the first two years of a liberal education (McGrath & Spear, 1991; Eaton, 1994; Rudolph, 1977; and Astin, 1993).

Educational leaders advocating removing the first two years of higher education from the university setting and placing them in separate institutions were Henry P. Tappan, President of the University of Michigan; William Watts Falwell, President of University of Minnesota; David Starr Jordan, President of Stanford University; Alexis Lange, a Dean at the University of California at Berkeley; finally, William Rainey Harper, President of the University of Chicago.

Harper, known as the "father of the junior college in America," saw a need to separate the first two years of college from the second two years. Harper wanted to provide some level of education to as many students as possible, but not through the universities; they would educate those
students who were capable of very high level intellectual thought. Thus the junior college grew out of this desire to provide more opportunity to the more capable students. Harper is credited with founding Joliet Junior College, one of the first American public junior colleges, in 1901. The founding of Joliet was the beginning of the junior college movement. Harper's influence on the development of the public junior college in Joliet, Illinois, was one of his most significant contributions.

The 1922 American Association of Junior Colleges' definition of the junior college was "an institution offering two years of instruction strictly collegiate grade. These courses must be identical in scope and thoroughness, with corresponding courses of the standard four-year college" (Bogue, 1950, cited by Cohen & Brawer, 1988, p. 4).

Alexis Lange, a Dean at the University of California, was influential in the development of junior colleges in California, and was a strong, early advocate of teaching technical subjects and some "technical" programs in junior colleges. While vocational programs were part of the early
junior college curriculum, they were seldom an important part of the offerings (Brint & Karabel, 1989).

Among the junior college presidents surveyed in 1917 and 1918, 90 percent said that the public demand for greater educational opportunity was an important reason for the founding of their colleges, and 50 percent said that it was the most important reason (McDowell, 1919). The early leaders of the junior college movement believed that general education courses should be a part of the occupational curriculum and that transfer curricula should be an option in all colleges (Brint & Karabel, 1989).

In 1917 California passed a bill providing state and county support for junior college students comparable to that of high school students. California continued its support through state funding in 1921 by passing legislation providing for the organization of independent junior college districts with their own boards, budgets, and operating procedures. The California legislation provided for local control, and most importantly equated the first two years of junior college work with the first two years of university
work. Additionally, legislation extended public education to the thirteenth and fourteenth years and endorsed the concept of having public institutions of higher education available locally. These California laws were models for later legislation in other states. The state of California was a leading force in the junior college movement.

After 1920, the community college movement had begun to find a place in the American system of public education. The number of junior colleges rose from 403 in 1929 to 584 in 1945 (Monroe, 1972); the next big leap was after World War II, and particularly after 1960. This rapid growth can be attributed to several factors: high school graduates wanting a college education, the growing demand of business and industry for technically trained employees, the existence of local communities which had both sufficient taxable wealth and population willing to support a community college, and a body of citizens who aspired to have their children enjoy the fulfillment of a dream for a college education but were unable to afford the cost of attending a university.
During the early part of the twentieth century, the "university parallel" programs were exemplary, with career, technical, and remedial programs clearly distinguishable from the transfer program (McGrath & Spear, 1991). However, in 1932 the Carnegie Foundation for the Advancement of Teaching issued a report strongly endorsing the idea that transfer preparation should no longer be the primary function of the junior college and that terminal or vocational education should be the focus (Brint & Karabel, 1989). This report started a controversy over program emphasis which remains unresolved. Until 1932, collegiate education had been the most important aspect of the two-year college mission.

Junior colleges changed considerably over the next 50 years serving a clientele uniquely different from the traditional college student in age, gender, and academic proficiency. Junior colleges began to serve a clientele, which was part-time, female, and adult, interested primarily in vocational or terminal occupational studies (Astin, 1993). The once dominant transfer function became just one
of several important functions and the liberal arts curriculum no longer occupied the important position it had earlier (McGrath & Spear, 1991; and Knoell, 1991).

The end of World War II not only increased enrollments in community colleges but also brought about other changes in higher education. This was the time when the federal government decided to become more involved in higher education. Many men were returning home to the United States to seek jobs that they had held before the war. Many of these positions were now occupied by women. The junior colleges were further affected by the Servicemen's Readjustment Act of 1944 known as the G.I. Bill.

The Serviceman's Readjustment Act (G.I. Bill) of 1944 provided a form of scholarship for veterans. The G.I. Bill provided for the first large scale financial aid packages and as a result, college enrollment increased. The G.I. Bill not only led to a more non-traditional student population, with the return of older serviceman, it also opened up the opportunity to attend college to those who might not have considered it an option. Veterans took
advantage of this opportunity and enrollments at the colleges and universities increased tremendously. This bill, along with other federal funding, provided money for career education which led to growth in vocational education programs in higher education.

Many of these veterans entered junior colleges. Programs of direct student aid impacted enormously on community college enrollment, student body composition, programs, and its overall mission. By the end of World War II, the junior college had expanded its mission to serve veterans through open access.

The junior college has been viewed as the leading edge of an open and egalitarian system of higher education. The four-year colleges and universities could not admit the large number of students who wanted to attend college. Furthermore, the colleges and universities were very selective in admissions. From the perspective of equal opportunity, there was a need for the services of the junior colleges.

While junior colleges continued to offer college
transfer courses, the shift in emphasis meant that junior colleges offered less liberal arts and transfer programs, causing the traditional collegiate function to become less important (Eaton, 1994).

In 1947, the President's Commission of Higher Education, known as the Truman Commission, articulated the value to be derived from students having access to two years of study beyond the secondary level (Cohen, 1988). The Commission expressed its belief that America should break down its barriers to educational opportunity at the post-secondary level. Because of its decidedly egalitarian focus, the Commission suggested that community colleges promote an open-access policy and provide accommodations to serve the underprepared student who would now be admitted. Because community colleges are the first step for many students entering higher education, their effectiveness is crucial (Smart & Hamm, 1993).

Edmund J. Gleazer, Jr., former president of Graceland College in Iowa and former Executive Director for the American Association of Community Colleges (AACC), as the
national spokesperson for community colleges, did more than any other individual to shape the mission of the community colleges. On the fiftieth anniversary of the American Association of Junior Colleges, the Association expressed broad aims for the community college. Among them, it was stated that "the community college must become available to everyone in its community" (Palinchak, 1973, p. 126).

Because of the growing demand for education to greater numbers of students, statewide systems of community colleges have evolved. With the development of statewide systems, some areas are now able to have a community college within commuting distance of most students' homes. However, statewide systems have been achieved only with the help of state funding. With state funding comes a degree of state control. This has eroded some local control, but it has also created a partnership between state and locality that resulted in rapid growth of community colleges.

The Truman Commission, G.I. Bill, Civil Rights Act, and other developments spearheaded the belief that all Americans should have access to education, which is an important
concept in the community college mission. The Federal government committed itself to higher education by establishing in 1972 the Basic Educational Opportunity Grants (Pell Grants) and other types of financial aid putting education within the reach of the lower socio-economic groups. These and other factors have contributed to the development of the comprehensive community college as it is known today.

The comprehensive community college is unique, significant, dynamic, and a challenging component of higher education. It is a blend, borrowing heavily from the public high school, the private junior colleges, and the four-year colleges and universities, but still maintains an identity of its own. Since the community college is comprehensive, it must provide transfer programs as well as a variety of vocational/technical programs to meet the needs of a diverse group of students.

The 1960s were a time of dramatic change for the community colleges with its roots in the past and a rapidly growing future. The major community college functions were
general education, transfer, and preparation for entry level employment, with remedial courses offered for those not prepared for college-level work. The student population consisted of recent high school graduates from families whose economic status was generally above the poverty level. There was a clear distinction between transfer course work and vocational education. This distinction was part of a federal requirement that vocational education be stipulated as terminal as a condition of funding (Knoell, 1991). Although two-year colleges in the early 1960s had open-access policies, there were no special efforts to recruit students from ethnic minority or other disadvantaged groups except for those colleges that had athletic programs.

By 1970 the student population at the community college had changed as a result of students being oriented towards careers and being ill-prepared to meet the challenging academic environment (Cohen & Brawer, 1988). The term non-traditional characterized the community college students. They were part-time, older, working full-time, and included many more female students. In order to meet the needs of
this group, community colleges began to develop evening programs and provide classes at off-campus sites. The changing student population included a change in social class from which a majority of the community college students came. A larger proportion of students from lower socio-economic backgrounds began to enroll. Differences in social class imply, generally, less interest in general educational goals (Deegan & Tillary, 1985). The lower ability of the community college student and their socio-economic background resulted in a less rigorous academic climate than is found in four-year colleges and universities (Deegan & Tillary, 1985). Open-access had begun to have a significant adverse effect on community college transfer programs intended to lead students to the baccalaureate degree. The decline of high school student abilities in the 1970s caused academic expectations to be lowered, which had a pronounced negative effect (Cohen & Brawer, 1987). By 1980, 90% of the community college enrollment in liberal arts programs was in courses with no prerequisite. Cohen & Brawer (1987) noted the beginning of a strong emphasis on
occupational courses. Open-access led to a wide range of educational and quasi-educational programs and services, many of which were not at the college-level and did not lead to a baccalaureate degree (Eaton, 1994). As the community colleges broadened the scope of their offerings, there was a transformation to more career education, adult-basic education, and compensatory programs (Cohen and Brawer, 1989). By the mid-1980s, the community colleges had become comprehensive in nature, with their programs and services being offered to an increasingly diverse student body. Developmental programs continued to grow in order to meet the needs of the growing number of students with serious educational deficiencies (Knoell, 1991).

Community colleges established equal educational opportunity and affirmative action programs to attract and enroll students from previously under-represented groups. These efforts were successful in attracting disadvantaged students with various deficiencies in preparation, including some whose native language was not English. As a result, English as a Second Language programs began to grow
dramatically (American Council on Education, 1993). Highly urban areas began to build community colleges which encouraged the enrollment of disadvantaged students who sometimes needed to earn high school diplomas or to acquire basic skills in courses that are not part of degree programs (Knoell, 1991). The American Council on Education (1993) stated that community colleges in urban areas have offered a higher percentage of remedial courses than those in suburban areas.

In 1980, Dale Parnell became President of American Association of Community and Junior Colleges (AACJC), bringing a different focus to the community college. As a consistent spokesperson for vocational education at the community college level, Parnell believed that community colleges should promote career education. Parnell's concern for the education of the ordinary people was expressed through his belief that the community colleges should serve the middle quartile of the student population. Through Parnell's Tech Prep Program, high school students can earn postsecondary credit for certain courses (Hull, 1993). A
major concern is whether this program moves community colleges closer to secondary schools and farther from the collegiate function of the comprehensive community college.

**Academic Reputation of the Community College**

To many, community colleges have an image of being less than academically rigorous institutions because of the open-access concept, a preponderance of vocational courses, and extensive remedial programs; community colleges are perceived as lessening their academic standards to meet the needs of a diverse student population (McGrath & Spear, 1991; Brint & Karabel, 1989; Dougherty, 1992; Eaton, 1988; Richardson, et al., 1983). Courses in the sciences have moved away from teaching research and experimental methodology toward terminology and concepts useful for understanding the effects of various treatments (Cohen & Brawer, 1987).

Cohen and Brawer (1987) state that community colleges offer numerous specialized courses for students with particular occupational or personal interests. Such courses
have been developed in philosophy, especially ethics, and in mathematics where computer science and technology have grown rapidly. In 1988, Cohen & Brawer wrote that by the mid 1970s, approximately "one third of all mathematics being taught in community colleges was at a level lower than beginning algebra" (p. 17). Cohen and Brawer (1987) noted that over one third of all community college offerings in English and math are remedial.

Cohen & Brawer believe that during the 1970s, the "entire academic content of community college education fell into jeopardy (1988, p. 341). The threat to the "academic content of community college education did not come from career education. In fact, the technical programs make rigorous demands on their students. The threat to the academic programs at community colleges came from colleges that offered a few presentations on television, a sizeable number of community service programs, and credit courses in hundreds of locations with non-credit options--all with no attempt to ensure that the presentations were educative" (Cohen & Brawer, 1988, p. 341-342). Eaton (1994) charges
that through shifts in emphasis such as these, community colleges have "become ambiguous sites of quasi-educational opportunity" (p. xi). The threat to the academic content of community college education was further enhanced by colleges proudly espousing policies that encouraged students to drop in when they want, take what they want, and drop out when they want--a policy which could result in the ultimate in curricula disintegration (Cohen & Brawer, 1988).

Critics argue that community colleges do not promote social mobility. The community college, while acting as a note for higher education, "has generalized opportunity and cushioned failure. It has held out the promise of economic and social mobility and also verified low intellectual, social, and economic status" (Rudolph, 1977, p. 286).

As community colleges began to offer terminal one- and two-year occupational programs for those who were not interested in or academically unable to pursue a baccalaureate degree, they became extensively involved with remedial work and duplicating programs previously associated with public secondary schools (Richardson, et al., 1983).
The threat to the community college's academic rigor exists because many significant courses are at the developmental level. The population of open-access students consists of the urban and rural poor or working class, various ethnic minorities, displaced homemakers or the new unemployed, and the lowest achievers from high school (McGrath & Spear, 1991).

During the 1950s and 1960s, one of the criticisms leveled at community colleges was that many of the community college liberal arts courses were taught by faculty recruited from high schools and became modified versions of secondary education courses (Cohen & Brawer, 1987). However, this was countered by those community college instructors from the university graduate programs, who maintained that the courses they taught were equivalent to those courses taught in the universities (Cohen & Brawer, 1987). Community colleges are perpetually defending themselves against criticism because of their comprehensive mission (Deegan & Tillary, 1985). Research has indicated that the open-access policy of the comprehensive community
college has allowed many ill-prepared students to enroll (McGrath & Spear, 1991; Knoell & Medsker, 1965).
Affirmative action efforts and active recruitment of minorities and non-traditional college students has increased these ranks (Knoell & Medsker, 1965). Students from lower socio-economic populations have less of a sense of the American higher education model (Knoell & Medsker, 1965), experience academic difficulty, and affect the academic environment of their institutions (McGrath & Spear, 1991; Knoell & Medsker, 1965). Because of the community college's comprehensive mission as well as the concerns about the academic quality of the community college, it does not have high status within the higher education community (Ames & Elsner, 1983). Community colleges employ a large number of part-time faculty; often over 40% of the faculty are adjunct. These faculty have little or no ownership in the institution and are believed to reduce the collegiate control of the curriculum (Richardson, et al., 1983). There is a perception that part-time faculty often do not provide students with prerequisite knowledge for the next course.
(Chronicle of Higher Education, 1993). The nature and quality of instructors leads to skepticism and doubt on the part of the four-year school, and makes the community college-level of instruction vulnerable to question (Bender, 1990).

The diverse student population at community colleges has exerted steady pressure on curriculum and teaching methods (Richardson, et al., 1983). Fewer demands have been placed on students--fewer term papers, essay exams, and required reading lists. Open-access community colleges have had difficulty promoting standards for literacy, which has caused a credibility crisis at the four-year schools (Richardson, et al., 1983). As the student population at the community college has become more representative of the population at large, the standards of literacy have begun to approximate the standards that prevail in society at large (Richardson, et al., 1983).

