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Meeting Graduate Student Needs through Alternative Programs: An Analysis of the Impact of Factors Related to Student Choice

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MEETING GRADUATE STUDENT NEEDS THROUGH ALTERNATIVE

PROGRAMS: AN ANALYSIS OF THE IMPACT OF FACTORS

RELATED TO STUDENT CHOICE

by

Debra Jill Wright

A dissertation submitted in partial fulfillment

of the requirements for the degree

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Dissertation Committee

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ABSTRACT

The purpose of the study was to explore the design and initiation of alternative graduate programs and their impact on student needs, to examine the university organizational structure and environment that fosters the development of alternative graduate programs, and to identify the factors graduate students see as important in their choice to attend and participate in an alternative graduate program. The intent of the research was to rank the factors significant in the design of a graduate program to meet the factors meaningful to the student in meeting their needs related to graduate programs. Five hundred six surveys were returned, four hundred eighty-six (81%) were used in the study. The student population consisted of eleven alternative programs currently in operation at the time of study. The designer/initiator population consisted of three identified individuals responsible for the eleven alternative programs in the College of Education at the ABCD University in Southern California.

The content of the survey instrument was derived from in-depth interviews with the designers/initiators of the programs, record and document analysis, participant observations, and triangulated through strategies of archieval data and a focus group activity. Gender, age, ethnic diversity, work setting, job, and work level were used as the independent variables. Measures of satisfaction on the five identified themes and thirty individual factors were used to identify areas of agreement and disagreement.

The five identified themes were career, professional and personal; university as an institution; accessibility; flexibility; and program characteristics, program linkages.

Seven primary hypotheses were tested using one-way ANOVA's and produced 62 significant differences. Nine secondary hypotheses were tested using two-way ANOVA's and produced 14 significant interaction effects.

The study found that graduate students expressed relatively high agreement on the theme and factors associated with the university as an institution. This was particularly significant when coupled with the variables of age, ethnic diversity, work setting, job and work levels. The theme and factors related to career, professional, and personal was found to be significant by respondents when joined with the variables of age, work setting, job, and work level. The theme of accessibility was found to be impacted by the variables of ethnic diversity and job.

In the comparative analysis, each of the identified themes were found to be of similar ranking between the graduate student populations and the designer/initiators who by design of the program, incorporated many of the factors associated with each theme in an attempt to meet the needs of graduate students.

The variable of gender interacted significantly ($\alpha = .05$) with seven of the themes or factors indicating that female and male graduate students vary in their level of importance on what impacts the decision to choose a graduate program. Similarly the variable of ethnic diversity interacted with work level and job categories to

further the delineation of identifying specific factors or themes that were of significance to diverse graduate student populations.

A further summary of the factors associated with the initiation and design of alternative graduate programs, the reasons for existence of alternative graduate programs, and the relationship between alternative graduate programs and traditional graduate programs was posited. Findings suggested that alternative graduate programs are designed and implemented to meet the needs of graduate students not being met in traditional graduate programs. A further findings suggested that alternative graduate programs are used as a vehicle for change that may impact the design and method of delivery of the traditional graduate programs.

As of result of the findings, six specific recommendations were made regarding future research and an outline of areas for strong consideration were recommended for schools and colleges of education related to graduate students and graduate student programs.

DEDICATION

I would like to dedicate this work to my mother, Phyllis J. Wright, who empowered me to believe in myself and to never accept a lesser quality than excellence in everything that I do.

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CHAPTER I

THE PURPOSE

Statement of the Issue

A recent advertisement in a professional education journal announcing an alternative Master of Arts in Education degree program resulted in 150 requests for information. A meeting held at a large Southern California school district, late in the Spring of 1993, prompted 125 people to sign up for an alternative Master of Arts in Education degree program. In a northern area of the same county, when the announcement of an alternative program was published, 140 persons expressed an interest in applying.

An announcement of an alternative doctoral program in 1992 resulted in over 300 inquiries. A pilot, alternative masters of arts graduate program began classes in October, 1993 and over 150 students registered for courses in the first thirty days. An alternative international educational Master of Arts in Education program currently has an interest list of over 600 names and an active student body of 400 attending courses each year. One can easily see that in some cases, large numbers of potential graduate students are making choices and showing interest in programs that

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are in some way different from the traditional programs that universities offer.

At the same time regular academic program offerings in the Master of Arts in Education programs and doctoral programs at the ABCD University (a pseudonym) in Southern California struggle each year to recruit and enroll adequate numbers of students. In a period of student enrollment decline and scarce resource allocations, why are these alternative programs seemingly more popular than the traditional, basic programs which have been in operation for over forty years? What needs are being met by alternative graduate programs that are not being met by traditional graduate academic programs?

Students who choose to pursue graduate degrees make choices. It would seem that choices are made between alternative and regular programs at the graduate level at the ABCD University. "Given the considerable investment of time and energy that most students make in attending college, the student's perception of value should be given substantial weight. Indeed, it is difficult to argue that student satisfaction can be legitimately subordinated to any other educational outcome" (Astin, 1977, p. 164).

This study examines a number of factors that have been identified by previous research efforts as those that have significant impact on the choice of graduate programs by students. Factors are also identified by the designers-initiators of alternative graduate programs in their efforts to develop new programs that attract large numbers of potential applicants. A survey of the identified factors given to participants in eleven alternative

graduate programs provides a strong indication of the relevancy and importance of the graduate student in the selection of a program at ABCD University. As a result of the identification of these factors, university leadership have the potential to change organizational practices to address the perceived wants and needs of graduate students. This would allow for the design and implementation of graduate programs that better serve perspective populations and also bring the traditional graduate programs into better alignment both fiscally and operationally.

Background and Specifics of the Issue

ABCD University is an accredited institution in the State of California, supported in large part by state higher education funding formulas based on the number of students served. The university offers undergraduate and graduate level degree programs for students. The mission of the university, as stated in the Graduate Bulletin, is to provide the best possible education for its undergraduate and graduate students, to contribute to knowledge and the solution of significant problems through its research, and to serve the people of California and the nation.

In the academic year 1989, ABCD University celebrated the Year of the Teacher-Scholar. This inspired the adoption of a Teacher-Scholar model which focuses on a complementary relationship and integration of a teaching institution and the aspirations of a research university (ABCD University, 1993).

Inherent in the model is the belief that faculty should teach at both the undergraduate and graduate levels. Utilization of individual faculty involvement in research and application of new ideas are dual roles that should "encompass both traditional aspects and the kind of scholarship that is expressed in artistic endeavor and in applied research" (ABCD University, 1993, p. xxviii).

In support of the Teacher-Scholar model, policy has been implemented that strives to improve the quality of academic programs by encouraging greater formal research, publication and exhibition. This emphasis is coupled with less formal academic inquiry, revision and conversation (all of which are considered as scholarly pursuits) which have been deemed as essential to the life and growth of the university.

Within the College of Education, (there are 15 divisions or colleges denoted in the organizational chart under the direction of Academic Affairs) there are six departments, each with a specific educational focus. All departments have an equal level of status, per the College's organizational chart, and have direct access to the Dean of the College of Education. The mission of the department under investigation in this study is to provide collaborative quality educational opportunities for students to function as effective leaders in diverse educational and human services organizations.

The organizational structure of the work of the department is somewhat a division by specialization of personnel in the scheduling and assignment of teaching loads. There is a commitment to research and to student advising for each faculty member (teaching loads are reduced by two tenths for each assignment). In addition,

there is a percentage of time awarded to individual faculty members for the coordination of specific programs within the department's structure. What results is a lessened contact time with students in the graduate programs. ABCD University prides itself on the fact that it has attempted to support and encourage faculty to be productive by the use of assigned time. Departments are encouraged to utilize assigned time judiciously (ABCD University, 1993).

In an informal survey (see Appendix A) conducted in 1993, faculty and staff members in the department, were asked their beliefs about the organizational structure of the department. The survey was based on theories of organizational operation as outlined by Morgan (1986) and Bolman and Deal (1984). The literature supports utilization of this type of existing information as it is experiential and involves humanistic understanding which is central to the comprehension of an issue (Stake, 1983). It is important to first learn what participants consider important (Biklen & Bogdan, 1986). The focus of attention was on the perceptions and experiences of the participants, what individuals say they believe, the feelings they express and the explanations they give. These are treated as significant realities (Locke, Spirduso and Silverman, 1987).

One half of the responses regarding the organizational structure indicated that the department operates from within a human resources metaphor (Morgan) which tailors the organization to people to enable them to get their jobs done and feel good about it. Forty percent of the responses also indicated that a political framework (Bolman and Deal) was the main focus of operation

emphasizing an arena of scarce resources where power and influence constantly interact.

The role of authority within a university department is difficult to define. There are not traditional or recognizable hierarchies of supervision. The faculty are individually responsible for their own teaching and research. The faculty elected chairperson of the department represents the department at the college level and also within the formal structure of the university to other academic divisions. The department chair is responsible for all academic programming in the department and reports to the Dean of the College of Education.

There is a large degree of autonomy built into the structure of this department that allows each faculty member to function as he or she chooses within loosely defined guidelines (course syllabi, grading policies, course meetings, etc. that are defined by other university divisions). Development of alternative programs is an individual faculty or small group of faculty's choice. It is usually undertaken for external funding opportunities or to serve a specific identified population that in the opinion of the individual faculty member, is not being serviced by the regular, traditional program.

ABCD University as a whole, has suffered in the past five years from negative publicity due to staff and faculty reductions. A sustained emphasis (and pressure from the Dean's office) was placed on the development of new programs that would bring in more students to the local programs and provide funding to save faculty jobs. Within this five year time frame, eleven alternative programs were in operation or implemented. One of the alternative programs

was expanded to almost double its original size. The financial rewards for these alternative programs do not directly impact or benefit the department's traditional academic year program.

ABCD University has been through trying times which have affected the overall image of the institution and the morale of faculty (ABCD University, 1993). Mandatory state guidelines allowed the admission of large numbers of students in the 1970's and 1980's. This led to a serious overcrowding situation. In the 1990's, the State of California instituted severe budget cuts, that forced serious reexamination of the priorities of the individual colleges and the local departmental units.

Faced with this changing educational climate, departments and individual faculty at the local level, were encouraged to be creative in external funding sources and program development. For some faculty it meant the difference between being laid-off and reporting to school the next year. Students experienced the irony of higher tuition fees for fewer classes and reduced support services. Reductions were placed at the college and departmental unit levels. Internal conflicts surfaced between the logical priority of protecting local faculty versus limiting enrollment.

The cumulative effect of these long term reductions has placed severe strain on the University's human resources and institutional infrastructure. Expectations with regard to teaching, research and creative activity are currently being reexamined, reaffirmed and supported as the university continues to be driven by issues of insufficient monetary support (ABCD University, 1993).

Purpose of the Study

The purpose of this study was threefold: (1) to investigate the design and implementation of alternative graduate programs and their impact on student needs; (2) to examine the university organizational structure and environment that fosters or inhibits the initiation of alternative graduate programs; and (3) to identify the factors students see as important in their choice to attend and participate in alternative graduate programs.

Based upon the outcomes of this research, additional or expanded purposes may become apparent (Guba & Lincoln, 1989). These can be found throughout the literature on university faculty and include power, leadership, management, organizational change, belief systems, norms, and culture of graduate university programs as well as roles and responsibilities of students, faculty and leadership at the university level.

An assumption of this inquiry was that alternative graduate programs are designed and developed through an intuitive process by individual faculty or faculty cohort members who are strongly committed to consumer sensitivity and are reacting to belief systems about the nature of graduate education. A comparative assessment between designers and initiators of the alternative programs and students who attend these programs led to a recognition of the needs being met by alternative graduate programs. In addition, forces that impact alternative program development may be political and the university organizational structure is playing an

important, yet often perceived as a negative role, in fostering this environment.

The results of this study can contribute to a knowledge base regarding the reasons students choose to attend a specific graduate program and have the potential to enrich the understanding of the educational community, particularly at the graduate level, by examining alternative graduate programs and why at this particular institution alternative programs seem to be highly successful in terms of numbers of students they attract.

The literature is sparse in this area as most studies concentrate on specific program outcomes, (Weiss, 1987) in terms of alternative programs, or emphasize a student's overall satisfaction with a choice of a particular program after they have completed studies. In these uncertain times of resource allocations for higher education, leadership in the university setting (the traditional levels of presidents and deans) can derive benefit from this type of research as they envision the future of graduate programs as well as meeting the needs of graduate students who ultimately will cast the deciding factor by their choice of graduate programs.

Research Questions

The following five questions originated from the statement of purpose of this research and were specific to the ABCD University, College of Education alternative graduate programs regarding their design and implementation. The research questions enabled the

researcher to determine the factors important to the participants of graduate alternative programs as well as those factors that are embedded in the initial plan by the developers of the programs.

1.   What factors are considered in the development and design of alternative programs?

2.   Who initiates alternative graduate programs and for what reasons are these programs designed and implemented?

3.   Is there a match between the design characteristics of alternative programs and the needs of prospective students?

4.   Why are there alternative graduate programs when regular programs exist within the university structure?

5.   What kind of a relationship exists between the alternative and traditional programs?

Statement of Hypotheses

Based on a review of the literature and personal experience with alternative graduate programs, the following null hypotheses for research question 3 were generated with $\alpha = 0.5$ used in all tests of statistical significance:

Hypothesis 1:   There is no significant difference in the mean scores of male graduate students and female graduate students in the responses for selection of alternative graduate programs.

Hypothesis 2:   There is no significant difference in the mean scores between ages of graduate students in the responses for selection of alternative graduate programs.

Hypothesis 3 : There is no significant difference in the mean scores of graduate students, according to their ethnic group, in the responses for selection of alternative graduate programs.

Hypothesis 4 : There is no significant difference in the mean scores among the occupational setting of education or non education of graduate students in the responses for selection of alternative graduate programs.

Hypothesis 5 : There is no significant difference in the mean scores of teachers, administrators, and counselors in the responses for the selection of alternative graduate programs.

Hypothesis 6: There is no significant difference in the mean scores of elementary, junior high/middle school, high school, higher education or district level work assignments in the responses for the selection of alternative graduate programs.

The six primary hypotheses described above were developed to test the main effects between the levels of independent variables. A seventh primary hypothesis was posited as follows:

Hypothesis 7 : There is no difference in the ranking of mean scores of graduate student responses for selection of alternative graduate programs and the reasons for design and implementation given by the designers of said alternative programs.

In addition, specific combinations of the independent variables were of interest. The following interactions were examined through nine secondary hypotheses, described in Chapter III, to determine if any interaction effects existed between specific categories of graduate students: (1) gender and age; (2) gender and

ethnicity; (3) gender and work setting (i.e., educational or non educational); (4) gender and work level (i.e., elementary, junior high-middle school, high school, higher education, district level); (5) age and job (i.e., teacher, administrator, counselor); (6) age and ethnicity; (7) age and work level; (8) ethnicity and work level; (9) ethnicity and job.

Significance of the Study

There is a void in the literature of higher education and in particular of graduate education, that speaks to the issue of student selection of programs. Most data collected since the 1930's is quantitative in nature and measures the cognitive effects of higher education (Astin, 1977; Feldman and Newcomb, 1969; Pace, 1979). Some longitudinal studies exist, a major portion of which is made up of cross-sectional investigations or one-point measurements of first year students, graduates or alumni. There are relatively few examples of interview studies or open-ended questionnaires. It has seemed more important to measure the acquisition of facts during the university graduate experience with a focus on outcome data.

Much discussion in the higher education literature attempts to direct attention to numbers and quality of students. There is an assumption that the better and more innovative colleges and universities will be chosen by more and better applicants and students (Leslie and Miller, 1974). Some critics have even gone as far as to indicate that rather than promote educational opportunity

and upward mobility, higher education institutions channel students into jobs that are commensurate with their social class origins (Brint and Karabel, 1989; Dougherty, 1987; Karabel, 1972; Pincus, 1980).

There seems to be a dichotomy between the American ideal of higher educational opportunities and the purposes that university programs purport to accomplish. Ultimately the choice of pursuing an advanced graduate degree is the student's. Institutions that offer graduate programs might want to examine why alternative graduate programs attract large numbers of potential applicants. To further this, university leadership might gain an understanding of what is happening in the development of alternative graduate programs and why there is a tendency for them to operate outside of the formal organizational structure, initiated and coordinated by individual faculty.

This research can add to the existing base of knowledge an understanding of change within the university structure as it is related to the development and improvement of graduate programs. The findings within this study may provide guidance to university administration in matching student needs with graduate programs.

Definition of Terms

The following terms will be referred to and used throughout the course of this study:

Alternative graduate programs: A program of study culminating in a masters or doctoral degree or advanced certificate

that is in operation outside the traditional realm of the university organizational structure. These programs meet all academic and course requirements but either by method of delivery or design, intentionally or unintentionally, do not follow the standard mode of operation as compared to the regular graduate program. The term is defined as it relates to the university as an organization and is not necessarily reflective of the definition a graduate student may use for an alternative program.

Designers-initiators: Persons who have been identified and recognized by the university or immediate supervisors as the director or coordinator, by title, of an alternative graduate program.

Graduate education: This term refers to those degree-granting or certificate programs that require the baccalaureate degree as the minimum condition defining eligibility for admission.

Regular or traditional graduate program: The standard course offerings as stated in the graduate bulletin that are offered to students seeking an advanced degree or certificate, either at the masters or doctoral level. A traditional method of delivery and design is utilized that is comparable across the university departments and disciplines.

University: For the purpose of this study, a university is defined as an educational institution that grants advanced degrees beyond the baccalaureate degree and is recognized as such by its name.

Assumptions of the Study

    1. The researcher assumed that alternative graduate programs in the study are designed and developed by individual faculty or faculty cohort members.

    2. The researcher assumed that a comparative assessment between designers and initiators of the alternative programs and students who attend these programs leads to a recognition of the needs of students that are being met by alternative graduate programs.

    3. The researcher assumed that all respondents participating in the interview sessions answered with integrity, without bias, and to the best of their ability yielding a true indication of factors that are embedded in the design and implementation of alternative graduate programs that meet graduate student needs.

    4. The researcher assumed that all respondents to the survey questionnaire answered with integrity, without bias, and to the best of their ability yielding a true indication of the importance of factors related to their decision to attend a graduate alternative program.

    5. The researcher assumed that the subjects in the research embraced the essence and intent of the study as a meaningful effort to improve the quality of graduate programs and that respondents approached the questionnaire with integrity and enthusiasm yielding a high rate of return.

    6. The researcher assumed that prior research, conducted by a number of educational researchers, was valid and that the previous

research has been integrated into the current research effort in such a way that the integration of the materials has not been altered or detracted from the intent and meaning of any original research.

Limitations of the Study

Qualitative research is a systematic, empirical strategy for answering questions about people in a bounded social context. It is a means for describing and attempting to understand the observed regularities in what people do, say, and report as their experience (Locke, Spirduso and Silverman, 1987).

Several limitations of the study were identified:

1. The study would be bounded within the context of the ABCD university organization under investigation and in particular to the department where the alternative graduate programs are in operation. Generalizability may be limited in this respect as other researchers will have to weigh the "fit between the situation studied and others to which one might be interested in applying the concepts and conclusions of that study" (Schofield, 1990, p. 226).

2. The study would be limited in terms of the student population that was surveyed. There was a mixture of United States and international educators included in the programs under investigation. The students fromm the United States may or may not reside in the State of California. Respondents will have in common only the pursuit of a graduate degree or certificate and will have made the choice to attend an alternative graduate program.

3. The study would be limited by the design of the survey instrument. The survey items would be developed from a combination of the initiators' responses during interviews, from document and record analysis and from a review of the literature. Some survey questions are not open-ended and may not provide all of the reasons that a person chooses an alternative graduate program.

4. The study would be limited by the skills of the researcher in determining the survey items from a qualitative analysis of a series of interviews.

5. A final limitation would be the bias of the researcher, having worked in the organization under investigation for the past five years and having played an integral role in the development of alternative graduate programs. The researcher does not bring an unbiased viewpoint to this study. The dynamic interactions of faculty and students in these alternative graduate programs have prompted this study. The researcher believes there are tangible elements that can be identified about alternative graduate programs that will benefit the knowledge base in the field.

Scriven (1984) states that we "cannot separate ourselves from the phenomena being studied" (p. 38) and it is from this framework that the researcher intended an assessment not only of alternative programs but of the clients and consumers of the program. The researcher recognizes bias as an inextricable background for every step from question to conclusion. "A successful study requires that one or several residents in the study context welcome the investigator as a guest and a trusted confident" (Locke, Spirduso and Silverman, 1987, p. 114).

As an internal researcher, the investigator had access to an unusual range of information and had high expectations that respondents would trust the integrity of the researcher and cooperate with the purposes of this study. The researcher's perceived role was "not primarily to find the correct interpretations but to expand the range of interpretations available" (Donmoyer, 1990, p. 184).

Outline of the Dissertation

Chapter I has presented an overview of the research problem and related background and specifics of the issues to be integrated in the study. It has presented five research questions and seven null hypotheses. The assumptions under which the study was conducted and the limitations encountered in the research project have also been delineated in Chapter 1.

Chapter II will present a review of the related literature and research findings that are pertinent to the understanding of the theoretical and historical development of the current study. The second chapter will introduce key concepts involved in the understanding of university as an organization from an historical perspective and how graduate education has developed. The importance of organizational history impacts the working relationships and program development efforts at the university level. The literature review will include a discussion of the role of graduate faculty and graduate students as well as expectations of both groups. Needs of adult students and the relationship of these

needs to issues of gender, age, ethnicity will be presented along with relevant theories of adult development and learning. Graduate schools of education in general as well as the ABCD University will be discussed to lend a conceptual and contextual understanding of the relationship of alternative graduate programs to the traditional, regular program as well as how they fit within the structure of the university organization. The university and its ability to change will be discussed to provide insights into how graduate programs relate to change or if they can make adaptations to meet changing needs of graduate students. The chapter will conclude with a discussion of the need for research of student choice of a graduate program, graduate alternative programs, as well as the impact that the research may have in terms of organizational change within the university system.

Chapter III will outline the methodological framework of the study in terms of the research design, site selection, subject population, instrumentation, data collection and analysis, ethical considerations, methodological assumptions, and limitations of the methodology. Chapter IV will present the quantitative and qualitative data analysis and the findings of the research pertaining to the development and administration of the survey instrument. The third chapter will feature a discussion of the results as well as a presentation of representative tables, charts, and graphs to help illustrate the findings of the research.

Chapter V will present a summary of the research project. The research questions as presented in Chapter 1 will be discussed with results from the study. The implications for the various

stakeholders at the ABCD University regarding alternative graduate programs and meeting needs of graduate students will be identified. Conclusions that can be drawn from the research will be discussed and the dissertation will conclude with recommendations for future research and study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Reviewing the literature within the context and boundaries established in this research was difficult as one had to identify a broad range of factors that may seem to have impact upon the area of study. Surveys of university students exist but they do not address the issue of selection of program, or if they do so, it is within a context that is not easily identifiable.

What the literature has revealed, at an inferential level, are themes that must be explored to understand the complex nature of the university environment. It was assumed by this investigator that the designers/initators of alternative graduate programs have reasons and rationales for choosing to initiate separate programs and that they take appropriate actions within the structure of the university organization. These actions result in the initiation of such programs. The investigator also believed that faculty who develop alternative graduate programs are reacting with specific motivations to the university structure and organizational culture, framework and operating norms of the university system. In

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particular, that the development of alternative graduate programs is a vehicle utilized to institutionalize change within the larger system and at a specific unit or departmental level.

With these beliefs in mind, the review of the literature will focus on the following themes: a historical overview of the development of graduate educational programs; the roles and responsibilities that the university has undertaken; the roles and expectations of faculty and students at the university level; research of student choice of university; and the university as an organizational system and its ability to change within the structure of a university. Adults as graduate students, their needs, and as learners as well as graduate schools of education and the ABCD University specifics of graduate education will be discussed.

The purpose of this review is to delineate the various strands of research and discourse described above into an integrated summary of the factors that may have impacted graduate education at the ABCD University and specifically may have created an environment for the creation of the eleven alternative graduate programs that were investigated.

In compilation of this review, it was noticed that many areas are interrelated to one another and that themes are interconnected particularly as it pertains to university governance and graduate faculty perceptions and roles as they relate to graduate alternative programs. This phenomena cannot be avoided as no clear cut lines of distinction can be drawn between the interactions of faculty and students within the context of the university climate with its long standing traditions, cultures, philosophies, and operating norms.

Historical overview of the development of graduate education

Graduate education programs originally culminated in the awarding of Master of Arts (M.A.), Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in the arts and sciences. In addition, there are many other master's and doctoral degree programs and titles (Master of Business Administration [M.B.A.], Master of Education [M.Ed.], Doctor of Education [Ed.D.], Doctor of Social Work [D.S.W.] which have been developed. These programs are often referred to as professional programs, depending upon the tradition and administrative organization of the institution that awards the degree (Glazer, 1986).

Graduate education is considered to be advanced, focused and scholarly in nature. It is based on the assumption that graduate students have acquired fundamental knowledge, both general and specific, at the baccalaureate level prior to entering graduate school. The objective is to focus in-depth with a specific discipline or field of study, rather than to provide a broad educational experience (the objective of the baccalaureate degree). It is thought that graduate students must understand and be able to use a generalizable knowledge base and that doctoral students must contribute to that knowledge base. Graduate programs tend to be either research- or practice-oriented. The central issue is the state of knowledge in a discipline versus the state of practice in a profession.

In the early nineteenth century, the concept of graduate education flourished in Germany. A substantially modified version on the German model gymnasium was adopted by the American higher education system. Instead of introducing research into the undergraduate curriculum, the plan was designed (at Johns Hopkins University in Baltimore) to create an advanced training for college graduates intending to enter into a profession. There emerged a great variety of graduate programs and departments. Graduate schools became part of a university which in many cases also had a college structure (Veysey, 1965).

The most important American innovation in higher education was the formation of the graduate school. Unlike European universities, which did not provide much training for professional practice, the graduate school did exactly that. Clinical training in medicine, supervised field work in social work and practical aspects of any other professional work taught in the university were incorporated into the early curriculum efforts. British higher education provides training in professional skills, but it is often in frameworks partly or wholly independent of the universities (e.g. teaching hospitals or Inns of Court). Graduate schools in the arts and sciences adopted a model which primarily engaged in professional training for research.

The early emphasis on the function of practical training in professional skills, resulting in the American prototypes, is in contrast to the European university chair. The latter is a kind of publicly paid private practice, complemented, in Germany, by a personally administered research institute. The American graduate

department was organized more toward a bureaucratic unit structure, designed to teach and train students and do research at the most advanced levels. It was taken for granted that this required a division of labor and cooperation between teacher-researchers specializing in different branches of a discipline, and in the experimental sciences, elaborate plants and facilities.

British universities were also organized into departments, but were primarily engaged in the instruction of undergraduates. Colleges awarded a master's degree to any graduate three years after the award of the bachelor's degree, upon payment of a fee. No further study was required. The American counterpart of graduate schools has also undertaken the functions of the research institutes of German universities. In this setting, the research apparatus of all the professors was utilized for the systematic training of students, and it became the corporate responsibility of the department to provide training in all specialties.

This was quite different from the original German model where research training was acquired through personal apprenticeship with a single professor (Ben-David, 1971). The candidate for advanced study was no longer mainly under the patronage of a single senior professor in the field but the graduate of a systematic program administered by a department within the supervision and rules of a graduate faculty.

The organizational model, not consistent in all implementations, of the American graduate schools accommodated all kinds of inquiry, even if they did not fit into the traditional disciplines taught at the university. Since some defined the purpose

of the advanced training as practical in nature, boundary problems did not exist. Anything relevant to the training of students on the most advanced levels was needed and welcomed. At odds with this purpose was the German model which placed a heavy emphasis on research and independent investigation.

The first models of graduate programs to emerge in American higher education were at Harvard, Yale and Johns Hopkins. Early developments at Harvard did not distinguish between the graduate and undergraduate curriculum, but the development of departments did provide the framework and vehicle for what would later become graduate study culminating in the awarding of an advanced degree.

Yale University developed a model which made a sharp distinction between collegiate education and graduate education. This was most prevalent in the fields of study "embracing philosophy, literature, history, the moral sciences, other than law and medicine and their applications to the arts" (Furniss, 1965, p. 12). The model developed at Johns Hopkins followed the German pattern and the prevalent feeling was that the undergraduate programs played a subordinate role to the graduate education programs and research (Burgess, 1934; Ryan, 1939). Yale was the first American institution to develop the Ph.D. degree on the basis of two years of study beyond the baccalaureate, acceptable performance on a comprehensive examination, and a dissertation showing original scholarship.

Growth in the area of graduate education was rapid. By the late 1960's, graduate education programs were being offered at over 700 institutions, of which over 200 offered the Ph.D. or some equivalent

degree. Growth in advanced educational programs paralleled an increase in population and wealth in the United States and also the explosive growth of research and knowledge. American cultural and personal values associate satisfaction in career with higher education and thus the desire for graduate programs increased (Bowen, 1980). The federal government has also played a role in stimulating growth in research by its financial support in terms of contracts, financial aid for students, facilities construction grants and general institution grants (Wilson, 1985).

Graduate faculty roles and expectations

During the nineteenth century two main functions of the university to some extent, crystallized and separated. These were the functions of research and teaching. Although thought to be complementary in the university environment, these functions have repeatedly been debated in the literature as to their many cross purposes for faculty. The literature is abundant with debate over the importance and prioritization of issues of publication, research and teaching roles. "A graduate school is primarily a family of scholars who select their own company, setting their own climate of interests, and supporting each other in their quest for more knowledge" (Rosenhaupt, 1958, p. 72).

Rosenhaupt postulated that a family of scholars needed libraries and laboratories to do research. The financial support and intellectual stimulus was provided by apprentices (graduate students). If the apprentices gave a good accounting of themselves,

they were rewarded with a title of Ph.D., but this rewarding process was only of secondary interest to the researchers (scholars) in the early graduate models.

The dilemma between research and teaching was illustrated by a study published in 1960 (Gustad, 1960). College faculty members were interviewed and a number of questions were asked concerning the academic environment. In a section pertaining to actual time spent on certain job activities, chemistry teachers ranked the teaching of upper-division courses and lower division courses first. The teaching of graduate courses was ranked second. In terms of how the faculty felt their time should be spent, conducting their own research ranked first and the teaching of graduate level courses ranked second. Similar findings were discovered with the English and psychology faculty.

It was felt, at the time, that gradual changes were taking place in the preferences of university faculty (Grigg, 1965). Most of the activities that faculty were giving preference to were the teaching of graduate or upper-division courses and conducting research of their own choosing (Parsons and Platt, 1973). Faculty orientations were moving in the direction of those activities that reflected a disciplinary rather than an institutional orientation (Gouldner, 1957). Graduate schools were becoming intellectually oriented not so much to their institutions but to the national disciplinary associations which were being formed at about this same time (Berelson, 1960). The university structure stressed a more multi-purpose role for faculty (Farley, 1963). From the student's perspective, the biggest deficiency in college [university]

faculty was associated with teaching (preparation of lectures and tests and the grading of papers), not in the relationship between research and teaching (Webb, 1964).

Appointments to the graduate faculty, at many universities, vary somewhat in their procedures. Common to many processes is that universities leave the recommendation and selection methods entirely to the graduate department. Extensive documentation of research and publications generally accompanies the application document. Appointment of the graduate faculty is made in terms of the specific discipline within the college and the department.

Rules and regulations governing the granting of graduate degrees, in some cases, is regulated by a Graduate Council or Graduate Division which in many large academic institutions is composed of administrators and non academicians. It is interesting to note that most changes and innovations which arise in graduate programs begin at the department or discipline level and must first clear their individual colleges before going to the university level. The origination of these changes and innovations come from the departments themselves, usually from an individual faculty member, rather than the graduate faculty as a whole (Grigg, 1965).

The extensive volume of literature regarding university organization, structure and programs published in the 1960's, parallels the student unrest on university campuses during that time frame. Some twenty years later, much of the same discussion is taking place as graduate faculty, students and administration debate the need for reform in graduate programs and argue the merits of practitioners from the field versus the research oriented professor

as graduate faculty (Bowen, 1980; Boyer, 1987; Bratlien, Genzer, Hoyle, and Oates, 1992; Clark, 1980; Goodlad, 1990; Norris and Lebsack, 1992; Pounder, 1993).

Goodlad (1990) ponders the future of university professors where a heavy emphasis is placed on research and publication. The heavy stress on publishing in refereed journals has led to some interesting reactions. In the 1950's and 1960's there were a few, familiar journals available. Educational journals alone, now number in the hundreds. Goodlad notes that the kind of research undertaken by university faculty today, is more methodological and in most cases, less understandable and less accessible to the practitioners who are attending the graduate school courses.

Machell (1988) underscores the shared difficulty of all professors of any discipline of "establishing a sense of personal worth derived from the rubbery yardstick of academic worth" (p. 426). Clear cut cures are hard to come by in higher education. The study suggests that it is an inability to keep score of the factors in the professor's life that contributes to a crisis of low self-esteem for faculty. Machell estimates that the proportion of professors suffering from professional melancholia to be as high as twenty percent. Halsey and Trow (1971) countered in an earlier study that academic staff almost invariably command the most power in high-prestige institutions. They also have a significant degree of independence and are analogized as a one-man business.

The roles and responsibilities of graduate faculty discussed above have great implications for the graduate student. The basic dichotomy seems to be the issue of choice. Graduate students must

select among institutions and programs that prioritize research or theory and those that advocate practical or at a minimum theory into practice courses. Graduate faculty feel an obligation to admit to graduate study only those students who show the greatest promise, the best and the brightest (Pelczar, 1985; Perkins, 1966), the most capable of carrying on the traditions (Perkins, 1973) of the specialized discipline that dates back to the early history of the roles and functions of higher education. Boulding (1980) refers to graduate education as "the rite of ordination" (p. 144), a "system of apprenticeship" (p. 145). Potential graduate students find themselves competing for a few coveted places within the academic institution, particularly at high prestigious, research oriented universities. Yet, promising candidates do make the first and most important choice, that of what institution and which program to make application to in the pursuit of their goals. Research in how universities are meeting the needs of graduate students is lacking. One strategy of analysis would be to investigate the adult student, their demographic characteristics, and related theories of adult development to bring about a conceptual understanding of the factors that may impact the university choice.

Graduate student roles and expectations

There is confusion over the role of the first year of graduate study which also reflects the diversity of American higher education. Many graduate schools that recruit widely for their new candidates make a point of admitting students as much for their

potential as for their past achievements. The first year of study is often devoted to testing and sorting out students to determine whether they should be encouraged to proceed further.

From the student's perspective, master's degrees are often viewed as a terminal program preparing one for professional practice. For other students, a master's degree program serves as an opportunity to explore more deeply, subjects they pursued as undergraduates or to explore a new area of study, but without a commitment to proceed further. In many universities with major doctoral programs, the master's degree gives the faculty a chance to weed out the students they do not want in the Ph.D. program.

Gropper and Fitzpatrick (1959) suggested that students pursuing graduate or professional courses make the decision to enter advanced study as a personal reflection of their own professional or vocational goals. This is in comparison to the decision to enter college as a freshman, which is made by the strong influence of family relationships. These findings are consistent with a study of thirty-two institutions made by Grigg (1961). Gropper and Fitzpatrick also found that the most influential factor determining graduate school application and actual attendance was gender related. Socioeconomic factors did not appear to have much effect on enrollment.

Miller (1963) posited in an early study of undergraduate seniors that although they felt their grade point averages were an important consideration to graduate school admissions requirements, it was not an important factor in their determination of making the choice to continue with further formal education.