Open-access, or the democratization of education, has changed the view that teachers and students share a common cultural world (McGrath & Spear, 1991). Students at
community colleges form an oppositional culture and the faculty sometimes accede to its formation and maintenance--giving in to lower standards (McGrath and Spear, 1991). Critics charge that community colleges must emphasize the value of such academic practices as writing, interpretation, synthesis, and analysis. There needs to be a battle for rigor, substance, and distinctiveness in community college education, as these colleges answer the question, "open-access to what?" (McGrath & Spear, 1991).

Grading procedures have been altered in many open-access colleges. Eaton (1988) charges that the community colleges' grading standards are often norm referenced (how students perform in relation to others taking the same class) while in the university, standards are criterion referenced (measured against a standard that does not change with variations in preparation or aptitude of others in the course).

Failure of many community colleges to monitor the student's progress has led to public skepticism about the institution's concern for students as learners (Richardson,
et al., 1983). Attendance of large numbers of non-degree seeking-students has led to a de-emphasis on advanced courses. There are those who believe that the open-door policy has lead to a leveling down of standards (Richardson, et al., 1983; McGrath & Spear, 1991; Cohen & Brawer, 1989; Prager, 1993; Eaton, 1988). Community colleges, in order to take advantage of funding formulas, ensure student eligibility for financial aid, and thereby prevent discouragement on the part of the student, have begun to offer many remedial courses for college credit (Deegan & Tillary, 1985; Richardson, et al., 1983).

Due to open admission policies and the resulting substantial increase in remedial programs, courses at the Associate in Arts level "are being watered down to accommodate limited academic abilities" (Prager, 1993, p. 39). This leveling down of course content, expectations and requirements resulted from the meeting of nontraditional students with a traditional faculty, ill-prepared for the task of teaching this population. Critics charge that community college courses are no longer taught with the same
attention to theory and detail found in the university (Eaton, 1988). When instructors reduce their expectations, or lower their standards, they transfer less complex information to students via lectures; they demand less literate behavior from the students by replacing term papers and essays with multiple-choice exams. The norms of literate activity dip as the rigor of academic work is negotiated away. When one has students who are mostly specific or nonspecific information users versus faculty whose goals are information disseminators, the response will be the watering down of requirements (McGrath & Spear, 1991).

University faculty contend that many community college courses, though similar in the catalog description, lack the depth and breadth of subject matter taught in the first two years of a baccalaureate institution (Prager, 1993). Faculty at the four-year institutions feel that they have no effective way to judge quality of courses or curricula at community colleges (Prager, 1993). It appears that individual community college faculty modify courses so that
they come to bear little resemblance to official catalog
descriptions (McGrath & Spear, 1991). Faculty in four-year
institutions want control over the nature and quality of the
courses that satisfy various degree requirements (Knoell,

For more than a quarter of a century, even some
students of the community colleges have deplored the decline
in academic rigor (Prager, 1993). Richardson and Bender's
study in 1986 indicates that these colleges should better
prepare their students for longer and more complex reading
assignments. The exams should be more difficult and
structured for testing a student's knowledge of the
materials instead of simply memorization and recall (Eaton,
1988). Qualified students who wish to earn legitimate
college and occupational credentials are handicapped by
college-level courses that are taught at less-demanding
levels in order to accommodate underqualified students
(Deegan & Tillary, 1985).

Identity or image remains one of the most serious
concerns of community college educators—a concern that has
been with them almost from the beginning (Cohen & Brawer, 1989). It is necessary for community colleges to stress academic rigor as well as access. Unless community colleges offer quality education, the promise of access is empty (Raisman, 1993). Community colleges need guidelines to improve--recognized reference points in an attempt to verify the quality of the education they provide (Eaton, 1988; Deegan & Tillary, 1985; Cohen & Brawer, 1988).

**Academic Standards in Higher Education**

Colleges and universities appear to have made no attempt to integrate pedagogy into any single type of undergraduate curriculum (Carnegie, 1987), resulting in no absolute standards regarding college curriculum (Cohen & Brawer, 1987). There is a national academic accounting system that translates the undergraduate experience into units and grade points that are accepted despite wide variations in the content and quality of instruction (Carnegie, 1987). The degrees offered at American colleges simply record the successful completion of a number of
requirements—generally common to most institutions, but which vary greatly in specific detail as to their intellectual content, subject matter, rigor, and difficulty (Carnegie, 1987). The diversity among higher education institutions leaves colleges without generally recognized reference points in the quest for quality (Carnegie, 1987).

In 1984, two national reports on higher education were published. NIE's report presents its perception of the decline of American undergraduate education and included in its warnings is a need for "an assessment of stated academic and social standards" (Simpson & Frost, 1993, p. 14). The second report published by the National Endowment for the Humanities (NEH) suggests a reshaping of the undergraduate curricula (Simpson & Frost, 1993). In 1985, the Association of American Colleges (AAC) published a report which looks at "the faculty's role in curriculum decay" (Simpson & Frost, 1993, p. 14). The AAC report states "that undergraduate courses lack structure, and suggests incorporating a framework in the curriculum that includes processes, methods, and modes to develop understanding and judgement"

Not only community colleges but higher education in general, including the universities, have come under strong criticism in recent years. In 1987, the Carnegie Foundation for the Advancement of Teaching, published a study. The author, Ernest Boyer, surveyed 500 faculty and 4500 undergraduates and documented widespread deficiencies among which is the lack of purpose in the college curriculum (Boyer, 1987).

The majority of publications looking at problems in higher education "take aim at the professorate and its commitment or lack of it, to good teaching" (Simpson & Frost, 1993, p. 16). It appears that well-researched publications are balanced with independent observers, and the conclusions are similar--there needs to be an increased emphasis on good teaching. Experimentation in colleges has led to new structures, new goals, and different abilities of students--and not all efforts are compatible (Carnegie, 1987).

According to a 1992 report by the Aspen Institute,
critics of American higher education note that there are widespread concerns about the quality and the content of the curriculum and criticisms of college faculty have increased. There are concerns about how much and what college students are learning, and there is an apparent lack of a strong interest in some higher education circles on measuring educational outcomes in order to make this determination. The Aspen Report states that the weight of available evidence confirms that too little learning is currently occurring in general at the undergraduate level. Also noted in this report is that effective teaching is critical and often goes unexamined as a component in determining how much learning occurs. Dissatisfaction on this score is felt by many faculty members and administrators as well as students. Colleges and universities must change the fact, as well as the appearance, of low standards by increasing academic rigor (Aspen, 1992). This point has even been made by college students. Disgruntled undergraduates from 13 institutions demonstrated their concern when they held two conferences at Syracuse University during the 1980s devoted
to figuring out ways to press their colleges to raise academic standards. Former Harvard President Derek Bok is quoted as stating that undergraduate education has been accused of "winding down toward mediocrity" (Aspen, 1992, p. 20). Robert Samuelson, contributor to *Newsweek* and the *Washington Post* and quoted in the Aspen Report, characterized colleges in general as "educationally undemanding and economically wasteful. They are a symptom of low educational standards...." (Aspen, 1992, p. 21). The Aspen report points out there are shaky cognitive outcomes among those who pass through America's higher education system.

American colleges and universities are extremely divergent with many goals and missions. This diversity, while offering obvious advantages, also has shortcomings. Diversity conceals the question of whether or not there should be some common characteristics which define the education colleges offer their students (Carnegie, 1987). What is meant by college-level skills lacks definition and varies considerably from college to college (Carnegie,
There is general indecision about where the institution's responsibilities for teaching elementary skills end and where the colleges' responsibilities for teaching advanced level skills begins (Carnegie, 1987).

Although higher education is partially controlled by state budgets, courts, federal legislation and guidelines, new state commissioners of higher education, and newspaper editors, higher education must shape its own destiny in ways that are acceptable to the public and its elected leaders (Keller, 1983).

There are fundamental differences between two-year colleges and four-year colleges which involve faculty and administrator's attitudes about the importance of knowledge, standards, and the academic experience itself (Eaton, 1988). This has important consequences because pedagogy may affect the level of a college course (Rudolph, 1977; McGrath and Spear, 1991; Cohen and Brawer, 1987; Eaton, 1994). Community college courses intended for transfer are deemed college-level by definition (Eaton, 1994). The four-year colleges agree that community college courses are college-
level when they accept them for transfer credit. However, four-year colleges are more apt to assign a greater quantity of reading assignments and use written assignments as a basis for evaluating students, than are two-year colleges (Smith, 1983 cited in Eaton, 1988; ACE, 1993). Faculty members at both two- and four-year institutions say that there is less rigor in the community college classes (Richardson & Bender, 1986, cited in Eaton, 1988). It is now generally agreed that community college courses need to have comparable standards to those at senior institutions in order to prepare transferring students for baccalaureate study.

Articulation Agreements

Developing a more efficient transfer process and reversing the decline in the numbers of community college students who wish to complete baccalaureate degrees are joint responsibilities of two- and four-year colleges and universities (Bernstein, 1986). Better and more programmatic articulation between and within systems can
have a positive effect on transfer; however, some articulation agreements may not be useful because of a lack of understanding of college-level course work (Bernstein, 1986). Eaton (1994a) suggests articulation agreements fail to deal with the single greatest problem that students face upon transferring, which is receiving equivalent credit at the senior institution for course work undertaken at the community college.

Articulation agreements are more likely to ensure that a certain number of credits will be accepted than that specific courses will be accepted. This practice results in students having more credits than will transfer and being forced to retake courses at senior institutions. Eaton (1994a) states that ultimately, "the benefit of an articulation agreement for a student rests upon faculty decisions about course acceptance" (p.35). Most articulation agreements however do not accomplish this.

At the heart of the transfer effort is an awareness that the present relationship between two- and four-year institutions needs to change (Eaton, 1994a). "This
relationship needs a change in attitude, a change in modes of communication, and a change in approach to curriculum design and the setting of performance standards" (Eaton, 1994a, p. 36).

One promising method of resolving transfer problems is statewide agreement by faculty in various disciplines as to the lower-division requirements in various discipline areas. Established standards and criteria would be helpful to serve as guidelines for every public institution as they evaluate courses intended for transfer. Dougherty (1992) argues that there needs to be a discussion as to why things do not transfer. Dougherty (1992) is of the opinion that transfer problems arise due to lower standards and expectations at the community college. Those who call for higher standards in community colleges include McGrath & Spear (1991) and Dougherty, (1991). Even where two-year colleges are branches of four-year institutions, transfer is difficult because senior faculty are uncertain about the abilities of two-year students to complete four-year programs (Prager, 1993). There is clearly an urgent need to develop more
coherent guidelines to serve the large numbers of transfer students who expect and deserve to continue their education toward a baccalaureate degree (Prager, 1993). Prager (1993) goes on to question how long institutions can continue to ignore course work completed in a two-year program in this era of rising costs to higher education consumers. The literature indicates that faculty should play a key role in articulation planning and development.

Traditionally there have been two approaches to the direction of the community college transfer function: the reliance on documentation to oversee transfer and the dependence on student support services to ensure transfer. Both approaches have advantages and disadvantages, however neither is fully able to meet transfer needs of the future (Eaton, 1994a).

The management of transfer programs through documentation stresses the use of articulation agreements between institutions as a crucial means to oversee the transfer function. The documentation model is administrative and bureaucratic and responds to the question
of what needs to be done institutionally to ensure transfer of credit (Eaton, 1994a). According to Eaton (1994), based on the limited investigation to date, there is little indication that the document model has a significant positive impact on transfer programs. There appears to be no consistent positive correlation between institutions with high transfer rates and articulation agreements (Eaton, 1994a). It could be said that articulation agreements may help and does not harm the transfer process. Eaton (1994a) states however that when the preoccupation with articulation agreement precludes other institutional actions that might strengthen transfer, they could be harmful. Rarely are faculty involved in the planning and development of articulation agreements.

The student support services method to transfer hinges on two factors: information availability and personal assistance to students through: 1) transfer counseling, 2) orientation, 3) course equivalency guides, 4) electronic access to transfer information, 5) college catalog rooms, and 6) four-year college days (Eaton, 1994a). Eaton
believes the model is valuable but only in a limited way because it cannot ensure that students are armed with the two major skills they need for successful transfer: "curricular experiences that prepare them for a four-year institution and experience with performance standards that are comparable to four-year expectations" (1994a, p. 36). In other words, the personal assistance students receive essentially helps students obtain needed information about how, where, and when to transfer but cannot ensure success of transfer.

Although the two traditional models have been around for some time, Eaton (1994a) poses an alternative or complement to either the document or the student support service approach to transfer which is an "Academic Model" (p.36). The academic model focuses on the curricular and cognitive skills students need for successful transfer (Eaton, 1994a). The model also addresses the faculty acceptance problem that is not adequately addressed through articulation agreements. It places importance on the intellectual competencies students need for effective
transfer that cannot be addressed through student support services (Eaton, 1994a).

The academic model depends on two- and four-year teaching faculty, their collaboration and attention to curriculum and academic standards, and the willingness of community colleges and senior institutions to be held accountable for the results of their transfer efforts (Eaton, 1994a). The academic model requires a major investment in collaborative curriculum development across institutions to ensure that all students, independent of type of institution attended, obtain the needed academic skills and curricular background to achieve the baccalaureate degree (Eaton, 1994a).

During the eighties the Ford Foundation made improvement of transfer and articulation a priority for funding. Proposals that were funded primarily contained three major components: 1) articulation agreements that set forth the conditions that each pair of institutions were expected to meet in facilitating student transfer, 2) faculty exchanges, and 3) plans and timetable for student
transition to the four-year institutions (Knoell, 1994).

In 1989 the National Center for Academic Achievement and Transfer was founded through funds by the Ford Foundation and the American Council on Education (ACE). The multiyear grant was given by the Ford Foundation to ACE to establish the National Center for Academic Achievement and Transfer for the purpose of examining, strengthening, and enhancing student transfer between two- and four-year institutions (Knoell, 1994). The center financed approximately two dozen, two-year/four-year partnerships in which faculty from each institution came together to develop or redesign discipline-based courses and develop new interdisciplinary courses (Eaton, 1994a). When faculty work together there is an attitude of shared responsibility. This attitude is in strong contrast to the earlier attitude by senior institutions which perceived itself superior and dictated curricular terms and standards to two-year institutions.

ACE sees the center as a key player in its continuing efforts to achieve equity in transfer. Practitioners and
researchers will also continue to look to the National Center for Academic Achievement and Transfer for both direction and enlightenment as the struggle continues to make the transfer function work.

Transfer Issues

The widespread lack of clarity about the requirements and standards of college-level course work affects the transfer of college credit. Even within the same state system of higher education, courses which transfer to one institution may not be acceptable for transfer by another. Though there are viable reasons for lack of transferability, there are cases where the reasons are not obvious, and there is little recourse for the sending institution or the student. This situation exists even though the institutions involved both are accredited by the same accrediting body.

Noncompliance in transfer often occurs because four-year colleges believe community college course work is not college-level (Melander & Robertson, 1992; Richardson & Bender, 1986; Dougherty, 1991). In addition, four-year
colleges are uncertain about what is required of those community college students who apply for advanced standing, especially those students who did not meet the four-year requirements upon graduation from high school (Knoell, 1991; ACE, 1993).

Community colleges have been criticized for often making little effort to ensure that their transfer courses indeed parallel university courses in credit hours, rigor, course sequencing, and prerequisites. Community colleges use the phrases college parallel, college transfer, and college equivalent interchangeably to describe academic programs equivalent to the first two years of a baccalaureate degree program. Regardless of the phrase used, many four-year colleges are reluctant to take community college transfers, accepting them only if they cannot fill their classes with freshman (Dougherty, 1992). When students do transfer, many students loose credit because four-year colleges demand course equality rather than course comparability based on learning outcomes (Prager, 1993). Four-year colleges routinely refuse credit
for community college courses that have no counterpart in their curriculum, such as many vocational/technical education courses. Four-year colleges often give no credit, or only partial credit, for community college courses for which a student has received a grade of "D", although four-year native students are not so penalized (Dougherty, 1992). If students have to earn the same credits twice, the public and the students pays for those courses twice.

A successful transfer function depends less on what specific courses students take than on the strength of the classroom and the closeness of the fit between the academic cultures of the community college and that of the university (McGrath & Spear, 1991). The renewed emphasis on transfer challenges institutional assumptions and values (ACE, 1993). Transfer is a function of teaching and learning and not simply a procedural matter dealing with program articulation and credit transfer (ACE, 1993). Two-and four-year colleges need to look at ways curricula, pedagogy, and academic standards shape transfer opportunities for community college students (ACE, 1993).
One reason for grade shock upon transfer is the tougher standards of the four-year college (Dougherty, 1992). Poor preparation at the community college compounds this situation (Dougherty, 1992). In addition, transfer shock due to differing academic cultures is one of the reasons cited for the low degree completion rate of community college transfer students (Townsend, et al., 1993). Over the years, university parallel courses at community colleges have become weaker with the central concern being course matching (McGrath & Spear, 1991). The trend at community colleges toward less than college-level instruction has accelerated and the expectations in collegiate courses have changed (Cohen & Brawer, 1988). Success of community colleges in enrolling a diverse population of non-traditional students has affected community college course offerings (Cohen & Brawer, 1989).

Demographic changes and the increased cost of higher education have caused senior institutions to become increasingly dependent on community college transfer students. In some cases, more than half of the senior class
at four-year colleges began their college work in community colleges (Melander & Robertson, 1992). Issues of transferability of course work and transfer student preparedness to do upper-level four-year college work are becoming increasingly important.

While all of higher education would benefit from guidelines for college-level course work, it is particularly important for the community colleges because of their image as less than college-level academic institutions. The lack of coherence in higher education in general makes it difficult for community colleges to utilize any criteria in the development of their curricula and to counter the questions raised about the academic level of their course work. There were, according to the Chronicle of Higher Education (1993), 1,480 two-year colleges as of 1994, with 5,404,815 students in attendance at publicly supported two-year colleges. Approximately 20 to 22 percent (Hull, 1993; Cohen, 1993) of community college students transfer to four-year institutions with the intent of completing a baccalaureate degree. These numbers indicate that transfer
is of great importance on the community college campus. "Transfer is important because the community colleges serve as the point of first entry to higher education for many students who would not otherwise be able to attend college. More than one third of the people beginning college in America begin in a community college and the figures are much higher for members of minority groups. These institutions are an essential component of a democratic system of higher education--one that seeks to acculturate the citizenry and to make opportunity for further education available to all" (Cohen, 1984). To facilitate the success of transferring students, two-year community colleges have an obligation to ensure that students receive collegiate-level instruction (Eaton, 1988).

College-Level

What is understood as college-level course work is ill defined and varies considerably from college to college (Carnegie, 1987). However, references to college-level course work do appear scattered throughout the literature.
According to Frances Ferguson, Vice President for Academic Affairs, Bucknell University (Adelman, 1986), college-level learning has much to do with the liberal arts, with the development of the capacity to analyze, problem solve, communicate, and synthesize. Above all, it is important for college students to develop the ability to synthesize. High school students can be taught to analyze, but they are more likely to accept the authority of their teachers. College students are at a stage in their personal maturation when analysis for individual understanding is important, but they should also learn to put together the parts of their experience to become mature, independent adults. Emphasizing analysis creates students who are better at pulling things apart than they are at putting things together. "Synthesis is the hardest ability to develop and it relies on a prerequisite breadth of knowledge acquired through a truly liberal education. . . " (Adelman, 1986, p. 29).

Alison Bernstein (1986) of the Ford Foundation, characterizes most college-level learning as those courses
that are not offered in most high schools, e.g. logic, anthropology, Latin American history, art history, history in general (not the social studies concepts taught without chronology), economics, political science, and certain forms of math, such as calculus. Each offers a conception of reality. These college courses are taught, or should be taught through original texts, not mediated texts. To know that college-level learning is taking place, faculty must implore evaluation means other than true/false and multiple-choice tests. Students should be graded on the quality of their thinking and writing. College-level learning is synonymous with continuous and disciplined writing (Adelman, 1986).

Writing is essential to college-level learning since it disciplines thinking in a way that speaking does not. Bernstein believes college-level learning is also about identifying and manipulating theories, concepts, and abstractions. She further states that this type of learning should require in-depth involvement with the reality of a culture different from one's own, including the historical,
geographical, language, gender, class, and race perspective. College-level learning demands the testing of realities students have already accepted against competing realities. It also demands an understanding of Western Civilization, not just historical conceptualization. Bernstein's final point is that college-level learning is about generating questions, not finding answers (Adelman, 1986).

Employers identify skills such as the ability to communicate; to analyze situations; to identify alternative solutions; as well as to have the human relations skills necessary to deal effectively and maturely with other employees and customers as desirable skills for entry level employees (Adelman, 1986).

While no group of educators can agree on what must be known by everyone, Cohen & Brawer (1989) state that minimum standards, specific objectives, and enforced prerequisites in community college curricula can be sustained. Many local and state policy makers suggest that such requirements will be enforced if not accomplished voluntarily, and as a result community colleges will gradually but steadily gain
additional approbation and respect from their constituents (Cohen & Brawer, 1989).

An academic culture values reasoned inquiry and principled dispute (McGrath & Spear, 1991). Reading and writing is a matter of mastering semantic, syntactic and orthographic correctness (McGrath & Spear, 1991). These skills are prerequisite to college-level learning. Critical reading and writing skills distinguish the educated and educable from the undereducated and functionally illiterate (Richardson, et al., 1983). College-level does not have to mean liberal arts, but that substantial course content and a high level of intellectual challenge need to be present (Eaton, 1994). Cohen & Brawer, (1987) in discussing liberal arts, states that "the liberal arts form the core of the curricular cannon, a body of rule as strict and authoritative as any dogma set down by a church government" (p. 7). In the liberal arts, much derives from the doctrine of contemplation. Rigor, expectation, and pedagogy are critical aspects of academic culture (McGrath & Spear, 1991). Math and the hard sciences have rigidly
structured disciplines, and they appear the safest from
decreases in cognitive level (McGrath & Spear, 1991). One
test of the level of a course is the degree to which it
makes intellectual demands of its students; college-level
courses teach reflection and use of intellect (Cohen &
Brawer, 1989). According to the ACE (1993), in college-
level courses, the emphasis is on learning basic principles
that have broad judgmental applications. College-level
courses generally involve specialization of a theoretical
or analytical nature beyond the introductory level.
Several higher education discipline associations have
developed criteria for their college-level course work.
These professional organizations generally indicate what
courses should be offered, the sequence of courses, and the
topics that should be covered in each.

The following points are often considered important in
defining college-level course work: College learning 1)
should imply a conceptual as well as a practical grasp of
the knowledge or competencies acquired; 2) should be
applicable outside the specific context in which it was
acquired; and 3) should fall within the domain usually considered degree credit (Willingham, 1977). Learning can be justified as college-level by 1) relating learning to subjects areas traditionally taught in colleges; 2) showing that it is at a level of achievement equal to what is normal in college; 3) comparing specific learning to that acquired in college-level work; and 4) identifying learning as that acquired after high school and expected for professional acceptance (Willingham, 1977). College students need to be able to explain, summarize, and arrange information.

Writing in college involves more than mastering the mechanics of grammatical structure and punctuation or logic; the significant achievement is in appreciating the essentially rhetorical nature of writing and thought (McGrath and Spear, 1991). Curriculum planning efforts will have better results in terms of student outcomes if there is less focus on formal structure and content and much more emphasis on pedagogy and other features of the delivery system (Astin, 1993). The Carnegie Commission (1987) states that learning how to learn is one of the best investments
that can be made for an effective life.

In college, according to one authority, cognitive development consists of "three types of courses that seem to produce generally favorable outcomes: courses emphasizing science or scientific inquiry, courses emphasizing the development of writing skills, and interdisciplinary courses" (Astin, 1993, p. 423). In addition, "A number of pedagogical practices likewise seem to be associated with favorable cognitive outcomes: time devoted to studying and homework, tutoring, cooperative learning, honors or advanced placement courses, racial or cultural awareness workshops, independent research projects, giving class presentations, taking essay exams, having class papers critiqued by professors, use of personal computers, frequent student-faculty interaction, and frequent student-student interaction. Finding ways to encourage such activities will substantially enhance student learning" (Astin, 1991, p. 424).
Chapter III

METHODS

Previous research on college-level course work has centered on transfer issues rather than distinguishing characteristics of college-level course work. This study was a partial replication of a study done in Maryland at Montgomery Community College and the University of Maryland at College Park to identify distinguishing characteristics of college-level course work. The Maryland study focused on freshman English composition and mathematics (Miller, 1996).

In order to explore the distinguishing characteristics of college-level course work, the researcher used the qualitative research method of elite-interviewing (Marshall and Rossman, 1995). This method allowed for in-depth investigations of the attitudes, opinions, experiences, and perceived ideas of individuals involved in the issue.

Procedures

The specific procedures in this study involved:
1. development of interview questions based on the research questions and theoretical framework suggested by the literature review;

2. selection of the sample and arrangement of interviews with participants in the study;

3. collection of data relating to the distinguishing characteristics of college-level course work; and

4. analysis of the relationship and differences between and among the responses of those interviewed regarding college-level course work.

The following sections discuss the elite-interview method, the selection of the sample, and the method used for data collection and analysis, along with issues of reliability and validity inherent in the elite-interview method.

**Interview Method**

The purpose of this descriptive study was to identify or discover the important variables which contribute to different faculty perspectives of the distinguishing characteristics of college-level course work. The research

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strategy was the semi-structured, in-depth interview technique known as elite interviewing.

Elite interviewing focuses on a particular type of respondent (Marshall and Rossman, 1995). Elite individuals are considered to be influential, prominent, and well-informed people in an organization or community. Elites are selected for interviews on the basis of their expertise in areas relevant to the research (Marshall & Rossman, 1995). For the purpose of this study elites were professors teaching freshman history or biology who are considered excellent teachers in their field, have strong commitments to the discipline, and participate in curriculum development at their institutions.

Elite interviews of the two- and four-year college faculty currently teaching freshman biology and history courses provided a useful and appropriate means of gathering focused data. Marshall and Rossman (1995) have identified several distinct advantages of the process of elite interviewing. The following three have particular relevance to this study: 1) gaining valuable information from
participants because of the positions they hold; 2) providing an overall view of an organization and its relationship to other organizations; 3) reporting on an organization's policies, past histories, and future plans, from a particular perspective.

Selection of the Sample

Glaser and Strauss (1967) and Denzin (1978) recommend theoretical sampling for qualitative research. This form of sampling involves the purposeful selection of those people who offer the most theoretical relevance to the situation and concepts under study. When comparison groups are used, theoretical sampling serves the purpose of providing "simultaneous maximization or minimization of both the differences and the similarities of data that bear on the categories being studied. This control over similarities and differences is vital for discovering categories, and for developing and relating their theoretical properties, all necessary for the development of an emergent theory" (Glaser & Strauss, 1967, p. 55).
For this study, the aim was to identify a sample of teaching faculty at community colleges and senior institutions who were teaching similar courses in similar organizational settings. Post-secondary institutions were selected from a rural geographic location with similar student populations. The three community colleges participating in this study were similar in size, program offerings, and transfer patterns. The three four-year colleges were also similar in size, program offerings, and transfer patterns. The State Council of Higher Education for Virginia (SCHEV) Special Assessment Survey (B-7 Report) tracks students transferring from Virginia's community colleges to four-year colleges and universities in Virginia. This report was useful in identifying colleges that have similar transfer patterns to the same senior institutions. The nature of the study was explained and permission was granted from the chief academic officer or the president of each institution to conduct the study using "elites" based on recommendations from division chairs at the community colleges and department chairs at senior institutions and
faculty interest in participating in the study. Professors were asked by division or department chairs to volunteer if they were interested in participating in the study. The names of the teaching faculty will remain anonymous.

This study identified a sample of professors teaching first-year biology and history courses at selected two-and four-year postsecondary public institutions. The selection of faculty was not random, but consisted of full-time faculty currently teaching the same subjects. The study was designed to compare differences and similarities of perceived characteristics of college-level course work for both community college faculty and four-year college faculty. Only full-time teaching faculty were interviewed, although approximately forty percent of all courses at community colleges are taught by adjunct faculty. Since adjuncts are usually not involved in curriculum development, only full-time teaching faculty were interviewed. Individual professors were chosen, based on their expertise, through consultation with the college department chairperson and the chief academic office of the institution.
Objectives of the Study

The specific objectives of the study were:

1. to synthesize the extant literature with regard to the definition of college-level course work;
2. to develop a set of interview questions based on the research questions and theoretical framework;
3. to select elites for interviews based on their expertise in areas relevant to the research;
4. to set up an interview schedule for interviews;
5. to collect and analyze the data relating to faculty perception of college-level course work.

Primary and Secondary Research Questions

Based on the literature review, a list of secondary research questions were formulated from the primary questions asked in this study. They are as follows:

Primary Question:

1. What are the distinguishing characteristics of college-level course work?

Secondary Questions:
A. What is the theoretical basis of college-level course work?

B. Is there a uniform definition of college-level course work?

C. Who are the recognized authorities on college-level course work?

**Primary Question:**

2. What are the perceived similarities and differences among community college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

**Primary Question:**

3. What are the perceived similarities and differences among four-year college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

**Primary Question:**

4. Is there a difference between what community college and four-year faculty perceive as the
distinguishing characteristics of college-
level course work?

Interview Questions and Pilot Studies

The researcher developed, pilot tested, and revised the interview questions prior to conducting the study. Before arriving at a final version of the interview questions several preliminary steps were taken. First, the literature was reviewed to determine what was meant by college-level. Second, one broad question was formulated to gather as much information as possible in a way so as not to restrict the informants' comments. Finally, probe or follow-up questions were developed to elicit information not obtained from the original question.

A pilot test was conducted on the first set of questions in which the researcher interviewed faculty who were not participating in the study. The pilot test indicated that the main question did not elicit as much information as expected. Faculty focused more on student ability and less on the components of a college-level
Based on information from the pilot a new question was developed. This question asked the informant to be more specific about what constitutes a college-level course, but retained the essence of the original question so the informant could respond freely. This version was pilot tested using two faculty. The results showed that the revised question made it easier for faculty to talk more specifically about college-level course work. With minor editing, this version was used in the study.

The final set of questions also contained items concerning demographic information about each participant. Faculty were asked questions regarding their credentials, number years teaching experience, and number years teaching the course in the study. The final set of interview questions are found in Appendix A.