Miller also found that graduate students make multiple applications to graduate programs and weigh the best offer, often influenced by the prestige of the institution or the availability of doctoral programs. Knox, Lindsay and Kolb (1992) also found that the prestige of the school was highly significant in the level of satisfaction perceived by students of their higher education experiences.

University administration and many faculty feel that the student's role in graduate education is simple and one that in many ways parallels the organizational structure of the environment. In an address delivered at Princeton University by James A. Perkins (1966), President of Cornell University, one is struck by the somewhat elitist perspective of the student as a young, naive, child who must be led in an appropriate direction by the parent figure. "A student is a student. He is at the university to learn, not to manage; to reflect, not to decide; to observe, not to coerce. The process of learning, like the process of research... require[s] for the most part detachment and not engagement" (p. 51). These statements were made in the context of student involvement in university decisions and policies, one of which could most certainly be the perceived needs of graduate students in program development. How universities can better accommodate student needs is missing from these postulates.

One can counter this view with the work of Hans Rosenhaupt (1958) whose study of Columbia University from 1940-1956 reminded university faculty and administration that "any true reform of graduate study must be based on respect and affection for

the graduate student" (p. 99). Rosenhaupt saw the graduate student as standing at the edge of the present and the future, at the edge of the status quo and a new way of life yet undiscovered, but strongly influenced by the decisions he or she would make during their advanced courses of study.

In the 1960's Berelson (1960) conducted extensive research on the motivation and reasons why students pursue graduate education. He found that perhaps the most significant fact about the decision to go forward to a doctorate had to do with when the decision was made. Berelson called the decision much more the result of a drift than an actual decision. Findings confirmed that most survey respondents decided to attend graduate school on their own. They decided on the institution they would attend for three main reasons: one intrinsic, the reputation of the institution, or that of the department or a particular professor; and two more contingencies, the institution's location and its financial support for students.

More recent studies have cited the changing demographics of the graduate student population (Adamany, 1983; OECD, 1987; Pelczar, 1985; Vaughn, 1985) as impacting the traditional forms and formats of graduate education. Graduate students as a population, are older, often married with children, include more diversity in gender and ethnic representation and have career responsibilities that allow them only to attend the university on a part-time basis. Judge (1982) also found that many students are taking courses, or parts of courses, to only fulfill requirements of employment or promotion. Jaschik (1988) found that the rising costs of higher education are causing urban residents to want higher education more

readily available in the metropolitan areas where they are currently living and working.

These changes in the student population have demanded that new and alternative programs in graduate education be made available. It can be surmised by the popularity of alternative graduate programs that potential students feel the traditional university structure is not meeting their needs. Stark and Griffith (1979) argued that higher education institutions view the graduate student as an educational consumer. "Most college faculty members and administrators dispute the appropriateness of [this] terminology and characterization" (p. 85). Potential students are more conscious of the stringent economic times and are actively searching for the best educational buy for their time and money in relation to the long-range benefits and the immediate costs to them and their families.

The authors also found that college reactions to the consumer concept can take four possible reactionary stances: (1) the saintly reaction: we have always paid attention to the needs of our students and we will, of course, continue to follow this long tradition of excellent service; (2) the semantic reaction: the term consumer means to use up, students do not use up education. Students cannot be considered consumers in the etymological or the economic sense of the word. To accept this construct would be dangerous and ultimately prostitute the meaning of education; (3) the ostrich reaction: the federal or state governments cannot define what is a local issue. We cannot lose our autonomy and must resist the intrusion of government definitions into the educational process, if

we are patient the consumer idea will dissipate; and (4) the realistic reaction: perhaps, although not fully relevant to our purposes, the concept is a reminder that university policies do need periodic scrutiny. The authors propose that constructive results can be obtained if colleges take the initiative and obviate federal intervention to protect the rights of students.

Whether post secondary institutions accept the role of student as consumer is indicative of their marketing strategies to attract graduate students to their programs. In a study conducted by Dluhy and Modesto (1993), a comparison of variety, access, dependence and quality was made of higher education marketplaces in fifteen metropolitan areas. One of the purposes of the research was to provide an explanation of the factors that determine why some programs do better than others in terms of attracting students.

Variety in an area is demonstrated by the range of choices that a student will have in pursuing a higher education. A marketplace that offers more choices in programs and degrees at different institutions is generally thought of as being more desirable. Access was utilized as a dimension to indicate the extent to which students are already using the existing institutions of higher education. An area that enrolls a higher proportion of its population in higher education than other metropolitan areas is generally thought of as providing better access and this characteristic makes the marketplace more desirable.

Dependence is defined as the academic programs and enrollment patterns established by a single dominant public institution. There is likely to be little competition and less

differentiation in the programs offered when the marketplace is dominated by a single institution. Marketplaces with more competition and differentiation are judged to be more desirable for the consumer. The dimension of quality was accepted as the definition used by each group that did the rankings. The best predictors indicated by this study were size, region and strategic economic location.

The authors concluded with recommendations for educators, business leaders and planners who want to improve the opportunity structure for students. These include the development of a shared vision for the future, that higher education leadership requires vision beyond the development of a single institution and, that community leaders need to examine the big picture to determine the strategies that will improve the opportunity structure for students, particularly in metropolitan areas.

<u>Adult development stages</u>

A conceptual foundation of the stages of adult development can lend an understanding and possible explanation to factors impacting adult graduate alternative program choices. Psychologists and researchers view middle age as a distinct period in the adult life cycle, ultimately different from other periods. Levinson (1978) examines major seasons of adulthood and describes developmental stages. He characterizes the adult life cycle as having a particular character and following a basic sequence. It is the idea of a process of going from a starting point (birth) to a termination point (death). Seasons are a series of periods or stages within the life stage having distinctive characteristics.

Jung (1959, 1971) as a classic personality theorist, indirectly addresses seasons of adult development. Although Jung conceptualizes the entire life cycle, he paid close attention to the second half of life. He uses the term individuation to describe the process of becoming uniquely individual. Maslow (1970) writes about individuation in terms of the self. He describes the hierarchy of human needs requiring fulfillment before the adult can self-actualize.

Peck (1978) addresses psychological development in the second half of life. His theory of mental flexibility versus mental rigidity states that too many adults become set in their ways, inflexible in their opinions and actions, and closed-minded.

Maslow (1963) is another contributor to adult personality theory, as he outlines the Eight Stages of Man. Much discussion revolves around the ego development in middle and late adulthood. At stage 7, the conflict between generativity and stagnation exists. An adult who is inclined toward generativity assumes responsibility for new generations and has a sense of contributing to the future. An adult functioning in ego stagnation is not growing, but bogged down in self-fulfillment. At stage 8, adults wrestle with ego integrity or despair. An adult with ego integrity accepts one's life as having been inevitable, appropriate, and meaningful, while an adult in despair views life as being too short and unfullfilling (Neugarten, 1968).

Chickering (1981) posited about developmental stages for adult life cycle tasks related to the motivation of mid career teachers: mid-life reexamination (35-43): search for meaning, reassess marriage, reexamine work, relate to teenage children,

relate to aging parents, reassess personal values, adjust to single life, solve problems, marriage stress; Reestabilization (44-55): adjust to realities of work, launch children, adjust to empty nest, become more socially involved, participate in the community, meet demands of older parents, manage leisure time, support children, ailing parents, adjust to single life, solve problems, manage stress; preparation for retirement (56-64): adjust to health problems, deepen personal relations, prepare for retirement, expand avocational interests, finance new leisure, adjust to loss of mate, solve problems, manage stress.

Chickering and Havighurst (1981) identify mid-life transitions and middle adulthood as problematic. Their life cycle model highlights change in the mid-life transition, ages thirty-five to forty-five. Individuals search for meaning and often reassess marriage, family relationships, values, goals, and career plans. By middle adulthood (ages forty-five to fifty-seven), individuals adjust to the realities of work, usually attaining their highest status level.

Krupp (1980) specifically studied the mid-life transition of teachers. She sees the forties as a time of massive self-reassessment, a time of unrest, questioning, and vulnerability. The key concerns for teachers in age forty transition (forty to forty-seven) lies with de-illusionment, individuation, and mortality. De-illusionment manifests itself as teachers look at their careers, and many see little for change. Krupp (1981) also sees teachers in the forties transition going through an individuation process. Part of this process is a review of values, goals, and moral and ethical beliefs.

Krupp (1989) defines middle-aged as 35-55 years-old and Levine (1989) adds the caveat that aging staff motivation is a pressing issue in education. Research and theory show middle adulthood poses challenges to educators in growing and being optimistic about their aging or stagnating and being discouraged with their life's structure.

Understanding educators as learners can be gleaned from the literature on adults as learners. Teachers in their forties express negative attitudes toward structured activities but the mid-life transition necessitates new learning opportunities (Cross, 1981, Krupp, 1982). Cross (1981) believes the transition naturally stimulates and challenges adults to pursue new knowledge and skills. Researchers also highlight the need for relevant and meaningful adult learning (Knox, 1986, Krupp, 1982). Lambert (1984) feels if the activity lacks assigned meaning, learning does not occur. She believes connecting individuals' meaningful personal experiences to learning activities encourages growth.

It then becomes important to recognize what research and theory say about adults as learners. Institutions which design programs must understand adult learning boundaries and needs. The literature reveals that teachers, and thus we might include educators, demand their learning experiences be valuable, relevant, and personal to their development stage. It would seem that the research indicates that creating dissonance, looking at individual needs, allowing teachers to control their own learning, and providing evidence as reasons for change challenge adults. Adult development

theory is not well known or widely used in educational settings (Howser, 1993).

The variable of gender

Researchers describe women's adult development as different from men's. Where the male pattern of development could be described as linear and stage-developed, women's development is circular, cyclical, and marked by discontinuity. Motivations change and values shift at mid-life when women begin searching for balance in their lives (Montgomery, 1992).

Hennig (1976) found in a study of career women and the life cycle that within the first ten years women established a career identity and created an endless cycle of achievement, success, and recognition, as well as a pattern of withdrawal and avoidance to keep their own self-concepts in tact. But from age 35 to 40, factors changed and career women hit a job plateau. They changed from being motivated by opportunities to demonstrate competence to being motivated by opportunities to find meaning.

Other research shows that as females approach 40, they begin to feel obsolescence anxiety (Blotnick, 1984). They may experience a high level of competitiveness with younger peers, may need to become a self-starter, and stop looking for praise. As a female beings to explore herself, to judge her own performance, and to make basic decisions about her life, she feels increasingly irritated by external limitations and restrictions.

Howser (1993) found in her research that female teachers are significantly more dynamic and persistent than male teachers and that they preferred more of a tactile learning mode than males.

Middle-aged, experienced male teachers tended to characterize their own adult stages as a time of settling down and mellowing, a time of capping their career and accepting and adjusting to life as it is. In contrast, middle-aged, experienced female teachers spoke of becoming one's own person and focusing, for the first time, on themselves and their careers. Graduate programs may be lacking in this recognition of adult development while alternative graduate programs may be meeting some of these unspoken needs.

Student choice of university program

Demographic changes and cuts in important sources of student financial aid brought about significant enrollment declines to higher education in the 1980's. Colleges responded by engaging in market oriented activities intended to attract students while each year's students became more like academic shoppers or consumers (Riesman, 1980). "Potential students became consumers and flexed their newfound marketplace muscle". (p.1)

Sociologists view the formation of college-going aspirations as part of a general status attainment process. Economists view college attendance decisions as a form of investment-like decision-making behavior (Jackson, 1978). Astin (1965) emphasizes the psychological environment, or climate of an institution, its impact on students and student institution fit.

Paulsen (1990a) examined the changing marketplace, the new consumer, marketing concepts, the interactions of student and institutional characteristics, and stages of college choice.

In the 1970's colleges began paying increased attention to pools of prospective applicants that were not shrinking, as the traditional (age) candidates, such as women, older students, part time attenders, minorities, and foreign students. These latter groups turned out to be the primary demographic sources of enrollment maintenance in the 1980's (Frances, 1989).

Paulsen postulates that an institution of higher learning has two broad enrollment strategies: (1) recruit students with characteristics consistent with the characteristics of the college and/or (2) adjust the characteristics of the college so they are more consistent with the student characteristics desired by the college. Although this study addresses initial baccalaureate choice, there is considerable information and data concerning the non traditional student. The largest single demographic source of enrollment growth in the 1980's was the student of non traditional age (25 or older). Very little research has been given to the study of non traditional student enrollment (Paulsen, 1990b). The non traditional student is defined by age and may have applications and findings important to understanding graduate school choice since the age categories are identical.

Paulsen's research looked at macro level studies of college choice (usually beyond an institution's control) and institutional characteristics (usually within an institution's control. These characteristics often include environmental, institutional and student characteristics. Micro level studies are drawn on the individual characteristics of the student.

Macro level, institutional studies found that urban location (Strickland, 1981), part-time students (Krakower and Zammuto, 1987), curriculum as it is impacted by conditions that exist in job market (Paulsen and Pogue, 1988) were all factors affecting college decision choice. Noteworthy in this research is that factors examined at more than one level were found to have similar effects on enrollment at each level.

Paulsen (1990a) generalizes from a review of research a number of factors important in the macro level studies, a few of which include factors seemingly relevant to the non traditional student defined as over the age of 25, and thus might be a viable area to investigate for the graduate student as: (1) job market benefit, opportunities for those holding degrees versus those without degrees; (2) direct costs of college; (3) location; and (4) curriculum, as it pertains to traditional liberal arts and teacher training fields or other professional or occupational fields.

There are conceptual foundations for the study of college choice behavior (psychology, sociology, economics). It is important to understand what determines enrollment, such as an increasing job market or economic recession. Micro-level studies of college choice behavior estimate the effects of institutional and student characteristics on the probability that a particular individual will choose a particular college. One of the questions addressed in the Paulsen (1990a) discussion was: What factors are important to students of nontraditional age in making college decisions?

Students of traditional and non traditional age respond similarly to some factors in their college going behavior. Other

factors are either uniquely important or simply more important for non traditional students. A student of non traditional age is more likely to attend college with a higher level of occupational status, the higher student's own income, the younger he or she is, when the student is not married, when the student has fewer children under 18, when working full time, when a veteran, when living a short distance from a college, when tuition is lower and when financial aid is available (Bishop and Van Dyk, 1977).

Paulsen (1990a) aggregated research data and postulates that the nontraditional age students who are more likely to attend college are: (1) white (Bishop and Van Dyk, 1977); (2) have a higher occupational status (Anderson and Darkenwald, 1979; Bishop and Van Dyk, 1977; Corman, 1983); (3) the student's previous educational attainment is greater (Anderson and Darkenwald, 1979) and (4) the student's own income is greater (Anderson and Darkenwald, 1979).

In addition correlates specific to gender have been found in nontraditional age students in college choice. Income levels (Corman, 1983), men were more likely to cite a degree objective, while women are more likely to cite personal enrichment as a primary motivation (Paltridge, Regan and Terkla, 1978).

Paltridge, et al (1978) and Corman (1983) and Bishop and Van Dyk (1977) also found that distance from a college was important for non traditional age students, they appreciated the "convenience" of having a college " minutes from their home" (Bers and Smith, 1987, p. 41). Bers and Smith (1987) found that men more often cited job improvement skills as their primary motivator, while women

identified critical life changes such as divorce or children leaving home.

Wolfgang and Dowling observed that, overall, students list "cognitive interest" and "professional advancement" as their top reasons for attendance (1981, p. 643.) Rogers, Gilleland and Dixon (1988) discovered the most frequently cited reasons were degree objectives, job changes, and self improvement. However, students who were female, younger, and had lower incomes were most likely to cite job changes as important reasons, and those with lower educational attainment were the most likely to refer to self improvement.

Some research has been done with ethnic differentiation in the college choice. Blacks request more information, consult more information sources, consider more institutions and more institutional characteristics than whites (Lewis and Morrison, 1975). In addition, Lewis and Morrison found that women start and finish the application process earlier, and make more applications than men.

In the application process, Litten and Brodigan (1982) found that student responses were of the highest rank for areas related to financial, fields of study, general academic reputation, location, social atmosphere, faculty teaching reputation, academic standards, and careers.

Paulsen (1990a) summarizes the research by recommending further study and policy specifically aimed at the behavior of students of non traditional ages and from non traditional groups. "We must better understand their perceptions, preferences, and

behaviors if we are to better serve their educational needs" (p. 78). Inherent in any further research is the investigation of subgroups within the populations: "The greater our understanding, the greater our ability to serve the educational needs of women, minorities, foreign students and other groups" (p. 78).

Paulsen (1990b) concludes that an "understanding of which institutional characteristics are most influential in determining which colleges students apply to offers important guidelines for the development of the programs, prices, and places which make up the optimum marketing mix for attracting desirable students" (p. 47).

A marketing strategy for graduate education

There are historical and philosophical reasons underlying the lack of emphasis on understanding the graduate college selection process; the "underlying philosophy of graduate education has been elitist, and, thus, has focused on skimming the cream from the top" (Kotler, 1976 p. 305). Until recently, most public institutions have experienced neither a decline in graduate enrollment nor a decrease in resources to support graduate education.

Graduate students differ from undergraduate students in that there are a number of constraints within which they operate. (Cooper, 1984). Cooper argued that the constraints, be they real or perceived, are so great that most prospective graduate students restrict their application to a very few schools. These limitations include: the applicants undergraduate grade point average and score on required standardized admissions tests; the foregone income during the pursuit of an advanced degree; educational and living

expenses; positive and/or negative input from family and peers; and employment opportunities for the applicant and/or spouse.

Kotler (1976) delineated the sequential steps most individuals generally follow during the college selection decision: the decision to attend; information seeking and receiving; inquiries into specific colleges; the application process; admission into one or more institutions; choice of institutions; enrollment. By contrast, there is no body of available research which discusses the multiple influences operating in the college selection decision of the prospective graduate student.

In a study by Olson and King (1985), a preliminary analysis looked at two dimensions of the decision process by prospective graduate students, one of which included; initial consideration of institutions; and the ultimate decision to enroll at a particular institution. Questions focused on variables relating to: (1) reputation of the institution, program and faculty; (2) degree of student's personal involvement with various personnel in the institution during the decision process; (3) educational and living costs as well as availability of financial aid; (4) communications with the institution.

The second dimension included factors related to: (1) interactions with the institution during admissions; (2) students' present or previous enrollment in the institution and/or current employment in the community; (3) interaction with key personnel at the institution during the critical decision stage; (4) personal reasons, including input from significant others and personal life-style and value preferences.

Olson and King (1985) found factors that influenced initial consideration of the institution were: geographic location (given the highest rank) followed by personal contact with faculty at the institution, reputation of the academic department and educational cost factors. Factors that influenced the ultimate decision to enroll included: contact with faculty followed by personal reasons, such as marriage, family responsibilities, size of community and having attended the institution as an undergraduate. Cooper (1984) indicated that her research showed that 25 percent of all graduate students study at institutions where they earned their baccalaureate degrees.

The fact that a large cohort of the student body is familiar with the academic departments probably contributes to departmental reputation being a significant variable in initial consideration of a program. Though most institutions have a general idea of their undergraduate market, there seems to have been no centralized, systematic research effort to identify the prospective graduate market.

Cooper's findings (1984) indicate that the ultimate decision to enroll in one particular university are encompassed within the personal reasons and respondent employed categories. The reasons most commonly cited were the presence of a spouse in a degree program; employment of spouse; compatibility with the community where the university is located. The respondent employed category reflected that graduate students enroll on a part time basis while continuing to work at a full-time job. Cooper concluded that "Though most institutions have a general idea of their undergraduate market,

there has been no centralized, systematic research effort to identify the prospective graduate market" (p. 313).

Three key issues were addressed in a study by Malaney (1987): (1) why students decided to pursue graduate study; (2) how they found out about the institution they selected; (3) why they applied to that institution. An analysis of the data showed how opinions varied across categories of students' gender, ethnicity, citizenship, age, quality, and part-time/full time enrollment status. Students' responses indicated that the reason they go to graduate school is the desire to learn and personal satisfaction. These were more important reasons than reasons related to getting a job, although job-related reasons were frequently mentioned.

Reasons for going to graduate school varied depending upon certain student characteristics. Females were more likely than males to go to graduate school because a friend was going and for personal satisfaction. In an age breakdown analysis, categories of 20-23, 24-27, 28-64; younger students were more likely to indicate they had nothing else to do and their job prospects would be better. Older students were more likely to indicate that they wanted an advanced degree for professional reasons. Students who were local (considered as local due to their geographic location and as opposed to international students) were more likely to respond that they had nothing to else to do, for personal satisfaction, their chosen field required a graduate degree and their job prospects would be improved.

In discussing how students found out about the program or school, women were more likely than men to receive information

from alumni, and men were more likely to obtain information from brochures and receive recommendations from their professors. White students were more likely than non-white students to have been undergraduates at the institution and non-white students were more likely to receive information from career days at their undergraduate institutions. Local students were more likely to have been undergraduates at the institution and receive information from alumni. Younger students were more likely to find out information from departmental brochures and letters, while older students were more likely to receive information from their professors, newspapers and advertisements and alumni.

The main reason that students applied to an institution was based on the perception that the department had a good academic reputation. Other reasons listed as important were financial considerations and location of the institution. Responses in this category again differed significantly depending upon certain demographic characteristics: females were much more concerned than males about location, and males were slightly more concerned about departmental reputation and the knowledge of their undergraduate faculty regarding the school. White students were more concerned with location, while non-white students were more concerned about finances. Local students were equally concerned with location and finances. Older students were more likely to apply because they had friends at the school or because of the location, while younger students were more likely to apply because of departmental reputation or financial considerations.

Most of the literature that pertains to marketing graduate programs and recruiting graduate students emphasizes the special students, such as women and minority groups (Atelsek & Gomberg, 1978; Henry, 1980; Brooks and Miyares, 1977) or non-special students in specific departments (Czinkota, 1980; Malaney, 1983; McClain, Vance, and Wood, 1984).

Malaney (1984) presented the first analysis of an entire population of new graduate students in a single institution; and Olson and King (1985) presented a study of all domestic graduate students at a single institution. Malaney's (1984) survey attempted to look at all entering graduate students at a single institution but only 698 of 2372 returned the survey. The study was limited in that the focus was on the importance of financial aid as a recruiting tool. The study also failed to analyze any data by demographic characteristics of students.

The Olson and King (1985) study surveyed all domestic (local) graduate students at a single institution with regard to several of the same issues that have been addressed in the Malaney (1987) study. However, the researchers' population sample was all graduate students and not specific to new graduate students. The authors also offered no analysis of demographic variables. Olson and King's (1985) study showed that there seemed to be differences based on institutional characteristics as well. They reported that the most noted reason for considering the school was the location of the institution. In the Malaney (1987) study, location was only the third most important reason, after the departmental reputation and financial considerations. Some explanation may lie in about one-

third of the students in the Olson and King study having been undergraduates at the institution.

The Olson and King (1985) study also reported that close to half of the students noted that personal contact with faculty was an important factor that influenced their initial consideration as opposed to only 28 percent responding similarly in the Malaney (1987) study. These differences may be somewhat accounted for when one examines the differences in the size of the institutions: 4000 in the Olson and King study and 10,000 in the Malaney study.

In recruiting as a marketing strategy, the first premise according to Kotler and Fox (1985) should be for the institution to "determine the needs, wants, and interests of its consumers: and to satisfy them through.. appropriate and competitively viable programs and services " (p. 10). Marketing in higher education is a combination of college attributes arranged in the following categories: programs, prices, promotions, and places of delivery. A theme that seems applicable to the study of graduate students is one that emphasizes the importance of gathering information about the prospective consumers (Gorman, 1976; Gaither, 1979; Mudie, 1978; Murphey, 1981; Cook and Zalloco, 1983).

In opposition to the market strategy, many academicians simply dislike the notions of marketing and recruitment equating marketing concepts to consideration of the preferences of potential students (Litten, Sullivan, and Brodigan, 1983). "Techniques are equated with commercialism and selling used cars" (p. 249). These arguments against a marketing and student focus are probably even

greater at the graduate level where the perception is that the value of the education is even greater.

Recent evidence suggests that philanthropy poor, tuition dependent institutions make proportionately more programmatic changes than the more philanthropy rich institutions (Chaffee, 1984; Paulsen, 1990). The perception of a buyer's market has evolved and perhaps many institutions believe that survival means they must "cater to the student customer" (Riesman, 1980, p. 108).

Powers (1990) addresses the problem of maintaining a critical mass of students enrolled in programs, where there is an indication of a future demand, but where there may have been a decline. University marketing techniques have not generally focused on graduate school recruitment, but recent economic and demographic changes show a shrinking undergraduate enrollment could impact the graduate enrollment. Also problematic in this is a more diverse college student population that views many traditional graduate programs with less interest.

The numbers of students enrolled in graduate programs has remained relatively stable for several years but this masks the overall stability in enrollment variations among disciplines and schools. Literature on institutional marketing and student recruitment has mostly centered on undergraduates.

Baron (1987) surveyed 250 graduate schools and found that most responses indicated that techniques and strategies are the same: promotional materials, and faculty personal contacts. Recent economic and demographic changes could have a negative impact on graduate programs. The smaller number of undergraduates

in recent years will produce a smaller pool of college graduates to enter graduate school. Also, the more diverse college population of the nineties includes a larger proportion who do not see graduate education in the arts and sciences as part of their future.

Recruitment efforts for graduate programs have been effective as a decentralized activity left largely to departments.
In order to be effective in terms of recruitment, many feel it is important to know first what type of student the school is seeking.
Mary Powers, Dean of Graduate School, Arts and Sciences, Fordham, (1990), undertook a five year plan to look at the diversity of the prospective graduate candidate.

There were an array of traditional programs that attracted mostly students seeking the Ph.D. Fordham found it necessary to initiate programs that enrolled several types of part-time students, persons interested in careers and students who had been out of school and had returned for personal enrichment purposes or to upgrade skills. Many women made up this last group, in Powers' experience. It was necessary to develop "imaginative programs" (p. 10) to serve students who were changing careers, returning to school and seeking certain kinds of programs.

Typically, the philosophy of graduate education has been different from undergraduate education in that the objective of graduate education has always been to "skim the cream from the top" (Olson, 1985, p. 22). In contrast, the open admissions movement during the 1960's paved the way for increasingly dramatic numbers of persons earning baccalaureate degrees. There has never been

strong sociopolitical support for providing graduate education for the masses (Olson, 1985).

Graduate education, which has its origins in the ante-bellum German university, has been reserved for those students who show the most promise as original investigators and scholars. Social pressure for change has had little or no effect. The mentor function and ideology of graduate education and faculty role has persisted. The structure of the comprehensive university, Cohen and March (1986) calls them organized anarchies, in which there are competing interest groups with diverse goals and values interacting with graduate faculty who tend to identify with and have an allegiance to their academic disciplines rather than to a particular institution.

Most academic departments have a general idea of their primary target markets, yet there is no organized or sophisticated research effort to identify the variables influencing the enrollment decision. Most departments seem to place their focus and energies on the product (curriculum) rather than on the client (Olson and King, 1985)..

Recent research indicates that brochures, posters, catalogues, and materials describing individual academic programs were the most popular types of publications among all departments. Departments with reasonably well-developed recruiting plans have a network with which they maintain regular communication in a variety of ways. Graduate students depend heavily on the availability of research facilities and a positive professor-student environment, they respond favorably to an opportunity to visit the institution

before making a commitment to a graduate degree program (Olson and King, 1985).

Enrollment patterns at the graduate level have not heretofore been an issue of major concern. Institutions have assumed a seller's market mentality that may not be consistent with the current fiscal and demographic realities. (Olson, 1985).

Current literature suggests that the fastest growing cohorts at the graduate level are the older returning student. There is also a related group of students who are re-entering academics with the intent of retooling in order to change careers. They bring into graduate programs a rather long work history in one field and yet they have 15-20 years of labor marketability remaining. History has demonstrated that change is often the direct result of pronounced external pressure. To the extent that this is true, we should expect to see a fundamental change begin to emerge in the administrative approach to graduate education.

Student choice is a complex phenomenon (Hosler and Gallagher, 1987). Hossler, Braxton and Coopersmith (1989) promote a strategy that provides an institution with the power "to see oneself through students' eyes" (p. 281). Inherent in this philosophy statement is the underlying structure of the university and the relationships that colleges of education have within that arena.

The organization of the university

American higher education is characterized as various institutional sectors that conform to the Carneige Classification of

Institutions of Higher Education (1976). In this authoritative typology, organizations are categorized by size, breadth and function. Classifications range from research university I and II, doctoral granting universities I and II, comprehensive universities and colleges I and II, liberal arts colleges I and II, two-year colleges and institutes or professional schools, and other specialized institutions.

There are also commonly accepted distinctions between the categories of public and private institutions. These designations are based on the structure of support and governance, but they also correspond to different organizational functions. Private institutions are often extolled in the literature for the selectivity and the quality of their undergraduate programs, as well as providing diversity in American higher education for meeting the needs of particular religious, ethnic or gender groups. By contrast, public institutions are often characterized as providing relatively non selective access to higher education, particularly to first generation and nontraditional students (Rhoades, 1987).

In the case of student markets, critical scholars focus on the organized efforts of groups of students (e.g. women or minorities) to open opportunities to them. Rather than conceptualizing markets in terms of the colleges and universities moving to meet the needs of these pools of students, they examine markets in terms of students organizing politically to demand services and that their needs and interests be addressed. Critical scholars do not consider the choices and places of students in the higher education system as natural or

meritocratic and functional (Karabel, 1972; London, 1978; Weis, 1985).

Critical scholars view markets not as competitive but as fixed. They view differentiation and stratification not as natural and meritocratic and reflecting quality but as politically structured and grounded and as reflecting power within the organizational structure of the university. There is an interlocking network between the political and professional economies that affects decisions surrounding university programs (Rhoades, 1987). In contrast, the Sloan Commission (1980) calls for the autonomy of the academic institutions and equates it with institutional integrity and quality. The argument is familiar, those in academe have the expertise, knowledge and commitment that is necessary to regulate themselves. Claims to autonomy in higher education are claims to privileged status (Slaughter, 1990).

When examined through a structural-functionalism and critical theory perspective, different views of American higher education are found. The dichotomy is between a system shaped by competitive market forces and the state (for funding allocations) or as a site of struggle patterned by the political economy. Higher education literature is dominated by the assumptions, concepts and questions of structural-functionalism with divisions of labor, competitive markets driven by individual choices and institutional aspirations. A largely status quo view supports the existing hierarchy and leaves higher education poorly equipped to address and analyze social, economic and political change that is embedded in and that change higher education. The question can be raised about who shapes and

who benefits from higher education (a common query that critical theory constantly raises). In contrast is the comfortable and conventional conception of what is and of what is not functional for the university as an organizational entity.

Institutions of higher education are also differentiated in terms of their academic organization and purposes (Blau, 1973; Cohen and March, 1986). Organizational differences are somewhat offset by a collegial tendency toward the blurring of status boundaries. The basic unit of most American universities is the department which is accountable for a budget and their own academic policies. Since persons within the department are generally seen as holding an equal or same recognized status level, there can be strong resistance to outside influences. There seems to be no hierarchical mandate or influences that force change. The autonomy of the individual faculty member may derive from a local monopoly of a particular domain of specialized knowledge. This can often be exploited in the assertion of departments to shape their own academic destiny (Beecher, 1983).

Added to the organizational structure of the university are the individuals in the system: the academics, the students and the administration. The role and responsibilities of the academics was discussed earlier in this section. The role of the administration is viewed as the maintenance of the physical facility and overall monitoring of policies and procedures of the university environment. Administration is not generally involved in the formulation of academic policy. Students, the most transient section of the university, exercise a limited role in university affairs. They are

expected to comment on teaching through formal evaluation procedures.

Three perspectives have been dominant in recent studies of academic organization: a political model, an organized anarchy model and the model of a loosely, coupled system. The political model assumes that, because academic organizations are fractured into different groups or cultures, that the power structure is loose, ambiguous, and poorly defined. Each group attempts to articulate its special interests by influencing others through a process of conflict and negotiation. Stability of the organization is a temporary lull between competing forces. An individual's behavior is motivated by self interest (Baldridge, Curtis, Ecker and Riley, 1978).

The second model is that of organized anarchy proposed by March and Cohen (1986). The structure of the academic organization is seen as highly differentiated, with diffused power: goals are either vague or in dispute, technology is familiar but misunderstood, and participation is fluid and unpredictable. The authors postulate that decision making is a garbage can process in which decisions are made by accident or default. Planning is not feasible, leadership is illusionary and management is an unobtrusive marginal activity. It is assumed that individual behavior is non purposeful, unpredictable and leads to organizational ambiguity rather than coherence.

The third model is that of a loosely coupled system (Weick, 1976). Weick suggests that academic organizations can be best understood as loosely coupled systems in which individual departments and schools are highly differentiated and autonomous but have sufficient variables in common to be somewhat responsive

to each other. The individual faculty member is responsible for the integration of the separate functions of teaching, research and public service. Weick argues that if the basic building block in which functions are tied together is one or two individuals, than as these units are aggregated and built upon each other, fewer ties can be expected between the larger units or university organizational structure.

With the diversity in the literature surrounding the organizational structure of the university and educational institutions, one can see why change may be difficult at any formal level. Responding to the needs of students may be a low priority to individuals who are the basic unit of change and innovation. Understanding the organizational structure of the university can facilitate understandings of its faculty, administration and students and why traditional university programs are resistant to change.

Graduate schools of education

The concept of graduate school education study has evolved into one of mixed purposes compounded by programs for state certification intertwined with those for degrees. What has resulted are graduate school of education programs that (1) specialize in entry to the profession; (2) improve role competence; (3) some for changing roles within the profession and (4) some for systematic study about education (Erdman, 1979).

Erdman (1979) suggests that two models are necessary to understand the conflicting forces within the university organization: the role model and the academic content model. The role model assumes that purpose is associated with development and

improvement of competence in professional practice. Value is measured by the direct applicability to practical utility. A minimum of increased level of competence is professional practice is the major criterion. In contrast, the academic content model purports the purpose of graduate study as directed toward advancing knowledge in the content and processes of education though systematic scholarship. The academic community is the primary public in this orientation and advancement takes place in the form of academic pursuit, not constrained by demands for direct application in professional practice. Quality of scholastic behavior is the major criterion for evaluation.

These models can lead to strong conflicting forces within an organization. "Schools of Education, by the very nature of the profession itself, dictates the need for both orientations" (Erdman, 1979 p. 61). Continuation of the delineation between tasks in all phases of the academic endeavor force priorities that limit human and material resources. Any impact of change will also affect faculty role and organizational structure.

The historical emergence and development of graduate programs in Schools of Education clearly reflect the simultaneous increasing specialization and diversification in education and society. Erdman (1979) feels schools of education may have made a strategical error by not assuming closer identification with the emerging mission of the university as it broadened its purposes.

Schools of Education are usually one of many units competing for limited resources within a university. All of the academic units contain programs emphasizing the generation and dissemination of

knowledge. All are concerned with the values and traditions of the past, present, and future histories. All claim a right for existence because of varying degrees of societal need or enrichment. "Decisions made are value-laden" (Erdman, 1979, p. 59). Programs of graduate study appear vulnerable within this competitive academic marketplace. Often their justification of existence is perceived by critics as a means for mobility and/or monetary reward within the profession; and the use of graduate degrees as a vehicle for professional improvement is an anathema.

This increases the confusion between purposes and structures of professional and academic degrees. Schools of Education are often perceived as lacking viable major commodities that can be used by the University to enhance its negotiating power with the societal structure (Erdman, 1979). These criticisms may reflect prevailing prejudice and bias about schools of education and education in general.