Data Collection

The data were collected during the summer of 1996. For the purpose of this study, descriptive methods for data
collection and analysis were selected. The purpose of descriptive research is to describe and develop an understanding for a situation, event, group or interaction (Lock, et al., 1991). Detailed descriptions of context and what informants actually say form the basis for inductive rather than deductive forms of analysis (Lock, et al., 1991). The focus of attention was on the perceptions and experiences of the participants. These methods were chosen because they offer maximum potential for minimizing some of the threats to validity and reliability inherent in the elite interview method. James Spradley (1979) has described in some detail structured strategies for data collection and analysis anchored in hands-on work with actual data (Miles & Huberman, 1984). Spradley's methods allow other researchers to examine easily the data and the way in which conclusions have been drawn during analysis of the data.

Two strategies of descriptive inquiry have been used in this study: 1) elite interviews, which attempt to record what informants recall about their experiences, attitudes and beliefs; 2) document analysis, which attempts to
determine "official" stances (Denzin, 1978; Spradley, 1979).

In this study, the interviews provided rich, contextual information that allowed individuals to present their experiences, beliefs, and reasoning in ways that were meaningful to them. Such information would have been difficult to gather through a survey instrument or questionnaire.

**Interviews.** The interviews consisted of personal interviews with the participants at selected two- and four-year colleges. All interviews took place at the college where the participants were teaching. The researcher interviewed each faculty individually and tape recorded the interview with the permission of each informant.

A broad, open-ended interview question was designed to gather information from the two-and four-year college faculty, regarding the distinguishing characteristics of college-level course work. In case the main question did not elicit the desired information, additional questions were used as probes (see Appendix A). Interview questions were based on factors suggested in the literature review to
differentiate characteristics of college-level course work. Each question was designed to gather information for answering the research questions; yet the questions were asked in a such way as to encourage the informant to provide relevant information that would not be limited to particular categories. The first question was a descriptive question, aimed at eliciting a large sample of information in the professor's "natural" language. This question was designed to encourage the informant to talk about and describe the course and method of teaching used by the professor. The following is an example of what Spradley (1979) calls an ethnographic explanation leading into a descriptive question:

Let me explain briefly the purpose of my study and the interview today. What I will do is ask a broad, general question, and I want you to just answer in as much detail as you can provide. I would like for you to describe what you consider to be the distinguishing characteristics of a college-level course.

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Categories of information referred to as domains usually emerge from responses to the basic question. If necessary, these domains of information may be further clarified through the use of secondary or probing questions.

Probing questions were designed to provide alternate ways to obtain additional information that belongs in that domain. Following is an example of a probing question:

What prerequisite knowledge, if any, is needed for the first-year biology course?

Once a considerable amount of this kind of specific information has been fitted into one or more domains, a contrast question was asked.

Contrast questions were designed to elicit information about differences or similarities in data bits within a domain or between two or more domains. Contrast questions are helpful tools in discovering tacit relationships among and within the categories or domains of information that have been gathered. From tacit knowledge, important patterns emerge that explain the phenomena under study. The following is an example of a contrast question used with a
professor who has taught biology at both a community college and a four-year college:

You have provided detailed information regarding the distinguishing characteristics of a college-level course. What are the similarities or differences, if any, between a community college freshman biology course and the same course taught at a four-year college?

Data Analysis

Through data analysis the researcher was able to make inferences by objectively and systematically identifying specified characteristics from the obtained data. This was a way of asking a fixed set of questions about the interview data in such a way as to produce countable results (Marshall & Rossman, 1995).

After the interviews, a system of analytic induction referred to by Spradley (1979) as domain analysis, was used to study the data for categories of information relevant to the concept being explored (college-level course work).
Data obtained through the interviews was used to look for patterns which illustrate objective and quantitative descriptions of what has been communicated. These patterns were relevant to the objectives of the research which were listed above. Through domain analysis the researcher examined all data, assigned the data to categories of meaning, determined patterns common to the situations under study, and explained why some incidents did not follow the patterns. Spradley's systematic procedure begins with a search for categories of meaning, or domains, within the data being analyzed (Spradley, 1979).

Coding of data. The transcribed interviews were submitted to domain analysis through two procedures. First, each descriptive interview question was analyzed and considered as a possible domain. For example, the question "What prerequisite knowledge, if any, is needed for the first-year biology course?" might become the domain essential knowledge base. Responses and details which do not fit into any of the domains established from the interview questions provided the second source of domains.
Pattern and Theme Identification. Once domain analysis was applied to all interview data collected from all informants, the domains were searched for common characteristics or theme patterns that were repeated or noted as significant by the informants. There was a search for patterns across both two-year and four-year college professors and across disciplines. The results were displayed on a chart so comparisons could be made across all groups and within all groups of data. These comparisons led to the discovery of patterns of inter-related minor themes and major themes that were related to all others.

Developing categories involved noting the similarities in the data. Looking at the emerging categories allowed the researcher to determine which have internal convergence and which have external divergence (Guba, 1978). The researcher then identified the salient, grounded categories of meaning held by participants in the study (Guba, 1978). Patton (1980) described this inductive analysis as a process which uncovers patterns, themes, and categories, calling it "a creative process that requires asking carefully considered
judgments about what is really significant and meaningful in the data" (Patton, 1980, p. 313).

Methodological Issues. Threats to validity were reduced by careful attention to specific procedural safeguards. The elite interview method of research has both advantages and limitations in regard to validity and reliability (Cuba & Lincoln, 1981).

Potential bias is introduced into any study that uses impressions and opinions of informants as a major source of data. Researcher bias can pose threats. Some problems which could threaten the reliability of this study were difficulties in establishing rapport with informants, biased questioning, and preconceived ideas about the existence and relative importance of certain factors in the analysis of data. The following steps were taken to reduce these sources of bias: taping of interviews; the use of document analysis; and, the use of the same descriptive questions and probes to guide each interview cycle across cases for standardization of the interviewing process.

Since a single researcher collected and analyzed the
data, there were no measures of inter-researcher reliability. All data, however, have been indexed by original source, as well as by tape and transcription location.

One of the concerns of the interview method is the inability for one to generalize from the small, non-probability sample to a larger population. In this study, the researcher takes the stance of Cronbach (1975) who warns against making "generalization" the ruling consideration in methodological priorities. He contents that ...."When we give proper weight to local conditions, any generalization is a working hypothesis, not a conclusion" (p. 125). The aim of this study was to generate a number of working hypotheses with regard to the concepts under study, and with a view towards generating new knowledge that would guide future studies in the areas of college-level course work and transfer programs.
Chapter IV

FINDINGS

This chapter begins with a synthesis of the findings, followed by a presentation of the analysis of data as they relate to the research questions. This chapter contains the summary of findings from interviews with twenty-three college history and biology professors from three community colleges and three four-year public colleges. The faculty interviewed were asked to describe the distinguishing characteristics of college-level course work.

Twenty-three interview tapes were transcribed. The salient points were highlighted and coded by discipline and by college. The characteristics of college-level course work each faculty member discussed are summarized, using the words of the participants.

Description of the Sample

Twenty-three full-time teaching faculty participated, twelve from four-year colleges and eleven from community colleges. The group of professors consisted of fourteen
biology faculty and nine history faculty. Both four-year colleges and community colleges employed more biology faculty than history faculty from which to select a sample. Generally, there was only one full-time history professor at each community college; therefore, the number of history faculty interviewed is less than biology faculty. Each community college had two or more full-time biology faculty. Most had taught freshman courses since the beginning of their college teaching career. Since part-time faculty are usually not involved in curriculum development, only full-time teaching faculty were interviewed. This study was conducted at institutions with culturally similar populations and geographic locations.

Table 1 presents a composite profile of each participant from information obtained during the personal interview. The profile indicates the total number years of teaching experience, number of years at the current institution, gender, and highest degree earned. As shown in Table 1, years of teaching experience of the twenty-three professors ranged from eight to thirty-nine years with a
mean of 23.7 years. Years experience at the current institution ranged from four to thirty years with a mean of 17.8 years. Years experience teaching the freshman course identified ranged from one to thirty years with a mean of twenty years. There were four females and nineteen males in the group. Of the twenty-three professors interviewed ten held an earned doctorate, one had a Certificate of Advanced Graduate Studies, and twelve held Master's degrees.
Table 1. Professor Demographic Profile*

<table>
<thead>
<tr>
<th>Professor Discipline</th>
<th>Years Experi.</th>
<th>Years Instit.</th>
<th>Gender</th>
<th>Highest Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Biology</td>
<td>39</td>
<td>26</td>
<td>M</td>
<td>PhD</td>
</tr>
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<td>2</td>
<td>27</td>
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<td>3</td>
<td>13</td>
<td>7</td>
<td>M</td>
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<td>4</td>
<td>16</td>
<td>16</td>
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<td>PhD</td>
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<td>5</td>
<td>22</td>
<td>22</td>
<td>M</td>
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<td>6</td>
<td>20</td>
<td>17</td>
<td>M</td>
<td>MA</td>
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<td>7</td>
<td>27</td>
<td>27</td>
<td>M</td>
<td>PhD</td>
</tr>
<tr>
<td>8 History</td>
<td>8</td>
<td>4</td>
<td>M</td>
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<td>9</td>
<td>12</td>
<td>4</td>
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<td>13 Biology</td>
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<td>24</td>
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<td>MS</td>
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<td>23</td>
<td>35</td>
<td>27</td>
<td>M</td>
<td>MA</td>
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</tbody>
</table>

*Key  Four-Year n=1-12  Biology n=1-7  History n=8-12  Community College n=13-23  Biology n=13-19  History n=20-23
Description of Findings

Twelve four-year faculty and eleven community college faculty responded to the open statement: Describe in as much detail as possible what you consider to be the distinguishing characteristics of college-level course work. When the respondent had difficulty answering, a probing question was asked to move the interview along.

Based on content analysis nine patterns of college-level characteristics emerged and are listed below. (Characteristics are shown in Table 2.) An additional category emerged that is indirectly related to college level characteristics but is important to the overall picture of college-level course work. This category has been labeled additional findings. The patterns are as follows:

1. Problem solving using higher order thinking skills
2. Mastery of the subject matter
3. Connections within and across disciplines
4. Preparation and desire of the student
5. Essential knowledge base
6. Course requirements and teacher expectations
7. Pedagogical issues: writing, reading, evaluation, and textbook

8. Rigor of the course

9. Application of the subject

10. Additional findings, including student ability, credentials of the faculty, and decline of academic standards and faculty expectations.

This chapter consists of three sections. The first section is an analysis of each characteristic; the second section is a discussion of additional findings; and the third section relates the findings to the research questions.

**Characteristics of College-Level Course Work**

The faculty comments regarding college-level characteristics have been divided into "four-year, biology and history" and "community college, biology and history" followed by a summary.

1. **Problem Solving Using Higher Order Thinking Skills**
Higher order thinking skills necessary for college-level course work operate on those listed in Bloom's taxonomy: analysis, synthesis, interpretation, evaluation, inference drawing and conceptualizing; all of these are components of critical thinking. Eighty-three percent of the faculty interviewed felt that problem solving using higher order thinking skills was an important characteristic of college-level course work. Faculty pointed out that complex problem-solving should occur in college-level course work.

**Four-Year College Faculty**

**Biology**

The following comments regarding the use of higher order thinking skills in problem solving are representative of the seven four-year college biology faculty. Of the seven biology faculty interviewed, five identified problem solving skills as an important characteristic of college-level course work. For instance, one instructor said, "I want students not to just think but think critically. To me critical thinking means to analyze what one has read based
upon past experiences and go further looking for the meaning beyond what the topic is."

Faculty pointed out that critical thinking was not memorization of facts. Another instructor said, "My view of a college-level course extends beyond the simple memorization of facts. A college-level course should develop critical thinking skills." Some faculty commented that students expected the teacher to teach exactly what would be included on tests. Faculty concluded students wanted to learn only the information that would be presented on test. Faculty did not believe that most students wanted to search for solutions. Another instructor commented, "I expect students to be able to synthesize the material and be able to relate the material." Faculty felt students should be able to use the information to continue to learn. Several faculty said they wanted to teach students to "learn how to learn." One instructor said, "A college course should be more problem solving because that is what students will be doing in the end." In other words, students are required to solve problems and find solutions in whatever
job they accept after graduation.

One instructor said that higher level thinking "requires a vision of the whole argument. The ability to think about the big picture is important." A college-level course should teach students to take specific information and go beyond that information to be able to draw conclusions and make inferences.

**History**

The history instructors expressed much the same viewpoint about problem solving using higher order thinking skills as did the biology instructors. All five four-year history faculty felt problem solving was an important characteristic in college-level course work. One instructor pointed out that in a college history course he taught problem solving by "adding complications." He said

I mean taking something that the students accept as a basic fact and begin to show how there are various interpretations of the fact. I want students to be able to analyze the situation and see how the basic facts hold up.
Another instructor said that critical thinking was the most important characteristic of college-level course work but it was also the most difficult to teach and measure.

Some faculty wanted students to read between the lines and look for meaning other than what seems to be in the text. One instructor said, "I want students to view the process and see what consequences are caused and how individuals play a role."

History faculty also said that most students simply want to memorize the facts but that a college-level course goes beyond the memorization of facts to analysis, synthesis, and interpretation. One instructor wanted students in a college-level course to "have a sense of how a historian goes back and looks at primary sources, analyzes the sources on the basis of evidence and then writes a history of their perception of what all that means." Taking this point one step further, another instructor pointed out that in college, "students should be able to take what they know about history and be able to relate that information to social change."
Community College Faculty

Biology

The community college biology faculty responses that included references to problem solving and critical thinking skills are represented by the following comments taken from interview transcripts. The community college responses closely resemble the four-year college biology faculty. Of the seven community college biology faculty interviewed, six felt problem solving using higher order thinking skills was an important characteristic of a college-level course. Much like four-year biology faculty, the community college faculty discussed the fact that students want to memorize the information only to pass a test. Faculty expressed an interest in having students become more actively involved in the learning process. The faculty expected students to be able to assimilate, synthesize and analyze information to solve problems. One instructor said, "The teacher presents a problem to the students and then the students try to research and solve the problem on their own. Students should not be spoon fed." Another instructor said, "In
biology there is a lot of problem solving especially in the lab experience because we give problems and expect students to form a hypothesis and expect them to work through the problem using experimental procedures to come up with solutions." This instructor further commented that "sometimes teachers give students too much information to assimilate; conceptual knowledge is more important than fact, fact, fact." A third instructor affirmed what the previous instructor said: "Learning is indeed working through problems, developing possible solutions, and testing the solutions for answers."

**History**

Community college history faculty said problem solving was an important characteristic of college-level course work as the following examples illustrate. One instructor commented that "history teaches through critical analysis." Another instructor agreed by saying that he wanted students to "understand that history was basically interpretation and involved analysis, synthesis, and critical thinking." Another instructor said she had students write "response
papers’ so students would be challenged to think critically. In this professor’s class students were given problems or situations and they had to write a response using research to substantiate their position.

**Summary**

There was a great deal of similarity in the comments between the groups as faculty discussed problem solving using higher order thinking skills. Nineteen of the twenty-three faculty interviewed felt problem solving was an important characteristic of a college-level course. Both community college and four-year faculty said they were teaching students from very similar backgrounds. These students were classified by some faculty as first generation college students. From the interview comments, the development of thinking skills is inherent in college course work; thus the agreement among those interviewed appears logical.

In college, according to those interviewed, complex problem solving occurs in almost all aspects of college-level course work. These problem solving situations often
involve multiple variables drawn from various sources, where the development for a solution requires selection of the appropriate variables and evaluation of findings. One instructor summed up problem solving like this:

Students must solve a number of problems in biology. I expect students to form a hypothesis and expect them to work through the problem using experimental procedures to come up with results. This helps train a student’s mind to think in a logical sequence. Students need to solve problems in a logical patterns to find solutions. Problem solving is definitely apart of college-level course work.