Graduate study in the School of Education can be characterized by its multiplicity of purpose, structure, and curricula, as clearly manifested in the diversity and specialization of program and degree patterns. Many of these programs are initiated with varying degrees of conceptual clarity and have been maintained because of need and tradition. (Erdman, 1979). Traditional perceptions of purpose, structure, and curricula are becoming increasingly more diffuse and ambiguous.

"Within traditional, mainstream education, there continues to exist a reservoir of immense talent--coupled with a simultaneous sense of impotence or incompetence. A prevailing sense of smugness

and invulnerability precludes attention to negative feedback and reinforces the belief that what is being done is right" (Clark and Fantini, 1979, p. 5)

Clark and Fantini (1979) accept several givens in an attempt to project graduate school decisions:

•Education is a formal and informal process which takes place in homes, schools, places of worship, community agencies, and businesses, it occurs through a variety of modes of communication; it is a lifelong process.

•Education and training are different, and we must be concerned with both.

•Many of the roles for which our graduate students prepare will be replaced or redefined in coming decades; a majority of our graduates will make significant role changes, both in an outside the scope of formal education, during their careers.

•The graduate student population in education is increasingly experienced, mature and self-directed.

•Professional education in any sphere is characterized by the development of knowledge an theory on the one hand and its effective clinical application on the other. Each is integral and both are interdependent in professional education.

One example that is commonly given and persists as an issue is the use of Graduate Record Examination scores and grade point averages as admission criteria and institutional quality measures. When the candidate for graduate school is between 25 and 50 years of age, many feel the GRE-GPA indicators can and should be superseded by other factors.

"Those in Colleges of Education are often their own worst enemies" (Clark and Fantini, 1979 p. 7) because although they recognize the low status school, colleges, and department of education hold on most campuses, they compensate by compounding the problem. They often exhort themselves and colleagues to improve quality--and these very exhortations presume and confirm the appropriateness of the arts and sciences standards.

There are accolades for the quality of graduate institutions from which faculty members come, the high academic caliber of the graduate students, the sophistication of research designs displayed by a sampling of dissertations, the excellence of well published faculty, the rigor of admissions and personnel reviews as well as the sometimes misleading course loads being carried by faculty members. However, there is often silence about the diversity of the faculty, the alternative admissions criteria, project-type dissertations, faculty members who are excellent but don't publish, the private adaptations of curriculum review processes to facilitate off-campus and alternative programs, and the external use of clinical personnel as a fundamental teaching resource (Clark and Fantini, 1979).

Financial stress and changing market conditions have not stimulated major program changes in the Arts and Sciences. Most departments in a study by Breneman (1975) seem to be following a conservative, enclave strategy designed to maintain the status quo. Mayhew (1980) also detailed an inertia of graduate education in the arts and sciences and observed that professional schools have displayed far greater change, innovation, and effort to reform. These

included medicine, law, architecture and engineering. He called for education to add itself to the list.

Again, to stress the environment in the schools of education as equal to that in the overall university organization, reconceptualizations of graduate schools of education face many of the same oppositions in areas of philosophical beliefs and generalized ideas.

"Graduate programs in education appear to fall short on the gatekeeping function. With few exceptions, they have been patterned on the model of a mass production factory" (Dolce, 1979, p. 19) Large numbers of students have been admitted, and are processed through courseware in a relatively short time into graduates credentialed as professionals. Course offerings seem to concentrate on information transmission. Insights about the influence of modeling and the effects of students on an institutional environment seem to be ignored.

Certain traditional assumptions have tended to impede progress in graduate programs. The first of these is the bifurcation of professional preparation programs into those designed for the practitioner and those designed for the scholar. Such distinctions between practitioners and scholars are based on faculty assumptions (Dolce, 1979). This invalid bifurcation of research and teaching has also created conceptual problems in program development.

An additional juxtaposition is the view of service as a function unrelated to and separate from teaching and research, the primary faculty functions in graduate programs. Service, in theory

demonstrates the utility of graduate faculty members and their expertise in addressing real world problems. Service in this sense means technical assistance. Often the terms applies to the activities faculty pursue off-campus and if related to instruction. "Graduate programs in education do not have the political clout on campuses to capture added resources". (p.21)

Areas that contribute to quality graduate education include the university structure acceptance of a philosophy of encouraging leadership in the development of programs; the willingness of faculty in academic departments and colleges to take individual responsibility for promoting and assisting in the development of high-quality programs (Nitzschke and Lamberti, 1979). Colleges of Education can enjoy the freedom to operate individualistically within the larger university structure. This freedom permits response to ad hoc demands that seem more frequent today that in the past. Whereas bureaucratic controls and demands can stifle initiative, autonomy or governance and program development can be a spur to individual excellence among faculty, and can result in broader participation and enrichment.

Three of the issues to be addressed in the 1980's by Nitzsche and Lamberti (1979) were: an increased trend toward part-time graduate study. Graduate students in many cases are employed full-time and engage in graduate level work on a part-time, convenience schedule, and sometimes only if required to do so.

The authors discuss that graduate programs are falling into a credit-generation trap and are being played against the other to make their programs the most convenient for part-timers; the

increased emphasis on relevance by inclusion of field study and on-the-job experiences at the expense of substantive, academic learning experiences. Academic study appears to have been abandoned to the undergraduate programs and is too seldom evident at the graduate level.

"Changing programs based on ad hoc needs is a classic example, in this case we are providing inservice, not education" (Nitzschke and Lamberti, 1979 p. 25). The third trend discussed was an increased emphasis on serving the needs of all people of all ages whatever they may be. Institutions are packaging their program bags and taking them to remote corners to meet the demands that exist. Programs are also being tailored to accommodate the local set of circumstances in order to make them more appealing.

Nitzschke and Lamberti (1979) feel that quality control, guaranteeing program integrity and rigor, take a back seat to getting the program to where the people are. Institutions that have designed and can defend high-quality on-campus programs are being challenged by clientele in the field to deliver. Often institutions that balk at wholesaling graduate credit off campus are unjustly accused of being unresponsive and inflexible. "It appears that the term suitcase college is being applied more and more to deliverers of graduate programs rather than the students" (p. 25).

The authors conclude that institutions of higher education are being asked more and more to design programs that are job specific and career oriented. Again, there seems to be a situation in which forces outside the university are determining what the various programs should look like, instead of preparing educational

personnel for a wide variety of career options and letting them apply their learning abilities to job-specific tasks, we have allowed the job-specific tasks have been allowed to determine the educational programs.

From a systems perspective, it is clear that the graduate school of education is not an independent entity determining its own goals, operations and resources (Gordon, 1979). It fits within a campus whether it is a major research university or an institution primarily dedicated to undergraduate education. There are roles and relationships, goals and expectations, and history which influence how the partners in that central unit relate to and affect each other.

Schools of Education generally work against the force that has given them low status on the campus. Those who wish to make it attempt to emulate behavior of those who are perceived as having high status. "This often leads to a tendency to assume that the liberal arts model of graduate education and scientific research is the appropriate way to raise the status of the school, and thus, one's own status as a member of an educational faculty" (Gordon, 1979 p. 33).

A common source of difficulty in this conflicting role expectation for graduate school of education faculty members is the reward system. In the university system it is an obstacle to the field service commitment of professionals in education. This is a firmly entrenched perception. Gordon (1979) believes that at some point, the discussion on conflicting roles and institutional emulation for graduate schools of education is an extension of opportunism versus planning. He posits that sometimes it seems that academic

units developed by a pseuopod approach: they resemble the amoebae, first one foot is extended, then the whole amoebae follows. Some person or group gets an idea, somehow is successful in eliciting funds, begins a program, then gradually shapes the direction of considerable school energies to carry out what was not an agreed-upon plan developed across the board by faculty members.

The author admits that this is probably a time-honored and very successful procedure because it reflects beliefs in academic freedom, individual initiative, but it also, in his opinion reflects a certain degree of anarchy in program planning. "Faculties in schools of education attempt to become describers rather than designers" (Gordon, 1979 p. 2). In emulating descriptive sciences, "faculties are describing how things are and how they work. Schools of Education should be engineering schools, teaching how to design and how to make things" (p. 38).

ABCD University

This section of the literature review will focus on the individual institution in this study. It was necessary to frame the contextual setting for a clearer understanding of the climate and environment in which alternative graduate programs are initiated and implemented in this particular context.

Over the past five years, graduate student enrollment has averaged around 6,600 students according to the ABCD Self-Study Report published in the Fall of 1993. Demographic information (see Appendix D) indicates that in the fall semester of 1993, 58% of graduate students were female and 42% were male students.

The median age of male graduate students was 29 in 1988 and 30 in 1992, for females, the median age was 30 in 1988 and 1992. Ethnic breakdown in the Spring semester of1993 was 59.7% white non-Hispanic, 9.6% Chicano, Mexican American, 4.5% Asian, 2.2% Southeast Asian, 4.7 % Black non-Hispanic, 2.4% Other Hispanic, 4.7% Filipino, .9% American Indian, .6% Pacific Islander, and 8.2% other or did not respond.

Of the 1,259 masters degrees and 18 doctoral degrees, 28% of all masters degrees were awarded in the College of Education in the 1991-92 academic year. The ABCD University claims that numbers of students have changed but the nature of students has not undergone any significant change.

Changes among graduate students have been noted between 1987 and 1992 as increasing in all ethnic categories except American Indians and White non-Hispanic students.

ABCD University lists in a section on institutional purposes, that "closely related to the teaching mission of the University is student and faculty research. Involvement in research ensures that both students and faculty maintain currency in their disciplines and fosters the advancement of knowledge. Graduate study at ABCD University at the master's and doctoral levels emphasizes creative scholarship, original research, and the development and utilization of research techniques" (p. 57).

In the Governance and Administration section, ABCD University purports that "planning is an activity that occurs at a number of different levels. While departments take the lead in the development of curriculum and new programs, college-wide committees and

ultimately the dean of the college must take responsibility for the balance and direction of the college as a whole, and of working within the fiscal parameters set at higher levels of administration" (p. 86).

In a section headed Educational Programs, the ABCD University addresses graduate programs: "Graduate programs are offered at the University only after a study has indicated need or potential student demand. All policies and procedures developed by the University and the CSU require that such determinations be made for all proposed programs at all levels. Graduate program proposals are considered from the following perspective:

a. a list of other CSU campuses offering or projecting the proposed degree; a list of public and private neighboring institutions offering the degree; the differences between the proposed degree and the other institutions' degrees;

b. The number of declared undergraduates majors in related baccalaureate programs and the degree production over the last three years.

c. Professional applications of the proposed degree;

d. The expected number of students and graduates in each of the first four years of the degree program;

e. The purpose for proposing the degree and the anticipated demand, including evidence of the need for graduates with that specific educational background;

f. A review of the credentials of all faculty associated with the program" (p. 109-110).

In a section headed Special Opportunities for Innovation, the ABCD University lists that "in addition to regularly scheduled courses, the University offers opportunities for Special (or Independent) Study and innovative departmental Topics courses under the General Studies rubric. Topics courses allow a department to offer a course four times within six years without the long-term commitment of a Catalog entry. These offer opportunities for experimentation or to gauge student interest" (p. 110).

The ABCD University states as quality expectations for non-standard scheduling "that the Curriculum Guide and the course proposal forms provide careful explanation of criteria applied to short-term Topics and General Studies courses that are taught for less than a semester's duration and warns that screening committees question whether it is feasible to offer effectively certain workshop and weekend courses for as many units of credit as would be earned in a regular 15-week semester. For approval, such courses must be as rigorous as regular courses. Three or more unit courses offered for fewer than 15 weeks in Winter and Summer Session have a requisite number of class hours equal to regular semester courses. There are differing opinions as to the effectiveness of the three-week course compared with the regular semester course. For some subject matter and disciplines these short-term courses are uniquely valuable immersions; for others, the amount of time does not allow for comparable research, written work, and rumination" (p. 111).

ABCD University states that timely progress toward degrees is expected. "The average number of years spent by students pursuing

30 unit Master of Arts degrees is two and one-half. Doctoral students on average require five years to complete their degrees" (p. 118).

The eleven alternative graduate programs in this research all operate under the direction of the College of Extended Studies. The ABCD University describes and explains the function and role of the College of Extended Studies as follows:

Within the CSU system policies, individual campuses are responsible for organizing and administering continuing education programs; ABCD University assigns all responsibility for non-state-supported programs to the College of Extended Studies. Of the five major divisions within the College, Extension and Special Sessions is listed as a main component. This division develops and administers educational programs.

The College provides a wide variety of traditional and non traditional experiences designed to fit the lifestyles and expectations of mature adults. The College also provides a range of academic and special programs for students and groups during the summer months, in the evenings and weekends, and between semesters.

There are two types of academic credit available through the College of Extended Studies: ABCD University resident credit and extension credit. Resident credit programs are called Special Sessions and include Summer and Wintersession; all courses awarding resident credit are fully approved ABCD courses listed in the General Catalog and Graduate Bulletin, meet the same academic

standards as those offered in regular semesters, and are carefully monitored by ABCD University faculty and administrators.

Special Sessions are credit courses and are offered through the College of Extended Studies. They are self-supporting. All credit courses offered during Summer and Wintersessions are selected from among the University's approved courses, most are taught by University faculty and all carry ABCD University resident credit. In offering special programs and courses for credit, ABCD University if careful that the structure, functions, goals, and objectives are consistent with and help to meet institutional purposes. Requirements for awarding credit are consistent with those for students in more conventional campus programs. Scheduling special courses to provide for optimal learning is an important University consideration.

On-campus administrators and faculty participate in planning, approval and ongoing evaluation of special programs and courses. Learning resources are provided as needed and used appropriately by the programs and courses offered at each learning site; sufficient financial resources are available; and student services are provided as appropriate to the clientele.

The guiding principles as outlined above impact the alternative graduate programs within the ABCD University. The underlying premise is that these programs are not related to the university and therefore do not affect normal operations of the traditional university. The College of Extended Studies is an option utilized by most colleges on the campus to experiment, serve diverse

populations and to meet needs of populations that are currently not being serviced.

The university and change

Change in American educational organizations can be characterized by innovations within a basic structure that evolves over a long period of time. Criticisms of schools are persistent in the organization's lack of responsiveness to the social environment and their conformity to highly standardized definitions. Early research conducted in the 1960's (Mort, 1963) found that the time between the introduction of a new idea and its spread throughout the educational system takes decades, although there is sometimes a burst of action during which some educational organizations will adopt the change. An additional factor was noted that various interest groups in the schools and communities are critical determinants of the adoption process and its outcome.

Havelock, et al's (1969) summarized the literature of the 1960's and proposed three streams of research emphasis: (1) the social interaction perspective which focuses on the adoption of specific new practices by individuals; (2) the research, development, diffusion and utilization model which is derived from an agricultural extension service model and commonly found in integrated research and development departments in the military and industry; and (3) the problem-solver perspective based on the work of Kurt Lewin which focuses on the process of the individual or group change and the identified stages in the change process.

Research in the 1970's regarding school organizational change moved away from the concept of organizational intervention strategies to a concept of the ways in which organizations exhibit regular but non rational behavior. Factors examined were size, complexity, formalization and centralization; degree of individualization or curriculum focus; staff morale or past innovativeness; experience or professionalism; student characteristics and regional or political contexts (Baldridge and Burnham, 1975; Deal, Meyer and Scott, 1975; Rosenblum and Louis, 1981). All were thought to be factors impacting change.

During the 1980's research began to explore new themes on change in educational organizations. Meyer and Rowan (1977) postulated that change is usually imposed from outside the organization through government intervention, change in social consensus and change in demographics. There was also an increase in research pertaining to leadership and design in the change process that had not been previously emphasized (Firestone and Wilson, 1985; Huberman and Miles, 1984). Smaller scale studies were able to locate individual factors that seemed to influence the outcomes of change and suggest successful change management strategies that could take place in the rather chaotic, unpredictable and often non rational context of the educational environment (Louis and Miles, 1990).

Glazer (1986), in a study on the current status of the master's degree believes that no longer can the graduate school, confronted by new professional programs seeking autonomy from the research

model, function effectively as an academic "Bureau of Standards" (Pelikan, 1983).

It has been suggested that the master's degree may be becoming the first professional degree (Glazer, 1986), reflecting contemporary society's increased interest in more utilitarian and measurable objectives. There are major issues in program design, the principle one being the balance of theory and practice. Glazer's study looked at factors motivating and inhibiting change in the master's degree.

The master's degree has been traditionally shaped by arts and science models. Demands for accountability, quality control, and standards are countered by proposals for innovation, change and the implementation of new graduate programs (Pelczar and Solomon, 1984). While state education boards, accrediting agencies and professional associations comment with increasing frequency on the problem of the proliferation of degrees, the institutions mount efforts to attract non-traditional students to existing and new degree programs thus indicating that these populations have needs that are not being met through traditional and existing graduate degree programs.

There is a sentiment by critics that some oversight on the part of the State is more prevalent in public rather than private institutions, and it is characterized by two kinds of problems: the diversity of the programs, and the perceived need for public institutions to respond to the needs of non-traditional clienteles (Pelczar and Solomon, 1984). Glazer (1986) asks if there is room for innovation.

In the 1960's and 1970's, change was a function of the rapid expansion of graduate education, the vocationalism of graduate students, and the introduction of public policies to strengthen access and opportunity at all levels. In the 1980's, there was a climate of retrenchment, change was linked to the management of enrollments, to the market for jobs, and to adherence to external and institutional standards. Graduate and professional schools are seeking to respond to society's and individuals' perceived needs and are encountering limited incentives with which to implement new programs and demands from the state and accreditation agencies for higher standards, greater productivity, and more measurable outcomes (Folger, 1984).

Pelczar and Solomon (1984) feel that there may be disincentives to change that go beyond the costs and benefits of implementing new programs, to the continuing preference for theoretical over applied types of programs, vertical specialization over breadth, and established over emergent programs in the status hierarchy.

External degrees, experiential learning, cooperative education, inter institutional consortia, combined degrees, interdisciplinary programs, and distance learning are some of the mechanisms and strategies being implemented in graduate and professional programs that are receiving mixed results. It is far easier to measure uniform quantitative variables than to individualize each student's program commensurate with his or her needs. What we have to be wary of, however, is the designer degree shaped to the needs of the wearer and apt to be high fashion rather than classic cut (CGS, 1985).

Issues of change for higher education, and in particular for graduate education, focus on the issue of the nontraditional student. Enrollment of regular age students in the arts and sciences programs will decline, and enrollment in professional or career-oriented masters' programs will continue to increase across student age groups. "Enrollment will be strongest in universities that provide quality programs for part-time, career-oriented students with technological interests" (Albrecht, 1983, p. 26).

By their very nature, universities are tradition bound institutions cast in a classic mold and, therefore, are resistant to change. Many outsiders think of the academic institution as a hierarchy with control from the top down by the administration. However, academic decisions are actually far more in the hands of faculty subject specialists and often flow upward from the faculty through a system of academic committees and councils. The attitudes, actions and beliefs of faculty members assume decisive importance. Structural changes which shape the parameters of post graduate education have been for the most part, determined by policies framed with other goals in mind (OECD, 1987). Little change has been seen in the inner workings of the graduate programs themselves.

Inherent in the systems of tenure, degrees and ranks which are associated with university faculty members, a system has developed which perpetuates a rigid, tradition imbued-culture highly resistant to change. "The academy is like a dinosaur, long-lived but slow to move. But change it must or face its own unique form of extinction" (Shelton and DeZure,1993). In an interesting book addressed to an

audience of those considering graduate school, author, Mark Sanford (1976) calls for graduate schools not to de-emphasize the training of scholars but to broaden their conception of the scholarly life and to value a wider range of human potentialities. "In the more humane environment thus created, the quality of scholarly work would surely improve and the practice of [student] system beating would be eliminated almost entirely" (p. 119).

Social and demographic changes facing graduate programs today, and in the near future, include the aging of the society, changing values, inflation and tuition and enrollment decreases in traditional student populations. "With the enrollment of the more nontraditional students, universities will need to accommodate them by adjusting programs and services to include more flexible course offerings, intensive courses, independent study, more flexible hours for admissions and financial aid services, commuting and parking conveniences and child care services" (Boaz, 1981, p. 12). Changes in the traditional locale, format and time for offering courses present other opportunities for educational institutions to attract new students in the present day situation of competition for scarce financial resources (Peterson and Birren, 1981).

The demand for change in American universities has existed for more than a century with little effect. The university system, including graduate programs, seems unable to organize itself toward change. Kenneth Ashworth (1979), commissioner for the Coordinating Board of the Texas College and University System, says, " It is ironic that our colleges and universities...give so little attention to the study of their own past and the social processes at

work upon them. The colleges and universities equally neglect the consideration of their alternate futures. The university community probably spends less time studying itself than it does almost any other topic for scholars to contemplate" (p. 19).

Summary of the review of the literature

Graduate education can anticipate an unprecedented tension between specialization and generalization in the design and conduct of study. Institutional prescription will compete with student determination of graduate programs of study.

Bunt (1979) called for a time of change. The education of teachers, educational administrators, supervisors and other allied professional educators should be conducted with a new mission, an enlarged set of purposes, and a redefinition of content. "Graduate schools of education accordingly must reorganize and revamp their structure, design and functions" (p. 75). Some areas of concern included: narrow definitions of their responsibilities and purposes; an amoral approach to professional education; a myopic concentration on knowledge production to the detriment of knowledge utilization.

Perrone (1979) calls the question for graduate Schools of Education: "How do we assure that our programs become more accessible, appropriately serve underserved populations, have a capacity to make a qualitative difference for those who pursue them, support a collaborative character, and stimulate our faculty and their interests?" (p. 89).

Organizational theorists tell us that the driving purpose of organizations is to perpetuate themselves, to survive and grow as entities. There is little to suggest that colleges of education and their graduate programs are not driven by these self-survival motives (Ryan, 1979). With current economic issues continuing and the population demographics changing, concerns for short-term growth or possible survival may stampede program planners into actions that are either unwise or detrimental.

We may be tempted to be too many things for too many potential customers. The other choice that remains is to be tempted to ignore the current economic realities in the educational climate and stick to business as usual. Ryan (1979) considers that the only avenue for graduate programs in education is to be imaginative and to be courageous: imaginative within the educational community to be open and flexible and creative in finding new ways to work with practitioners in the field in what is a new era with new conditions; courageous in being true to the fundamental mission of higher education, to be concerned with theory, with new ideas, and with old truths. Taking this one step further, higher education must be imaginative and courageous in developing high-quality programs that make a difference, a positive difference in the way that education professionals do their work.

Higher education cannot escape history as it moves from serving royalty and the upper classes, the ancient professions and the church, to serving all persons and all institutions in the more democratic and industrialized societies of modern times.

Higher education, it is true, follows its own internal
logic of development in response to the wishes, in
particular, of its faculties. But it must additionally
respond to the changing contexts of external society.
Much of the history of higher education is written by
the confrontation of internal logic versus external
pressure. Higher education has never been fully
autonomous (Kerr, 1994 p. xvi).

Sixty-one of the oldest universities in the world are mostly
still in the same locations with some of the same buildings, with
professors and students doing much of the same things. The eternal
themes of teaching, scholarship, and service, in one combination or
another, continues. Looked at internally, one can see enormous
change in the emphases on several functions, but looked at from
without and comparatively, they are among the least changed of all
institutions. About the historical university, Kerr (1994) concludes,
"that everything else changes, but the university mostly endures" (p.
45).

"There is a remarkable strength of institutional heredity which
conflicts with the imperative of modern life" (Kerr, 1994 p. 49).
Given autonomy, the university has proven itself to be a highly
conservative institution. The faculties are at the center of the
enterprise. And, left to their own devices, "faculties make few
changes" (p. 219). They rule largely to consensus, usually defer to
their older members, and often subscribe to the view that colleagues
should not raise controversial matters that may be divisive. All this
conduces to the preservation of the status quo. The two potential
sources of change, the university administration and the students
are viewed as "the transients within the structure" (p. 219).

It seems that we know much about graduate programs and students from a limited and rather narrow perspective. Studies can indicate demographic information: the type of student who attends graduate school, the years it takes to complete a program, student ages, origins and their evaluation of the programs. We have not investigated substantially the reasons or factors that influence choice of programs. If indeed, these data are available to individual institutions, they are not readily accessible in the research.

The lack of this basic information is inherent in the organizational structure of the university system and in particular the graduate programs themselves. It can be concluded that universities are resistant to change as is well documented in the literature. Faculty seem to be the main instruments through which alternative programs and innovations develop. In the way in which the academic market functions, there is an emphasis on brand names and professional striving for upward mobility. The university setting can be thought of in a microcosmic view of American capitalism and a materialistic society. In its' self imposed isolation from critical discourse and self-imbued intellectual autonomy, the university has developed an individual identity that inhibits self reflection and deters substantial reform efforts.

The various themes taken in this literature review begin to provide an abbreviated understanding of the context of the university environment in which alternative graduate programs are initiated. Prior research efforts have suggested that the graduate student strongly be considered in light of the changing characteristics of this population and also due to the realization

that graduate students make significant choices and decisions regarding graduate schools, programs and their lives.

The preceding review of the literature has presented an integrated overview of the historical importance of the university, the roles and expectations of faculties and students, the impacts of understanding adult development theories for non traditional students, the development of a framework for understanding the context in which graduate schools of education exist and the relevant research studies that impact the choices students make in the decision to pursue graduate education. The review of the literature has helped to create a common frame of reference and understanding of the theoretical and practical research elements that have preceded the current research study. Chapter III will delineate the methodological considerations utilized in the current study.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

In this chapter, the research methodology employed in the study and the research design are explained. A methodological framework is presented that integrates quantitative and qualitative strategies. Discussion of a mixed methodological strategy is presented. The operational definitions of the categorical, dependent, and independent variables are presented. The seven primary null hypotheses introduced in Chapter I and eight secondary null hypotheses are stated. A description of the subject population is discussed followed by a description of the interview process that led to the survey methodology and protocol, including discussion of the pilot study that preceded the current research effort. The analysis of the interview material as well as the statistical treatment of the data is outlined and the chapter concludes with a delineation of methodological assumptions and limitations identified in the research project.

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Methodological Framework

To fulfill the purposes of this study and generate appropriate data to answer the research questions posited, a naturalistic inquiry paradigm was utilized. This is a pattern or model for how inquiry may be conducted and allows for a combination of quantitative and qualitative methodology strategies. An overview of the methodological process was designed based on the work of Karl Pillemer (1988) who combined quantitative and qualitative data in the study of elder abuse. (Figure 1).

The methodological framework allowed the research to be conducted in a discovery mode with continual analysis during the research and the positing of new questions as the data emerged through the interview process. The research plan of qualitative and quantitative strategies with an ex-post facto design evolved during the initial stages of the study and was found to be consistent with similar research efforts.

Four phases preceded the actual development of the research questions and hypotheses: Phase 1, participant observation; Phase 2, record and document analysis; Phase 3, focus; Phase 4, definition of the research in light of the findings and theoretical literature. A continual analysis of the emerging data formed a cyclical process where new questions were posed, research was conducted, data analyzed and additional new questions were posited.

This study answered research questions one and two as presented in Chapter 1, through the collection and analysis of both qualitative and quantitative data. Field methods of document and

Methodology Process Overview
Utilizing Qualitative and Quantitative Methods

Pose new questions — The Process Continues

Define new problems in light of study findings and theoretical literature

Conduct research

Analyze data

Pose new questions

Conduct research

Analyze data

Pose new questions

Analyze data

Formulate hypotheses

Develop research design

Conduct research

Pose new questions

PHASE 1: Participant observation

PHASE 4: Define problem in light of findings and theoretical literature

PHASE 3: Focus

PHASE 2: Record and document analysis

Define Unit of Analysis

Define Research Topic

Increasingly Inductive

Increasingly ideographic

adapted from Karl Pillemer
Combining Qualitative and Quantitative
Data in the Study of Elder Abuse, 1988

Figure 1. Methodological framework incorporating quantitative and qualitative strategies.

Methodology Process Overview
Utilizing Qualitative and Quantitative Methods

Pose new questions — The Process Continues

Define new problems in light of study findings and theoretical literature

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Figure 1. Methodological framework incorporating quantitative and qualitative strategies.

record analysis, participant observation and in-depth interviewing have been utilized. These evaluation methods, derived from anthropological research methods and qualitative approaches are appropriate within a naturalistic inquiry (Biklen and Bogdan, 1986; Guba and Lincoln, 1981; Patton, 1980) and program evaluation models (Patton, 1987; Stake, 1983).

Research question three, which asked the question, what factors are considered in the development and design of alternative program, as presented in Chapter 1, was answered by the qualitative data collection strategy of a focus group and comparative quantitative data analysis. Participating graduate students in eleven alternative programs completed surveys. The same survey instrument was given to the designers and initiators of the alternative graduate programs in the study. Both sets of data were ranked individually, and then compared for differences and similarities on the identified themes as well as on individual survey questions by means of an analysis of variance. Mean scores of the student data and the results of the focus group were utilized for this purpose.

Focus group techniques are frequently utilized in educational research to complement the findings of other techniques (Krueger, 1988; Morgan, 1988; Stewart and Shamdasani, 1990). This qualitative strategy involved the three designers or initiators of the alternative graduate programs in an unstructured group discussion about the factors identified in the individual interviews and the survey instrument. "Focus group interviews elicit in-depth, albeit subjective, information to help researchers understand deeply held

perceptions of student, or other groups, of policy importance to a college or university. The method is best used to identify attitudinal dimensions and not to quantify the extent to which these are held in any population or subgroup" (Bers, 1987, p. 19).

Research questions four and five have been addressed by qualitative data collected from the in-depth interviews of alternative graduate program designers and initiators. Participants were questioned regarding their motivations, experiences, and beliefs about graduate programs, their rationale for the existence of alternative graduate programs and about the relationship, if any, between alternative graduate programs and traditional graduate programs. Additional information was collected through record and document analysis as well as a review of the literature.

Strategies of in-depth interviews, participant observation and record and document analysis (Guba and Lincoln, 1983) were utilized to gather data within the university environment. By observation of the natural setting and actual operation of the alternative programs, an analysis of the collected data led to the identification of the themes and factors that were incorporated into the survey instrument.

An interview guide outlining topics to be covered during the course of the interviews was prepared for the purpose (Patton, 1980) of consistency. (see Appendix B) . A variety of descriptive, structural and contrasting questions were developed as a result of a review of the literature and based on the experiences of the researcher and utilized throughout the interviews (Spradley, 1979). The interview process was audiotape recorded to capture complete

information and allow each respondent to engage as a co-investigator with the investigator.

Mixed Methodological Approach

Two distinctive world views, epistemologically and ontologically, are represented by the differences in qualitative and quantitative methods of research (Guba and Lincoln, 1983; Locke, Spirduso, Silverman, 1987; Reinharz and Rowles, 1988). The discussion in the literature is not whether the two forms of data collection can be accomplished within the same study, but whether it is possible to analyze this data from perspectives that genuinely represent two distinctive world views (Howe, 1988; Phelan, 1987; Smith and Heshusius, 1986).

"Qualitative methods [have] sometimes been used in conjunction with traditional quantitative techniques enabling practitioners to draw upon the strength of both traditions" (Broughton, 1991, p. 461). There is growing evidence that designs employing a combination of methodologies can make important contributions in fields such as program evaluation, policy development and organizational studies. Reinharz and Rowles (1988) discuss two ways in which the two paradigms of research may be reconciled: "separate but equal" and "integrated" (p. 14).

Separate but equal implies that different research strategies may be suitable for different types of research questions. If one is searching for meaning, a qualitative approach is more appropriate. If one is searching for distribution or correlation, a quantitative

approach is more appropriate. Contained within one's research, qualitative strategies may be utilized for generating hypotheses and quantitative strategies utilized for testing of the hypotheses. In reverse, quantitative results may be interpreted or elaborated with qualitative follow-up.

An additional mixed methodological process may be utilized to construct an instrument from qualitative data that will in turn be applied in quantitative research. Open-ended questions can be formulated to develop valid instrumentation for later large scale studies (Neugarten, 1986).

An integrated approach implies triangulation or multiple operationism (Webb, Campbell, Schwartz and Sechrest, 1966). This involves combining different methods in the same project to reveal different dimensions of the same phenomenon, to strengthen shortcomings of each method or to double-check findings by examining them from several vantage points. Several studies in the field of gerontology have demonstrated the success of this methodology (Eckert, 1980; Fry and Keith, 1986; Ikels, Keith and Fry, 1988; Pillemer, 1988). The integration of different methods makes it possible to weave back and forth between different levels of meanings (Connidis, 1983).

The research questions and hypotheses that were generated earlier in the statement of the issue, seemed most logically pursued by a complement of the techniques of naturalistic inquiry including in-depth interviews, observations, site analysis and document review; (Wolfe, 1983) and the techniques of traditional quantitative research, testing the investigator's suspicions, hypotheses and

notions (Reichardt and Cook; 1979). The data collected from the interviews with the program designers was utilized for the survey instrument which was administered to graduate students participating in alternative graduate programs.

Methodological approaches need to be flexible if they want to produce meaningful and useful results (Conner, 1981). From a practical posture, the purpose of the mixed methodological approach for this study was to search for worthwhile and balanced information, taking into account multiple perspectives, multiple interests and multiple realities (Patton, 1987). Utilization of a mixed methodological approach for this study provided meaningful, useful, timely and relevant data through a combination of complementary strategies.

Research Design

The research design attempted a naturalistic generalization which is the recognition of similarities of issues within the context of the setting (gained through the interview sequence) and suggest a natural sense of the covariations of the individual perspectives (Stake, 1983). Guba and Lincoln (1989) point to a number of ways in which a social, political and cultural appreciation can be obtained, one of which is termed the practice of "prior ethnography" (p. 201). They define this as having actually lived in and experienced the context for some time as a participant observer without simultaneously engaging in any evaluation activities. The researcher

was in such a situation and position throughout the duration of this study.

To fulfill the purposes of this study and generate appropriate data to test the hypotheses posited, a factorial design will be employed utilizing statistical measurements of analysis of variance and ranking. Factorial designs, traditionally consist of studies which employ two or more independent variables to test for their independent and joint effects on a dependent variable (Kerlinger, 1979). This design is significant in that it allows for the research of complex problems and hypotheses to be studied. Kerlinger states that factorial designs have several advantages, two of which are important to this research: (1) more realistic problems can be investigated; and (2) the joint influence of variables can be studied.

An analysis of variance was used as the statistical tool for the survey data collected to determine whether the differences among two or more means are greater than would be expected from sampling error alone (Glass and Hopkins, 1984). Six independent variables in this research were identified for the purposes of this study: gender, age, ethnicity, work setting, job designation and work level. A review of the literature suggested that these variables may result in different reasons for choosing a particular graduate program. The dependent variable will be mean scores on the Likert scale survey. Interaction effects of the independent variables will be analyzed as well as compared with the results of the qualitative data collection. Analysis of variance is a very common inferential statistical technique utilized in educational research (Willson, 1980; Wick and Dirkes, 1973). The confidence level will be $\alpha = .05$,

the most commonly chosen value for x in education (Glass and Hopkins, 1984).

The quantitative portion of the research design can be referred to as causal-comparative research of an "ex post facto" design (Issac and Michael, 1971) in that the data was collected after the event under consideration had taken place. Graduate students had already made their decisions to attend an alternative graduate program. The students also bring with them the experience of age and the possible biases they have due to gender, ethnicity, work setting, and work level or position.

The ex-post-facto research design differs from true experimental research designs in that there is no control of experimental groups with which to manipulate independent variables. According to Issac and Michael (1971), causal-comparative research methods are useful when: it is not possible or impractical and unrealistic to control the independent variables; and the method of a causal-comparative design could yield useful information about the nature of the phenomena under investigation.

Weaknesses of causal comparative designs are noted as (1) the lack of control over the variables under investigation; (2) no one factor may be the true causative agent in a particular situation; and (3) comparative studies are sometimes difficult because there is little or no control over subject selection into various treatments or categories. In the confines of this study, however, subjects were categorized according to their participation in an alternative graduate program. This type of study, has been conducted with undergraduates, ex-post-facto, by various national, state and

institutional studies (Mattila, !982; Paulsen and Poguem, 1988; Stafford, Lundstedt, Sven, and Lynn, 1984).

Research Design--Independent Variables, Dependent Variables, and Categorical Variables

Independent Variables

Five themes were identified from the review of the literature and analysis of the interview data: (1) career/personal factors; (2) university as an institution; (3) accessibility; (4) flexibility; and (5) program characteristics and program linkages. These themes were treated as the independent variables. Individual items were designed to further delineate each of the themes in the survey instrument. Each item contained in the themes are defined later in this chapter.

Categorical Variables

Several categorical variables were used based on previous research discussed in Chapter II.

1. Gender: The students were asked to identify themselves as either male or female producing two levels of the gender variable.

2. Age: The students were asked to place themselves in one of four age categories: under 30, 30-39, 40-49, 50 and over. The age variable categories produced four groups or levels of the variable.

3. Ethnicity: The students were asked to identify themselves as one of 10 ethnic groups: White non-Hispanic, Black non-Hispanic, Chicano Mexican-American, Other Hispanic, American Indian, Canadian First Nation, French Canadian, Asian, Pacific Islander, others producing 10 levels of the categorical variable.

4. <u>Work setting</u>: The students were asked to indicate whether they worked in an educational or non educational setting thus producing two levels of the categorical variable.

5. <u>Job</u>: The students were asked to identify their current position in terms of four levels: teacher, administrator, counselor, or other resulting in four levels of the categorical variable.

6. <u>Work level</u>: Students were asked to indicate their work level in terms of six categories: elementary, junior high/middle school, high school, higher education, district level, other resulting in six levels of the work level variable. Research also indicated there may be interaction effects among these variables.

<u>Dependent Variable</u>

The dependent variable for the study was the mean score for factors indicating reason for choice of a graduate alternative program as indicated by responses to Likert scaled questions. Mean scores were summated by themes and also by individual items.

<u>The Null Hypotheses</u>

The following null hypotheses were introduced in Chapter 1. A confidence level of $\alpha = .05$ was used in all tests for statistical significance:

Hypothesis 1: There is no significant difference in the mean scores of male graduate students and female graduate students in the responses for selection of alternative graduate programs.

Hypothesis 2: There is no significant difference in the mean scores between ages of graduate students in the responses for selection of alternative graduate programs.

Hypothesis 3: There is no significant difference in the mean scores of graduate students, according to their ethnic group, in the responses for selection of alternative graduate programs.

Hypothesis 4: There is no significant difference in the mean scores among the occupational setting of education or non education of graduate students in the responses for selection of alternative graduate programs.

Hypothesis 5: There is no significant difference in the mean scores of teachers, administrators, and counselors in the responses for the selection of alternative graduate programs.

Hypothesis 6: There is no significant difference in the mean scores of elementary, junior high/middle school, high school, higher education or district level work assignments in the responses for the selection of alternative graduate programs.

Hypothesis 7: There is no difference in the ranking of mean scores of graduate student responses for selection of alternative graduate programs and the reasons for implementation given by designers of said programs.

In addition to the seven primary null hypotheses to be tested via one-way ANOVA's, and ranking techniques, nine secondary null hypotheses were written, based on a review of the literature, to test for the existence of statistically significant interaction effects via two-way ANOVA's between combinations of the categorical variables:

Hypothesis 1: There is no significant interaction effect in the mean scores for student responses for choosing an alternative graduate program between the categories of age and gender.

Hypothesis 2: There is no significant interaction effect in the mean scores for student responses for choosing an alternative graduate program between the categories of gender and ethnicity.

Hypothesis 3: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of gender and work setting.

Hypothesis 4: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of gender and work level.

Hypothesis 5: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of age and job.

Hypothesis 6: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of age and ethnicity.

Hypothesis 7: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of age and work level.

Hypothesis 8: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of ethnicity and work level.

Hypothesis 9: There is no significant interaction effect in the mean scores of student responses for choosing an alternative graduate program between the categories of ethnicity and job.

Site Selection

An education department within the College of Education at the ABCD University was selected as the site of data collection due to the accessibility and the fact that eleven alternative programs have been initiated within the past eight years. These programs outnumber, individually, the regular academic program(s) by more than four to one (Table 1) and also fit the definitions and criteria previously stated in Chapter 1. Students attending these programs have other options and choices of graduate programs.

Access to the entire student population in the identified programs was easily accomplished and should reduce the sampling error in the quantitative data and lend more credibility to the findings. A letter of support for this study was obtained from the chair of the department in support of this study. (see Appendix C)

A second factor in the site selection was the accessibility to the initiators and designers of the alternative graduate programs. Each person was easily identified by title (director or coordinator of the program), was currently on staff and was in residence during the duration of this study and is known to the investigator. Each person selected has also been with the university organization for a period of more than five years and assumes functions other than the coordination of an alternative graduate program.

Participant Selection

The qualitative data collection concentrated on the designers and initiators of alternative graduate programs. There were three persons identified. Participants chosen have direct and immediate influence on decisions regarding their alternative programs and basically are responsible for the meeting of university standards and requirements. This can be termed a somewhat purposive sample selection in that it was important to the goals of this research that these individuals respond in detailed description to their experiences, motives, assumptions and created or constructed realities within the context of the alternative graduate programs.

Table 1

Comparison of student numbers in traditional and alternative programs

Traditional Program	no.	Alternative Program	no.
Master of Arts*		Program #1	30
		Program #4	237
MA in Education Leadership	30[1]	Program #6	93
MA in Curriculum/Instruction	25	Program #8	45
Master of Science*	26	Program #3	80
Preliminary Credential	see subscript 1	Program #11	22
Professional Credential		Program #7	10
		Program #9	36
		Program #10	30
	45		
Doctorate in Education*	12	Program #5	14
Certificate Program	21	Program #2	20
total	160	total	617

*indicates that enrollment in the program is limited
1 The Master of Arts program is combined with a credential program in the traditional program.

The investigator's working assumption was that people make sense of their own experiences and thus create their own reality.

The survey population was the entire student body that were currently participating in the eleven alternative graduate programs that had been selected. The total population was identified as 617. Students ranged in age from 25-55 and when compared to a representative population of all graduate programs at the ABCD University in the College of Education for the variable of gender were of similar proportion to the research participant population.

In terms of ethnicity, there was somewhat of a difference from the ABCD University demographics due to specific target populations within the frameworks of several alternative graduate programs. Age, as a variable also differs in terms of percentages from the total university graduate population. This may be due to the accessibility and flexibility factors discussed later in Chapter IV. The student population also represented an international status which again is representative of the institution as a whole. (For ABCD University demographics, see Appendix D)

The purpose of the study was explained and surveys distributed at the end of a class session. Those students wishing to participate in the study were asked to remain after class to complete the survey. Permission of the instructor was obtained prior to distribution of the instrument. To access the various student populations, dates were pre-established with the directors or coordinators of the programs during the interview sequences.

This sample can be considered somewhat of a volunteer, cluster sample in that it was more feasible to select these specific

groups of subjects rather than randomly select individuals from a much larger undefined population. It was inherent in the nature of the design of this study that actual participants responded while they were within the context of the alternative graduate program. The reasons for selection of a particular graduate program should be prevalent in the minds of the students.

Instrumentation

Survey Development

Since the purpose of the study was to identify the factors regarding development of alternative graduate programs that met the needs of graduate students, an analysis of the interview data along with factors from a review of the literature were identified. The items for the survey instrument were compiled from a series of three to five, ninety minute interviews with each of the three identified designers-initiators of an alternative graduate program. Participants for the interviews had been identified by job title (director or coordinator). Further reference to these participants will be limited to protect their anonymity.

Survey items were developed into single statements with each identified theme or factor having no less than four questions and no more than eight items related to each area. Thirty-three items were developed with three additional open-ended response areas placed throughout the survey. The use of the terms apply and attend were used interchangeably to vary the monotony and add to the face validity of the instrument.

Demographic items were added to the survey based upon a review of literature and included: gender; age; ethnicity; work setting; job; and work level.

A five point Likert scale was utilized with the following descriptor attachments: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree and (5) strongly agree.

Interviews

An interview protocol (see Appendix E) was developed to initially approach the interview candidates. An interview guide was developed (see Appendix B) based on a review of the literature and to insure some consistency in terminology throughout the interview process. All of the initial interviews conducted in this study began with a question about the background and experiences of each of the participants involving alternative graduate programs. General descriptive questions were asked to solicit information about program development from conception to design to implementation. Additional areas of questions involved individual faculty responsibilities and teaching loads. A final area was addressed regarding the organizational structure and adaptability of the university institution to concepts of change and alternative graduate programs in general. A total of twelve interviews were conducted. At times, modification of questions were necessary in order to elicit clearer responses. Questions were purposefully skeletal in nature to allow for more explicit questions as new areas of information emerged and as the interactions between the respondents and the interviewer became more animated. Each interview session was specifically more directed toward key

information needed to answer the research questions previously posited. Many questions were rephrased and repeated throughout the interviews to confirm data and specific meanings of constructs and individual words. Meanings, as understood by the respondents, were sought so data could be coded and reaffirmed to gain consensus toward themes and individual items for the survey instrument.

Focus Group

The resultant data from the interviews with the designer/initators was compiled into a Likert survey and verified by the respondents through utilization of a focus group technique (Strauss and Corbin, 1990). The focus group provided a supplement to both the qualitative and quantitative methods (Morgan, 1988) and reaffirmed the participants' interpretations of the results obtained through the interview sequences.

Respondents were asked to complete the survey from the standpoint of their development and initiation of an alternative graduate program and come to an agreement among themselves on a ranking of the identified themes (within the context of the focus group meeting). Lincoln and Guba (1985) believe that "truth can be established by dialectical discourse when consensus exists among participating parties" (p. 290-291). This process lends an implicit validity to the survey instrument. Additional data was included from a review of the literature, previous research, and through a record and document analysis to triangulate the data to provide substantial confidence in the meaningfulness of the research results.

A taxonomic analysis of the interview data was made and confirmed in the focus group meeting and resulted in the

confirmation of five major themes or factors. These themes were broken down into individual items and verified in subsequent interviews for content and in the focus group with the initiator-designer participants. This was also utilized as a construct validity measure. The five themes were further verified by an independent analysis from an outsider not connected with the research but trained and familiar in areas of quantitative data analysis.

The five themes or factors that would impact a student's choice to attend an alternative graduate program were identified as career, professional and personal factors; university as an institution; accessibility; flexibility; and program characteristics and program linkages.

The theme of career, professional and personal factors included advancement on a salary schedule, the meeting of professional development goals, ability to qualify for jobs, mobility in career, and achievement of a personal goal. The theme of university as an institution included reputation of the university; reputation of the faculty; reputation of the program; recommended by colleagues; recommended by employer; recommended by former students; lower tuition costs; as a follow-up to previous graduate work; and as a result of advertisements and brochures.

The theme of accessibility factors were identified in terms of overall program schedule; convenience of class meetings; location of class meetings; availability of other similar graduate programs; availability of individual faculty members; and program support outside of academics.

The theme of flexibility factors were identified in terms of interference with family responsibilities; combining course work with job; development of individualized program of study; and time within the program to network with colleagues.

The theme of program characteristics and program linkages were identified as maintaining a cohort group; mixing social activities with academic activities; collaboration with student's employer and the university; design of program that follows current research trends; program is different from other graduate programs; combining course work with job; and being able to attend courses with friends and colleagues.

Record and Document Analysis

Alternative graduate programs in the context of this research were, for the most part, self-supporting. Included in the circumstance are numerous brochures, advertisements, flyers, announcements and promotional documentation that were collected and analyzed for word usage, themes and descriptors in describing the alternative program. Through utilization of this documentation, the researcher was able to confirm differences in terms of the alternative programs and the traditional programs and also to understand the deeper conceptual frameworks of the initiation of the alternative programs. As a participant observer the researcher was able to "get things firsthand and to use his or her own knowledge and expertise in interpreting what is observed, rather than [totally] relying upon once removed accounts from interviewers" (Merriam, 1989, p. 88).

Coupled with data from the interviews, a clearer picture of the relationships of the alternative programs to the university as an institution, to the local departmental level and ultimately to the students who chose to attend the alternative graduate programs began to emerge. This portion of the research assisted in the development of the survey instrument.

The researcher was also able to attend various departmental and program level meetings throughout the year that discussed issues involving the alternative graduate programs. As an insider in the organization, the initiation and development of an alternative graduate program was openly discussed. Observation proved useful as programs, strategies, and methodologies for delivery were discussed. Whyte (1984) notes that "observation guides us to some of the important questions we want to ask the respondent, and interviewing helps us to interpret the significance of other means of data gathering" (p. 96).

An additional avenue that was explored was program evaluations for a select number of the traditional programs. These documents revealed areas of concern on the part of the graduate students in the traditional programs. Many of the factors and themes discovered through the interview process were confirmed by the students in written evaluation form. In traditional programs, factors that were not in evidence in the programs such as flexibility of course work and development of individualized programs as well as accessibility to individual faculty members and non academic support services were criticized by graduate students and listed as concerns. In alternative programs, evaluations frequently mentioned

factors of class location, collaboration with employer in the development of the program and the fact that the alternative program was different from other graduate programs as positive factors.

A final area of document and record analysis that was utilized was the review of 500 graduate student applications for an alternative graduate program over a three year period. A portion of the departmental level application asks students to make a statement about why they are pursuing a graduate program of study and to address any other issue they may deem relevant.

In more than two-thirds of the applications, students provided information about why they chose to apply to the program. The most frequently observed factors included that the program was recommended by former students or colleagues, that the overall program schedule meet their individual needs, that no graduate program was available in their area, and the reputation of the program. Other consistently mentioned factors were the class meeting times, professional development goals, ability to qualify for advanced jobs and university collaboration with the employer coupled with the opportunity to combine course work with their job responsibilities and areas of interest to their careers.

Artifacts like the above reflect what people believe is important and feel obliged to emphasize. Webb (1981) referred to these as unobtrusive measures which reveal hidden underlying values, expectations, and behaviors. Eisner (1991) warns that " lest this identification of specific data sources becomes fragmented and atomic, [one] should emphasize that the context as a whole is a

primary source of information; actions [and interactions] within it constitute a subtext that can reveal the meanings people share within that context" (p. 185).

Although this study utilized a mixed methodological approach, the researcher has chosen the criteria of Guba and Lincoln (1990) in judging the credibility, transferability, dependability and confirmability of this study. The construction of the quantitative measures are so critical to the outcomes of the qualitative process that these criteria seem appropriate.

Credibility was established by the investigator's prolonged exposure and experience with the university setting and alternative graduate programs in capacities not associated with research, assessment or evaluation. Transferability and generalizability are dependent upon the context and boundaries other researchers have to judge before applying these findings to their individual settings. Dependability was established through triangulation of data sources and through member checks throughout the course of this study. This open-ended, hermeneutic process encouraged those who participated to engage in critical discourse and joint collaborative reconstruction of the emergent findings.

An external reviewer, not associated with any alternative graduate program, was asked to review and audit interview interpretations for research confirmability. The five research questions were given to the reviewer.

Pilot Study

A pilot study was conducted after the interview process with 20 identified graduate students who were attending an alternative

graduate program. The instrument used in this pilot study was analyzed by way of a test-retest correlation to determine reliability of the instrument with the same pilot study participants. As a result of the analysis, a reliability coefficient of $r = .71$ was established for the instrument.

Participants in the pilot study were asked to comment on the design of the instrument, content of the instrument, clearness of the stated items, wording and readability of the instrument, and recommendations for future use. The time for completion of the instrument was noted as well as any questions that participants may have had during the administration of the survey regarding clarity of the language in the statements, understanding of directions and procedural processes (Fink and Kosecoff, 1985). From these comments, the survey instrument was revised and reordered for clarity.

Pilot survey participants raised the issue of the meaning of an alternative graduate program and this information was incorporated in subsequent administrations of the survey either in oral form or written form. The pilot study allowed for improvements in procedures, methodologies, analyses, and instrumentation.

The current research intentionally paralleled populations and methodologies from previous studies. However, previous studies had involved mainly non traditional undergraduates and examined more of the process of choice of a graduate program rather than reasons for a choice of program. The current research is one of a few studies to concentrate on the graduate level and choice of a program by themes and indiviual factors..

Survey Methodology

The research methodology involved a one-time administration of the survey instrument. (see Appendix F) The instrument was administered to all graduate students participating in one of 11 alternative graduate programs. All 11 programs were currently in operation during the time frame of this study. The instruments were delivered to individual classes and explanations of the research, the survey process and time frame were given. Although the sample population, in theory can be considered infinite, (Glass and Hopkins, 1984) an attempt was made to include the entire population of the 11 alternative graduate programs. In some cases due to location of the class meetings, the survey instrument was mailed to the instructor of the course or individually to the student's work location with a self-addressed stamped envelope. For survey instruments that were mailed, a second mailing was done within 30 days to allow for additional responses.

In the mailed survey instruments, cover letter, instructions, and the survey were included. (see Appendix G) In the case of an entire program being surveyed via mail, the individual initiator-designer of the program provided a signature on the cover letter. This strategy helped to personalize the survey and also provided a point of reference for any questions regarding the survey, the data to be collected and access to results. There was only one phone call made throughout the entire research process and that was to ensure that the survey would reach the appropriate person since they had changed work locations. A code number was assigned to each

individual program and placed on the self-addressed, stamped envelope for return to designate the specific alternative program and to facilitate institutional mail sorting.

The survey data collection process began on April 27, 1993 and was individually scheduled to meet specific program timelines (i.e., some programs met in the month of June only, and other programs were not available in the area until July of 1993). Each program was given approximately 30 days to respond. An identical follow-up mailing with cover letter and survey was sent to each participant after 20 days. By July 30, 1993, 486 surveys had been recorded. The return rate was determined to be 81%. An individual breakdown, by program, (see Table 2) was prepared to report back to the initiator-designer of each program individual results after completion of this research.

The survey data were entered into the Statview SE + Graphics microcomputer statistics program and the various formulae were applied to the individual question items as well as the identified themes and factors for the dependent variables identified in the study.

Data Analysis

Results of the data collected during the qualitative phase of the interviews relied heavily on Spradley's (1979) methods for data analysis. From the verbatim transcribed records of the interviews, meanings were derived through the use of domain and taxonomy development and analysis. The objective was to discover meanings

Table 2

Percent of survey return by program

	Population	Survey Return	Return Percentage	Method of Distribution
Program 1 [Pilot]	20	20	100%	P
Program 1	10	10	100%	P
Program 2	20	20	100%	P
Program 3	80	59	74%	M
Program 4	237	186	76%	P
Program 5	14	13	93%	P
Program 6	93	84	90%	P
Program 7	10	3	30%	M
Program 8	45	37	82%	P
Program 9	36	21	58%	M
Program 10	30	30	100%	P
Program 11	22	20	91%	M
overall totals	617	506*	82%	
research totals	597	486	81%	

P = survey distributed in person
M = survey distributed by mail
* nine additional surveys were returned but not utilized for this research
(1 from Program #3, 1 from Program #5 and 7 from Program #9)

for words, phrases, concepts and ideas regarding the reasons for the design of alternative graduate programs, the institutional interaction with alternative graduate programs and the match between student needs and the individual alternative graduate program. The resulting product was descriptive in nature and relied upon the investigator's judgment as to similar meanings among each respondent as well as by verification and consensus with each respondent's meanings throughout the interview process.

Data collection and analysis were simultaneous and ongoing, as in qualitative strategies of methodology. Merriam (1988) purports that analysis begins with the first observation, the first document read, the first interview. From the emerging data, insights, hunches,

and tentative hypotheses led to the next phase of data collection, which in turn led to refinement, reformulation or redirection of the next level of questions. "This is an interactive process in which the researcher is mostly concerned with producing believable and trustworthy findings" (p. 121).

Goetz and LeCompte (1984) address the issue of the distinguishing features of the quantitative and qualitative research designs in the area of timing of analysis and the integration of the analysis with other tasks. Although the researcher, based upon six years of experience with one alternative graduate program, had some general impressions and overarching concepts of the design and initiation of alternative graduate programs, it was important to the purposes of this research to determine if other alternative graduate programs were similar in strategy of design and implementation and if the numbers of students attending graduate alternative programs could be linked to the design and implementation of the program. The interviewing process coupled with the survey instrument addressed this concern.

With the initial design of the interview guide, a series of general questions and areas were developed. These questions were broad enough in terms of conceptual nature to allow the interviews to proceed with some structure and also allow for spontaneous interaction with each of the interview participants. Some questions did not have to be asked specifically, as they naturally emerged from the interviews as fresh thoughts surfaced and new ideas emerged.

Yin (1984) supports the concept of an ongoing analysis process in lieu of recording data in a more mechanical method. In the process

of this study, the researcher transcribed each audio tape shortly after a participant was interviewed. Pre and post interview notes and thoughts were kept in a journal for further reflection and reference. During each interview, a handwritten log was kept to allow the researcher to return to specific areas for better understanding and clarity.

Once an interview was completed and transcribed, the data was reviewed by comparing the handwritten log to the transcription and to the audio tape. Each transcription was given to each interview participant to review and edit. After this was completed, data was categorized using general themes that were developed from specific categories. Guba and Lincoln (1981) suggest that units of information can reveal information relevant to the study and even the smallest bit of information can be interpreted by itself. The themes and factors that were developed for the survey instrument were integrated into categories in this manner. Responses to the original research questions introduced in Chapter 1 were developed from the same type of analysis and will be presented in Chapter 5.

In summary, initial interview data was collected through record and document analysis and observations, a review of the literature and personal experiences of the researcher. This data provided a foundation for formulating the interview guide. A semi-structured interview format was developed. The results of the twelve individual interviews were audio tapped and transcribed by the researcher within 24 hours of each interview. Handwritten notes were compared with the transcription of the interview. Notations were made in the margins of the transcripts reflecting areas to be

further developed, confirmed or further explained. Notations were also made of voice inflections, body language, interruptions or aside comments as well as post interview comments and discussion.

Emerging themes and categories were tagged for later compilation and analysis. Individual concepts and words were identified for clarity and definition among the interview participants. Themes and factors were verified through a focus group activity as well as triangulation of data through observation and archival data. At the completion of all the interviews, an analysis of the key themes and factors was developed.

Statistical Analyses of the Data

The data collected and entered into the Statview SE + Graphics computer software program were descriptive statistical data and were analyzed by the use of inferential statistics to determine any causal relationships or interaction effects for each of the dependent and categorical variables used in this study. A confidence level of .05 was used in all tests for statistical significance and any findings slightly above the confidence level that may be of practical significance were also considered. Alpha levels or confidence levels of .05 and .01 are commonly used in educational research. As the focus of the research was on student choice of an alternative graduate program, an $\alpha = .05$ was determined to be liberal enough to permit consideration of the results that may be important and was conservative enough to eliminate any factors that were not considered to be of significant impact.

Analysis of variance (ANOVA) and a factorial design were utilized to test for statistically significant differences between the individual questions as well as the five themes or factors. A summated ranking was used to address any differences among the survey population and the initiator-designer population. Two-way ANOVA's were also measured to determine if any statistically significant interactions were present between categories of gender, age, ethnicity, work setting, work level and job.

Scheffé post-hoc comparisons were utilized to identify the specific level, group, or groups with each categorical variable that were significantly different from the others in the ANOVA's that were revealed to be statistically significant. The Scheffé post-hoc analysis is the most conservative post-hoc technique within the Statview SE + Graphics computer program. The utilization of this statistical treatment allows for a meaningful difference between the categorical levels being compared and that the differences are not a result of a chance occurrence.

An additional measure of analysis, for Hypothesis 7 was utilized by a comparison of the mean scores of the student responses, for a ranking purpose, with those of the rankings obtained from the designers of the programs in the focus group activity. Although correlation does not infer cause and effect, it was interesting to note the similarities or differences in findings.

Ethical Considerations

The nature of naturalistic inquiry can lead to examination of one's self-interests, motivations, beliefs and philosophies. A benefit of this study was the exploration of these components for the investigator and the respondents. There was no expense or risk to participants in this research other than that possibly associated with minor fatigue during the course of the interview. Participants during this phase of the research remained anonymous and the data collected was referred to either by pseudonym or as a group finding. All information was kept confidential and no external preparation of the interview data was needed.

Participants in the interview process were asked to sign a consent to act as a research subject form (see Appendix H) which outlined the purpose of this study, the expected duration of the interviews and any potential risks and benefits of participation. Participants could withdraw from the research at any time during the course of the investigation. Participants were also given the opportunity to amend or alter their responses by reviewing a copy of each of the transcripts prior to publication in this study. Audio tapes and transcripts were stored at a non- site location. At the conclusion of the study, tapes and transcripts were destroyed.

Participants in the quantitative phase of this study remained anonymous by design of the survey instrument. The only reference made to persons participating was in the form of the dependent variables: gender, age, ethnicity, work level, work setting or occupation and then in terms of an overall subgroup. The investigator

assumed voluntary participation and consent by each respondent's willingness to complete the survey. Surveys were personally collected by the investigator. Survey data was entered into the computer software program solely by the researcher. Surveys were destroyed after the data base was built and stored on a disk in the possession of the researcher. Since the data base may be utilized for purposes other than this study in the future, it will be retained.

Methodological Assumptions of the Study

Several methodological assumptions were made by the researcher during the research investigation.

1. The researcher assumed that graduate students make choices to attend programs based on some criteria.

2. The researcher assumed that alternative graduate programs are initiated for some reason(s) since regular university programs are in place that offer the same educational ends.

3. The researcher assumed that all participants in the interview sequences and respondents to the survey instrument would answer to the best of their ability, with integrity, and without bias thus yielding a true indication of the factors impacting choice of an alternative graduate program and in the design and implementation of an alternative graduate program.

4. The researcher assumed that all participants in the study would embrace the essence and intent of the study as a meaningful, timely, and useful effort to improve and inform the quality of graduate programs.

Limitations of the Methodology

In addition to the limitations that were identified in Chapter 1 regarding the research study, several methodological limitations were also identified.

1. The literature has shown a lack of research in the area of choice of graduate programs. It may be difficult to ascertain certainty of the results due to the complex nature of decisions that adults make in their lives. To single out one component (choice of graduate program) may involve more than this research study can examine.

2. Since a mixed methodological approach is not commonly utilized in research, there may be subsequent findings that critique and recommend alternative strategies when both qualitative and quantitative processes are utilized in the same study.

3. Another limitation recognizes that the scope and richness of the qualitative results are only as valid as the researcher's skill and competency in interviewing, interpretation of data and bias within the context of this study at this point in time.

4. Sub-analyses of the variable of ethnicity was collapsed to allow for more significant findings. This resulted in only two levels of ethnicity: white-non Hispanic and others. The population of the 11 alternative programs in this study were not highly diverse. This resulted in very small numbers in the original sub-groups of ethnicity. Although there are most likely significant findings among and between the individual ethnic groups, the numbers in the sub-

groups would have to be enlarged to have any meaning for program development and policy.

5. Although there was a high return rate of 81%, there was not time during this research to do any follow-up on non-respondents.

6. The interview collection of data relied heavily on the individual responses of the participants who were all male. This provides a unique and somewhat limited interpretation to the data since people create their own interpretations of phenomena.

7. The site selection and population was selected for study because of the researcher's particular interest in alternative graduate programs and personal involvement in these types of programs. This limits the objectivity of the researcher. The researcher recognized this bias and attempted to adopt a neutral stance during the collection and analysis of the qualitative data, but bias and error can never be totally eliminated, only minimized.

Summary

Chapter III has presented discussion of the methodological framework, research design, subject and participant selections, nine secondary hypotheses were introduced, the instrument and protocol for the study, the pilot study, the statistical treatment of the data, methodological assumptions of the study and methodological limitations of the study. Due to the mixed methodological strategy of the study, areas involving the interviews, focus group, record and documentation analyses, site selection, ethical considerations, survey development, survey methodology and mixed methodological

approach were discussed. The results of the data analyses and statistical analyses and discussion and interpretation of the findings of the research will follow in Chapter IV.

CHAPTER IV

PRESENTATION, DISCUSSION AND INTERPRETATION

OF THE FINDINGS

Introduction

The data analysis and discussion of the findings of the research are presented in six sections in Chapter IV. The first section of the chapter presents a qualitative picture of the interpretation and analysis of the interview data that led to the identification of the five themes and individual factors that were incorporated into the survey instrument. The second section of the chapter presents the demographic data accumulated through the survey participants' responses. The categorical variables utilized in the analyses and description of the subject population were also used to disaggregate the various levels of each categorical variable to understand, in a more meaningful way, the make-up, range, and numbers of respondents in each of the subgroups of interest. The third section presents a descriptive statistical summary and a discussion of the statistics for the dependent variables under study for the 486 students that responded with completed questionnaires. The fourth section presents the data and discusses the statistical analyses of the data for each of the seven major hypotheses

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presented in Chapter III. The fifth section presents the data and discusses the statistical analyses of the nine secondary hypotheses presented in Chapter III as well. The sixth section summarizes the qualitative responses of the survey respondents from the portions of the survey instrument which asked for write-in responses. The chapter concludes with a summary of the major themes and findings presented in the study.

The qualitative analyses of the data involved the identification of themes and factors related to the design and implementation of alternative graduate programs from the point of view of the initiator-designer. The themes were coded and verified with the interview participants through utilization of domain and taxonomic analyses as well as a focus group activity. Domain and taxonomic analyses were developed and are presented. Results of the focus group activity are presented in Chapter IV. A comparative ranking of themes and individual survey items between the interview participants and the survey respondents was completed and results and findings are presented in Chapter IV.

The statistical analyses of the data involved 180 one-way ANOVA's to test each of the seven primary hypotheses discussed in Chapter III and 75 two-way ANOVA's to test each of the nine secondary hypotheses also presented in Chapter III. The statistical analyses performed on the data collected in the study produced a total of 255 ANOVA tables and subsequent post hoc analyses tables. Only the statistically significant findings will be presented and discussed due to the volume of printed materials that resulted. ANOVA tables for the significant findings will presented in Chapter

IV. Post hoc analysis will be discussed and the subsequent tables can be found in Appendix M. As noted in Chapter III, an $\alpha = .05$ was used in all tests of statistical significance.

Section 1: The Initiation and Design of Alternative Graduate Programs

Research questions one and three as presented in Chapter 1 asked the questions of what factors are considered in the development and design of graduate alternative programs and is there a match between the design characteristics of alternative programs and the needs of prospective students. The focus of this research was to address the design factors in terms of a match between the graduate students who chose to attend alternative programs and the designers/initiators who build alternative programs with certain factors in mind. The first research question was addressed by interviews with the designers/coordinators. Findings of this data collection were identified, coded, and analyzed and are presented in this section. This data led directly to the design of the survey instrument. Findings of the data collection related to the matching portion of the inquiry are addressed in a later section in this chapter.

Record and Document Analysis

A record and document analysis revealed a basic foundation of characteristics that seemed similar to all of the eleven alternative programs. Figure 2 presents data verified through the interview analysis as well as personal observations to be those elements different from the traditional program. Although not all programs

have each distinctive characteristic, the majority of the programs seem, by design, to feature factors that designers/initiators feel are important in meeting the needs of graduate students in their programs. The one common feature that is a part of every program is the fact that all programs operate on a non traditional schedule and maintain some sort of cohort group for the students. Other factors include courses meeting off campus, allowances for individualized programs, partnerships with employers, a mixture of social activities with academic activities and the fact that in some aspect the program offers courses different from the traditional. The last factor is not indicated in each program due to program design and the student population that is served.

	non traditional schedule	off campus meetings	partnership w/employer	maintains cohort group	allows for individual courses	mix of social activities w/academic	different courses than traditional
Program 1	X	X	X	X	X	X	X
Program 2	X			X	X		X
Program 3	X		X	X	X	X	X
Program 4	X	X		X	X	X	X
Program 5	X	X		X	X	X	X
Program 6	X	X	X	X	X	X	X
Program 7	X	X	X	X	X		
Program 8	X			X	X		X
Program 9	X	X	X	X			
Program 10	X	X		X			
Program 11	X	X	X	X			

Figure 2: Characteristics of Alternative Graduate Programs

A second record and document analysis was done specifically related to the promotional literature, advertisements, and brochures that were associated with each of the eleven alternative graduate programs. In order to gain a clearer understanding of the meaning of

specific words and phrases utilized in describing the alternative programs, a comparative analysis was conducted between promotional literature of the traditional and alternative graduate programs. Figure 3 illustrates the similarities and differences that were found. There is a strong preponderance of action words utilized in alternative program literature. This includes references to words such as exciting, flexible, individual, dynamic, unique, variety, and special. The most commonly used words across all the alternative programs included references to collaboration, cooperation and coupled with, referring to partnerships with organizations and institutions outside of the formal university structure. Other high frequency words included cohort, successful, support, linkage(s), and new. The commonalties of work usage in the descriptive literature of the alternative programs as opposed to the traditional programs may suggest that alternative programs are different. Sam Baker calls them "more supportive, customer concerned, and customer sensitive." He also believes that "programs of this sort...are really oddballs."

Throughout the interviews there was consistency in the terminology utilized to describe alternative graduate programs from the designers/initiators as they attempted to explain their perceptions of the differences between their programs and those of the traditional programs. Graduate students in casual conversations, their writings and in correspondence also allude to this type of word usage.

Key words	Program 1	Program 2	Program 3	Program 4	Program 5	Program 6	Program 7	Program 8	Program 9	Program 10	Program 11	Traditional Program
accommodate			X		X		X			X	X	
choice options	X	X	X	X		X	X	X				X
cohort	X		X		X		X	X	X	X	X	
collaborate cooperate coupled	X	X	X	X	X	X	X	X	X	X	X	
dynamic				X				X				
exciting				X	X	X						
field work	X	X	X	X	X	X	X	X	X	X		X
flexible	X		X	X		X	X					
individual	X	X	X	X	X	X	X					
Institute				X				X				
intensive			X	X				X	X	X		
linkage	X	X	X			X		X	X		X	
new	X	X			X		X	X	X	X		
opportunity	X	X	X	X	X	X	X	X	X		X	X
outstanding				X	X							
outstanding faculty				X	X			X		X		
quality	X		X	X	X	X			X		X	X
service	X	X	X	X	X							
significant								X				
special				X	X	X	X	X		X		
successful		X	X	X	X		X	X		X	X	
support	X	X	X	X	X	X			X			
unique			X	X	X	X		X	X		X	
variety				X				X				

Figure 3. Comparison of the word useage between alternative graduate program promotional literatrue and the traditional program literature.

Meeting student needs through alternative graduate programs

"I see a need to offer courses in a variety of configurations to make education available. We are a state agency and we should strive to make our programs available to the greatest number of people", states Sam Baker, a pseudonym for a designer/initiator of alternative graduate programs. Larry Roman, (pseudonym) a second designer/initiator of alternative graduate programs, adds that "we have always been looking into how to extend our program and take the program off campus to better meet the needs of our customers." A final comment by Matt Franklin, (pseudonym), a third designer/initiator of alternative graduate programs, parallels the same sentiment, "You really only have two customers in this whole process. The first customer needs to be the student and the second needs to be your teaching faculty, but they are not first, they are second and in that order!. These are the basic principles that I operate under."