2. Mastery of the Subject Matter

Mastery of the subject matter is closely related to application and problem solving using higher order thinking skills. If students do not posses a deep understanding of the subject matter, then the students will not be able to solve complex problems. Mastery of the subject matter goes
beyond the memorization of facts to an ability to grasp the material and utilize the information to solve problems. The researcher felt mastery of subject matter was not mentioned as often as other characteristics because the essence of this characteristic was discussed so thoroughly in the category of problem solving and the category of application.

Four-Year College Faculty

Biology

The following remarks reflect the need for students to master the subject matter in a college-level course. Although only two of the seven four-year college biology faculty interviewed mentioned mastery of subject matter as an important characteristic of college-level course work, the faculty made comments that reflect what the mastery of the subject implies. One instructor noted that college-level course work "requires students to work on their own. The students will not simply memorize the material but have some understanding of the material. Increasingly more work is done outside the class as the level of the course goes up." The same professor said "students should be conversant
with the literature in their particular field. The professor should stimulate your (students) desire for further research in various areas that are covered in the course." Another instructor said, "students in a college-level course should be able to describe and explain the subject. Students should understand complex biological principals, ideas, concepts and terminology." Faculty comments indicated that students need to understand the content and acquire a vocabulary that is part of the discipline.

**History**

Two of the five four-year history faculty elaborated on masters subject matter as a characteristic of college-level course work. Again the relatively low numbering of faculty commenting on mastering subject matter was not indicative of its importance as a characteristic of college-level. The history faculty tied this characteristic closely to application and interpretation (problem solving using higher order thinking skills). One instructor said,

I am not interested in how much the student can
memorize but I prefer they (students) understand the concept. What I find is that when people don't like history, it is because they (students) don't understand it. I encourage students to enjoy the topic and get involved in the process. Another instructor followed by saying, "Students need to understand the material, not just memorize the facts and dates. I want the students to engage the material and make it a part of their lives." The idea was that if students make the information a part of their lives then the material will not be soon forgotten. A more comprehensive understanding of the material enhances the students' appreciation for the subject.

Community College Faculty

Biology

Two of the community college biology faculty interviewed commented on mastering the subject. The following quotations were taken from these two interview as representative samples. One instructor noted that in college, "a course in biology is not just a course in
biology. We (the instructors) try to develop the students' awareness of biological data and encourage students to become life-long learners." The instructor continued to say that when students from their college transferred to other institutions the instructors wanted the students to have the knowledge and background to feel comfortable with college-level course work." The result of mastering the subject matter was that it raise the students' perspective to a higher level. Students need to master a body of knowledge in order to be successful at the next stage.

Another community college biology instructor said in a college-level course the material should be current. She also said, "High school is very repetitive and you (instructor) hold their (students) hand. In college it is important to foster independent thinking, independent learning. Students should search for information, not have it handed to them."

History

Two of the four community college history professors interviewed included remarks about mastering the subject.
College history teachers tend to look at many things in a college-level course in terms of interpretation. In discussing mastery of the subject one instructor said, "History is a reading and research course. The real learning of history is done by the individual student based on how he/she interprets the material." He continued by saying a college-level course should be a "springboard" toward helping students become more progressive. Another instructor said "students must have a very good mastery of the subject to be successful in this course." Both community college and four-year college faculty expect students to master the subject and be able to utilize the information to solve problems both in and out of class.

Summary

The comments regarding the need to master the subject were very similar for both the community college faculty and the four-year faculty and for both the biology faculty and the history faculty. Even though both disciplines take a different approach to mastering the subject, those who cited the need to master the course work in college were
consistent in their reasoning. Both groups expected students to remember the information and be able to use the information. Memorization was not considered acceptable in a college-level course. Memorizing is not mastery, but is considered the lowest of the thinking skills (Bloom, 1987).

Eight of the twenty-three faculty interviewed mentioned college-level course work requires the mastery of a body of knowledge. One instructor summed up by saying, "Students should be capable of asking questions and commenting on the material being able to challenge the professor and the material." Mastering a subject means that students have a thorough understanding of the subject; it is not memorizing bits and pieces, out of context.

3. Connections Within and Across Disciplines

Making connections within disciplines means that students build a body of knowledge during the course and other courses within the discipline. For example, in biology students learn complex concepts and terminology in order to be able to describe and interpret biological data.
in research projects. Making connections across the disciplines means that students use information and concepts obtained in other disciplines in the courses students are currently enrolled. For example, history or biology students use writing skills that may have been learned in an English class. A close relationship exists between mastering the subject and making connections across disciplines.

Four-Year College Faculty

Biology

When the faculty mentioned connections across disciplines it was usually in association with English and writing skills of the students. The researcher noted that in this study, interview comments were often applicable to more than one characteristic. Most faculty did not say specifically that the subject connected to other disciplines; instead the faculty said things like, “I am as much an English teacher as a biology teacher. When I grade written work from my students, I grade for content and grammar.” Almost all faculty discussed the importance of
writing and in the context of writing the instructors discussed connections to the discipline of English. The biology instructor also said that in a college-level biology course students not only learned biology but the students made use of mathematical concepts learned in math classes.

History

The four-year history faculty connected history to the English discipline in much the same way as did the biology faculty. Faculty graded written work as an English teacher would, correcting for content and grammar. Repeating a point made by a biology colleague, a history instructor said he "graded student papers for grammar and content."

Community College Faculty

Biology

The community college faculty comments were very similar to observations made by the four-year college faculty. One biology instructor said, "We (instructors) work very closely with the English department here." This particular faculty member always used "we" when he was referring to teaching techniques or department activities.
He commented that instructors in this department worked very closely so that students progressed at the same level. The sense of community in his department clearly indicates connections within the discipline. Two biology instructors commented that learning the terminology in a college-level biology course was equivalent to learning a second language for the students. Another instructor said students need to "understand how to use the English language." He continued: "Learning must cross disciplines. I had the math teacher come to my class and work with the students on graphs so the students could turn out a quality graph." Continuing, "It would be nice in the undergraduate level if we could try to tie in so that all the courses had meaning within the content and context of all the courses the students were taking." Students would like to know how every subject fits in, rather than seeing subjects only as separate entities. An instructor commented that "It's tough for a student if they can't see a relationship between courses."

History

The community college history instructors said the same
things as other professors said with regard to connections within and across disciplines. The comment again was “I want the writing accurate for both content and grammar. I consider myself an English teacher as much as a history teacher. Can’t do one without the other.” In other words the instructor could not teach history without teaching English. The instructor continued to say, “I believe we (instructors) should expand the students’ whole range of human knowledge. Literature, science, math, or business whatever because it is all apart of the historical structure. It is all how one has affected the other or the relationship that exists.” Another instructor said “I see history and English as natural companions.”

**Summary**

The comments between the disciplines and institutions regarding connections within and across the disciplines were similar. Apparently the English discipline spans all other disciplines. According to the instructors interviewed connections were important as a characteristic of college-level course work. A theme that emerged with regard to
connections across disciplines was that most college courses were designed to teach skills that will be used in more than one situation or course. Each discipline was connected either directly or indirectly to another in some way. Material learned in one course is applicable in another course.

Six faculty mentioned connections to other disciplines directly but others referred to connections in different ways. For example, writing was discussed in 96 percent of the interviews and most of the instructors said both content and grammar were important in quality writing. Connections within and across the disciplines has been described by Gardner and Jewler (1989), p. 116) as "an integration of knowledge and understanding that allows students to think and create independently."

4. Preparation and Desire of the Student to Achieve

Preparation means that the students entered college and came to class prepared for college-level content. Desire to achieve is the willingness of the student to take
responsibility for his/her learning and become actively involved in the learning process. Seventeen faculty discussed preparation and desire of the students to achieve as characteristics that are desirable for students to have in approaching college-level course work.

Four-Year College Faculty

Biology

All seven four-year biology professors discussed the students' lack of preparation for college-level course work and/or lack of desire to achieve. Preparation for college-level course work was necessary because it was assumed that "one of the differences between a high school and a college biology course" is that in a college course "the student is responsible for a great deal of the learning." A second instructor comment concluded that preparation is necessary in college, because success was based on "student involvement in the learning process." A third instructor said, "Students should be able to work more on their own." Still another instructor added, "I tell my students that college-level work should require as a minimum two hours of
work outside of class for every one hour spent in class. However, the students don’t believe this.” The remarks were numerous with regard to the need for students to take responsibility for the learning process.

Most of the instructors interviewed believe that students are not generally prepared for college-level coursework. Comments suggested that students have not had the proper background coming from high school and that students often do not complete assignments made by the teacher. One instructor said, “I expect students to read and pay attention to the learning aids and come into class having read the material and ready to discuss. My expectations however are rarely realized.” Another descriptive comment made during the interviews was that “the students are passive and not aggressive in the course work. They very seldom read a book.” Another instructor said:

Typically here (the college where the interview was being held) students have a GPA in biology of 1.8. This is a little below a grade of ‘C’ which is considered a standard. I was appalled when I
interviewed here and saw that. I came from a very competitive school where if you (the student) got a grade of 'C' in a course it was a serious abomination and here students rejoice with a grade of 'C'.

One biology instructor summed up the comments of his colleagues by stating:

The background of the students who come in is a whole lot weaker. I try to get the students as involved as possible with the learning process.... Most of the students don't have a whole lot of knowledge coming in a college-level biology course. The little they remember is very muddled.

The remarks were numerous from four-year biology instructors about the students' lack of preparation for college-level course work and/or desire of the student to achieve. Each faculty interviewed cited lack of preparation as a cause of poor student performance. Many felt this lack of preparation contributed to lowering the academic standards in college-level course work.
History

Again all four-year history instructors asserted that lack of student preparation and desire to achieve was an important issue related to college-level course work. The comments followed closely with what the biology faculty said previously. A history instructor stated that "I try to encourage students to enjoy the topic and get involved in the process. If you (students) don't put anything into it; it is very hard to get anything out of it." Another instructor said, "I would love for the students to come in having read a lot of great works of literature and to understand that these are interpretations of what people believe." Comments continued along the same pattern from two other instructors. One said, "Many of these students are simply not willing to adjust to the more rigorous demands of college-level course work. About twenty percent of the students drop out due to 'laziness'." Another instructor said, "It is very difficult to teach a college-level course when you have an open admissions school. Students are not prepared when they get to me. This is not
the students' fault but then it is not my fault either."

Community College Faculty

Biology

Fewer community college biology faculty commented on lack of student preparation and desire to achieve than did the four-year instructors. One instructor said, "I try to introduce students into what I consider college-level coursework and help them (the students) make the transition to doing this level of work." He continued by saying, "our students come from a lot of different backgrounds but we (instructors) try to make sure that the materials we use in our courses are at college-level." Another instructor affirmed what others have said: "Students are not prepared. They do not know how to work on their own. Their work ethic is very bad. They do not know how to study." In the words of a community college biology instructor, "A college-level course should have a lot of student input in that they (students) will be able to do a lot of work on their own."

History

Two community college history faculty said lack of
student preparation was a characteristic of college-level course work. Community college history instructors wanted students to take responsibility for the learning process. As with biology faculty, students needed to be able to work on their own. One instructor said, "I have a greater expectation of the student to do more on his/her own and not be to spoon feed the students. Expect them to be mature." This instructor was the only person to use the word maturity in relation to lack of student preparation. Since the average age of a community college student is twenty-seven, most faculty feel community college students are more mature than students just graduated from high school.

**Summary**

All four-year biology and history instructors discussed the lack of student preparation, as evidenced in part through responsibility as an influence on college-level course work. Five community college instructors discussed lack of student preparation and desire to achieve in relation to college success. Many faculty felt lack of preparation was synonymous with acceptance of
responsibility. Students were not ready to accept responsibility for their role in the learning process. The researcher felt this was very frustrating to teaching faculty being interviewed because many had trouble getting away from the students’ lack of preparation and really discussing the other major components of college-level course work.

Four-year faculty were more apt to stress the responsibility of the students in the learning process. Community college faculty put more emphasis on utilizing a variety of pedagogical techniques to better prepare students for college-level course work.

Seventeen of the twenty-three faculty interviewed mentioned lack of student preparation and desire to achieve as a characteristic of college-level course work. Many instructors interviewed stated that in college, learning is the student’s responsibility, where the student needs to seize the opportunity to learn through lectures and assignments. The students have to be able to learn on his/her own with the classroom as a learning aid but
increasingly more work is done outside the class as the level of the course goes up.

5. **Essential Knowledge Base**

Essential knowledge base means the basic knowledge expected of a college-level student upon entering college. Many faculty commented about spending too much time on basic content rather than college-level content.

**Four-Year College Faculty**

**Biology**

The four-year college faculty expressed concern about the knowledge base that students bring to college, specifically noting that students lack writing skills and basic subject content. Only two of the four-year biology instructors specifically stated that there were essential skills that college students must have; but all of them commented on the fact that students were coming to college ill-prepared for college-level course work. Some instructors commented on the need for each course to build on knowledge obtained from another course. One professor
said, "Often times in a college course the professor is preparing some students for a profession and of course the basic courses are preparing one for the more advanced courses." Another professor said "I can’t assume anything when it comes to basic knowledge. I start at the beginning. We should be able to assume some things but it is not always the case. Students may be familiar with the biology terms; may have heard of them (biology terms) but the students do not know the definitions to the words." Another instructor said, "I teach the course as though students have absolutely no knowledge of biology. Students go through a college preparatory biology course and don’t know what DNA is."

Because students come in deficient in the essential skills, another instructor said that he had "found it necessary to lower standards."

**History**

Several of the four-year history faculty shared the opinion made by the biology faculty. Most of the history faculty felt much the same way as one instructor when he said, "First one hopes that the basics have already been
given and increasingly that is the disappointment many of us face. The basics are not there so there is nothing to build on." History faculty said that the little knowledge students do bring to class is narrow focused. One instructor said, "Much of their (the students') historical knowledge is just simply not correct. They (students) have such a nationalistic attitude that it is hard to teach them western civilization." Because of this fact the instructor said that he preferred for the students to come to him with a "blank slate." While students are expected to come from high school prepared for college-level course work the instructors indicate that this is not the case. In explaining the high school knowledge base a third instructor said, "Students don't come in with a basic content knowledge and I am having to teach that basic knowledge instead of being able to build on it." A fourth instructor said, "I feel that I am doing more remedial work than I should be doing. As a result we are not covering the content at a level that we should be."

*Community College Faculty*
Biology

Only two community college biology faculty commented on the students’ lack of an essential knowledge base as a characteristic affecting college-level course work. However the comments of these faculty were very similar to those made by the four-year biology faculty. Students were expected to come from high school with a certain level of knowledge so college faculty could build on that knowledge. One instructor said, “Students don’t come with the knowledge they need to be ready for a college-level biology course.” Students were not prepared for conceptual thinking or the extensive vocabulary students were expected to know. Closely related to discipline connections, one instructor said, “They (students) need certain skill levels in math and English to be able to be successful.”

History

Only one community college history instructor commented on essential knowledge base of the students. This instructor said what other instructors have said: “In community college some (students) may not have the necessary background so I
start at the beginning in teaching history."