Designers/initiators speak a lot about the students they service in alternative graduate programs. Matt Franklin states, "The first and probably the biggest driving factor, from our standpoint, is our student population that we are trying to attract and whether they are located in [one specific area or another area] they all have similar characteristics." Larry Roman believes "you have to have a program that is built and meets the needs of the customer." Sam Baker purports that "it's incredible that we have essentially three times the number of students in our alternative programs than we have in our normal program, banging on the doors and we have to either turn them away or turn to serving them through our

alternative programs." Embedded in all of these statements are concepts of need and how to best meet these needs in the delivery and type of graduate programming that is available to students.

The designers/initiators, through the series of interviews, provided data that through tagging, coding and analysis led to the five overarching themes of the needs that are met for graduate students as shown in a taxonomic analysis in Figure 4. These themes

VERIFIED THEMES OF PROGRAM DESIGN

Career Professional Personal	University as an Institution	Accessibility [in terms of]	Flexibility [in terms of]	Program Characteristics Linkages
career advancement; career mobility; personal goal	reputation; recommendation; other [faculty, university, program, employer, colleagues, graduates, costs, promotions, follow up]	faculty; support services; program; schedule [time]	career; family; network time; program plan [location]	employer; design; social; current

Figure 4. Taxonomy of verified themes of design aspects of alternative graduate programs

are embedded in the structure and design of alternative programs and often act as the catalyst for beginning an alternative graduate program. The five themes are consistently spoken to in the interviews themselves, as well as promotional literature and advertisements for the programs. The five themes that were identified as a result of this research are: (1) career, professional and personal; (2) university as an institution; (3) accessibility; (4) flexibility; and (5) program characteristics and program linkages.

The theme of career, professional and personal includes such factors as the ability to advance in one's career, mobility within a career field, the meeting of personal and professional goals as well as professional development objectives, and the ability to qualify for jobs and move upward in one's career. Larry Roman believes "that there will always be a substantial number of students who are getting a masters degree for salary purposes, for promotional, career purposes, to gain more mobility in their careers." Matt Franklin elaborates some specifics.

> Human services has changed so dramatically, the changes are more dramatic for individuals even to do their daily job, they need to have upgraded skills because of strategies that exist, client populations and a whole myriad of different areas. That's been a trend that has gone on. The typical educational delivery system has been the event, the workshop, a two day seminar, a half day seminar, something that is topical. When a person completes 14 of these, for example, what they get is 14 slips of paper that say they participated. When they take it back to their employers or the hiring authority, they get a "good person", end of discussion. These individuals wanted to move up in their organizations and begin to administer the programs, they didn't have any expertise and they were competing with people who had expertise in administration in the form of a

degree. We began looking at alternatives as to what we could do differently.

The theme of university as an institution includes factors such as reputation of the university, reputation of the program and reputation of the faculty. Larry Roman added that "I think if you program develop, you build the program and the department's as well as the university's reputation." Other factors associated with this theme include recommendations from former students, colleagues, employer. Larry Roman continues that "the selling point of the university program is that they know someone else that has been down here. It's the stories that they tell about the program." According the designers/initiators, graduate students look at who is teaching in the program and the degree to which there is academic rigor.

Sam Baker indicated that people often ask him "Isn't there some way that our university could offer a program, we are the only state funded, inexpensive, relatively inexpensive program in our area...it is kind of ridiculous that we only have one state college [and such limitations on our program]." Tuition costs at the ABCD University are among the lowest due to design in the California Master Plan for post secondary education institutions. Other factors in this theme included advertisement and brochures as well as follow up to previous graduate course work.

The third theme that was revealed through the interviews was a theme related to accessibility. Accessibility was defined in terms of overall program schedule, class meeting times, location of classes, program availability, faculty accessibility and non

academic support services. Sam Baker explains that alternative programs offer summer only programs and offer geographically different locations. He talks about service to areas and at times that are not "exclusionary" to certain populations of student. The example given is that

> at least one-half of your faculty at secondary schools
> are involved in student activities of some sort. There
> are 40 some athletic settings for examples and 40
> teachers out of a staff of 75 who will be involved in
> these activities. These [teachers] are often the most
> active people who are willing to work with students
> after school. You then exclude the most active, most
> aggressive people from participating when classes
> only meet at 4:00 p.m.

Other designers/initiators spoke of using different formats to accommodate student needs. These ranged from Sunday night, all day Monday and most of a Tuesday for 13 months, to other 3 day options, to a total immersion of 21 days during the month of June, to summers only formats. Larry Roman believes that these are "factors that people who select a program look at, accessibility." Roman continues that

> we don't develop our courses around when the faculty
> are available, when space is available, and when the
> university says we are supposed to start programs. We
> start our courses and schedule them when they best
> fit and meet the needs of our customers, our students.

Matt Franklin believes that students "typically have more intense access to the instructors, if you do a strategy of a Thursday, Friday or entire week, you as the instructor are a captive audience

for those students. It's dependent more upon the student's schedule, the issue is what fits." Franklin continues that it is being anticipatory with regard to course schedules, texts and materials so that individuals don't "come to the program with a lot of surprises, all the way from little things like when classes are scheduled, to the kinds of rooms, to the content of the course and the instructional modality as well as the instructor. I think it is essential."

A fourth theme was identified in terms of the flexibility of the alternative graduate programs. Factors identified within this theme included being able to combine course work with career, the ability to develop an individualized program, time within the program to network with colleagues and as little interference with family responsibilities as possible. Key terms that were frequently mentioned were programs that could be based on an individual, student by student basis, being able to have the student schedule their own time, doing field work in conjunction with their course work, setting up peer or cooperative learning groups as they go about their field work, a real connection between classroom work. Sam Baker finds that in the alternative programs, "graduate students by design of the program, can do independent study work, thesis and masters projects that are particular to their school. " He believes that "course descriptions are more flexible, giving people the latitude to do very practical kinds of projects as well or not to conform to the requirement of a research structure."

All the designers/initiators spoke about the graduate experience from the standpoint of how it interrupts and changes the

life of an adult graduate student. Matt Franklin suggests that in graduate programs, "we have people who are more mature coming back and often times into second or third careers, these are not the standard academic types." Larry Roman identifies "people who have been out of college or university for some time and find it difficult to come to college or university."

The final theme to be derived from the interviews was the concept of the development of certain program characteristics and program linkages which the traditional graduate programs do not have. Factors within this theme include partnerships, employer collaboration, a cohort group identification, and mixing social and support activities with academic activities. Program designers/initiators include the involvement of coordinators and directors in the program with a high visibility profile, tying in with school districts and having the districts in partnerships, having a consortium of school districts that in the design of the program allows the district to localize the program, and the idea of using alternative styles of delivery. Matt Franklin believes that "educational experiences need to be more than academics." Larry Roman calls it the "development of an extended family or community, a community of learners, a community of leaders."

In summary, Matt Franklin sets the environment for alternative graduate programs:

> We [as a university] are really geared toward the idea
> of a freshman though a senior program, the education
> being done in four years, classes being taught between 7:00
> a.m. in the morning until 4:00 p.m. in the afternoon, always
> an instructor in front of the class. That's been the

traditional mode that both faculty and administrators
have embraced. Graduate education has been kind of an
anomaly, as opposed to the trend setter. When you look at
graduate education, especially in human services areas,
we are really looking at very different clientele then
individuals in say, psychology, who are preparing people
for doctoral studies at the masters level.

Designers/initiators seem to believe that traditional graduate
education programs use a menu driven approach by telling students,
"here is all of the courses we have to offer, your choice is to pick
from this menu", rather it is relevant to them or usable in the short
or long terms. Matt Franklin believes that "alternative programs can
change that." He strongly believes that "we should spend time asking
what the consumers want." Larry Roman summarizes by saying that

students have choice and exercise that choice. They go
where there is somebody they trust, where somebody
is visible, where there is a great deal of credibility.
They go because there is a belief and confidence that
things that are promised to be different are different.

Sam Baker concludes that "the word alternative means, you are doing
something that is not mainstream, not the traditional, not the
standard. Alternatives are absolutely vital if the organization is
going to continue to change and live."

The five themes and individual factors were incorporated into
a survey instrument as shown in Figure 5. The survey instrument
was validated by the designers/initiators of the eleven alternative
graduate programs as to content, meaning, and thematic divisions.

Themes (factors)	In terms of factors related to:	Related survey question
I. Career	•advance in salary	#5
	•qualify for jobs	#7
	•move upward in career	#8
Professional	•meet professional goals	#6
Personal	•personal goal	#9
II. University as an Institution	•recommended by	
	colleagues	#11
	former students	#12
	employer	#16
	•reputation of	
	program	#13
	university	#14
	faculty	#15
	•tuition costs	#17
	•follow-up to previous	
	program	#18
	•promotions	#19
III. Accessibility	•schedule	
	overall program	#21
	class meetings	#22
	•location of classes	#23
	•no other program in	
	area	#24
	•faculty	#32
	•support services in	
	non academics	#35
IV. Flexibility	•family responsibilities	#25
	•coursework/career	#27
	•develop own program	#29
	•time to network	#31
V. Program Characteristics	•maintains cohort group	#33
	•mix of social activities	#34
	•follows current research	#30
Program Linkages	•different from others	#36
	•employer/job	#26
	•attend with friends and	
	colleagues	#28

Figure 5. Themes (factors) in terms of survey items validated by interviews.

Section 2: The Demographics of
the Alternative Program Populations

Survey instruments were distributed during the months of April, May, June and July, 1994, to 597 active students in eleven alternative graduate programs in the College of Education at the ABCD University. A total of 495 instruments were returned for a return rate of 83%. Of the 495 instruments returned, nine respondents' surveys were excluded from the research project due to inadequate completion or misunderstanding of the directions for completion of the instrument. The 486 remaining instruments lowered the research return rate to 81% for this study.

A major concern in survey research centers on the question of whether the sample population is representational in proportion to the larger population. Of the 486 students surveyed, 41% were male and 59% were female. The total population represented two categories of work setting: educational, with 85% indicating they worked in an educational setting and non educational, with 15% indicating they worked in another environment other than education. The 15% of non educational work setting respondents all were involved in human resource services, mostly in rehabilitation counseling.

Of the 85% who indicated they worked in an educational setting, 58% indicated they were a teacher, 27% of the population were administrators, 8% indicated they were counselors, and 7% indicated they had other responsibilities. Additional data was collected as to the work level of the respondents: 32% worked in an

elementary school; 15% indicated they worked in a junior high school or middle school; 26% in a high school; 5% in higher education; 5% in a district level capacity; and 17% at some other work level.

To provide an indices for comparison between demographic responses for the total subject population and the respondent group, the 486 respondents were also disaggregated according to age and ethnicity. A test of statistics for proportion indicated that there was no significant difference at $\alpha = .05$ between the respondent group and the proportions of the total student population for age. It was also found that age breakdown did not correspond with the percentages found at the total university level. Some of this difference can be explained by the nature of the alternative graduate program attracting different populations to their programs.

A similar procedure for the ethnic diversity category was conducted and a calculation of the test statistic for proportions indicated that there was no statistically significant difference at $\alpha = .05$ between the overall population of ABCD University and the proportion of respondents that had returned the survey instruments.

It should also be noted that for a higher degree of statistical validity, the categories of ethnic diversity were collapsed and recoded into two groups. The original data collected indicated that there were less than 4% in any one group, some subgroups were as small as one response and the count for each category was 19 or less. Utilization of the small cell sizes would have given a false impression to any statistically significant findings and increased the possibility of a Type I error. Utilizing an ethnicity recode, 84% responded that they were white-non Hispanic and 16% indicated that

were not white-non Hispanic increasing the individual cell sizes to 401 and 76. Although these tests do not conclusively provide evidence of respondent group representation, it is a strong indicator combined with the 81% return rate that suggests that the respondent group was representative of a cross-section of the entire student population of the eleven alternative graduate programs.

Frequency distributions based on the 486 usable returned instruments yielded the following disaggregation of data for each of the six categorical variables used in this research. Appendix I contains figures or charts for each of the independent variables representing a more visual perspective of the demographics of the student respondents' population.

Table 3

Frequency distribution for the gender variable

Bar:	Element:	Count:	Percent:	
1	male	201	41.358%	
2	female	285	58.642%	- Mode

There were 201 males and 285 females that returned completed survey instruments for 41.4% male and 58.6% return percentages. As previously noted, the response proportions were not significantly different from the proportions of the entire student population for the gender variable.

Table 4

Frequency distribution for the age variable

Bar:	Element:	Count:	Percent:	
1	under 30	61	12.656%	
2	30-39	164	34.025%	
3	40-49	222	46.058%	- Mode
4	50 and over	35	7.261%	

The mode for the age categories of 46% of the students in graduate alternative programs were in the 40 to 49 age group. The next largest category was the 30 to 39 age group which contained 34% of the respondents. The youngest and oldest categories had the fewest responses with 12.7% in the under 30 group and 7.3% in the 50 and over group.

Table 5

Frequency distribution for the ethnic diversity variable

X_1: Recode of ethnic

Bar:	From: (≥)	To: (<)	Count:	Percent:	
1	1	2	401	84.067%	- Mode
2	2	3	76	15.933%	

By the ethnic designation variable, 84.1% indicated that they were white non-Hispanic in origin. In the category of not white-non Hispanic, 15.9% responses were indicated. Again, it should be noted that the ethnic diversity categorical variable was collapsed into two categories from the original designation of 10 categories. (See Appendix J for the original data collection of ethnic subgroups.)

Table 6

Frequency distribution for the work setting variable

Bar:	Element:	Count:	Percent:	
1	no	74	15.258%	
2	yes	411	84.742%	-Mode

The data in Table 6 show that 84.7% of the students indicated that they worked in a traditional educational setting. These results were to be expected since the department under study in this research is in the College of Education at ABCD University and primarily attracts students who are preparing for administrative level jobs in public and private educational settings at the K-12 levels. The 15.3% who indicated a non educational setting represent proportionately the number of students served in the department who are in fields of rehabilitation counseling and other human services areas preparing for leadership and administration positions.

Table 7

Frequency distribution for the job variable

Bar:	Element:	Count:	Percent:	
1	tch	276	57.62%	-Mode
2	admin	130	27.14%	
3	coun	40	8.351%	
4	other	33	6.889%	

As Table 7 shows, 57.6% of the respondents indicated that they were teachers, 27.1% had administrative assignments, 8.4% were counselors and 6.89% were in another job assignment. As with the ethnic diversity variable, the non traditional programs attract other populations and may not represent an accurate proportion of a larger population since many of the non traditional programs are specifically designed for non traditional populations.

Table 8

Frequency distribution for the work level variable

Bar:	Element:	Count:	Percent:	
1	elem	151	32.128%	- Mode
2	jr/mid	69	14.681%	
3	high sch	125	26.596%	
4	higher ed	23	4.894%	
5	distr	23	4.894%	
6	other	79	16.809%	

The work level variable had 32.1% of the respondents indicate that they worked at the elementary level, 26.6% indicated that they worked at the high school level, 16.8% indicated that they worked at levels other than those listed, and 14.7% indicated that they worked at the junior high school or middle school level. The district and higher education categories had 4.9% responses each. As noted above with the variables of ethnic diversity and work setting, although not statistically significant, the proportions may not be representative of the larger population in the traditional programs due to the specific design of each alternative program and its targeted audience.

Section 3:   Descriptive Statistical Summaries,
Interpretation, and Discussion of the
Results of the Dependent Variables

Through the application of the formulae associated with each variable in terms of the themes and individual survey items as presented in Section 1 of this chapter, means and standard deviation values for each variable were derived for each of the respondent groups identified by the six independent variables. There was one common Likert scale used to solicit responses from the subjects. The range on the scale was 1 to 5. As a result, each variable may be interpreted individually and further interpreted as a result of its placement within the appropriate theme. All variable means may be comparable to each other and themes may be comparable to other themes. The presentation and discussion of descriptive summaries of each of the six dependent variables will follow with the independent variable headings: (a) career, professional, personal; (b) university as an institution; (c) accessibility; (d) flexibility; and (e) program characteristics and program linkages. Table 9 presents the five themes disaggregated by each of the individual survey items and presents means and the standard deviation for each theme as well as for individual survey items within each theme.

Student responses in the eleven alternative graduate programs expressed a high degree of importance to the factors associated with the university as an institution theme with means of 27.30. Within the theme itself (see Figure 6), individual survey items indicated that recommendations by colleagues were an important

factor in choosing a graduate program with a mean of 3.49. Other individual factors which were agreed to be of importance were reputation of faculty with a mean of 3.26, reputation of the program and advertisement and brochures with means of 3.17 each. The reputation of the university and recommendations by former students followed as important with means of 3.13 and 3.07 respectively. Other factors that may be considered as a high neutral in the decision to apply to a particular graduate alternative program, were lower tuition costs with a mean of 2.75, recommendation by employer with a mean of 2.71 and choosing a graduate alternative program as a follow up to a previous program with a mean of 2.55.

Table 9

Means and standard deviations for themes and individual survey items

Survey Item	Mean	S. D.
Career/Personal/ Professional	21.05	3.23
Q#5 advance on salary schedule	3.63	1.26
Q#6 meet professional goals	4.45	.77
Q#7 qualify for jobs	4.21	.955
Q#8 move upward in career	4.21	.953
Q#9 personal goal	4.55	.768
University as an Institution	27.30	5.72
Q#11 recommended by colleagues	3.49	1.33

Table 9

Continued

Survey Item	Mean	S. D.
Q#12 recommended by former students	3.07	1.36
Q#13 reputation of program	3.17	1.17
Q#14 reputation of the university	3.13	.96
Q#15 reputation of faculty	3.26	1.06
Q#16 recommended by employer	2.71	1.25
Q#17 lower tuition costs	2.75	1.25
Q#18 follow-up to previous program	2.55	1.24
Q#19 saw advertisements, brochures	3.17	1.37
Accessibility	21.39	3.65
Q#21 overall program schedule	4.36	.85
Q#22 classes meet convenient	4.17	.96
Q#23 location of classes convenient	3.47	1.29
Q#24 no other program in area	2.72	1.51
Q#32 faculty more accessible	3.40	1.00
Q#35 non academic program support	3.28	1.05
Flexibility	14.58	2.85
Q#25 not interfere with family	3.01	.06

Table 9

Continued

Survey Item	Mean	S. D.
Q#27 combine course work/job	4.08	1.02
Q#29 develop own program	3.56	1.19
Q#31 program time/network with colleagues	3.92	1.00
Program Characteristics/ Program Linkages	20.83	4.06
Q#26 employer collaborating with university	2.67	1.45
Q#28 attend with colleagues/friends	3.47	1.25
Q#30 program design/current trends	3.84	.99
Q#33 cohort group	3.73	.97
Q#34 academics mix with social activities	3.34	1.07
Q#36 program different from other graduate programs	3.79	.92

The high mean on the university as an institution theme suggests that alternative graduate programs are chosen by

recommendations and reputations of the program itself. Traditional programs could identify a similar theme related to the traditional program and place a value of the perceptions of students regarding the importance of recommendations and reputation.

On the theme of accessibility the respondents reported a relatively high degree of agreement that factors associated with accessibility were important in the decision to attend an alternative graduate program. The mean for the theme of accessibility was 21.39. At the highest end of the accessibility theme (see Figure 7) were the individual factors of overall program schedule meeting respondent's needs with a mean of 4.36 and class meeting times being convenient with a mean of 4.17. A second grouping of factors seemingly important included convenience of location of classes with a mean of 3.47, individual faculty members being more accessible with a mean of 3.40, and the support provided by the program when student is not in class with a mean of 3.28. The final factor in the accessibility theme of no other graduate program available in the area reported a mean of 2.72. These findings seem to indicate the students chose a graduate program to attend based on specific individual needs. The commonalties are indications of the lack of these factors in the traditional graduate programs.

Closely related to the accessibility theme was the theme of career, professional and personal factors with a mean of 21.05. The highest factor associated with the decision to pursue a graduate degree is associated with meeting a personal goal with a mean of 4.55. Responses indicated that meeting professional goals with a mean of 4.45, is a strong factor to be considered in pursuing a
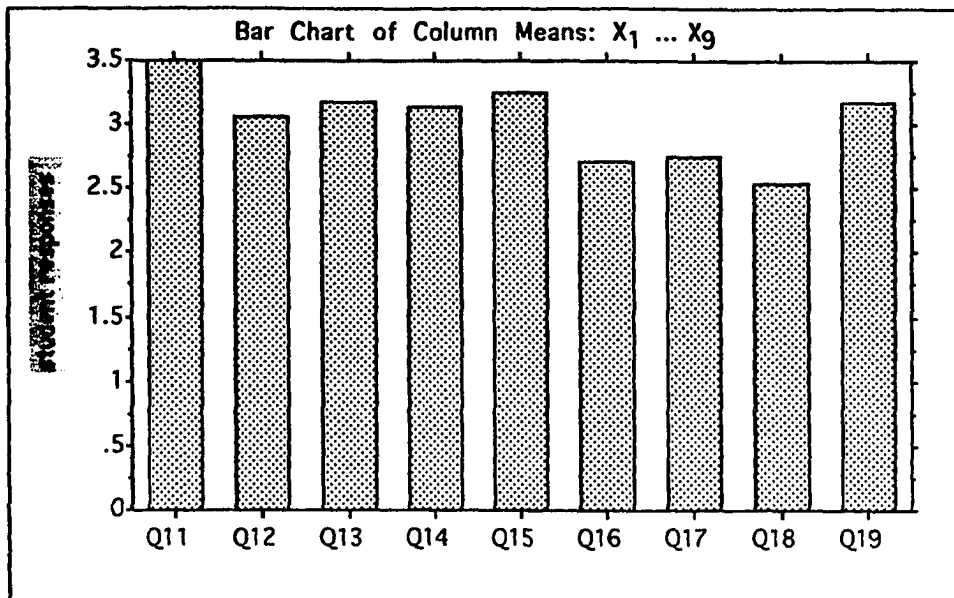
Q11	recommended by colleagues	Q16	recommended by employer
Q12	recommended by former students	Q17	tuition costs
Q13	reputation of the program	Q18	follow up to previous program
Q14	reputation of the university	Q19	promotional literature
Q15	reputation of the faculty		

Figure 6. Individual item means for university as institution theme
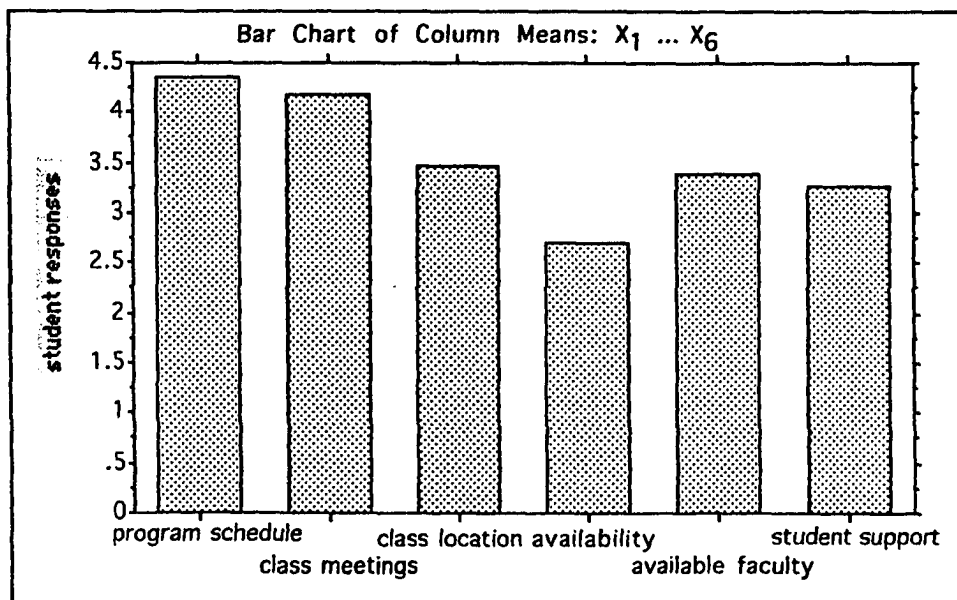
Figure 7. Individual item means for accessibility theme

graduate degree. Mean scores of 4.21 were reported for being able to qualify for jobs and moving upward in a career. The data suggests that meeting personal and professional goals are important considerations in the choice made to pursue a graduate degree.

A final factor reported indicated that advancement on a salary schedule was above neutral with a mean of 3.63 in reasons related to the decision to gain an advanced degree. (see Figure 8) The findings suggest that career, professional and personal factors are individually related to reasons for choosing to pursue a graduate degree program. These factors are generally outside the domain of the individual institution in planning and designing graduate programs and apply to traditional as well as non traditional graduate programs but the implication could be drawn that recognizing future employment trends and career opportunities as well as having an updated knowledge of individual employer standards for career advancement and qualifications may be an important factor in identifying potential populations as well as designing programs that specifically meet career needs (i.e., number of credit units needed, specializations and types of courses needed to apply for new jobs, and requirements and credentials needed to advance on salary schedules).

The theme of program characteristics and program linkages with a mean of 20.83 directly relates to characteristics of alternative graduate programs as well as linkages that these programs provide in their initial design and throughout their implementation. Respondents agreed that factors related to the design of the program following current research based trends with
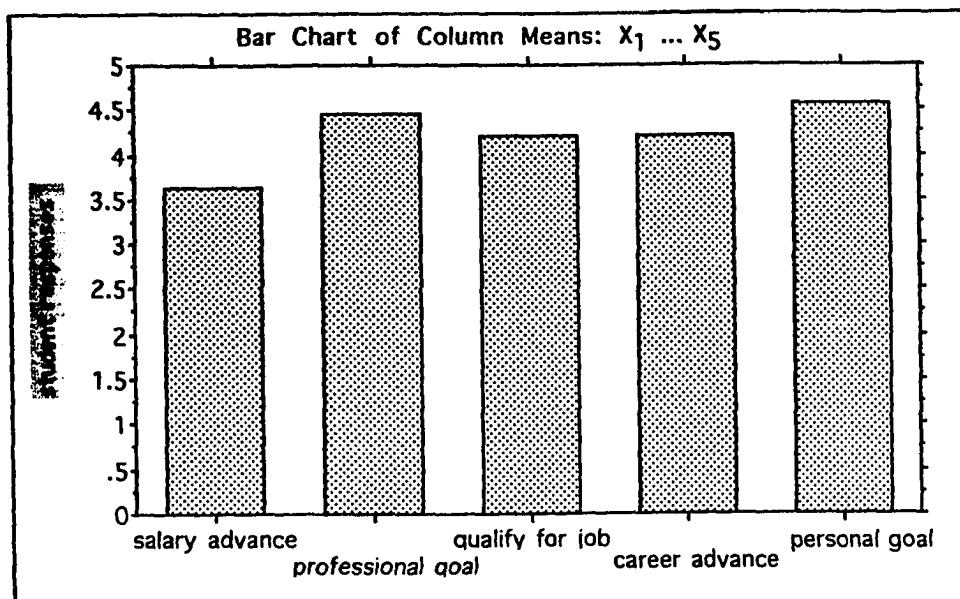
Figure 8. Individual item means for career, professional and personal theme
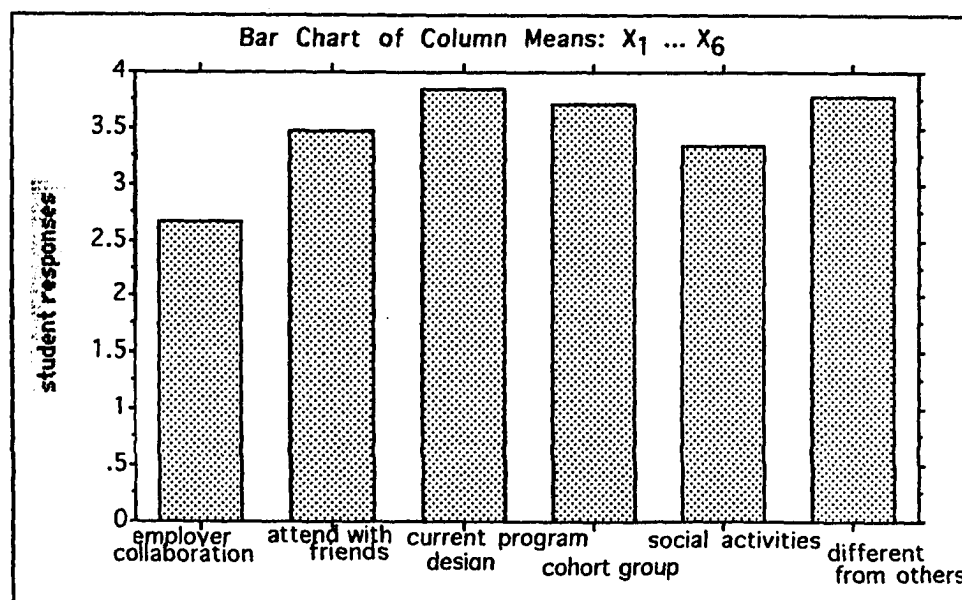
Figure 9. Individual item means for program characteristics and program linkages theme.

a mean of 3.84 was an important factor in choosing to attend a particular alternative graduate program. A second group of factors indicated that maintaining a cohort group with a mean of 3.73 and that the alternative graduate program is perceived as different from other graduate programs with a mean of 3.79 are considerable factors in the decision to attend a graduate program. Closely related factors of attending the program with colleagues and friends with a mean of 3.47 and mixing academics with social activities throughout the program with a mean of 3.34 were reported as somewhat more important than employer collaboration with the university program with a mean of 2.67. (see Figure 9) These findings suggest that traditional programs could benefit from a continual review of current trends in the field of educational training strategies making programs different from other traditional graduate programs and employ the concept of cohort groups as a system of enrollment and scheduling of programs. This finding is consistent with research studies and practical experiences of group learning and the development of cohort groups in an educational environment that is reported in the literature (Merino, Muse and Wright, 1994; Porter, 1989).

With respect to the theme of flexibility of programs, with a mean of 14.58, the findings revealed a strong indication that combining course work with a job was a substantial factor, with a mean of 4.08, in attending a particular graduate program. (see Figure 10) Also indicated with a high mean of 3.92 was time in the program to network with colleagues. The ability to plan and develop an individual program indicated strong agreement with a mean of 3.56

and the factor of non interference with family responsibilities was represented by a mean of 3.56. Analysis of these findings suggests that graduate programs need to pay particular attention to courses which allow individuals opportunities to mix course work with job responsibilities and to be flexible in designing strategies that allow for and encourage time to interact with colleagues as well as appropriate levels of individual program development.
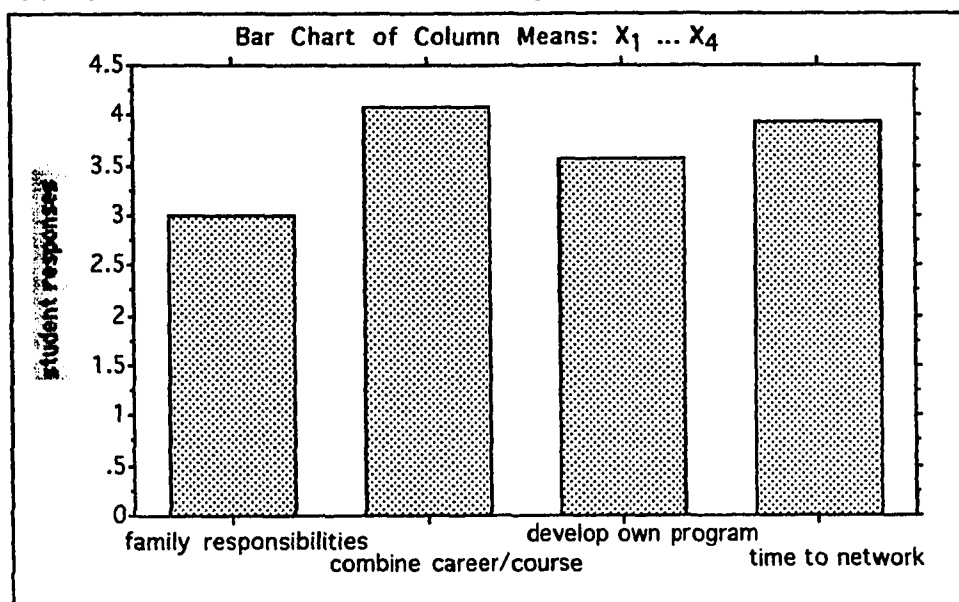
Figure 10. Individual items means for flexibility theme

In summary, students in alternative graduate programs indicated that factors related to the theme of the university as an institution were considerable in their choice to apply to a particular graduate program (see Figure 11). Factors related to the career, professional and personal; accessibility; and program (program characteristics/program linkages) themes were similar in meaningfulness in the decision to attend a graduate program. Flexibility of the program was seem as consequential by the

students but not as highly material to the decision to attend a program as the other four factors. College of Education administration and those responsible for planning and restructuring graduate programs at the ABCD University could use the information to greater advantage in meeting the needs of potential graduate students by nurturing relationship with graduates and alumni and by implementing programs which allow for career and professional goals to be met as well as more structured group admissions and program matriculation for the potential pools of applicants. By promoting programs with these factors directly stated in advertisements and brochures, students may be more inclined to choose one particular institution over another and one particular program over another when making their application and ultimate choice to attend a graduate program.
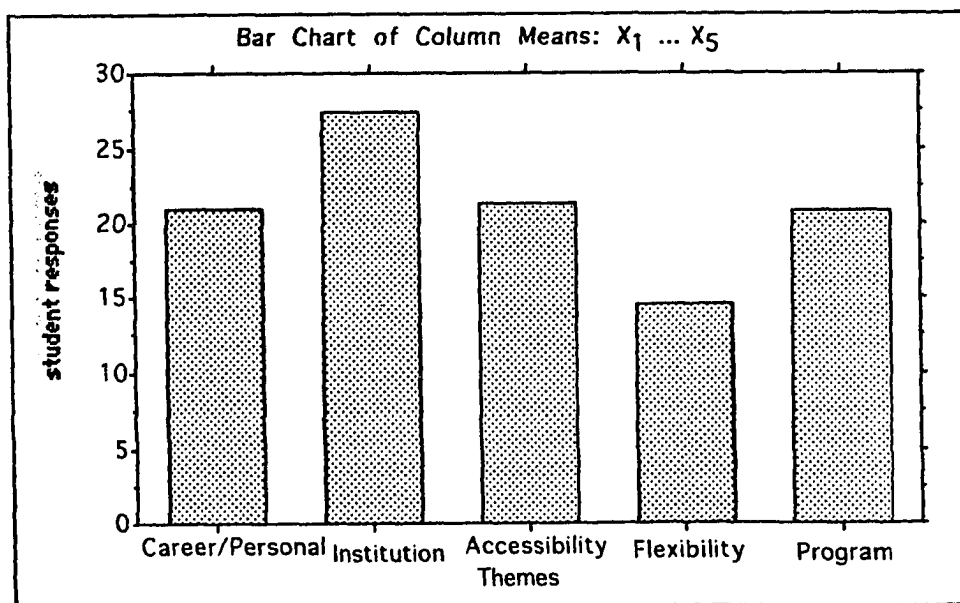
Figure 11. Comparison of mean scores of five identified themes

Section 4:   Comparative Statistical Analyses of the Data, Interpretation, and Discussion of the Results for the Independent Variables

The statistical analyses based on primary hypotheses numbers 1 - 6 yielded 62 statistically significant findings of the 180 one-way ANOVA's calculated to determine if there were significant differences between the levels of the categorical variables. The statistical analyses based on the nine secondary hypotheses yielded 14 statistically significant findings of the 75 two-way ANOVA's as calculated to determine if there were significant interaction effects between combinations of the categorical variables used in the study. Therefore, the presentation and discussion of the findings of this research will focus on the 76 statistically significant difference and interaction effects identified as a result of the data analyses.

Analyses and Discussion of Primary Hypotheses Numbers 1-6

Six of the primary hypotheses were presented in Chapter I to facilitate and operationalize the categorical variables for the statistical analyses that were to be performed. The statistical analyses involved computation of one-way ANOVA's for the six categorical variables identified in the study through prior research and the review of the literature. The six independent variables were gender, age, ethnicity, work setting, job and work level. The null hypotheses stated that they would be no statistically significant

difference between the levels or subgroups of the categorical variables ($\alpha = .05$). Table 10 presents the five thematic variables, the 30 individual survey items, the primary hypotheses variables, and the body of the table shows the thematic and individual probability statements generated through the statistical analyses of the data. An asterisk beside the probability statements in Table 10 indicates a statistically significant difference exists between the levels of the independent variable in question for the hypothesis category indicated across the top of the table at $\alpha = .05$.

The probability statements indicated with an asterisk equate to the rejection of the null hypotheses for that particular combination of independent and dependent variables. This means that a statistically significant difference at the $\alpha = .05$ level was found to exist between the levels of the independent variable for the dependent variable described in the left-hand column of Table 10.

Tables 11 though 72 display the results of the statistical analyses. Each of the six primary hypotheses is represented by a thematic probability statement first and then individually statistically significant findings are presented for each survey item within the theme itself. Tables 11 through 16 relate to hypothesis one and indicate differences between the levels of the gender variable; Tables 17 through 23 relate to hypothesis two and indicate differences between the levels of the age variable; Tables 24 through 32 relate to hypothesis three and indicate the differences between the ethnic diversity variable; Tables 33 through 44 relate to hypothesis four and indicate the differences between the ethnic

Table 10

Probability statements derived from ANOVA's to test for significance of the primary hypotheses and individual survey items

Dependent Variables	Categorical Variables Used to Define Groups for Analyses					
	Gender	Age	Ethnicity	Work Setting	Job	Work Level
CAREER, PROFESSIONAL, PERSONAL	.8049	.0028*	.3056	.0114*	.0041*	.0117*
advance salary	.0455*	.0556	.3529	.0001*	.0001*	.0001*
professional development	.6838	.1557	.0869	.2163	.0118*	.6265
qualify for jobs	.6837	.0011*	.7847	.2753	.2179	.2619
move upward in career	.2802	.0012*	.465	.852	.681	.2161
personal goal	.0673	.4309	.6153	.0735	.8883	.2159
UNIVERSITY AS AN INSTITUTION	.7915	.0211*	.003 *	.0131*	.029 *	.0025*
recommended by colleagues	.0306*	.1758	.2866	.2367	.3454	.0097*
recommended by former students	.1234	.7854	.267	.0652	.8234	.0418*
reputation of program	.014 *	.0083*	.8577	.0016*	.0737	.0053*
reputation of university	.2175	.0408*	.0088*	.1461	.314	.0873
reputation of faculty	.7483	.062	.3745	.0013*	.0035*	.0076*
recommended by employer	.4662	.4077	.0001*	.971	.2161	.3152
lower tuition costs	.16	.2572	.0032*	.0737	.6772	.7994
follow up to previous program	.1174	.1519	.0042*	.0001*	.0001*	.0001*
saw advertisements and brochures	.1408	.8792	.6513	.2383	.5117	.6586
ACCESSIBILITY	.0762	.4674	.0006*	.1124	.0263*	.0973
overall program schedule	.8958	.3526	.2716	.0065*	.028 *	.0287*
class times convenient	.2142	.3351	.052	.0007*	.0157*	.0223*
location of classes convenient	.0512	.7195	.0001*	.2918	.0506	.3496
no other program available	.0206*	.2886	.6285	.0001*	.0059*	.0001*
faculty more accessible	.4298	.075	.0575	.0089*	.1606	.2167
program provides non academic support	.9594	.5574	.3386	.1029	.0154*	.3027
FLEXIBILITY	.5746	.135	.9015	.8579	.3493	.4436
does not interfere with family	.0954	.087	.3863	.354	.6997	.206
combine course work with job	.866	.7146	.6899	.9898	.4703	.4697
develop own program	.0233*	.6266	.3505	.874	.5301	.3412
time to network with colleagues	.3756	.239	.4342	.6251	.3155	.6487
PROGRAM CHARACTERISTICS						
PROGRAM LINKAGES	.1057	.3385	.0622	.7413	.659	.1187
employer collaborating with university	.1847	.1021	.0001*	.9146	.8589	.697
attend with friends/colleagues	.1682	.0441*	..4682	.0091*	.4004	.0139*
program design current	.8843	.9271	.6536	.6509	.3331	.0249*
cohort group maintained	.5084	.4186	.0228*	.8828	.0213*	.7863
social activities mixed with academics	.0087*	.151	.7152	.5297	.4225	.0018*
program is different from others	.8095	.8915	.6096	.001 *	.0276*	.0034*

Note: alpha level < .05

diversity variable; Tables 33 through 44 relate to hypothesis four and indicate the difference between the work setting variable; Tables 45 through 58 relate to hypothesis five and indicate the differences between the job category variable; Tables 58 through 72 relate to hypothesis six and indicate the differences between the work level variable.

Hypothesis 1

The first null hypothesis stated that there would be no significant difference between the two levels of gender for the five independent variables ($\alpha = .05$). The first column of probability statements in Table 10 shows no significant differences in the five identified themes. One-way ANOVA's were then performed on each of the 30 individual factors in all themes by gender. The statistical findings produced six significant differences indicated by the ANOVA. Post hoc analysis can be found in Appendix M.

The difference in the mean score for males of 3.77 and the mean score for females of 3.53 was sufficient to create the statistically significant difference, $F(1, 485) = 4.022$, $p < .0455$, on the individual survey item of pursuing an advanced graduate degree for advancement on the salary schedule. (see Table 11) The results suggest that males consider advancement of salary as a reason for pursuing a graduate degree more than females.

The individual survey item or factor of recommendations by colleagues for applying to an alternative graduate program was found to be statistically significant, $F(1, 485) = 4.704$, $p < .0306$, by a comparison of the means of 3.65 for males and 3.38 for females.

Table 11

Comparison of the gender variable by the advancement of salary factor

One Factor ANOVA X_1: gender Y_1: Q5

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	6.39	6.39	4.022
Within groups	484	768.943	1.589	p = .0455
Total	485	775.333		

Model II estimate of between component variance = .02

Table 12

Comparison of the gender variable by the recommendations of colleagues factor

One Factor ANOVA X_1: gender Y_2: Q11

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	8.234	8.234	4.704
Within groups	484	847.233	1.75	p = .0306
Total	485	855.467		

Model II estimate of between component variance = .028

Findings suggest (see Table 12) that males more often rely on recommendations of colleagues for choice of a graduate program than do females.

Table 13 shows that the difference between the mean of male respondents of 3.33 and the mean of female respondents of 3.06 was statistically significant, $F(1, 485) = 6.087$, $p < .014$, on the individual survey item of the perceived reputation of the program.

The data findings suggest that males' beliefs about the reputation of a graduate program are a higher factor of consideration than females when deciding to apply to a graduate program.

Table 13

Comparison of the gender variable by the reputation of the program factor

One Factor ANOVA X_1: gender Y_3: Q13

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	8.29	8.29	6.087
Within groups	484	659.192	1.362	p = .014
Total	485	667.481		

Model II estimate of between component variance = .029

An ANOVA on the individual survey item associated with the availability of a graduate program in the area resulted in a statistically significant difference, $F(1, 485) = 5.396, p < .0206$, in the mean scores of females of 2.85 and males of 2.53. (see Table 14) It is interesting to note that this is the only finding where the female mean scores are higher than male mean scores. This finding suggest that for female graduate students, the availability of a program in a local region is of importance in the decision to apply to a graduate program.

Table 14

Comparison of the gender variable by the availability of a program in the area factor

One Factor ANOVA X_1: gender Y_4: Q24

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	12.203	12.203	5.396
Within groups	484	1094.612	2.262	p = .0206
Total	485	1106.815		

Model II estimate of between component variance = .042

The difference in the mean scores of males of 3.71 and females of 3.46 proved to be statistically significant, $F(1.485) =$ 5.254, $p < .0223$, on the factor of the program allowing for the development of an individualized program. (see Table 15) Results suggest that male students respond to graduate programs more favorably than female students when they decide to attend a graduate program if the factor of planning their own program is a characteristic of the program design.

Table 15

Comparison of the gender variable by the planning own program factor

One Factor ANOVA X_1: gender Y_5: Q29

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	7.386	7.386	5.254
Within groups	484	680.383	1.406	p = .0223
Total	485	687.77		

Model II estimate of between component variance = .025

Table 16 indicated that a final statistically significant result, $F(1,485) = 6.932$, $p < .0087$, was found on the variable of gender between the mean score of 3.50 for males and 3.24 for females on the mixing of social activities in the graduate program with academic activities. This result implies that male graduate students consider and attend graduate programs where social activities are intertwined and a part of the program more frequently than do females.

Table 16

Comparison of the gender variable by the mixture of social activities with academic activities

One Factor ANOVA X_1: gender Y_6: Q34

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	7.812	7.812	6.932
Within groups	484	545.488	1.127	p = .0087
Total	485	553.3		

Model II estimate of between component variance = .028

In summary, Hypothesis 1 was found to be acceptable related to the identified themes by gender. Important individual factors related to gender and salary advancement, recommendations by colleagues, reputation of programs, and development of an individualized program were more found to be significant factors to males in choosing a graduate program. Female graduate students indicated availability of graduate programs was an important factor in the choice of a graduate program.

Hypothesis 2

The second null hypothesis stated that there would be no significant difference between the four levels of age for the five independent variables of themes (α = .05). The second column of probability statements in Table 10 shows a significant difference in the themes of career, professional and personal factors, $\underline{F}$(3, 478) = 4.755, $\underline{p}$ < .0028, and university as an institution, F(3, 478) = 3.27, $\underline{p}$ < .0211 factors for all age levels. (see Tables 17 and 18) Post hoc analysis tables are located in Appendix M.

In a Scheffé post hoc test comparison, the difference in the mean score of 22.082 for under 30 responses versus the mean score of 19.743 for the 50 and over responses proved significant between groups within the theme of career, professional, and personal factors as reasons important to the decision to apply to a graduate program.

Within the theme of university as an institution, the mean score of 26.726 for the 30-39 age group and the mean score of 29.943 for the 50 and over group proved significant between groups in a Scheffé post hoc test comparison. This theme considers factors important to applying to a graduate program. Findings in these two themes suggest that older graduate students differ in their reasons for applying to a graduate program in terms of the value they place on factors related to the university as an institution while younger graduate students place a higher value on career, professional and personal factors in deciding to apply to a graduate program.

Table 17

Hypothesis 2: <u>Comparison of age variable by career, professional and personal factors</u>

One Factor ANOVA X_1: age Y_1: sum q 5-9

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	145.76	48.587	4.755
Within groups	478	4884.142	10.218	p = .0028
Total	481	5029.902		

Model II estimate of between component variance = .367

Table 18

Hypothesis 2: <u>Comparison of the age variable by university as an institution factors</u>

One Factor ANOVA X_1: age Y_2: sum q 11-19

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	316.634	105.545	3.27
Within groups	478	15426.876	32.274	p = .0211
Total	481	15743.51		

Model II estimate of between component variance = .701

One way ANOVA's conducted on each of the 30 individual survey items by the variable of age resulted in five significant differences. The differences in mean scores for all age level groups proved statistically significant, $F(3, 478) = 5.45, p < .0011$, on the factor of pursuing a graduate degree to qualify for jobs. Post hoc test comparisons indicated that between group significance was found in the under 30 age group versus the 50 and over age group and in the

30-39 age group versus the 50 and over age group. (see Table 19)
This data would be consistent with common sense thought about the
younger graduate student who has more years to work and is seeking
a job change and the older graduate student who is or has made job
changes and is more settled, nearing the end of a career, less likely
to change jobs.

Table 19

Comparison of the age variable by the qualify for jobs factor

One Factor ANOVA X_1: age Y_3: Q7

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	14.443	4.814	5.446
Within groups	478	422.546	.884	p = .0011
Total	481	436.99		

Model II estimate of between component variance = .038

Similar findings were discovered in the factor of moving
upward in a career with a statistically significant value between all
age level groups of $F(3, 478) = 5.372, p < .0012$. (see Table 20) Post
hoc comparison testing confirmed significance in the groups of
under 30 versus 50 and over and the 30-39 age group versus the 50
and over age group. Again, as stated above, these findings would be
consistent with age and work pattern characteristics as well as
theories of adult development presented in Chapter 2.

Table 20

<u>Comparison of the age variable by the allow me to move upward in</u>
<u>my career factor</u>

One Factor ANOVA X_1: age Y_4: Q8

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	14.279	4.76	5.372
Within groups	478	423.557	.886	p = .0012
Total	481	437.836		

Model II estimate of between component variance = .037

Results presented in Table 21 found a statistical significance, $F(3, 478) = 3.96$, $p < .0083$, between all age levels on the factor of reputation of the program in the choice to apply to a graduate program. Post hoc comparison testing indicated a significance between the 30-39 age group versus the 50 and over age group. These findings suggest that program reputation is more important to the older graduate student in choosing a graduate program to apply to than the younger graduate student but that program reputation is an important consideration for all age levels of graduate students.

Table 21

<u>Comparison of the age variable by the reputation of the program</u>
<u>factor</u>

One Factor ANOVA X_1: age Y_5: Q13

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	16.066	5.355	3.963
Within groups	478	645.984	1.351	p = .0083
Total	481	662.05		

Model II estimate of between component variance = .038

The variable of age proved to be statistically significant, $F(3, 478) = 2.777, p < .0408$ on the factor of reputation of the university. Post hoc comparison testing indicated no significance between age level groups. The data suggests that reputation of the program in choosing to apply to a graduate program is of equal importance to all age groups of graduate students. (see Table 22)

Table 22
Comparison of the age variable by the reputation of the university factor

One Factor ANOVA X_1: age Y_6: Q14

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	7.519	2.506	2.777
Within groups	478	431.444	.903	p = .0408
Total	481	438.963		

Model II estimate of between component variance = .015

A final significant finding was found in relation to the variable of age and the program design where students can attend the program with colleagues and friends, $F(3, 478) = 2.718, p < .0441$. (see Table 23) Post hoc comparison testing indicated no significant differences between the age groups. These findings may indicate that graduate programs designed toward more homogeneous groups in terms of collegiality may be an important factor in the graduate student's decision to attend a particular graduate program.

Table 23

Comparison of the age variable by the attendance with colleagues
and friends factor

One Factor ANOVA X_1: age Y_7: Q28

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	12.644	4.215	2.718
Within groups	478	741.256	1.551	p = .0441
Total	481	753.9		

Model II estimate of between component variance = .025

In summary, Hypothesis 2 was rejected related to the themes
of career, professional, and personal factors and university as an
institution factors by the variable of age. Significant factors were
noted between the age levels of under 30 and over 50. Individual
factors related to age levels of graduate students were found in the
areas of qualifying for jobs and moving upward in a career for the
under 30 and 30-39 graduate student and factors related to
reputation of program, reputation of the university, and attending a
program with colleagues and friends were found in the age levels of
50 and over.

Hypothesis 3

The third null hypotheses stated that there would be no
significant difference between the levels of ethnic diversity for the
five independent variables (α = .05). The third column of Table 10
shows two statistically significant findings related to the themes
of university as an institution, $F(1, 476) = 8.905, p < .003$, and

accessibility, $F(1, 476) = 12.059$, $p < .0006$. (see Tables 24 and 25) It should be noted that as discussed earlier in Chapter III, the ethnic diversity variable was collapsed and recoded from ten levels to two levels due to extremely low cell sizes and to avoid any Type I errors in the statistical treatment of the categories. Findings suggest that not White-non Hispanic graduate students consider the university as an institution factors as an important item in choosing to apply to a graduate program as well as the accessibility factors pertaining to an individual graduate program more so than do White-non Hispanic students.

Table 24

Hypothesis 3: Comparison of the ethnic diversity variable by university as an institution theme

One Factor ANOVA X_1: Recode of ethnic Y_1: sum q 11-19

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	288.263	288.263	8.905
Within groups	475	15375.662	32.37	p = .003
Total	476	15663.925		

Model II estimate of between component variance = 2.003

One-way ANOVA's performed on each of the 30 individual survey factors by ethnic diversity resulted in seven significant differences. Posts hoc analysis tables can be found in Appendix M. The first significant finding was noted in the factor related to reputation of the program, $F(1, 476) = 6.91$, $p < .0088$. (see Table 26) Not White-non Hispanic graduate students with a mean score of

3.395, consider the reputation of a program more frequently as an important factor in choosing to apply to a graduate program than do White-non Hispanic graduate students with a mean score of 3.08. These findings indicate the ethnic diversity of the graduate student is impacted in relation to the perceived reputation of a program in choosing to apply to a particular institution.

Table 25

Hypothesis 3: Comparison of the ethnic diversity variable by the accessibility theme

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_2$: sum q21-24,32,35

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	157.384	157.384	12.059
Within groups	475	6199.144	13.051	p = .0006
Total	476	6356.528		

Model II estimate of between component variance = 1.13

Table 26

Comparison of the ethnic diversity variable by the reputation of the program factor

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_3$: Q14

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	6.337	6.337	6.91
Within groups	475	435.604	.917	p = .0088
Total	476	441.941		

Model II estimate of between component variance = .042

Table 27 indicates that a highly statistically significant difference exists, $F(1, 476) = 20.954$, $p < .0001$, related to ethnic diversity and the factor of recommendation by employer in choosing a graduate program. Mean scores of 3.29 for not White-non Hispanic and 2.59 for White-non Hispanic indicate that graduate students who are not White-non Hispanic utilize employer recommendations of graduate programs to impact their choice of a graduate program.

Table 27

Comparison of the ethnic diversity variable by the employer recommendation factor

One Factor ANOVA X_1: Recode of ethnic Y_4: Q16

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	31.168	31.168	20.954
Within groups	475	706.559	1.487	p = .0001
Total	476	737.727		

Model II estimate of between component variance = .232

A significant finding was noted on the ethnic diversity variable and the tuition costs of a program, $F(1, 476) = 8.802$, $p < .0032$. A comparison of the mean scores of not White-non Hispanic students of 3.14 and White-non Hispanic students of 2.68 indicate a strong difference in the choice to apply to a graduate program. (see Table 28) The data strongly suggests that lower tuition costs are an important factor for the ethnically diverse graduate student in choosing to apply to a particular program or university.

Table 28

Comparison of the ethnic diversity variable by the lower tuition costs factor

One Factor ANOVA X_1: Recode of ethnic Y_5: Q17

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	13.604	13.604	8.802
Within groups	475	734.186	1.546	p = .0032
Total	476	747.79		

Model II estimate of between component variance = .094

Table 29 indicates a statistically significant finding $F(1, 476)$ = 8.258, p < .0042, related to ethnic diversity and the factor of choosing to apply to a graduate program as a follow-up to previous programs. The mean score for not White-non Hispanic of 2.93 versus the mean score of 2.49 for White-non Hispanic graduate students again strongly suggests that graduate students who are not White-non Hispanic consider more favorably than do White non-Hispanic students, an institution they have already attended as a follow-up to advanced study at the graduate level. This finding has great impact on institutions and programs who are attempting to build a strong diversity in their graduate student populations. Reviewing the diversity of undergraduate students would be a meaningful strategy in identifying potential graduate student candidates.

Table 29

Comparison of the ethnic diversity variable by the follow-up to a previous program factor

One Factor ANOVA X_1: Recode of ethnic Y_6: Q18

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	12.394	12.394	8.258
Within groups	475	712.905	1.501	p = .0042
Total	476	725.3		

Model II estimate of between component variance = .085

The factor of the convenience of location of the classes was found to be highly statistically significant, $F(1, 476) = 23.654$, $p < .0001$, for the ethnic diversity variable. (see Table 30) The group mean of 4.11 for the not White-non Hispanic student and the group mean for the White-non Hispanic graduate student suggests a strong difference in choosing a graduate program where classes are conveniently located to the student. The data suggests that not White-non Hispanic graduate students consider this factor meaningful in making a choice to attend a graduate program.

Table 30

Comparison of the ethnic diversity variable by the convenience of the location of classes factor

One Factor ANOVA X_1: Recode of ethnic Y_7: Q23

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	37.499	37.499	23.654
Within groups	475	753.033	1.585	p = .0001
Total	476	790.532		

Model II estimate of between component variance = .281

Table 31 indicates a highly significant finding, $F(1, 475) = 15.635, p < .0001$, in the factor related to employer collaboration with the university versus the ethnic diversity variable. The difference in mean scores for the not-White non Hispanic group at 3.26 and the White-non Hispanic group suggest that employer collaboration with a university program is a substantial factor in the choice to attend a graduate program for the not-White non Hispanic graduate student.

Table 31

Comparison of the ethnic diversity variable and the employer collaboration with the university program factor.

One Factor ANOVA X_1: Recode of ethnic Y_8: Q26

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	31.577	31.577	15.635
Within groups	474	957.297	2.02	p = .0001
Total	475	988.874		

Model II estimate of between component variance = .231

A final statistically significant finding was indicated related to the ethnic diversity variable and the factor associated with the design of the program maintaining a cohort group, $F(1, 476). = 5.215$, $p < .0228$. (see Table 32) Mean scores of not White-non Hispanic graduate students of 3.96 and White-non Hispanic students of 3.69 may suggest that a cohort group design in a graduate program is an important factor in the recruitment of diverse student populations at the graduate level.

Table 32

Comparison of the ethnic diversity variable and the program
maintains a cohort group factor

One Factor ANOVA X_1: Recode of ethnic Y_9: Q33

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	4.823	4.823	5.215
Within groups	475	439.291	.925	p = .0228
Total	476	444.113		

Model II estimate of between component variance = .031

In summary, Hypothesis 3 was found to be statistically significant for the university as an institution and accessibility themes related to the ethnic diversity of the graduate student in deciding to pursue and apply to a particular graduate program. Individual factors that impact not-White non Hispanic graduate students were reported to be reputation of the university, recommendations by employer, lower tuition costs, follow-up to previous graduate work, availability of the graduate program in their area, the opportunity to attend a program with colleagues and friends, and the design of the program maintaining a cohort group. Although the themes of university as an institution and accessibility were highly significant for all graduate students, programs and universities who are actively recruiting diverse student populations should note the findings on the individual factors related to the graduate student choice to apply and attend a graduate program.

Hypothesis 4

The fourth null hypothesis stated that there would be no significant difference between the two levels of a work setting for the five independent variables ($\alpha = .05$). The fourth column of probability statements in Table 10 shows two significant findings related to the themes of career, professional and personal, $F(1, 484) = 6.455$, $p < .0114$ and university as an institution, $F(1, 484) = 6.201$, $p < .0131$. (see Tables 33 and 34) The mean score of 21.20 for graduate students in an educational setting and the mean score of 20.18 for graduate students who work in a non educational setting suggests that graduate students who work outside of an educational environment consider the factors related to the career, professional and personal theme more in considering whether to pursue a graduate degree. In reverse, graduate students who work in a non educational setting, with a mean score of 28.81 versus those who work in an educational setting with a mean score of 27.02 consider the factors associated with the university as an institution more important in the choice to apply to a graduate program.

Table 33

Hypothesis 4: Comparison of the work setting variable by the career, professional, personal theme

One Factor ANOVA X_1: work set Y_1: sum q 5-9

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	66.361	66.361	6.445
Within groups	483	4973.548	10.297	p = .0114
Total	484	5039.909		

Model II estimate of between component variance = .447

Table 34

Hypothesis 4: Comparison of the work setting variable by the university as an institution theme

One Factor ANOVA X_1: work set Y_2: sum q 11-19

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	201.229	201.229	6.201
Within groups	483	15673.196	32.45	p = .0131
Total	484	15874.425		

Model II estimate of between component variance = 1.346

Further investigations were conducted with one-way ANOVA's on the 30 individual survey factors. Ten statistically significant findings resulted. The difference in mean scores of those respondents who work in an educational setting, 3.75, and those respondents who work in a non educational setting, 2.93, produced a highly statistically significant finding related to the advance on a salary schedule factor, $F(1, 484) = 27.91$, $p < .0001$. (see Table 35) These findings suggest that educators working in an educational setting are considerably more likely to pursue an advanced degree based on an advancement on a salary schedule than those who work in a non educational setting. Again, this finding is more of a common sense concept in that educators advance on salary schedules according to levels of education as well as levels of seniority.

Table 35

Comparison of the work setting variable and the advancement on a salary schedule variable

One Factor ANOVA X_1: work set Y_3: Q5

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	42.354	42.354	27.914
Within groups	483	732.842	1.517	p = .0001
Total	484	775.196		

Model II estimate of between component variance = .326

Table 36 presents findings that are statistically significant, $F(1, 484) = 10.03$, $p < .0016$, indicating that graduate students who work in a non educational setting, mean score of 3.57, as compared to those who work in an educational setting, mean score of 3.10, are more likely to consider the reputation of program when they choose to apply to a particular graduate program. Findings suggest that non educators may rely more on perceptions of reputation of the graduate program than do those who work in an educational setting.

Table 36

Comparison of the work setting variable and the reputation of the program factor

One Factor ANOVA X_1: work set Y_4: Q13

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	13.581	13.581	10.032
Within groups	483	653.87	1.354	p = .0016
Total	484	667.452		

Model II estimate of between component variance = .097

The reputation of the faculty was found to be statistically significant, $F(1, 484) = 10.47, p < .0013$, by work setting, as indicated in Table 37. A mean score of 3.62 for those not in an educational work setting versus a mean score of 3.19 for those who work in an educational setting suggest that graduate students who apply to programs and work in a non educational environment are strongly interested in the reputation of the faculty as opposed to those who work in an educational environment. This is somewhat of a surprising finding in that most programs in the College of Education at the ABCD University promote through advertisements and brochures their individual faculty accomplishments and activities.

Table 37
Comparison of the work setting variable and the reputation of the faculty factor

One Factor ANOVA X_1: work set Y_5: Q15

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	11.563	11.563	10.474
Within groups	483	533.22	1.104	p = .0013
Total	484	544.784		

Model II estimate of between component variance = .083

An ANOVA conducted on the variable of work setting and the follow-up to a previous graduate program resulted in a highly statistically significant finding, $F(1, 484) = 23.67, p < .0001$. (see Table 38) The mean score of those who do not work in an educational setting of 3.18 and the mean score for those who work in an

educational setting of 2.43 suggests that graduate students who work outside of educational environments have a strong tendency to apply to programs and universities where they have done previous work as a follow-up to their original programs. This finding suggests that strategies for recruitment of doctoral programs and/or certificate programs above the masters degree level could target populations of former students.

Table 38

Comparison of the work setting variable and the follow-up to a previous graduate program factor

One Factor ANOVA X_1: work set Y_6: Q18

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	34.58	34.58	23.67
Within groups	483	705.626	1.461	p = .0001
Total	484	740.206		

Model II estimate of between component variance = .264

The difference in the mean scores of those who work in an educational setting of 4.41 and those who do not with a mean score of 4.12, proved statistically significant, $F(1, 484) = 7.483, p < .0065$, when analyzed against the overall program schedule meeting needs factor. (see Table 39) This finding suggests that graduate students in educational work settings consider the overall program schedule when making a choice to apply to a graduate program more so than do those graduate students who do not work in an

educational setting. Colleges of Education could benefit from these findings in planning overall program schedules that meet the needs of graduate students who work in educational settings of which there are likely to be a very high number of candidates.

Table 39

<u>Comparison the work setting variable and the overall program</u>
<u>schedule factor</u>

One Factor ANOVA X_1: work set Y_7: Q21

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	5.258	5.258	7.483
Within groups	483	339.414	.703	p = .0065
Total	484	344.672		

Model II estimate of between component variance = .036

A similar finding resulted in Table 40 which shows a highly statistically significant finding, $F(1, 484) = 11.56, p < .0007$, between the variable of work setting and the factor of classes meeting at convenient times. (see Table 34) Mean scores for those who work in an educational setting of 4.23 and mean scores for those who do not work in an educational setting of 3.82 suggest that graduate students who work in educational settings strongly consider the class meeting times when applying to a graduate program.

Table 40

Comparison of the work setting variable and classes meeting at convenient times factor

One Factor ANOVA   X$_1$: work set   Y$_8$: Q22

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	10.379	10.379	11.557
Within groups	483	433.758	.898	p = .0007
Total	484	444.136		

Model II estimate of between component variance = .076

The data displayed in Table 41 indicates another highly significant finding, $F(1, 484) = 32.40, p < .0001$ in relation to the work setting and the factor of availability of a graduate program in their area. Graduate students who do not work in an educational setting, with a mean score of 3.61, consider programs that allow them to attend a program in their area more frequently than do graduate students who work in an educational setting with a mean score of 2.55. when choosing to attend a graduate program. This factor suggests that accessibility of a local program is an important factor in terms of the program itself related to non educational work setting graduate students.

Table 41

Comparison of the work setting variable and the availability of a
graduate program factor

One Factor ANOVA X_1: work set Y_9: Q24

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	69.581	69.581	32.404
Within groups	483	1037.153	2.147	p = .0001
Total	484	1106.734		

Model II estimate of between component variance = .538

Table 42 indicates a statistically significant finding, $F(1,$
$484) = 6.891$, $p < .0089$, in relation to graduate students who do not
work in an educational setting and the individual faculty members
being more accessible factor. (see Table 42) The difference in mean
scores between those who work in educational settings of 3.35 and
those who do not work in educational settings, 3.68, suggests that
graduate students who do not work in an educational environment
consider the accessibility of faculty as a factor in their decision to
attend a graduate program. This finding might be an indication of a
characteristic of an alternative graduate program being that faculty
members are more accessible to graduate students than in
traditional graduate programs.

Table 42

Comparison of the work setting variable and the accessibility of faculty factor

One Factor ANOVA X_1: work set Y_{10}: Q32

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	6.836	6.836	6.891
Within groups	483	479.155	.992	p = .0089
Total	484	485.992		

Model II estimate of between component variance = .047

Graduate student responses for those who work in educational settings indicate in Table 43 a statistically significant finding, $F(1, 484) = 6.864$, $p < .0091$, related to attending classes with colleagues and friends. (see Table 43) The mean score of those who work in educational settings of 3.53 versus the mean score for those who do not work in educational settings of 3.12 may indicate that graduate students in educational work settings place a high value on a program that allows them to attend with colleagues and friends. This may again be a comment on a particular characteristic of an alternative graduate program that by design has built a more homogeneous grouping of students in a particular location or area or that has collaborated with an employer in the program to allow for a student population who know each other prior to graduate study.

Table 43

Comparison of the work setting variable and the attend classes with colleagues and friends factor

One Factor ANOVA X_1: work set Y_{11}: Q28

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	10.605	10.605	6.864
Within groups	483	746.212	1.545	p = .0091
Total	484	756.816		

Model II estimate of between component variance = .072

A final statistically significant finding, $F(1, 484) = 10.88$, $p < .001$, for the work setting variable was found between those who do not work in an educational setting with a mean score of 4.11 and those who do work in an educational setting with a mean score of 3.73 in relation to a perception that a graduate program is different from other graduate programs. (see Table 44) The data suggests that those graduate students who do not work in an educational setting consider their perception of program differentiation when choosing to attend a graduate program.

Table 44

Comparison of the work setting variable and the graduate program is different from other graduate program factor

One Factor ANOVA X_1: work set Y_1: Q36

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	1	8.969	8.969	10.88
Within groups	483	398.157	.824	p = .001
Total	484	407.126		

Model II estimate of between component variance = .065

In summary, Hypothesis 4 was rejected in the analyses of the findings related to the themes of career, professional and personal and the university as an institution designations. Graduate students who work in educational settings seem to consider more the factors associated with career, professional and personal reasons when deciding to pursue an advanced degree than those who do not work in educational settings, particularly related to advancement on a salary schedule. In reverse, graduate students who do not work in educational settings favor factors associated with the university as an institution theme when deciding to apply to a graduate program in terms of reputation of the program, reputation of the faculty, and as a follow-up to previous graduate work, more than those who work in educational settings.

In an analysis of individual factors, it was found that graduate students who do not work in an educational setting strongly consider the accessibility of individual faculty and whether there is no other graduate program available to them more than those who work in an educational setting. For those graduate students who work in educational settings, the factors of convenience of the overall program schedule, the convenience of class meeting times, and the fact that they can attend a graduate program with colleagues and friends are significant considerations in choosing to attend a graduate program. The findings suggest that in terms of work settings, graduate students vary in their reasons for choosing particular program factors as opposed to others. This ranking of a sort can provide program planners with valuable information related

to specific populations in designing and implementing graduate programs.

Hypothesis 5

The fifth null hypothesis stated that there would not be any significant difference between the four levels of jobs: teacher, administrator, counselor and other for the five independent theme variables ($\alpha = .05$). The fifth column of probability statements in Table 10 shows three significant differences in terms of the career, professional and personal theme, the university as an institution theme, and the accessibility theme and the level of job held by a graduate student. One-way ANOVA's were then performed on the 30 individual survey factors and resulted in 10 additional statistically significant differences. It should be noted that a large majority of the respondents who did not work in educational settings held jobs with identical titles as those normally utilized for educational occupations. These respondents were included in this portion of the data analysis and thus it cannot be concluded that all findings are only relevant to those graduate students working in a traditional educational arena.

The theme of career, professional and personal proved to have a high statistical significance, $F(3, 478) = 4.47$, $p < .0041$, between all job level groups. (see Table 45) In a post hoc analysis, (see Appendix M) significant differences were noted between the groups of teacher and administrator, with teachers being more inclined to pursue a graduate program than administrators. (Mean scores of 21.45 for teachers and 20.21 for administrators.) This finding may

suggest that since most administrative positions require a masters degree as a qualifying factor, that administrators may not consider this theme to be highly relevant in deciding to pursue an advanced graduate level program.

Table 45
Hypothesis 5: Comparison of the job level variable by the career, professional, and personal theme

One Factor ANOVA X_1: job Y_1: sum q 5-9

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	136.982	45.661	4.475
Within groups	475	4846.262	10.203	p = .0041
Total	478	4983.244		

Model II estimate of between component variance = .381

Table 46 indicates a statistically significant finding related to job level and the theme of university as an institution, $F(3, 478) = 3.03$, $p < .029$. The individual mean scores did not produce enough of a difference to indicate any post hoc significance between the individual groups. This data suggests that teachers, administrators, counselors and others consider the factors associated with the university as an institution theme to be of equal weight when deciding to apply to a graduate program. Individual analysis of the factors discussed later in this section related to job levels may provide more delineated data for graduate program design consideration.

Table 46

Hypothesis 5: Comparison of the job level variable by the university as an institution factor

One Factor ANOVA X_1: job Y_2: sum q 11-19

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	296.097	98.699	3.033
Within groups	475	15458.174	32.544	p = .029
Total	478	15754.271		

Model II estimate of between component variance = .711

In the analysis of the findings between job levels and the theme of accessibility, a statistically significant result was produced, $F(3,478) = 3.11$, $p < .026$. (see Table 47) Post hoc analysis revealed that the job level of administrators with a mean score of 21.08 differed significantly from those respondents who listed other as their job level with a mean score of 23.09. This finding could indicate that administrators do not place a high level of consideration on factors associated with accessibility of the graduate program as do others whose job titles are teachers or counselors. Further analysis by individual factor presented later in this section may add more meaningful data to this finding.