Summary

Nine of the faculty interviewed felt that college-level course work was affected by an essential knowledge base that students bring with them; six were from the four-year colleges and three were from community colleges. The faculty felt that college-level course work builds on previous knowledge and that there is a general lack of student preparation for college work.

6. Course Requirements and Teacher Expectations

Course requirements and teacher expectations were discussed by fourteen of the twenty-three faculty interviewed as a distinguishing characteristic of college-level course work. The characteristic included class assignments and the level of student performance expected by the instructors. The characteristic of course requirements and teacher expectations was discussed as instructors discussed lack of student preparation for college-level course work.
Four-Year College Faculty

Biology

Six of the seven four-year biology faculty interviewed discussed the course requirements and the expectations of the teacher as an important characteristic in distinguishing college-level course work. Many faculty felt their expectations were never realized as were evidenced in the instructors’ comments that follow. In discussing the characteristics of a college-level course, one instructor said, "The first thing that comes to mind is the requirement or the expectation that I have that students will read not only the textbook but go beyond that and read related materials.... My expectations, however, are rarely realized." Another said "I expect students to read the material and be able to comprehend the information. Very few of the students actually do this." A third instructor summed up what most instructor were saying:

I don’t expect students to achieve what I want them to achieve. I would like students to come to class everyday, do all their homework, be alert,
and think very hard when I ask them to think hard which is most of the time. I think if they do all those things, they will for the most part succeed in achieving the goals. The major goal being to learn how to learn.

Another instructor said, "A college level course can be quite different and have much higher expectations in different institutions. There are a lot of things that we don't teach in terms of content. In terms of content it is pretty watered down." This comment was made in the context of discussing the essential knowledge base of students in the class. The teacher was not able to teach the content at a higher level because students did not have the basic knowledge to build on it. All of the biology faculty interviewed had high expectations in terms of student performance but they did not feel those expectations were being accomplished.

**History**

While six of the biology faculty discussed course requirements and teacher expectations as a distinguishing
characteristic of college-level, only two of the four-year history faculty discussed this characteristic. Of the two instructors who did mention teacher expectations, one instructor said, "Over the years I have dropped outside readings and use only the textbook because the students don't read the information. Students have enough trouble reading the textbook so additional reading was a waste of time." Another teacher said that because he had very high student expectations in terms of performance he was not a very popular teacher on campus. The instructor went on to say that "the graffiti in the men's room is (teacher's name) is the Antichrist." The instructor said that he would not lower his standards in class for any reason.

**Community College Faculty**

**Biology**

Only two community college biology faculty specifically mentioned the course requirements or teacher expectations as a characteristic of college-level course work. This does not mean that the community college biology faculty did not think assignments and teacher expectations were important.
They addressed this characteristic within the context of other characteristics. As noted earlier, the distinguishing characteristics of college-level course work overlap. Biology faculty noted that application, problem solving, reading and writing were among the most important characteristics of a college-level course.

The two community college biology instructors who did mention the course requirements and teacher expectations made the following comments. One instructor said, "I think it is very important that the teacher let go of the student’s hand." The instructors felt it was very important for students to be able to work on their own, which was the same comment made by four-year faculty. Another instructor noted that the "complexity of the material" was very important in a college-level course.

**History**

All four of the community college history faculty interviewed mentioned the course requirements and the expectations of the teacher as an important characteristic in distinguishing college-level course work. As one
instructor explained, "students ought to be pulled up a notch by having had this course both in language and content." Another instructor said, "The degree of complexity (content) of the course and language is what is important in a college-level course." Two instructors said a college-level course should "cause students to ask the why question." One of these instructors continued to say "I have students come in who are rather dogmatic in their thinking and it is very interesting to watch them began to change their perspective on issues and look at these concerns from more than one viewpoint."

Summary

Fourteen of the twenty-three faculty interviewed mentioned course requirements and teacher expectations as a distinguishing characteristic of college-level course work, eight from the four-year colleges and six from the community colleges. Many faculty felt their expectations were never realized as was evidenced in many of the instructors comments. On important issue was the students' willingness to accept responsibility in the learning process. Many
faculty voiced their opinion about students being able to work on their own in a college-level course. Many faculty expressed concern that content was being "watered down" because students were not able to satisfy the teachers' expectations in the classroom.


Four aspects of pedagogy were mentioned in the distinguishing characteristics of college-level course work: reading, writing, evaluation of the student, and the textbooks.

A. Reading

Four-Year College Faculty

Biology

All of the four-year biology faculty noted reading as a distinguishing characteristic of college-level course work. One instructor said, "The first thing that comes to mind is the requirement or the expectation that I have that students
will read not only the textbook but go beyond that and read related materials.” The second instructor said “I expect them (students) to read the material and be able to comprehend the information.” He continued, “I expect them (students) to read outside of class.” Another said “I require a lot of reading. I have them (students) read articles and two books and write critical summaries of each.” Another instructor said “I would like students in a college-level course to be able to make sense of readings on their own. Be able to say what the author’s point is and how the author developed that argument without the teacher having to do this for them.” Another biology instructor said, “I expect students to be able to read and work through the material.” The next instructor said, “students should read more in a college-level course than a high school course. The comprehension level should be higher.” Another instructor said students “need to read the assignments, and in a college course go beyond the assignment so they (students) understand the topic fully. Students should do additional reading which again most college students don’t
do."

**History**

A majority of the history faculty stressed the necessity of good reading skills for college-level course work. One instructor stated that he wanted students "not to just read but to read between the lines and see what a person might mean other than what seems to be there." Another instructor followed by saying, "I think that reading is very important. Students should know how to read with understanding." He continued "I want the students to think about the past in an intelligent way and try to make some sense of it." Another instructor pointed out that "students need to read primary documents." According to the history faculty interviewed, reading primary sources helps to develop interest in history. The last four-year history professor said, "Ability to read and comprehend college-level material. Critical thinking which is the most difficult to measure and teach. Those are probably the most important characteristics of a college-level course."

**Community College Faculty**

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Biology

The community college biology faculty comments very much resembled the four-year college biology comments. Most agreed that students need to be reading more but most admitted that students are not reading as they should in a college-level course. One instructor began by saying, "Reading the textbook is a must but outside reading is equally important." Another commented, "I want the students to do outside reading in say professional science journals. Even though the terminology may be difficult it is important that the students be made aware of the sources available." Another said that both "reading and writing were very important in a college-level course." One instructor pointed out that "students cannot move from one level to another without being able to read and comprehend the material presented. Reading is critical to a college-level course because much of the reading and the course work is done outside of class." Reading was considered essential to success in college course work.

History
Three of the four history faculty identified reading as essential in a college-level course. One instructor began by saying that "everything starts from reading comprehension. A large percentage of the students can't read and comprehend even the modest reading assignments." Another pointed out that students taking "remedial reading should not be taking history. One of the things we (instructors) are looking for is reading level. They (students) need to be able to comprehend the material." She continued to say "There is a lot of reading. Students need to read not only the textbook but outside of class." A third instructor commented that "the reading level of the textbook is very important. It should be at an appropriate level for a college course."

Summary

Twenty of the twenty-three faculty interviewed identified reading as a distinguishing characteristic of college-level course work; nine were community college faculty and eleven were four-year college faculty. There was very little difference in what the community college
faculty said and the four-year faculty said. Additionally, there was very little difference between what biology faculty said and history faculty advocated. Both groups agreed that reading for college courses exceeds what students have done in high school both in quantity and in complexity. History faculty felt the use of primary sources was important in a college-level course while biology faculty required students to read current literature.

B. Writing

Four-Year College Faculty

Biology

Six of the four-year biology faculty felt that the level of writing was a distinguishing characteristic of college-level coursework. One instructor said "writing skills are very important in a college-level course." Another said, "In a college-level course you (teacher) just naturally expect the students to write. Very few of the students can actually do this." According to a third instructor, "an element of a college class is writing. I
try to work on helping the students improve their writing skills. I require a good amount of outside writing." One instructor expressed concern over the students' writing when he said, "One of the big disappointments is the use of the English language." Both oral and written communication skills are expected of college students. Another instructor pointed out that he had "students keep a journal on their readings. The students are required to write up the articles using critical analysis." Another said he "expected students to be able to write a good research paper." One instructor said "I want the students to be able to use a level of synthesis and this can only be done through writing not a true /false or multiple choice question. I want students to be able to describe how things happen." Finally the last instructor said, "I require a great deal of writing because I believe students learn a great deal by writing."

**History**

Writing was discussed as distinguishing characteristic of college-level work by history faculty as evidenced by the
following comments: Students must "write clearly and concisely." One instructor said, "Writing is very important. I have students use more than one source and write a paper to compare and contrast the points of view." Another commented, "The written word is important. The accuracy of the statements and grammar is important. The fourth instructor said, "Students should be able to demonstrate good writing skills when they write various types of papers which I require in every class. One instructor who felt writing was important but expressed concern at the freshman level said,

Writing in and of itself in a freshman level course is not all that valuable partly because students can't write a very sophisticated paragraph. At a simple level students don't have anything to say. There is no analysis in the writing. Freshman don't do very much with critical thinking. Can't justify assigning a theme paper.

The researcher compared the comments of a community college
history instructor who said, "I once told an English teacher if students knew how to write and everything we wouldn't need to teach the course."

Community College Faculty

Biology

All of the community college biology faculty believed writing was essential in college—as one instructor exclaimed, "They need to be able to write to really be successful in college." He went on to say, "I give students a lot of opportunities to write especially in lab." Another instructor said, "I believe writing is very important in a college-level course. However, sometimes we (teachers) don't give as much writing as we should because of the time factor. There are many demands in a college biology course and writing is just one of them." One instructor pointed out that he "assigns writings on the articles the students read." One instructor said writing was important in college-level but most students "can't write a complete sentence. They (students) write in phrases." One instructor summed up this way:
There is time for writing in biology even though we do have a lot of content to cover. We are looking for quality writing in a college course not necessarily quantity writing.... This is where that word maturity comes into play. A student that hasn’t developed some maturity and enters a college-level class is not going to have great success.

History

All of the community college history instructors included writing as a distinguishing characteristic of college-level course work. The first instructor said “writing skills are a very important component of the history course.” He continued by saying, “My major assignment is what I call a contemporary events paper in which the students write and research on a subject that is in the headlines.” Another instructor said, “Students have a very hard time with writing.” A third instructor made the same comments others had made: “The ability to write and comprehend on a college-level is important for students to
be successful in this course." She continued, "History requires students to be able to assimilate a great deal of information and that information must be accurate." The fourth instructor said, "I have my students write several papers and the hope is they will learn what interpretation is. In this writing the student puts himself in the role of the historian, plus it is an excellent writing experience."

Summary

Twenty-two faculty felt writing was an important characteristic of college-level course work. According to scattered references to college-level work in the literature review, most would agree that writing skills are essential in college course work (Cohen & Brawer, 1989; McGrath & Spear, 1991; Richardson et al, 1983). Writing is a process which facilitates learning. The researcher notes that writing is a step in higher order thinking--precise communication of thought--which actually demonstrates what students know. One instructor made the comment, "It is valuable for freshman to get started writing early and probably their best papers will be done in their upper level
courses." According to the faculty interviewed, writing was an essential skill for college success. Even though students may not be great writers, the students need to begin writing and continue the process.

C. Evaluation of Students

Evaluation refers to the methods of student evaluation used by the instructors, such as essay questions, multiple choice or true/false statements. Only a few faculty discussed evaluation in regard to the issue of college-level course work.

Four-Year College Faculty

Biology

Five out of seven of the four-year college biology faculty mentioned the way students are evaluated as being a characteristic of college-level course work. Contrasting high school and college-level examinations, the college faculty said they give comprehensive examinations. One instructor said, "I use essay, multiple choice and short answer questions for my tests." Another instructor pointed
out that "evaluation is more than tests, quizzes and examinations." He said the overall course evaluation in his class included: "quizzes based on readings; journal writings; lab experiences; a final paper; a project; tests; critiques of articles; and exams." Another instructor commented that "tests should be more challenging than what students would be required to take in high school. The student would not simply memorize the material but have some understanding of the material." Another instructor said, "Students expect to pass without much effort. Tests need to be tests, not quizzes."

History

Only three history faculty discussed evaluation as a characteristic of college-level course work. One instructor said, "Part of my testing is essay exams that require more writing. I want students to analyze a film, book or primary document in writing." Another instructor said, I try to ask a lot of questions in class to get students to think beyond the basic facts. I try to do this with my tests using multiple choice
questions. These are not typical multiple choice questions, but the ones that ask students to make a judgement call in terms of what was the prime cause and what was the chief significance of such and such.

Community College Faculty

Biology

Three community college biology faculty discussed evaluation as a characteristic of college-level course work. These faculty agreed with the four-year faculty that there should be a standard in evaluation. That tests should examine the students' knowledge of the material as well as the students' ability to apply the information. Most biology instructors said they used objective tests with short answer questions. Some said with the large numbers of students in class that essay questions were not often used but were given occasionally. One instructor said, "Questions on an exam should be of the critical thinking type." One instructor summed up his comments as follows:

I believe in several methods of evaluation. The
students should have to write a decent coherent paragraph. I believe the student should be able to talk in front of a groups of peers. Students should be able to take a variety of different tests.

History

Only two of the community college history faculty expressed the need to include evaluation of students as a distinguishing characteristic of a college course. Both of these faculty felt essay type questions were important to "allow students to express themselves and share opinions." Another said, "Evaluation is a very important part of the college course....Students should be given the grade they make." This professor felt students were often given grades in high school and elementary school that they did not earn.

Summary

A little more than half of the faculty interviewed described the type of student evaluation which occurs in college as one of the distinguishing characteristics of college-level course work. Of those who included evaluation
as a characteristic, there was much similarity in the comments across the colleges and disciplines. This choice of a distinguishing characteristic by some faculty does not reflect the opinion of Adelman (1986) who noted that in order to know college-level learning is taking place, objective tests should be abolished and students should be graded on the quality of their thinking as expressed through their writing. Most of the faculty interviewed who mentioned evaluation as a characteristic said they used objective tests in student evaluations. The researcher included this characteristic as a distinguishing element of college-level course work because the interviewees continued to raise the issue even though only thirteen indicated specifically that it should be a characteristic.

D. Textbook

Four-Year College Faculty

Only three of the twelve four-year college faculty interviewed included the use of the textbook as a characteristic distinguishing a college course. The
researcher combined the comments of the history and biology faculty because the comments reflected very similar opinions. One instructor said, "The textbook drives the course. The book should be appropriate for an introductory level college course." Another said, "I use the basic textbook and primary materials in the first-year history course." One biology instructor said that in his department "most of us don't use textbooks but we use books that we prefer in the course. These are considered outside reading assignments." Another history instructor said, "They (students) become bored with reading a textbook because it is facts and relationships of the facts and students don't understand the analysis. I have students read more primary documents."

Community College Faculty

Biology

In contrast to the four-year faculty, all seven of the community college biology faculty made reference to the need and importance of the textbook in the first-year biology course. One instructor said, "I use materials in this
course that are at college-level." Another instructor commented that "the level of the textbook is important."
The text according to the community college biology faculty should be at college-level otherwise the course would be a repetition of high school biology. Another instructor repeated that "the book should be college-level." She said, "I try to find out what is being used in the area at neighboring four-year colleges because most of our students transfer to these schools."