In an analysis of the job level variable and the advancement on a salary schedule, high statistically significant findings, $F(3, 478) = 22.09, p < .0001$ resulted between the job level groups. (see Table 48)   Post hoc analysis indicated that mean scores between teachers and administrators (4.00, 3.09); teachers and counselors (4.00, 3.05) and teachers and others (4.00, 3.33) proved to be significant at the

95% level. These findings may parallel with concepts of the teacher being a lower level salary designation and that deciding to apply to a graduate program may reflect a high degree of motivation for a higher salary level for a teacher more so than for levels of counselor, administrator, and other, again since many salary advancements are dependent upon advanced course work and the number of units obtained as well as the obtainment of an advanced degree.

Table 47

Hypothesis 5: Comparison of the job level variable and the accessibility theme

One Factor ANOVA X_1: job Y_3: sum q21-24,32,35

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	123.234	41.078	3.106
Within groups	475	6281.806	13.225	p = .0263
Total	478	6405.04		

Model II estimate of between component variance = .299

Table 48

Comparison of the job level variable and the advancement on a salary schedule factor

One Factor ANOVA X_1: job Y_4: Q5

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	93.221	31.074	22.092
Within groups	475	668.111	1.407	p = .0001
Total	478	761.332		

Model II estimate of between component variance = .319

Similar to the above finding, a statistical significance, $F(3, 478) = 3.70$, $p < .0118$, was noted when a comparison was done between job levels and the factor of meeting professional development goals. (see Table 49) The Scheffé post hoc test analysis indicated no significant difference between the job level groups. This finding would suggest that all levels of job designation are equally interested in meeting their professional development goals in making the decision to apply to a graduate program. Graduate programs may consider defining professional development goals and designing courses and course work around this area to attract students to the traditional programs. Both of these last two findings relate to a further delineation of the factors involved in the career, professional and personal theme found to be significant and discussed earlier.

Table 49

Comparison of the job level variable and the meeting of professional development goals factor

One Factor ANOVA X_1: job Y_5: Q6

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	6.593	2.198	3.702
Within groups	475	282.004	.594	p = .0118
Total	478	288.597		

Model II estimate of between component variance = .017

Table 50 indicates that graduate students weigh the individual factor of the reputation of the faculty significantly different, $F_{(3, 478)} = 4.59$, $p < .0035$, according to job level designation. Post hoc analysis revealed that differences in the mean scores between teachers and counselors (3.17, 3.8) and administrators and counselors (3.21, 3.8) proved to be significant at the 95% level. Counselors had the highest mean score of any of the job level categories which might suggest that counselors place considerable weight on the perception of the reputation of an institution's faculty when choosing to apply to a particular program.

Table 50
Comparison of the job level variable and the reputation of faculty
factor

One Factor ANOVA X_1: job Y_6: Q15

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	15.212	5.071	4.595
Within groups	475	524.203	1.104	p = .0035
Total	478	539.415		

Model II estimate of between component variance = .043

An analysis of the survey responses related to the job level variable and the follow-up to a previous program show a highly significant finding, $F_{(3, 478)} = 7.65$, $p < .0001$. (see Table 51) Post hoc analysis indicates that there are significant differences between the groups of teacher and counselor (mean scores of 2.35, 3.05) and teacher and others (mean scores of 2.35, 3.09). This data suggests that teachers are less likely to consider the factor of a

graduate program as a follow-up to previous graduate work than are counselors and others. Some of this finding may be accounted for due to the fact that teachers may only have limited post baccalaureate work and only look toward a graduate degree program after more years away from the initial institution. The above two findings may lend a more meaningful understanding of the university as an institution finding discussed earlier since both factors are clustered within that theme.

Table 51

Comparison of the job level variable and the follow-up to a previous graduate program factor

One Factor ANOVA X_1: job Y_7: Q18

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	33.569	11.19	7.648
Within groups	475	694.928	1.463	p = .0001
Total	478	728.497		

Model II estimate of between component variance = .105

Table 52 shows a statistically significant finding, $F(3, 478) = 3.06$, $p < .028$, related to the job level variable and the factor of overall program schedule meeting needs. Post hoc analysis indicated that the mean scores between the teacher and administrator groups (4.44, 4.18) were significant in the weight of the decision to attend a graduate program. This finding combined with the next analysis may suggest that teachers are looking for graduate programs in

terms of convenience to their schedules more so than other job level groups.

Table 52

<u>Comparison of the job level variable and the overall program</u>
<u>schedule meeting needs factor</u>

One Factor ANOVA X₁: job   Y₈: Q21

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	6.505	2.168	3.06
Within groups	475	336.56	.709	p = .028
Total	478	343.065		

Model II estimate of between component variance = .016

Findings presented in Table 53 show a significant difference, $F(3, 478) = 3.49$, $p < .0157$, related to job levels and the convenience of class meeting times. Post hoc testing indicated that the mean scores of teachers of 4.26 and administrators of 3.95 were of enough difference to produce a significance at the 95% level. Again, as discussed above in Table 51, convenience of the overall program schedule and the class meeting times for teachers is a factor given more weight in the decision to attend a graduate program than it is for administrators and other job level groups.

Table 53

<u>Comparison of the job level variable and the class meeting times</u>
<u>being convenient factor</u>

One Factor ANOVA X₁: job   Y₉: Q22

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	9.492	3.164	3.491
Within groups	475	430.47	.906	p = .0157
Total	478	439.962		

Model II estimate of between component variance = .024

Table 54 indicates a statistically significant finding, $F(3, 478) = 4.212$, $p < .0059$, for the job level variable related to the availability of a graduate program factor. A post hoc analysis revealed no significant findings between groups. This data may suggest that graduate students consider measurably the availability of a program in their area when making a choice to attend a graduate program. This finding combined with the findings on the variable of age may provide some direction to program planners in terms of program scheduling, class meeting times and location of courses. Since all job level groups found this factor significant, it can be surmised that it is given somewhat of an equal weight in the choice process.

Table 54

Comparison of the job level variable and the no other program available factor

One Factor ANOVA X_1: job Y_{10}: Q24

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	28.32	9.44	4.212
Within groups	475	1064.632	2.241	p = .0059
Total	478	1092.952		

Model II estimate of between component variance = .077

In an analysis of job levels compared to the factor of program support outside of class, a statistically significant finding resulted, $F(3, 478) = 3.50$, $p < .0154$. (see Table 55) A post hoc analysis indicated a significant difference in the mean scores between teachers and others (3.19, 3.79). This finding may suggest that other groups not necessarily in the educational work force may need more

non academic support in a graduate program than do the traditional educational job levels of teacher, administrator, and counselor. Program planners at the graduate level who target non educational populations may consider this finding in planning program support services.

Table 55

Comparison of the job level variable and the support outside of class factor

One Factor ANOVA X_1: job $Y_{1\,1}$: Q35

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	11.397	3.799	3.503
Within groups	475	515.116	1.084	p = .0154
Total	478	526.514		

Model II estimate of between component variance = .029

Table 56 presents data that links the job level variable and the concept of a cohort group as a statistically significant finding, $F(3, 478) = 3.26, p < .0213$. A post hoc analysis of the findings further indicated that the mean scores between administrators of 3.62 and others with a mean score of 4.21 differed between the job level groups. This finding suggests that non educational job level students prefer the cohort group concept when considering to attend a graduate program somewhat more than do traditional educators.

Table 56

<u>Comparison of the job level variable and the program maintaining a cohort group factor</u>

One Factor ANOVA X_1: job $Y_1{}_2$: Q33

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	9.285	3.095	3.265
Within groups	475	450.339	.948	p = .0213
Total	478	459.624		

Model II estimate of between component variance = .023

A final statistically significant finding, $F(3.478) = 3.072$, $p < .028$, was discovered in the job level relationship with the program is different from other graduate programs factor. (see Table 57) A post hoc analysis revealed no significant difference between the job level groups. The data suggests that graduate students may take into consideration a program that is different from their perception of what is traditional when they consider attending a graduate program. This finding may be strongly related to a psychological construct of what is new or different is better than the old or the traditional.

Table 57

<u>Comparison of the job level variable and the program is different from other graduate programs factor</u>

One Factor ANOVA X_1: job $Y_1{}_3$: Q36

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	3	7.67	2.557	3.071
Within groups	475	395.453	.833	p = .0276
Total	478	403.123		

Model II estimate of between component variance = .019

In summary, Hypothesis 5 was found to be significant for the themes of career, professional and personal, university as an institution, and accessibility. In further analysis, teachers were found to be significantly different from the other job level groups in the career, professional and personal theme. Job levels other than teacher, administrator, and counselor were found to be significantly different in terms of the theme of accessibility.

A more in depth analysis of each individual item found significant differences for teachers and the advancement on a salary schedule, the overall program schedule, and class meeting times as compared to other job level groups. Counselors indicated a difference in their responses to the impact of faculty reputation in the choice to apply to a graduate program. Groups other than teachers, administrators, and counselors indicated a significant difference in relation to factors associated with program support outside of the class and the cohort group concept in terms of programming. Although these findings are somewhat specific in nature, it is important to recognize that alternative graduate programs by design seem to meet the needs of their graduate student populations related to the job designation that students hold.

Hypothesis 6

The sixth null hypothesis stated that there would be no significant difference between the six levels of work level for the five independent variables (α = .05). The fifth column of probability statements in Table 10 shows two significant differences in the themes of career, professional and personal and university as an

institution. One-way ANOVA's were then conducted on each of the 30 survey factors and resulted in 13 additional statistical findings related to work level. It should be noted at this point, that the work level variable is specific to traditional educational jobs and thus resulted in only 469 responses being applicable to this portion of the research. On the survey instrument itself, if a respondent indicated they did not work in an educational setting, the section delineating the work levels was not to be completed. Instead, non educational setting respondents were asked to indicate their specific job title.

The variable of work level was found to be statistically significant among the work level groups of elementary, junior high-middle school, high school, higher education, district, and other $F(5,464) = 2.98, p < .0117$, related to the theme of career, professional and personal factors in deciding to pursue an advanced degree. (see Table 58) A post hoc analysis revealed no significant difference between the groups. This finding suggests that their is no specific distinction between work levels of graduate students in their responses for the theme of career, professional and personal factors. The data would indicate that all factors are weighed somewhat evenly.

A statistically significant difference, $F(4, 464) = 3.73, p < .0025$, was found in relation to the work level of graduate students and the theme associated with the university as an institution. (see Table 59) Post hoc analysis revealed that the difference in mean scores of junior high-middle school of 25.23 and higher education

with a mean score of 30.26 was significant at the 95% level. No other significant findings between groups was noted. This data

Table 58
Hypothesis 6: Comparison the work level variable and the career, professional, personal theme

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	153.311	30.662	2.977
Within groups	464	4779.432	10.3	p = .0117
Total	469	4932.743		

Model II estimate of between component variance = .281

suggests that graduate students who work in higher education may find the university as an institution theme factors to be more important in deciding to apply to a graduate program than do junior high-middle school personnel. Individual factor analysis may indicate any significant differences that can be considered within this theme to be of a more practical nature.

Table 59
Hypothesis 6: Comparison of the work level variable and the university as an institution theme

One Factor ANOVA X_1: Work level Y_2: sum q 11-19

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	597.983	119.597	3.731
Within groups	464	14871.772	32.051	p = .0025
Total	469	15469.755		

Model II estimate of between component variance = 1.207

A more in-depth analysis of the individual survey factors revealed a high statistical significant finding related to the work level variable and the advancement on a salary schedule factor, $F(5, 469) = 10.79, p < .0001$. (see Table 60) A post hoc analysis indicated that mean scores between elementary and other (3.75, 2.90), junior high-middle school and other (3.91, 2.90), high school and district (3.96, 2.96) and high school and other (3.96, 2.90) were significant at the 95% level. The data suggests that within the theme of career, professional, and personal which was discussed earlier in this section, the concept of advancement on a salary schedule is an important factor in deciding to pursue a graduate degree. Some differences may be accounted for in this factor due to the fact that district level personnel may have advanced degrees and higher salaries prior to pursuing additional degrees and thus is reflected in their mean score of 2.96, the lowest of all work level categories. High school and junior high-middle school categories with higher means on this factor may indicate that personnel in these work level categories perceive their current status as a temporary situation or as a early career level that will change.

Table 60

Comparison of the work level variable and the advancement on the salary schedule factor

One Factor ANOVA X_1: Work level Y_3: Q5

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	77.3	15.46	10.791
Within groups	464	664.793	1.433	p = .0001
Total	469	742.094		

Model II estimate of between component variance = .193

Table 61 indicates a statistically significant finding, $F_{(5, 469)} = 3.07$, $p < .0097$, related to work levels and recommendations by colleagues. Scheffé post hoc analyses indicated no significant difference among the individual work level groups. Findings in this analysis suggest that all work levels strongly consider recommendations by colleagues when deciding to apply to a graduate program. This finding could also account for a portion of the significance on the university as an institution theme discussed earlier.

Table 61

Comparison of the work level variable and the recommendation by colleagues factor

One Factor ANOVA X_1: Work level Y_4: Q11

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	26.248	5.25	3.071
Within groups	464	793.199	1.709	p = .0097
Total	469	819.447		

Model II estimate of between component variance = .049

Four additional statistically significant findings were revealed in the university as an institution theme related to work level: recommendation by former students, $F_{(5, 469)} = 2.33$, $p < .042$, (see Table 62); reputation of the program, $F_{(5, 469)} = 3.37$, $p < .0053$, (see Table 63); reputation of the faculty, $F_{(5, 469)} = 3.19$, $p < .0076$, (see Table 64); and as a follow-up to previous graduate work, $F_{(5, 469)} = 6.49$, $p < .0001$, (see Table 65).

Post hoc analysis revealed no significant differences among the groups on the factors of recommendation by former students and reputation of the program. A significance was noted on the reputation of faculty factor among the work level groups of junior high-middle school and higher education (mean scores of 3.03 and 3.91) designations. This finding would stand to reason that persons in higher education would place a higher value on the reputation of faculty then those not in the higher education environment. Additional significant differences were noted on the factor of follow-up to previous graduate programs between the work level groups of elementary, mean score of 2.47, and other, mean score of 3.05; junior high-middle school, mean score of 2.30, and higher education, mean score of 3.30; junior high-middle school, mean score of 2.30, and other, mean score of 3.05; high school, mean score of 2.31 and higher education, 3.30; and high school, mean score of 2.31 and other, mean score of 3.05 related to the choice to apply to a graduate program. Findings may be related to factors of age and recency of academic experience. Further generalizations for this data are beyond the scope of this research but may be related to specific characteristics of alternative graduate programs.

Table 62

Comparison of the work level variable and the recommendation by former student factor

One Factor ANOVA X_1: Work level Y_5: Q12

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	21.209	4.242	2.327
Within groups	464	845.761	1.823	p = .0418
Total	469	866.97		

Model II estimate of between component variance = .033

Table 63

Comparison of the work level variable and the reputation of the program factor

One Factor ANOVA X_1: Work level Y_6: Q13

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	22.9	4.58	3.369
Within groups	464	630.794	1.359	p = .0053
Total	469	653.694		

Model II estimate of between component variance = .044

Table 64

Comparison of the work level variable and the reputation of the faculty factor

One Factor ANOVA X_1: Work level Y_7: Q15

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	17.805	3.561	3.193
Within groups	464	517.557	1.115	p = .0076
Total	469	535.362		

Model II estimate of between component variance = .034

Table 65

Comparison of the work level variable and the follow-up to previous graduate program factor

One Factor ANOVA X_1: Work level Y_8: Q18

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	46.418	9.284	6.49
Within groups	464	663.753	1.431	p = .0001
Total	469	710.17		

Model II estimate of between component variance = .108

Although the theme of accessibility did not prove significant related to the work level variable, three significant findings were revealed within individual factors clustered in the theme: overall program schedule meeting needs, $F(5, 469) = 2.52$, $p < .0287$; class times convenient, $F(5, 469) = 2.65$, $p < .0223$; and no other program available in the area, $F(5, 469) = 9.03$, $p < .0001$. (see Tables 66, 67, 68) Post hoc analysis indicated only three significant differences in mean scores for the factor of program availability among the individual work levels, elementary, 3.70 and other, 3.57; the junior high-middle school, 2.48, and other, 3.57; and high school, 2.26 and other, 3.57. This data suggests that graduate students other than in the traditional work level designations, consider overall program schedule, class meeting times and program availability more as a determining factor in deciding to attend a graduate program than do those in the work levels normally associated with K-12 education.

Table 66
<u>Comparison of the work level variable and the overall program meeting needs factor</u>

One Factor ANOVA X_1: Work level Y_9: Q21

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	8.813	1.763	2.522
Within groups	464	324.242	.699	$p = .0287$
Total	469	333.055		

Model II estimate of between component variance = .015

Table 67

Comparison of the work level variable and the class meeting time
convenient factor

One Factor ANOVA X_1: Work level Y_1: Q22

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	11.925	2.385	2.653
Within groups	464	417.115	.899	p = .0223
Total	469	429.04		

Model II estimate of between component variance = .02

Table 68

Comparison of the work level variable and the no other program
available in the area factor

One Factor ANOVA X_1: Work level Y_2: Q24

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	95.157	19.031	9.035
Within groups	464	977.33	2.106	p = .0001
Total	469	1072.487		

Model II estimate of between component variance = .233

The final four statistically significant findings were
individual items clustered in the theme of program characteristics
and program linkages related to work levels. The analysis revealed
significance associated with factors of attending with colleagues
and friends, $F(5, 469) = 2.89$, $p < .0139$; design of the program
following current trends, $F(5, 469) = 2.59$, $p < .0249$; social
activities mixed with academic activities, $F(5, 469) = 3.90$, $p <$
.0018; and the program is different from other graduate programs,
$F(5, 469) = 3.59$, $p < .0034$. (see Tables 69, 70, 71, and 72)

the factor related to attending a graduate program with colleagues and friends. This finding may suggest that those with elementary work level designations may feel more comfortable in graduate programs when they can attend with other educators and friends.

No significant difference between individual work level groups were found on the factors of current design of the program, a mix of social activity with academic activity, and program is different from other graduate programs. The lower probability levels for the social activity mix and program is different factor, imply that graduate students attend graduate programs in which these two factors are a designed characteristic. It might also be noted here that alternative graduate programs often combine social activities with academic activities as discussed earlier and that the nature of an alternative graduate program is that it is somehow different from other graduate programs.

Table 69

Comparison of the work level variable and the attend with colleagues and friends factor

One Factor ANOVA X_1: Work level Y_3: Q28

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	22.026	4.405	2.891
Within groups	464	706.995	1.524	p = .0139
Total	469	729.021		

Model II estimate of between component variance = .04

Table 70

Comparison of the work level variable and the program design follows current trends factor

One Factor ANOVA X_1 : Work level Y_{10} : Q30

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	12.573	2.515	2.595
Within groups	464	449.589	.969	p = .0249
Total	469	462.162		

Model II estimate of between component variance = .021

Table 71

Comparison of the work level variable and the social activities are mixed with academic activities factor

One Factor ANOVA X_1 : Work level Y_{11} : Q34

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	21.687	4.337	3.901
Within groups	464	515.845	1.112	p = .0018
Total	469	537.532		

Model II estimate of between component variance = .044

Table 72

Comparison of the work level variable and the program is different from other graduate programs factor

One Factor ANOVA X_1 : Work level Y_{12} : Q36

Analysis of Variance Table

Source:	DF:	Sum Squares:	Mean Square:	F-test:
Between groups	5	14.761	2.952	3.587
Within groups	464	381.837	.823	p = .0034
Total	469	396.598		

Model II estimate of between component variance = .029

In summary, Hypothesis 6 was found to be significant for the themes of career, professional and personal and university as an institution related to the variable of work level. Additional post hoc analysis revealed that advancement on a salary schedule was significant particularly for high school work levels. Other significant differences were discovered associated with the factors of recommendation of colleagues, recommendation of former students, and reputation of the program as a factor in choosing a graduate program. Respondents with higher education work levels were found to be significantly different in their perception of the reputation of faculty factor in choosing to attend a graduate program.

Attending a graduate program as a follow-up to previous graduate experiences was found to be meaningful for those at work levels associated with higher education, and other non K-12 work level designations. Overall program schedule, class meeting times, program design following current trends, and program is different from other graduate programs, and social activities mixed with academic activities were found to be significant contributing factors to all work level groups in choosing to attend a graduate program. Finally, factors associated with program availability were found particularly significant to other work level designations, although all levels found them highly significant, and being able to attend with colleagues and friends was found to be significant for those with elementary work level designations, although, again, all work level groups found this factor highly significant.

Hypothesis 7

The seventh null hypothesis stated that there would be no difference between the mean scores of student responses and mean scores of designer/initiator responses on the independent variables of the five themes. The designers/initiators of the eleven alternative graduate programs in this study were asked to consider the identical survey items and using a five point Likert scale, indicate their agreement or disagreement with the item in terms of what needs they believe they meet of graduate students in the design and initiation of their alternative programs. A focus group activity was utilized for this purpose. In verbal discussion of the ranking, the designers/initiators could not come to an overall agreement on the ranking of the themes and felt that a more quantitative analysis would answer this question. Additional discussion revolved around individual factors associated with the themes that each viewed as important in meeting the needs of their graduate student populations. It was difficult for the designers/initiators to see similarities of factors since they viewed each alternative program as unique and non traditional as compared to the traditional academic graduate program. There was a consensus reached in that the designers/initiators agreed to disagree and ended with convincing arguments that many factors are interrelated and important in the development of a graduate program. They emphasized that it is the interconnections of the factors that make the alternative graduate program successful in terms of numbers of students.

For purposes of comparison, the data for this hypotheses will be presented in figure form to offer a more meaningful understanding of the findings. Individual tables for the student respondents can be referred to earlier in this chapter. Individual responses in the form of tables for the three identified designers/initiators can be found in Appendix K for additional reference.

Figure 12 presents a comparative ranking of the mean scores of the graduate student respondents and the mean scores of the designers/initiators of alternative graduate programs on the five identified themes. There is a striking similarity in the overall ranking of themes between the two groups. The theme of university as an institution ranks highest with both groups, followed by the accessibility theme and program characteristics, program linkages theme. The theme of career, professional and personal is ranked somewhat higher by the graduate student, as is the theme of flexibility, than the designers/initiators. Themes of the university as an institution, accessibility, and program characteristics and program linkages are seen by the designers/initiators as higher ranking, individually, in terms of the design and initiation of an alternative graduate than the graduate student in terms of their choice to pursue an advanced degree.

An individual comparison was done for each of the 30 survey factors between the mean scores of student responses and the mean scores of designers/initiators responses. Figure 13 illustrates that graduate students rank pursuing an advanced degree related to a personal goal higher than do designers/initiators. There is also a
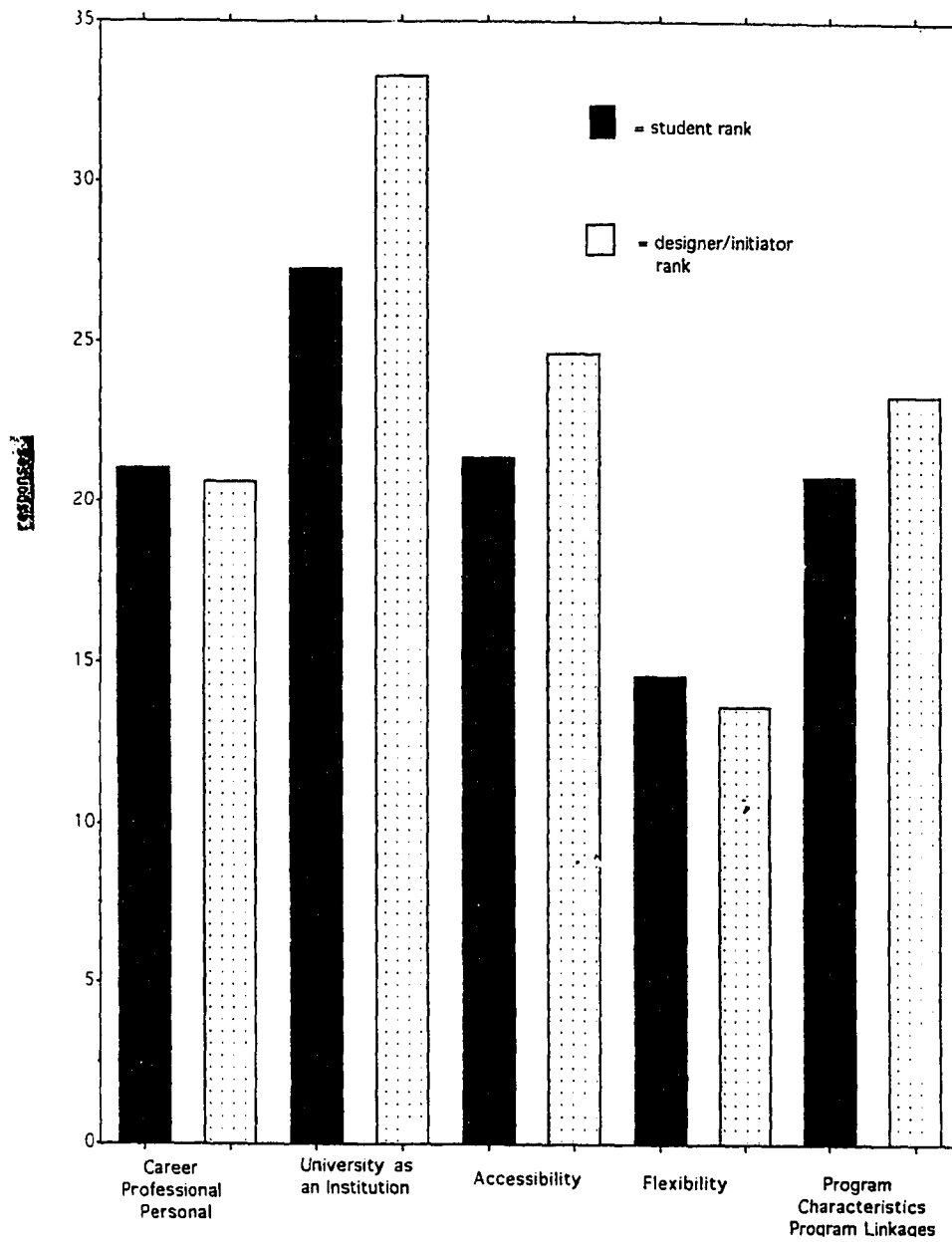
Figure 12. Comparative mean ranking of themes by graduate students and designers/initiators
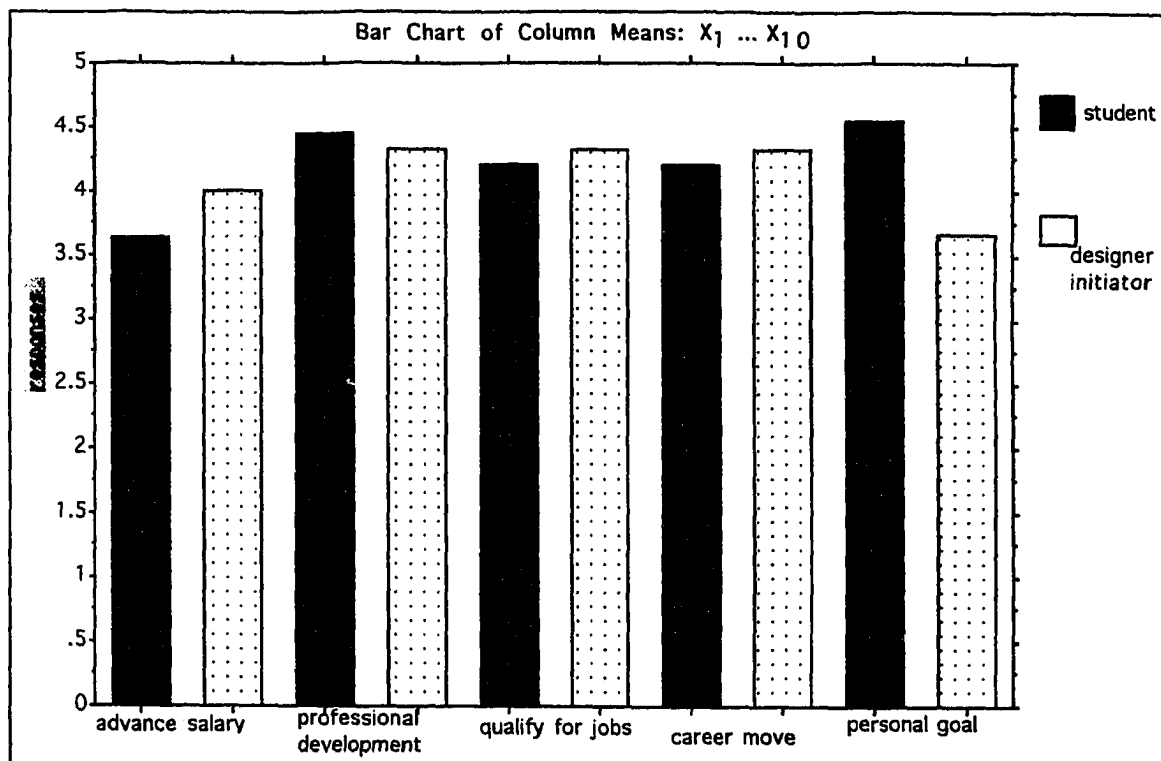
Figure 13. Comparative mean ranking of the individual factors of career, professional, and personal factors by graduate students and designers/initiators

slight difference between the graduate students and the designers/initiators in terms of professional development as a factor in pursuing a graduate degree. Other findings indicate a slightly higher emphasis on the individual factors of advancement in salary, qualifying for jobs, and mobility in career moves on the part of the designers/initiators as opposed to the graduate students.
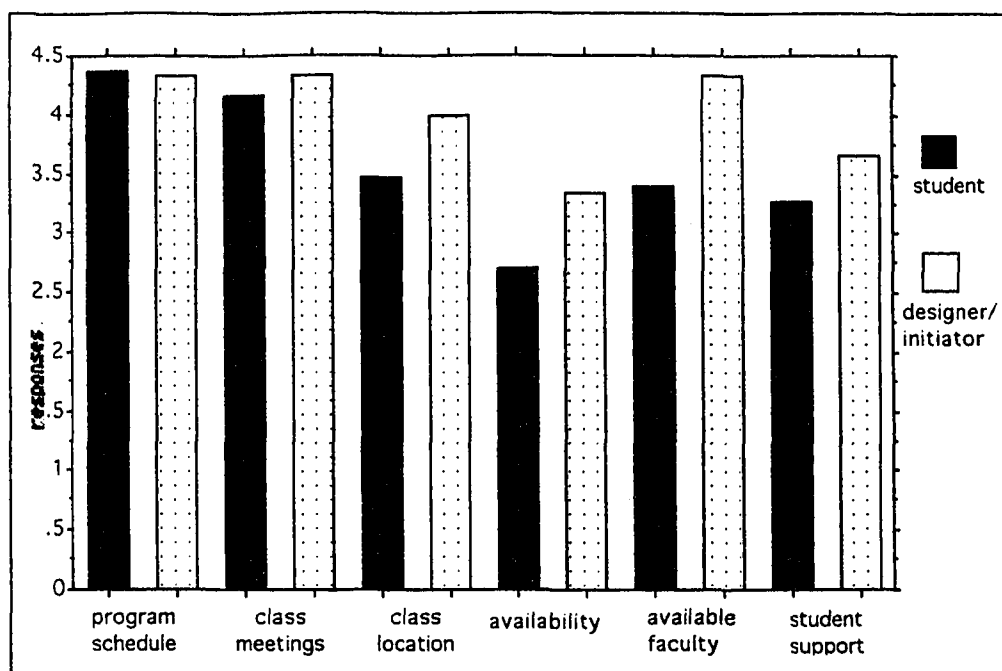
Figure 14. Comparative mean ranking of the individual factors of accessibility by graduate students and designers/initiators

Figure 14 indicates that the designers/initiators rank overall program scheduling, class meeting times and faculty availability somewhat equal, followed by class location, student support and program availability. Graduate students rank the overall program as their highest factor in considering to attend a graduate program, followed by convenient class meeting times, available faculty, student support and availability of the program. This finding would suggest that graduate students may attend a program where the overall schedule, class meeting times and class locations are more convenient even if there are other graduate programs available in their area. Designers/initiators rank all individual factors in this

cluster higher than graduate students with the slight exception of overall program schedule.