**History**

One community college history instructor said, "The textbook we use here is at the fourteenth grade level. You (teacher) want to keep the quality of the textbook up because if you water it down too much, there is a high school down the road doing the same class." He continued to say, "I deliberately choose a college-level book to stretch the students in a college level course." Another instructor commented that "textbooks need to be clear so the students can understand them. Sometimes people writing the textbooks are specialists and their tunnel vision causes them not to
be very clear writers.” Another instructor remarked that “the textbook should have reputable authors.” He continued to say what others have said: “the reading level of the textbook is important and the nature of the content is important.”

Summary

Thirteen of the twenty instructors interviewed mentioned textbooks as a distinguishing characteristic of college-level course work, three from the four-year colleges and ten from the community college faculty. The community college faculty expressed concern that the textbook be at a level appropriate for college classes. Most discussed the reading level of the textbook. The community college faculty did not want the textbook reading level lowered because it would not reflect a college course but rather a high school course. The community college faculty at the same colleges all used the same textbook. The four-year faculty did not use the same textbook as other faculty teaching the same course at their school. Some four-year faculty used textbooks and some used other sources.
3. **Rigor of the Course**

The term rigor was not mentioned very often. Only six faculty mentioned rigor as a distinguishing characteristic of college-level course work. When faculty referred to rigor of the course, they were referring to the difficulty of the course. Many of the faculty defined rigor in terms of the course requirements and the teacher expectations. Most instructors did not mention rigor specifically because they had already discussed what was expected in terms of content and student performance.

**Four-Year College Faculty**

**Biology**

Of the seven four-year biology instructors interviewed, only three stated that rigor should be considered a distinguishing characteristic of college-level course work. The very first statement one instructor made was, "The content of the course should be rigorous. There is a great deal of content in a biology course." Another said, "Biology courses are noted throughout the campus or regarded as being quite difficult." A third instructor commented in
regard to rigor: "They (students) really don’t need to be spoon fed. Tests need to be tests, not quizzes." Rigor exists in a college-level course because college instructors often do not give students the answer; rather, students must search for the answer and finally feeling comfortable with the fact that there may be more than one correct answer. One instructor said this process should "build confidence in the student." As one instructor said, "Learning should flow. It should be a continuum."

**History**

Only one history instructor mentioned the term rigorous while many mentioned the level of difficulty in a college-level course. "I feel that the college courses should broaden your knowledge of the world and the college course should reflect the knowledge of the professor and the subject that is rather extensive." He went on to say, "I expect a college level course to challenge the students' traditional way of thinking more than they would be if they were in some other educational setting."
Community College Faculty

Biology

The rigor of college-level course work was clearly delineated by one instructor as he said "the college-level course should stretch the students. That is the value of a good college-level course, that causes the students to reach and exceed their grasp." His colleague said, "A teacher who does a good job has to bring the students along. Not pushing or pulling but if you don't stay on a higher plane and give them something to reach for and the teacher is down on their level then nobody is going anywhere." These comments lead the researcher to believe that rigor is something that may be compared to growing pains. It can be painful for both the teacher and the student as the teacher strives to challenge the students.

History

While no community college history instructor specifically mentioned rigor as a distinguishing characteristic other comments made by these faculty alluded to rigor of the course.
Summary

Only a third of those interviewed cited rigor as a distinguishing characteristic of college-level course work. Rigor of a college-level course can be defined as challenging the students to reach a higher plane. If a course is rigorous, when learning occurs, the students’ behavior will be changed.

9. Application of the Subject

A large majority of the faculty interviewed discussed application of the subject as a distinguishing characteristic of college-level course work. Faculty referred to application as the students' ability to utilize the information in problem solving.

Four-Year College Faculty

Biology

Six of the seven four-year faculty interviewed remarked about the importance of application. One instructor commented, "Theory and application both are very important in a college-level course. Theory remains stable while the
application changes." A second instructor said, "I try with whatever works to stimulate them (students) as hard as I can to learn about areas of biology and to me it's not that important that they (students) learn everything there is to know or that they have a tremendous breath of knowledge. I'm much more interested that they learn how to learn." He continued, "Students need to seek out knowledge." From another instructor's viewpoint, "I want students to know if the conclusions fit the arguments, be able to apply the information, be able to generate ideas for finding out answers." Two more instructors said, "Application is important in a college-level course." One of the faculty interviewed said, "The student should be able to work with the material." The instructors agreed that students needed to be able to use the information.

**History**

All of the four-year history faculty interviewed said application was a distinguishing characteristic of college-level course work. One instructor said "I try to show and encourage students to look at evidence from different points
of view before drawing conclusions." He continued, "I want students to view the process and see what consequences are caused and how individuals play a role." Another teacher said, "I'm not interested in teaching my students a set interpretation but allowing them to formulate their own interpretation based on their understanding and application of the facts....The students will have to use the information from class and textbook and formulate their own way of dealing with the historical events." A third instructor said, "I want students to not only learn specific content about an area or period but I want students to learn how to learn." Another said application was "being able to relate the facts in terms of meaning." When another instructor was discussing application he said, "To understand history, students have to be able to put themselves into the picture." The last instructor summed up when he said, "Theory and application go hand-in-hand. I want my students to be able to apply concrete ideas. I want my students to be able to use conceptual thinking."

Community College Faculty
Biology

Five of the seven community college biology faculty discussed application as a characteristic of college-level course work. One instructor started by saying students should "not just be able to adapt to change but how to adapt to particular structural changes." The biology faculty felt the laboratory experience in biology classes provided students with an immediate opportunity to apply the knowledge obtained in lecture class. One instructor said, "The hands-on experience in the lab is very helpful to students' understanding of the material." Another said, "I always try to give the students some type of clinical application that we have discussed to see if the students can give the information back to the teacher to determine their (students') level of understanding." One teacher commented that she felt lab was a good experience because it allowed an opportunity not only for application of the material but also the opportunity to work in groups to come up with the right answers.

History
Four community college history instructors discussed application of the subject. One said, "The real learning of history is done by the individual student based on how they interpret the material." Another faculty discussed the need to understand the concepts before students could begin to apply and interpret the information." Another instructor followed by saying, "A student can't remember all the facts but they must be able to related the facts and know what brought a concept about." One instructor said in discussing distinguishing characteristics of college-level course work, "The mark of an educated person is to realize how much they don't know and how much is yet to be learned."

Summary

Twenty of the faculty interviewed discussed application as an important characteristic of college-level course work. All history faculty from both community colleges and four-year colleges discussed application. The faculty felt students needed to be able to use the information. They felt learning was a continuous process. Faculty wanted students to learn how to learn.
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<th>Characteristics of College-Level</th>
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<th>Four-Year College</th>
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<td>History ( n = 5 )</td>
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<td></td>
<td>History 2</td>
<td>History 3</td>
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<td>D. Textbook</td>
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<td>Application of Subject Matter</td>
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10. **Additional Findings Including: Lack of Student Ability, Faculty Credentials, and Decline of Academic Standards**

A. **Lack of Student Ability**

Six of the four-year faculty interviewed expressed concern that students enrolled in college-level courses lacked the ability to be successful. None of the community college faculty discussed student ability in relation to college-level course work. One reason the community college faculty may not have discussed student ability is that community college faculty assume their students will not be the most prepared students entering higher education. The community colleges and four-year colleges have different missions and serve different populations.

Both community college and four-year faculty expressed concern that student preparation was not what it should be and in particular that the writing skills and reading skills of college students were very poor. Four-year faculty commented about the decline in student ability over the last
twenty years of students entering their institutions. During the interviews, faculty at both four-year colleges and community colleges frequently compared college-level course work to high school course work. Many felt students lacked skills that should have been obtained in high school.

Four-Year Faculty

Four biology and one history discussed the students’ lack of ability as a reason for student poor performance. Faculty cited lack of student ability as a reason for lower academic standards. As one instructor pointed out, “Many students don’t have the ability to do college-level work but they are here. Many times their (students’) lack of ability to deal with abstract thought is less than is expected in a college-level course.” Another instructor said, “sometimes it is very frustrating with the students that we are dealing with.” He continued to say, “I expect students to read the material and be able to comprehend the information. Very few of the students actually do this.” A history teacher expressed his concern that “students have trouble reading the textbook.” Also, “Sometimes the students just don’t
have the intellectual background to understand what I am talking about." Another instructor said, "Some (students) simply cannot compete due to lack of talent." One faculty member said "either the academic ability of the students has declined or the amount of effort has declined, I am not sure which. I had more 'A' and 'B' range students years ago." When the faculty discussed reading and writing skills the comments the faculty made typically ended with the phrase "but with the students we get."

B. Credentials of the Faculty

The researcher asked a probing question: Are the qualifications and credentials of the teacher a distinguishing characteristic in college-level course work and specifically should faculty have a earned doctorate? Faculty responded to this question in a variety of ways. Credentials were discussed by several of those interviewed; however, credentials were not defined in terms of a characteristic of college-level course work. The discussion brought out comments about the faculty's knowledge of
subject matter, desire to teach, and ability of the teacher to relate the material to students. Less than half of the four-year faculty advocated a doctorate, and only one community college faculty said a doctorate was important to being a good teacher. Eighteen of the faculty interviewed said that knowledge of the subject and a desire to teach were important attributes of good teacher.

The literature criticized community college faculty for not having earned advanced degrees. Community colleges require a master's degree and a minimum of eighteen graduate hours in the subject being taught for teachers teaching classes in a degree program in arts and sciences. Almost all faculty interviewed stated that knowledge of the subject matter and desire to teach were more important to the classroom teacher than an earned doctorate. Some comments by four-year faculty were:

If by credentials you (researcher) are only referring to degrees, I'm not sure they are that important. If by credentials you (researcher) mean a knowledge of the subject matter, experience

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in the subject matter, and the ability to convey that knowledge and to excite people about that information that is essential.

Another instructor said, "Good teachers are good teachers. A doctorate does not make good teachers. It produces good researchers. You (teacher) have to know the knowledge." A history instructor said "Yes," meaning a doctorate was important in a college-level course. He continued by saying, "I am saying yes because I have worked very hard for my credentials. But people bring different strengths to the classroom." Some four-year faculty said the doctorate was a "union card."

Only one community college instructor said that a doctorate was important to the classroom teacher. He said, "I think the doctorate is important because the teacher is well prepared in the subject matter. It is important to know your field so you can give as much to students as possible and bring a lot to the class in terms of background and knowledge." Other community college faculty discussed knowledge of the subject and a desire to teach. Community
colleges are after all considered by some to be good teaching institutions. A large majority of both community college and four-year faculty discussed the importance of knowledge of the subject, desire to teach, and motivation of the teacher as important attributes to bring into the classroom.

C. Decline of Academic Standards

During the interviews, five faculty teaching in four-year colleges disclosed that they have lowered their academic standards in the classroom due to either lack of preparation of the students, lack of student ability, or subtle pressure from administration to keep students enrolled in college. One faculty commented, "There has been pressure in the past to reduce expectations. Reduce them to the extent in my opinion to the point that they (teacher expectations) would no longer be college-level courses. Another instructor said, "This course is not as rigorous as it was back when I started teaching in 1969." A third faculty said, "I feel that I am doing more remedial
work....because of this classes are watered down.” A final faculty comment was:

“we have people (teachers) who come into the campus and during the first couple of years they have very rigorous standards and they want to carry those standards straight forward and then they (teachers) begin to discover that students can’t handle some of the requirements and student evaluations are not all that good and they (teachers) have to survive here somehow and so standards begin to come down.”

The researcher noted that no community college faculty commented about lowering academic standards in the classroom for any reason. The literature indicates community colleges may have lowered their standards, providing less than college-level work (Eaton, 1994; Cohen and Brawer, 1987; Richardson, et al., 1983). This study did not find that community college faculty were lowering standards. The study did find that community college faculty were willing to work with students to help pull students up to the
standards of the course and expectations of the teacher.

Research Questions

The patterns of characteristics of college-level course work which resulted from the data analysis were studied to ascertain similarities across and among all cases. This examination of the data revealed nine characteristics common across the community college and four-year college faculty, and across the disciplines of history and biology. Category ten labeled additional findings was uncovered during the interviews but is not intended to distinguish college-level course-work.

Primary Question One

1. What are the distinguishing characteristics of college-level course work?

The faculty interview comments made during this study were similar in nature and touched on many of the things covered in the review of the literature. There were almost no differences between the responses from the community college faculty and those of the four-year college faculty. There was also little difference in the responses of biology
faculty versus those of the history faculty.

Based on content analysis nine patterns of characteristics of college-level course work were identified and are listed below:

a. Problem solving using higher order thinking skills
b. Mastery of the subject matter
c. Connections within and across disciplines
d. Lack of student preparation
e. Essential knowledge base
f. Course requirements and teacher expectations
g. Pedagogical issues of writing, reading, evaluation of the student (how students are evaluated by the professor), and the textbook
h. Rigor of the course

I. Application of the subject

Based on this research and the need to elicit any relevant information not suggested by the literature, secondary research questions were designed to assist in answering some of the primary research questions. In the following subsections, the secondary questions relevant to answering primary question one are first presented along
with the substantiating data.

Secondary question 1a. What is the theoretical basis of college-level course work?

The literature suggests that transfer courses taken at community colleges may not be as rigorous as similar courses taken at four-year colleges. The practice of open-access, admitting large numbers of students regardless of academic preparation and background, has brought forth criticisms of the community college. This study, through the process of identifying the distinguishing characteristics of a college-level course, addresses the long standing issue of what makes a community college course acceptable for transfer credit to a four-year college or university.

The data revealed no difference in what faculty perceive as the rigor of a community college course and a four-year college course.

Secondary question 1b. Is there a uniform definition of college-level course work?

The data and the literature reveal no uniform definition of what constitutes a college-level course.
Secondary question 1c. Who are the recognized authorities on college-level course work?

The literature review revealed some of the most noted authorities on the issue of what is college-level. Judith Eaton, the Chancellor of the Minnesota Community College System, was formerly President of the Community College of Philadelphia and Clark County Community College, President of the American Council on Aid to Education, Vice President and Director of the National Center for Academic Achievement and Transfer at the American Council on Education. Eaton is the author of numerous publication including *Strengthening Collegiate Education in Community Colleges* (1994), in which she makes the point that "the term college-level is central to the 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 are assigned. These academic goals have two characteristics: (1) they encompass subject matter that goes beyond the level of high school general education yet
precedes the academic specialization characteristic of upper-division and graduate-level university work, and (2) they incorporate qualitative and quantitative skill development aimed at ensuring that students can complete baccalaureate liberal arts and career studies if they wish (Eaton, 1994).

Author M. Cohen is Professor of higher education at the University of California, Director of the ERIC Clearinghouse for Junior Colleges, President of the Center for the Study of Community Colleges, and Editor-in-chief of the Jossey-Bass sourcebook series, New Directions for Community Colleges. Cohen is author of numerous publications. Arthur M. Cohen and Florence B. Brawer, in the second edition of *The American Community College* (1991), 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).
Florence B. Brawer is Research Director of the Center for the Study of Community Colleges, Research Educationist at the ERIC Clearinghouse for Junior Colleges, and Associate editor of the Jossey-Bass sourcebook series New Directions for Community Colleges. Brawer is author and co-author of several publications.

Dennis McGrath and Martin Spear, authors of The Academic Crises of the Community College (1991), discuss college-level work in terms of course content and method of teaching. McGrath and Spear present an interesting point regarding the issue of course content versus approach to teaching the course, making the distinction that courses are of two basic sorts. McGrath and Spear identify courses as those that teach how to think, or read, or write, or compute-courses which they call skills courses. Those that provide information, that teach what to think, are content courses.

While there are other notable experts in the literature regarding the academic curriculum and transfer function in community colleges, those identified have been major
contributors to the literature regarding college-level course work and are recognized in the academic community as leaders in the academic mission of community colleges.

Primary Question Two

2. What are the perceived similarities and differences among community college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

The data analysis of the characteristics identified by community college biology and history faculty suggests no difference in what each perceived to be the distinguishing characteristics of college-level course work. The findings are reported in Table 3.
### Table 3. Number of Faculty Identifying Each Characteristic of College-Level*

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*Key: 1. Problem solving using higher order thinking skills  
2. Mastery of the subject matter  
3. Connections within and across disciplines  
4. Lack of student preparation  
5. Essential knowledge base  
6. Course requirements and teacher expectations  
7. Pedagogical: a. reading, b. writing, c. evaluation, and d. textbook  
8. Rigor of the course  
9. Application of the subject
Primary Question Three

3. What are the perceived similarities and differences among four-year biology and history faculty in identifying the distinguishing characteristics of college-level course work?

The data analysis of the characteristics identified by four-year college biology and history faculty suggests no difference in what each perceived to be the distinguishing characteristics of college-level course work. The findings are reported in Table 3.

Primary Question Four

4. Is there a difference between what community college and four-year college faculty perceive as the distinguishing characteristics of college-level course work?

The faculty interview comments made in this study were similar in nature and touched on many of the issues discussed in the review of the literature. The data analysis of the characteristics identified by four-year and community college biology and history faculty suggests very little difference in what each perceived to be the distinguishing characteristics of college-level course work.
The findings are reported in Table 3. Four-year and community college faculty agree that problem solving using higher order thinking skills, pedagogical issues (reading and writing), and application of subject matter are the most important characteristics of college-level course work. A large majority of the four-year faculty and all of the community college faculty identified writing as an important characteristic of college-level course work. Both groups felt teacher expectation were important factors distinguishing college-level course work. All of the four-year college faculty reported that students were not prepared for college-level course work while only forty percent of the community college faculty discussed lack of student preparation. Faculty reported spending too much time on basic knowledge rather than delving into deeper content when students were ill-prepared. Both four-year and community faculty discussed teacher expectations as being an important influence on college-level course work during the interview.
Chapter V

SUMMARY AND RECOMMENDATIONS

The specific purpose of this study was to identify the distinguishing characteristics of a college-level course by ascertaining differences and/or similarities between and among selected faculty members at community colleges and four-year colleges, who teach similar courses. Knowledge of these characteristics is important to the leaders of community colleges and senior institutions in the years ahead for several reasons. Throughout the community college movement (as was documented in Chapter II), the transfer function, as a path for community college students to pursue the baccalaureate degree, has been an important component of the comprehensive community college.

Community college leaders must determine the characteristics that make a course college-level and these characteristics must translate into student competencies through curriculum development. Course numbers and titles are not an adequate means of transferring course credits.
This study identified nine characteristics of college-level course work.

Research Questions

This study was designed to contribute knowledge about those characteristics that distinguish a college-level course through answering the following research questions:

1. What are the distinguishing characteristics of college-level course work?

2. What are the perceived similarities and differences among community college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

3. What are the perceived similarities and differences among four-year college biology and history faculty in identifying the distinguishing characteristics of college-level course work?

4. Is there a difference between what community college and four-year college faculty perceive as the distinguishing characteristics of college-level course work?
Research Procedures

Data were gathered to answer these questions by conducting twenty-three interviews with faculty at three community colleges and three four-year colleges. The colleges were selected because they were culturally similar with regard to geographic location and student populations. The sample was selected with the assistance of the Academic Deans and the Division Chairs at the community colleges and the Deans and Department Chairs at the four-year colleges. The researcher chose participants who were identified by their colleagues as being knowledgeable about and interested in curriculum issues, as well as interested in participating in this study. Each potential participant was contacted to determine if he or she were interested and available to participate in the study.

The researcher began the interview with a broad, open-ended question that asked faculty members to describe in as much detail as possible what they perceived to be the distinguishing characteristics of college-level course work. Probes were used when the participant seemed unsure of an
answer or was slow to respond. The elite interview method was used to collect data. The interviews were transcribed and analyzed to begin the process of categorizing the data.

The remainder of this chapter consists of two sections. The first presents a summary of findings related to the research questions and a discussion of those findings that emerged from the data analysis which go beyond the research questions. The second section discusses interpretations and recommendations for future research.

**Summary of Findings**

Content analysis of the data was accomplished through domain analysis, a structured methodology for arranging data into meaningful categories (i.e. domains) of information that would be useful for answering the primary research questions. In addition, unanticipated categories (domains) emerged from the analysis that were not suggested by the literature dealing with these characteristics.

A search was then conducted for contrast and similarity across each interview and discipline. A further analysis
was then conducted looking at the comparisons among and
between the community college and the four-year biology and
history faculty. Analysis of the data that documented the
presence of these characteristics indicated that both
community college and four-year faculty acknowledged similar
characteristics of college-level course work.

Each distinguishing characteristic of college-level
work was presented through quotations from the interviews
and summaries of comments that described, in the words of
the faculty, the points they were trying to make. The
dimensions of similarity across interviews (i.e. common
characteristics) provided information for answering the
first research question: **What are the distinguishing
characteristics of college-level course work?** Based on
content analysis nine patterns of characteristics of
college-level course work were identified and are listed
below:

1. **Problem solving using higher order thinking skills**
   means students will solve complex problems 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 findings.

2. **Mastery of the subject matter** means the students have a deep understanding of the subject; it is not memorizing bits and pieces of information.

3. **Connections within and across disciplines** means that students must draw on previous knowledge from other disciplines, such as English. There appears to be a relationship between mastery of the subject and connections across disciplines. Students should master course work so that it becomes a part of long term memory, and therefore retrievable in order to make connections within and across disciplines.

4. **Lack of student preparation** means the willingness of students to take responsibility and become actively involved in the learning process. Students come to class having completed assignments and ready to take an active role in the classroom.

5. **Essential knowledge base** means the students have the
basic knowledge expected of a college student upon entering college. Faculty comments were similar across disciplines and institutions. Faculty commented about spending too much time on basic content rather than college-level content.

6. **Course requirements and teacher expectations** refers to components of a college-level course which the teacher feels are important in college-level course work. The four-year faculty said that complexity of the course content was important. Community college faculty agreed, but emphasized that approach to teaching was important in helping students deal with the difficulty of the content.

7. **Pedagogical issues of writing, reading, evaluation of the student, and the textbook** are common characteristics of most college-level courses. Faculty discussed the importance of **writing** in college courses. Some of the faculty said they considered themselves English teachers as well as history or biology teacher. Teachers evaluated writing for both content and
grammar. Reading was discussed with regard to its significance in college-level course work. Students were expected to read and comprehend at college-level. Most faculty felt their students did not read assignments carefully or in most cases did not read at all the textbook or outside readings that were assigned. Faculty comments regarding student evaluation dealt with the types of tests and examinations that were administered to students. The discussion about the use of a textbook was mentioned by more community college faculty.

8. Rigor of the course was defined in terms of course requirements and teacher expectations. Most did not mention rigor because they had already discussed what was expected in terms of content and student performance.

9. Application of the subject means students can take the information learned in the course and apply that information in problem solving situations. In order to be successful in college, students should understand
the theory base and be able to apply the information. Application of the subject and problem solving skills were very closely related.

The contrast between community college history and biology faculty led to information useful in answering the second research question: **What are the perceived similarities and differences among community college biology and history faculty in identifying the distinguishing characteristics of college-level course work?** The characteristics identified by community college biology and history faculty suggests no difference in what each perceived to be the distinguishing characteristics of college-level course work. Both biology and history faculty identified problem solving using higher order thinking skills, pedagogical issues, and application of subject matter as the most important characteristics of college-level course work.

The comparison between four-year history and biology faculty led to information useful in answering the third research question: **What are the perceived similarities and**
differences among four-year biology and history faculty in identifying the distinguishing characteristics of college-level course work? The characteristics of college-level course work identified by four-year college biology and history faculty also suggests no difference in what each perceived to be the distinguishing characteristics. Four-year biology and history faculty agree that problem solving using higher order thinking skills, attention to pedagogical issues, and application of subject matter are the most important characteristics of college-level course work. Both groups of four-year college faculty felt very strongly that student desire and preparation influence college-level course work. Faculty reported spending too much time on basic knowledge rather than delving into difficult content when students were ill-prepared. All of the four-year college biology and history faculty reported that students were not prepared for college-level course work.

Additionally the contrast led to information to answer the fourth research question: Is there a difference between what community college and four-year college faculty
perceive as the distinguishing characteristics of college-level course work? The characteristics identified by four-year and community college biology and history faculty suggests very little difference in what each perceived to be the distinguishing characteristics of college-level course work. Four-year and community college faculty agreed that problem solving using higher order thinking skills, pedagogical issues, and application of subject matter were the most important characteristics of college-level course work. A large majority of the four-year faculty and all of the community college faculty identified writing as an important characteristic of college-level course work. Both groups felt teacher expectation were important factors distinguishing college-level course work. All of the four-year college faculty reported that students were not prepared for a college-level course work while only forty percent of the community college faculty discussed lack of student preparation.

Some differences existed in the area of additional findings including student ability. Half of the four-year
college faculty pointed out the lack of student ability. No community college faculty discussed lack of student ability in relation to college-level course work. Four-year college faculty cautioned that students are being admitted to the college without the skills necessary to be successful in college-level course work. Half of the four-year college faculty admitted lowering teacher expectations and/or standards due to lack of student preparation or ability or subtle pressure from administration to keep students enrolled in college. No community college faculty mentioned lowering teacher expectations and/or standards due to lack of student preparation and desire to achieve or ability. Some community college faculty explained that they did work with students to help them achieve at a higher level in the classroom.

This study is a partial replication of Margaret Miller's study done in Maryland. Miller’s study focused on faculty teaching English and mathematics and found very similar characteristics of college-level course work (Miller, 1996). Miller identified eight characteristics to
define college-level course work. These characteristics were very similar to the one's identified in this study. Additionally, faculty in Miller's study reported that students were not prepared for college-level course work. Although faculty in both studies identified characteristics of what a college-level course should include, most faculty admitted that their expectations of college-level course work were not being met by students.

**Interpretations**

The very nature of the processes involved in the analysis and reporting of qualitative data calls for the ongoing interpretation of data as the analysis proceeds.

The first interpretation, based on the findings, the researcher infers that the nine characteristics identified are likely to be found in most college-level courses taught in institutions of higher education with similar student populations.

The second interpretation, based on the findings, was that students may be enrolled in college-level courses, at
four-year colleges, for which they may not be prepared. This interpretation was based on the constantly recurring theme in many domains that the skill level of college students at four-year colleges is below what is expected by faculty.

A third interpretation, based on the findings, was that if students are enrolled for courses which they are not prepared, this may result in four-year colleges lowering their standards and teacher expectations. The study found that although faculty identified characteristics of college-level course work, they indicated that students are not prepared for college-level course work.

**Recommendations for Further Study**

Further research is recommended and should include faculty from a broader range disciplines. Faculty should be informed about the process of elite interviewing.

The researcher recommends that interviews be structured in such a way as to have the faculty focus more on the characteristics of college-level course work rather than the
quality of the students. Many faculty had difficulty addressing the issue of college-level course work because the students in the classroom could not perform at the expected level.

One area that may require additional research is the determination of the college instructor's role in determining what is college-level course work. The role of the teacher at the college level differs from the secondary teacher or the trainer. This is an area not addressed in this study but worthy of further research as to its relationship to college-level course characteristics. Conclusively, if a college-level course requires the application of higher order thinking skills, then the instructor must do more than convey information.

The characteristics identified in this study substantiate the characteristics Miller found in the Maryland study. The researcher recommends that further research combine the characteristics of this study and Miller's study to confirm or fail to confirm the characteristics identified in both studies.
REFERENCES


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APPENDIX A

Interview Questions:

The following question was designed to elicit indirect responses to the research questions in such a way as not to restrict informant responses:

1. Describe in as much detail as possible what you consider to be the distinguishing characteristics of a college-level course. What do you consider important components of a college-level course?

The following questions were used as follow-up questions or probes to elicit more direct information regarding comments from the informant:

2. You have described a number of characteristics distinguishing a college-level course. Are there any other characteristics perhaps pertaining to student preparation or ability?
   a) What prerequisite knowledge, if any, is needed for the course you are describing?
b) What are your expectations regarding student performance? What should students be able to accomplish during this course?

c) Is the course content defined by your institution, by the professor, or by an accrediting body?

d) In your opinion, is the amount and quality of writing required in a college-level course a distinguishing characteristic of college-level work?

e) What methods of evaluation do you use in this course?

f) What about the rigor of the course - assignments, writing, reading, quantity of material covered in a specified amount of time, textbook, method of evaluation - is rigor a distinguishing characteristic?

g) How important is the level of abstraction of the course work?

h) Discuss the students' capacity to synthesize concepts and ideas both orally and written.
I) Is the theoretical as opposed to the applied approach to teaching more important?

j) Are the qualifications and credentials of the teacher a distinguishing characteristic in a college-level course? Should faculty hold a doctorate?

k) What role does the culture of the institution play in distinguishing college-level course work?

The following demographic information was used to develop a profile for each participant in this study:

3. a) Name of individual* and name of institution

   b) Number of years teaching experience

   c) Number of years teaching at current institution

   d) Degree(s) earned

   e) Level of course taught (i.e. first semester freshman, first year freshman)

   f) Number of years teaching current course

*The names of the individuals interviewed will not be used in the final report.
APPENDIX B

Letter to be sent to each individual to be interviewed.

March 15, 1996

Professor Name
Wytheville Community College
1000 E. Main Street
Wytheville, Virginia  24382

Dear Professor:

Thank you for agreeing to participate in my research. As we discussed on the telephone, the purpose of my study is to determine the difference and similarities in the defining characteristics of a college-level course, between and among two- and four-year college faculty. The defining characteristics of "college-level" must be identified if transfer of course credit is to be equitable and if transfer students are to be prepared academically to continue their baccalaureate studied.

This study will utilize the technique of elite-interviewing and theoretical sampling, which involves the purposeful selection of those people who offer the most theoretical relevance to the situation and concepts under study. During this interview I will ask you to describe the distinguishing characteristics of a college-level course, in all the detail that you can provide. I will ask you to address the components that you believe should constitute a college-level course. The interview should take
approximately one hour. I look forward to visiting you at your institution. Should you need to reach me prior to the interview, my home phone number is (540) 699-1617.

Again thank you for offering your time for this project. I look forward to meeting with you. I have confirmed our meeting time and place at the closing of this letter.

Sincerely,

Tresia B. Samani  
Assistant Director Continuing Education

Appointment time:  

place:
VITA

Tresia B. Samani
P. O. Box 776
Austinville, Virginia 24312

Education

Virginia Polytechnic Institute and State University, Ph.D., Community College Education, 1997.

Radford University, M.S., Guidance and Counseling with a minor in Psychology, 1977.

East Tennessee State University, B.S., Elementary Education, 1975.

Professional Experience

Director of the Smyth County Education Center and Assistant Director of Continuing Education, Wytheville Community College, Wytheville, Virginia, 1993-present.


Tresia B. Samani