A comparative ranking of the mean scores between graduate students and the initiators/designers of alternative graduate programs related to the individual factors clustered within the university as an institution theme (see Figure 15) reveals larger differences in terms of reputation of the university, reputation of the faculty and recommendation by the employer. Initiators/designers rank these somewhat similar as a first consideration in program design and initiation, followed by lower tuition costs, reputation of the program, recommendations by former students, follow-up to previous graduate work, advertisements and brochures, and recommendations by colleagues. Graduate students in reverse, consider recommendations by colleagues and advertisements and brochures to be meaningful in choosing to apply to a graduate program. These factors are followed by reputation of the faculty, reputation of the university, and recommendations by former students. The lowest rankings were given to those factors associated with recommendations by employers and lower tuition costs followed by a follow-up to previous graduate work. It is an interesting observation that the data suggests that programs are designed and initiated with the perceptions of meeting specific needs and graduate students indicate that other needs are met by factors considered to be of lower rank in the design and initiation of the alternative graduate program.
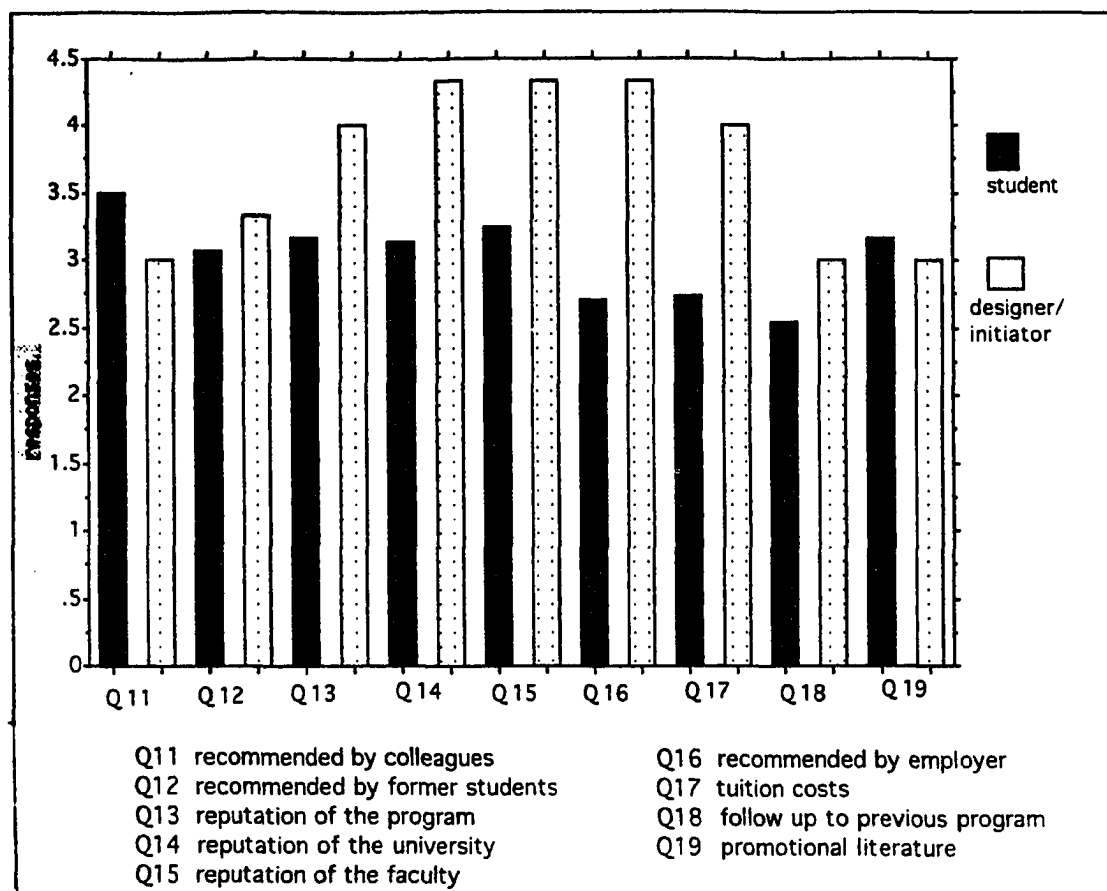
Figure 15. Comparative mean ranking of the individual factors of the university as an institution by graduate students and designers/initiators

Figure 16 reveals that graduate students rank equally the factors of combining course work with their careers and time to network in the program, followed by the flexibility to develop their own program and lack of interference with family responsibilities. Designers/initiators rank time to network, combing career with course work first and second, followed by development of individual programs and lack of interference with family responsibilities. Graduate students rank all individual factors above those of the

designers/initiators with the exception of the time to network in terms of their choosing to attend a graduate program.
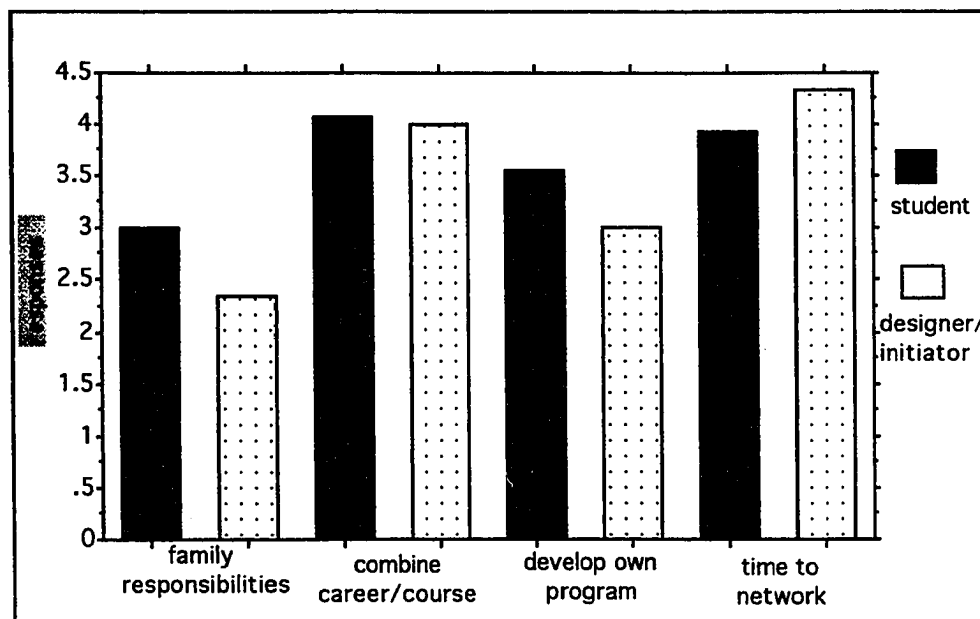
Figure 16. Comparative mean ranking of the individual factors of flexibility by graduate students and designers/initiators

In a comparative ranking of the final cluster of individual factors associated with the choice to attend a graduate program, graduate students rank the design of the program following current research trends and the fact that they perceive the program to be different from other graduate programs as first. (see Figure 17) These are followed by the maintenance of a cohort group in the program, attending a program with colleagues and friends, a mix of social activities with academic activities, and employer collaboration with the program. Designers/initiators rank all

factors above those of the graduate students in terms of the
program characteristics, program linkages with the factor of the
program being different from other graduate programs. Given
somewhat equal consideration are the individual factors of employer
collaboration, attending the program with colleagues and friends,
current design of the program related to research trends, and the
maintenance of a cohort group. Mixing social activities with
academic activities received the lowest ranking from the
designers/initiators.
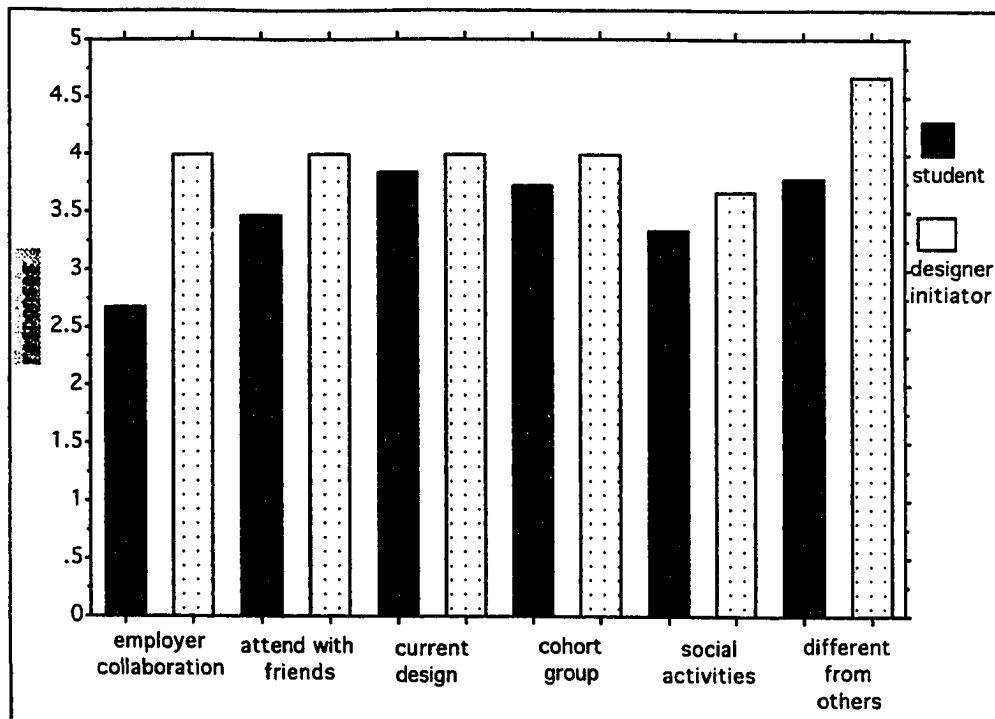
Figure 17. Comparative mean ranking of the factors of program
characteristics, program linkages by graduate students and
designers/initiators

In summary, Hypothesis 7 was found to be in error between the group of graduate students and the designers/initiators of the alternative graduate programs in all five identified themes as well as in all 30 individual factors. The overall findings concur with the literature in terms of the university as an institution factor being a high consideration factor related to the choice of a graduate student in deciding to apply to a graduate program. Designers/initiators also ranked the university as an institution theme as highest in terms of what needs they consider of graduate students in designing and initiating alternative graduate programs. It could be surmised that students attending these graduate programs perceive that the traditional graduate programs do not meet these needs.

Although many differences exist on the individual factors, many may be related to the diversity of the student populations and the fact that all eleven alternative graduate programs operate separately and serve what some may term as non traditional graduate students. It is inherent in the design of alternative graduate programs that some individual factors and characteristics may differ from each other but in the final analysis, alternative graduate programs seem to be designed and initiated with the same themes and individual factors that graduate students rate as important in their choice to pursue an advanced degree and apply to and attend a particular graduate program.

Section 5: Analyses and Discussion of the
Nine Secondary Hypotheses

The nine secondary hypotheses presented in Chapter III were used to investigate the interaction effects between levels of the independent or categorical variables. As stated in the introduction to the chapter, 14 statistically significant interactions were identified as a result of the 75 two-way ANOVA's calculated using the Statview SE + Graphics microcomputer statistical software program. It should be noted here that the nine secondary hypotheses were developed after a thorough review of the literature and based on the experiences of the investigator as well as the interview data collected. Although all interactions between the dependent variables were tested, only the ones that made some practical sense were stated as null hypotheses. Since this strategy is not purely *a priori* in methodology, the researcher assumes some expertise of knowledge within the alternative graduate programs.

Table 73 lists the probability statements for possible interaction effects. Tables 74-87 present the findings of the two-way ANOVA's. Discussion in the remainder of this section will be limited to the nine secondary hypotheses. The ANOVA tables and incidence tables (see Appendix N for AB incidence tables) will be presented along with a discussion of the findings for each hypothesis. The two-way ANOVA analyses provided more substantial information and insight into the areas of the graduate student's choice to attend an alternative graduate program and suggests why

Table 73

<u>Probability statements of the interaction effects derived from the two-way ANOVA's to test secondary hypotheses</u>

Dependent Variables	Categorical Variables Used to Define Groups for Analyses				
	Age	Ethnicity	Work Setting	Job	Work Level
GENDER					
Career, Professional, Personal	.2956	.9586	.4918	.4335	.0477*
University as an Institution	.9501	.0155*	.0429*	.7092	.0234*
Accessibility	.9504	.0069*	.151	.8639	.0099*
Flexibility	.5235	.2602	.0915	.3931	.144
Program Characteristics Program Linkages	.8299	.0599	.0038*	.4331	.0532
AGE					
Career, Professional, Personal	xx	.5232	.1794	.4678	.5225
University as an Institution	xx	.0425*	.919	.7118	.7376
Accessibility	xx	.3192	.7976	.0253*	.1023
Flexibility	xx	.0254*	.2012	.5816	.9999
Program Characteristics Program Linkages	xx	.0795	.1182	.5652	.9201
ETHNICITY					
Career, Professional, Personal	.5232	xx	.2398	.7944	.001*
University as an Institution	.0425*	xx	.4319	.0422*	.529
Accessibility	.3192	xx	.5131	.503	.0065*
Flexibility	.0254*	xx	.9199	.0127*	.2043
Program Characteristics Program Linkages	.0795	xx	.5647	.0535	.0681
WORK SETTING					
Career, Professional, Personal	.4918	.2398	xx	.5159	.4715
University as an Institution	.0429*	.4318	xx	.9708	.6381
Accessibility	.151	.5131	xx	.798	.4442
Flexibility	.0915	.9199	xx	.3235	.4888
Program Characteristics Program Linkages	.0038*	.5647	xx	.2896	.4236
JOB					
Career, Professional, Personal	.4678	.7944	.5159	xx	.9392
University as an Institution	.7118	.0422*	.9708	xx	.244
Accessibility	.0253*	.503	.798	xx	.5338
Flexibility	.5816	.0127*	3235	xx	.3571
Program Characteristics Program Linkages	.5652	.0535	.2896	xx	.1494
WORK LEVEL					
Career, Professional, Personal	.0477*	.001 *	.4715	.9392	xx
University as an Institution	.0234*	.529	.6381	.244	xx
Accessibility	.0099*	.0065*	.4442	.5338	xx
Flexibility	.144	.2043	.4888	.3571	xx
Program Characteristics Program Linkages	.0532	.0681	.4236	.1494	xx

*alpha level < .05

some previous findings discussed earlier in this chapter may have occurred.

The probability statements indicated with an asterisk equate to the rejection of the null hypotheses for that particular combination of independent and dependent variables. This means that a statistically significant difference at the $\alpha = .05$ level was found to exist between the levels of the independent variable for the dependent variable described in the left-hand column of Table 73. A note should be made here that Table 73 has duplication of the probability statements to add to the readability of the table by any of the dependent variables.

Hypothesis 1

The first secondary null hypothesis stated that there would be no significant interaction effects between the four categories of age and the two categories of gender ($\alpha = .05$). The two-way ANOVA's indicated that no significant interaction effects were revealed in terms of the combination of the variable of age and gender related to any of five identified themes.

Hypothesis 2

The second secondary hypothesis stated that there would be no significant interaction effects between the two categories of gender and the two categories of ethnic diversity ($\alpha = .05$) . It should again be noted that the ethnic diversity categorical variable was collapsed into two categories due to small cell sizes as discussed earlier in this chapter. The two-way ANOVA's indicated two

significant interactions. Table 74 shows a significant interaction effect, $\underline{F}(1, 473) = 5.90, \underline{p} < .0155$ between the levels of gender and levels of ethnic diversity. The intersection of the mean scores suggest that gender and ethnicity interact in relation to the theme of university as an institution. Not White-non Hispanic males may consider factors associated with the university as an institution theme more than White non-Hispanic males and both groups of females in deciding to apply to a graduate program. This theme included recommendations by colleagues, employers and former students; reputations of the faculty, institution, and program; lower tuition costs; follow-up to previous graduate programs; and advertisements and brochures.

Table 74

<u>Hypothesis 2: Interaction effect of gender and ethnic diversity for the university as an institution theme</u>

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 11-19

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	162.332	162.332	5.061	.0249
Recode of ethnic (B)	1	469.819	469.819	14.646	.0001
AB	1	189.405	189.405	5.905	.0155
Error	473	15172.727	32.078		

Table 75 revealed a statistically significant interaction, $F(1, 473) = 7.36, p < .0069$, related to the theme of accessibility. The AB incidence table (see Appendix N) shows similar findings in that not White-non Hispanic males are more likely to consider factors

associated with accessibility when deciding to attend a graduate program than do females of both ethnic categories and White-non Hispanic males. Other cell means show no significant differences. Individual factors within this theme include overall program schedule, class times, and class locations meeting needs; availability of other graduate programs in the area; accessibility of faculty; and non academic program support.

Table 75

Hypothesis 2: Interaction effect of gender and ethnic diversity for the accessibility theme

Anova table for a 2-factor Analysis of Variance on Y_2: sum q21-24,32,35

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	21.486	21.486	1.669	.197
Recode of ethnic (B)	1	223.334	223.334	17.35	.0001
AB	1	94.694	94.694	7.357	.0069
Error	473	6088.49	12.872		

Hypothesis 3

The third secondary hypothesis stated that there would be no significant interaction effects between the two categories of gender and the two categories of work setting ($\alpha = .05$). Tables 76 and 77 indicate two significant interaction effects related to the themes of university as an institution, $F(1, 481) = 4.12, p < .0429$ and program characteristics, program linkages $F(1, 481) = 8.48, p < .0038$.

The AB incidence table (see Appendix N) suggests that the intersection of mean scores between gender and work setting are significant in terms of the university as an institution theme. Further analysis shows that male graduate students who do not work in educational settings may consider factors within the theme more than females and both gender groups who work in educational settings when deciding to apply to a graduate program. This theme includes factors related to recommendations by colleagues, former students, employer; reputations of faculty, program, and university; lower tuition costs; follow-up to previous graduate course work; and advertisements and brochures.

The interaction of gender and work setting related to the theme of program characteristics noted a similar finding among male graduate students who did not work in an educational setting. The high mean score presented in the AB incidence table (see Appendix N) suggests that male graduate students who do not work in an educational setting may consider factors of employer collaboration, attending

Table 76
Hypothesis 3: Interaction effect of gender and work setting for the university as an institution theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 11-19

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	85.656	85.656	2.652	.1041
work set (B)	1	259.101	259.101	8.021	.0048
AB	1	133.178	133.178	4.123	.0429
Error	481	15537.157	32.302		

Table 77

<u>Hypothesis 3: Interaction effect of gender and work setting for the</u>
<u>program characteristics, program linkages theme</u>

Anova table for a 2-factor Analysis of Variance on Y_2: sum q 26,28,30,33,34,36

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	164.722	164.722	10.142	.0015
work set (B)	1	.83	.83	.051	.8212
AB	1	137.67	137.67	8.477	.0038
Error	481	7811.818	16.241		

with colleagues and friends, a program design which follows current research trends and maintains a cohort arrangement, mixes social activities with academic activities, and the perception that the alternative graduate program is different from others as important items in deciding at attend a graduate program.

Hypothesis 4

The fourth secondary hypothesis stated that there would be no significant interaction effects between the two categories of gender and the six categories of work level ($\alpha = .05$). It should be noted here that the work level categories apply to those respondents who indicated that they worked in educational settings. The two-way ANOVA's indicated three significant interactions related to the themes of career, personal, professional, $F(5, 458) = 2.29$, $p < .0447$, university as an institution, $F(5, 458) = 2.63$, $p < .0234$, and accessibility, $F(5, 458) = 3.06$, $p < .0099$. (see Tables 78, 79, and 80)

Table 78 indicates fairly consistent mean scores throughout the AB incidence tables. This finding might suggest that no specific individual gender level or work level is more likely to consider the theme of career, professional and personal factors over the other levels in deciding to pursue an advanced degree. Overall, the significance of the variables of gender and work level interacting with the theme are significant.

Table 78
Hypothesis 4: Interaction effect of gender and work level for the career, professional, and personal theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 5-9

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	8.101	8.101	.796	.3728
Work level (B)	5	168.209	33.642	3.305	.0061
AB	5	116.712	23.342	2.293	.0447
Error	458	4662.672	10.181		

Table 79 shows findings associated with the theme of university as an institution. The mean scores indicate that males followed by female graduate students working in higher education settings may be more affected by factors within this theme than traditional K-12 work levels for both genders. Another high mean score for males in the other work level category suggests a similar interpretation. Individual factors within this theme include recommendations by colleagues, former students, employers;

reputations of the university, program and faculty; lower tuition costs; follow up to previous graduate work; and advertisements and brochures.

Table 79

<u>Hypothesis 4: Interaction effect of gender and work level for the university as an institution theme.</u>

Anova table for a 2-factor Analysis of Variance on Y_2: sum q 11-19

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	.184	.184	.006	.9392
Work level (B)	5	702.322	140.464	4.45	.0006
AB	5	414.809	82.962	2.628	.0234
Error	458	14455.823	31.563		

An analysis of the interaction effects between gender and work level related to the accessibility theme indicates a high significance associated with this interaction and the theme, see Table 80. Mean scores for graduate students in work levels in higher education seem to be higher than other work levels for both gender levels. Other mean scores show little difference. This finding might suggest that males and females in higher education consider factors within the accessibility theme at a higher level than do males and females in traditional K-12 work levels. An additional notation may be made that males in higher education exhibited a slightly higher mean score than females in the higher education designation. Factors associated with the accessibility theme include, overall program schedule, class times, and class locations meeting needs;

availability of other graduate programs in the area; accessibility of faculty; and non academic program support.

Table 80

Hypothesis 4: Interaction effect of gender and work level for the accessibility theme

Anova table for a 2-factor Analysis of Variance on Y3: sum q21-24,32,35

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
gender (A)	1	45.684	45.684	3.528	.061
Work level (B)	5	128.389	25.678	1.983	.0798
AB	5	198.273	39.655	3.063	.0099
Error	458	5930.321	12.948		

Hypothesis 5

The fifth secondary hypothesis stated that there would be no significant interaction effects between the four categories of age and the 4 categories of job for graduate students (α = .05). Two-way ANOVA's indicated one significant interaction effect, $F(9, 459)$ = 2.14, p < .0253, for the accessibility theme. Table 81 revealed that means scores reported for other jobs in the age range of 40-49 are highest and may suggest that these graduate students give more consideration to factors associated with accessibility than do other age groups with more traditional educational titles in deciding to attend a graduate program. Other cell means indicated no significance with the exception of the 50 and over category of other jobs, but due to the low number of respondents in the group, no

interpretation will be offered. Factors associated with the accessibility theme include overall program schedule, class times, and class locations meeting needs; availability of other graduate programs in the area; accessibility of faculty; and non academic program support.

Table 81

Hyothesis 5: Interaction effect of age and job variables for the accessibility theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q21-24,32,35

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
age (A)	3	29.152	9.717	.748	.5239
job (B)	3	23.544	7.848	.604	.6125
AB	9	249.944	27.772	2.138	.0253
Error	459	5962.076	12.989		

Hypothesis 6

The sixth secondary hypothesis stated that there would be no significant interaction effects between the four categories of age and the two categories of ethnic diversity ($\alpha = .05$). Two significant interaction effects were discovered related to the themes of university as an institution, $F(3, 465) = 2.74$, $p < .0425$, and flexibility, $F(3, 465) = 3.13$, $p < .0254$. (see Tables 82 and 83)

Findings displayed in the AB Incidence table (Table 82) show a wide range of mean scores for the categorical variables. The data suggests that age groups of 30-39, 40-49 and 50 and over mixed

with the factor of not White-non Hispanic category place a higher value on the factors associated with the university as an institution theme than do the White-non Hispanic graduate students in the same age ranges and as compared to all categories of ethnic diversity in the under 30 age range. An additional view of the data in the White-non Hispanic column indicates a higher mean score for those over 50 as compared to other age groups in the same ethnic category.

Individual factors associated with the university as an institution theme include recommendations by colleagues, former students, employers; reputations of the university, program and faculty; lower tuition costs; follow up to previous graduate work; and advertisements and brochures.

Table 82
Hypothesis 6: Interaction effect of age and ethnic diversity variables and the university as an institution theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 11-19

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
age (A)	3	383.815	127.938	4.045	.0074
Recode of ethnic (B)	1	84.305	84.305	2.665	.1032
AB	3	260.68	86.893	2.747	.0425
Error	465	14708.882	31.632		

Table 83 revealed data that shows similar mean scores for all levels of the age variable and ethnic diversity variable with the exception of not White-non Hispanic, under 30 respondents, related

to the theme of flexibility. The lower mean score in this category
may suggest that graduate students that are under 30 and not White-

Table 83
Hypothesis 6: Interaction effect of the age and ethnic diversity
variable and the flexibility theme

Anova table for a 2-factor Analysis of Variance on Y_2: sum q 25,27,29,31

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
age (A)	3	20.937	6.979	.875	.4539
Recode of ethnic (B)	1	10.822	10.822	1.357	.2447
AB	3	74.974	24.991	3.134	.0254
Error	465	3708.418	7.975		

non Hispanic do not consider factors associated with flexibility as
strongly as those in other age levels regardless of their ethnic
diversity identification. A note should be made here that some cell
numbers may be too low to offer any meaningful interpretations
other than to this specific population of graduate students. Factors
associated with the theme of flexibility include program does not
interfere with family responsibilities, combining course work with
job, developing an individual program, and program provides time to
network with colleagues. It is likely that younger graduate students
have not found these factors substantial in their decision to attend a
graduate program due more to their age, career experience, and
family responsibilities.

Hypothesis 7

The seventh secondary hypothesis stated that there would be no significant interaction effects between the four categories of age and the six categories of work level (α = .05). It should be noted here that work level categories affected respondents who work in educational settings and does not include those graduate students who do not work in traditional education settings. The two-way ANOVA's indicated that no significant interaction effects were revealed in terms of the combination of the variables of age and work level associated to any of the five identified themes.

Hypothesis 8

The eighth secondary hypothesis stated that there would be no significant interaction effects between the two categories of ethnic diversity and the six categories of work level. Tables 84 and 85 indicate that the combination of ethnic diversity and work level are significant related to the themes of career, professional, and personal, $F(5, 450)$ = 4.18, p < .001, and accessibility, $F(3, 450)$ = 3.27, p < .0065.

Table 84 indicates a small range of mean scores between the ethnic diversity and work level variables with the highest mean score in the White-non Hispanic, junior high-middle school category and the lowest mean score in the White-non Hispanic higher education category. The differences in the mean scores, combined with some of the smaller cell numbers are not considerable enough to offer any useful differentiations within this interaction analysis. It is significant to postulate that the categories of ethnic diversity

and work level have significant impacts on the decision of graduate students to pursue an advanced degree. Individual factors associated with the career, personal and professional theme include advancement of a salary schedule, meeting of professional and personal goals, qualifying for jobs and moving upward in a career.

Table 84

Hypothesis 8: Interaction effect of the ethnic diversity and work level variables and the career, professional, personal theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 5-9

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Recode of ethnic (A)	1	31.246	31.246	3.159	.0762
Work level (B)	5	58.239	11.648	1.177	.3192
AB	5	206.998	41.4	4.185	.001
Error	450	4451.458	9.892		

Table 85 displays data associated with the interaction effects of the ethnic diversity and work level variables and the theme of accessibility. Mean scores as presented on the AB Incidence table show small differences with the exception of the not White-non Hispanic higher education category. This may be explained by the small number of respondents in this combination of categories. There may be some significance to not White-non Hispanic high school respondents who are the highest mean among the individual cells. This suggests that those graduate students in this category may give more consideration to factors associated with the

accessibility theme than do other ethnic and work level designated combinations. Individual factors associated with the accessibility theme include overall program schedule, class times, and class locations meeting needs; availability of other graduate programs in the area; accessibility of faculty; and non academic program support.

Table 85
Hypothesis 8: Interaction effect of the ethnic diversity and work
level variables and the accessibility theme

Anova table for a 2-factor Analysis of Variance on Y_2: sum q21-24,32,35

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Recode of ethnic (A)	1	117.927	117.927	9.278	.0025
Work level (B)	5	203.695	40.739	3.205	.0074
AB	5	207.905	41.581	3.272	.0065
Error	450	5719.495	12.71		

Hypothesis 9

The ninth and final secondary hypothesis stated that there would be no significant interaction effects between the two levels of ethnic diversity and the four levels of job variables related to the five themes (α= .05). The two-way ANOVA's indicated two significant interactions associated with the theme of university as an institution, $F(3, 462) = 2.75$, $p < .0422$, and the theme of flexibility, $F(3, 462) = 3.65$, $p < .0127$. (see Tables 86 and 87)

Findings presented in Table 86 indicate that the work level of counselor, particularly within the White-non Hispanic ethnic category, and administrators within the not White-non Hispanic

category may have a tendency to favor factors associated with the theme of university as an institution more so than other levels of jobs and other ethnic designations. Although the interaction analysis proved to be significant for the ethnic diversity and job variables, the differences in mean scores have a close range between White-non Hispanic teachers and administrators and other job levels within both ethnic diversity categories. It should be noted that overall, not White-non Hispanic categories show a higher mean score for all job levels (29.13) in terms of the theme of university as an institution when deciding to apply to a graduate program. Factors associated with the theme of university as an institution include recommendations by colleagues, former students, employers; reputations of the university, program and faculty; lower tuition costs; follow up to previous graduate work; and advertisements and brochures.

These findings are similar to the data presented in Table 85 describing the interaction of work level and ethnic diversity.

Table 86

Hypothesis 9: Interaction effect of the ethnic diversity and job variables and the university as an institution theme

Anova table for a 2-factor Analysis of Variance on Y_1: sum q 11-19

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Recode of ethnic (A)	1	36.267	36.267	1.139	.2865
job (B)	3	116.537	38.846	1.22	.3021
AB	3	263.063	87.688	2.753	.0422
Error	462	14716.121	31.853		

The final significant interaction effect was revealed through an analysis of ethnic diversity and job level related to the theme of flexibility, $F(3, 463) = 3.65, p < .0127$. (see Table 87) The AB ncidence table (see Appendix N) shows very little difference in the mean scores of all categories of ethnic diversity and job levels with the exception of counselors who are not White-non Hispanic (13.77) versus teachers who are not White-non Hispanic (16.8). The highest mean score is that of the counselors as a group, in both ethnic diversity categories (15.46). The lowest mean score is within the teacher group of not White-non Hispanic (13.77). The higher mean score for counselors in the not White-non Hispanic category may not be statistically significant due to the low cell count. Factors included in the theme of flexibility are program does not interfere with family responsibilities, combining course work with job, developing an individual program, and program provides time to network with colleagues.

Table 87
Hypothesis 9: Interaction effect of the ethnic diversity and job variables and the flexibility theme

Anova table for a 2-factor Analysis of Variance on Y_2: sum q 25,27,29,31

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Recode of ethnic (A)	1	5.056	5.056	.637	.4252
job (B)	3	64.447	21.482	2.706	.0448
AB	3	86.838	28.946	3.647	.0127
Error	462	3667.057	7.937		

In summary, seven of the nine secondary hypotheses that examined interaction effects, were found to be significant ($\alpha = .05$). Most significant interaction effects were noted with the interaction of gender as one of the variables specifically related to themes of university as an institution and accessibility. The theme of flexibility was found significant when it was associated with the interaction of the age and ethnic diversity and job and ethnic diversity. Interaction effects were significant when one of the variables was ethnic diversity coupled with job and work level, particularly as it relates to the themes of career, professional, and personal, university as an institution, accessibility and flexibility themes. The findings of the interaction effects seem to confirm the earlier data findings related to individual categorical variables as they impact the dependent variables either in terms of theme or individual survey factors. Graduate program designers and initiators might find the data relevant to unique situations when certain graduate student populations are recruited. Others might note that the data also indicates that there is most likely a need for more alternative graduate programs or change within the traditional graduate programs to reach the perspective graduate student.

Section 6: Summary of the Optional Other Fill-in Survey Remarks Sections

The survey instrument contained several areas in which respondents could write in their own remarks in addition to the questions, as they came to mind, while working through the 30 item survey. Most respondents did not take the opportunity to write in

short comments. Of those who did, approximately less than 10%, the responses were analyzed and coded by theme and to ascertain if the survey had neglected any context areas. The majority of the responses revolved around the identified themes within this research.

In the section of factors associated with career, professional, and personal, respondents became more specific in their reasons for pursuing an advanced degree. These included meeting credential requirements to maintain their current positions, seeing others qualify for job advancement, increase competencies, to meet requirements for more advanced study, which relate to the concepts of salary advancement, mobility, and to qualify for jobs that were indicated on the survey. Other responses indicated a more personal goal in that comments included a sense of fulfillment, to prove something to myself, desire to obtain an advanced degree, no one in my family has ever reached a masters level, a life adventure, a challenge to use my brain, a sense of achievement, self esteem, and personal satisfaction. On somewhat of a professional level, respondents indicated gaining credibility, help my own business, status, improving skills, leadership quality and to broaden my knowledge base in the field.

The second theme which was identified was the university as an institution. Graduate students indicated that they chose to apply to an alternative graduate program because of talk at the district level, conversations with others who have taken it, seeing information and checking out the reputation of the university, friends and former students, friends who had completed the

program, national reputation of an individual faculty member associated with the program, and the availability of scholarships. It is interesting to note that in this particular section, respondents took the opportunity to delve into areas of accessibility, flexibility and program characteristics and program linkages as reasons why they chose to apply to a particular program. Many write-in responses mentioned convenience, location of program, time factor, fit with lifestyle, cohort group concept, and the fact that the institution was an alma mater. One area frequently mentioned that was not considered in the original design of the survey was the geographic location in terms of the city's reputation. Many respondents mentioned sunny San Diego, being able to take holidays after studies were completed, nice weather, good place for families, and program accommodation for families.

One final area mentioned within this particular section in terms of the choice to apply to the program was the time frame of the overall program. It was frequently mentioned that summer terms, summer only options, and not requiring a residency period were important considerations. For programs that do not meet in the summer, characteristics such as shortness of program, allowing continuation of job, and meetings on one Saturday per month were mentioned. All of these seem to fit into the areas of accessibility and flexibility of the program.

A final theme included responses that had to do with characteristics of the program itself. It was mentioned that perceptions of a program were, that it's innovative, a chance to try something different, creating own program, currency and relevancy

of the program, an adult learning orientation, and that the program allowed for combining career with course work, were seen to be factors in the choice to attend the graduate program.

Summary

Through an in-depth-interview process, themes and individual factors that designers/initiators utilized to develop alternative programs were identified. These themes and factors were seen as meeting the needs of the graduate student who chooses to attend an alternative graduate program because the traditional graduate program does not meet these needs. In a comparative ranking to examine a match between designer/initiator needs and graduate student choosing programs matching their needs, as stated in Hypothesis 7, the ranking was seen to be similar. The theme and factors associated with the university as an institution ranked highest among both populations. This may suggest that alternative graduate programs are by design meeting needs of graduate students.

In addition, a comparison of groups according to the levels of the independent variables based on the six primary hypothesis revealed findings that gender does not make a significant difference in the themes of career, professional and personal, university as an institution, accessibility, flexibility and program characteristics, program linkages. Additional analysis revealed that individual factors associated with the variable of gender did prove significant.

The variable of age proved significant for themes related to career, professional and personal and university as an institution themes. The variable of ethnic diversity proved to be significant in

themes associated with university as an institution and accessibility. The work setting of a graduate student revealed significant findings related to themes of career, professional and personal as well as university as an institution. The specific job of a graduate student proved significant in terms of themes related to career, professional and personal and university as an institution. The work level of a graduate student proved significant in terms of the themes of career, professional and personal as well as university as an institution. Significant findings within each of the themes were analyzed for further definition and meaning. In total, sixty two significant findings were identified through the ANOVA's.

Scheffé post hoc comparisons identified the subgroup or levels of the variable that were responsible for the significant differences in the ANOVA findings for each of the five thematic variables as well as for each of the 30 survey factors individually. A number of the significant findings, 18, related to the dependent variable of university as an institution factors across all categorical variables; followed by 13 factors associated with accessibility; 12 factors linked to the professional and personal factors; and 12 related to program characteristics, program linkages. There were seven findings for career, professional and personal. Only one significant finding was identified across the categorical variables for the individual factors associated with the theme of flexibility.

From the analyses of the nine secondary hypothesis, 14 significant interaction effects were identified. The interaction effects portion of the study supported earlier findings related to the significance of the themes and added further understanding to the

levels of the categorical variables in terms of identifying the factors associated with the choice that graduate students make in choosing a graduate program. Again, the theme of university as an institution ranked highest with five significant interactions; followed by the accessibility theme with four; career, professional and personal and flexibility with two; and program characteristics, program linkages with one significant interaction.

Categorical variables found to be prevalent in significant interactions were associated with ethnic diversity and gender with four significant findings; work level and gender with three findings; job levels and ethnicity, and age and ethnicity with two findings each; job levels and age with one significant finding. Work setting and gender revealed two significant interactions. No significant interactions were found between the variables of age and gender and the variables of age and work levels.

Chapter IV has presented the major findings surrounding the development of themes, the seven primary hypotheses and the nine secondary hypotheses tested in this study. The findings suggest some significant areas related to the reasons why alternative graduate programs are chosen over traditional graduate programs by students. Chapter V will present a discussion of the initiation of graduate programs, why these program exist and if a relationship exists between the alternative and traditional graduate programs. Based on the data presented in Chapter IV and discussion presented in Chapter V, Chapter V will conclude with concepts of change in terms of universities and programs and offer recommendations for further study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The first section of Chapter V presents a summary of the research related to the initiation and development of alternative graduate programs, why these programs exist and if there is a relationship between alternative graduate programs and traditional graduate programs. The section sets the boundaries and outlines the framework which was an integral portion of the study which ultimately impacts further summary, conclusions, and recommendations. It is through the words of the designers and initiators that a glimpse of the underlying beliefs of graduate education, particularly at the ABCD University, is explored and the student responses and subsequent conclusions lend credibility and clarity. The second section presents a summary of the purpose, the theoretical background and literature related to the outcomes of the study, the methodology, and the findings of the study. The third section delineates the conclusions drawn from the research. The final section provides recommendations for graduate programs in Colleges of Education and further study based on the findings of this study.

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<p style="text-align:center">## Summary of the context of</p>
<p style="text-align:center">## alternative graduate programs</p>

Initiation and development of graduate alternative programs

One is immediately struck by the inauspiciousness of the alternative graduate programs. The hallway leading to two of the 10 x 13 foot offices is dimly lit and is no different from any of the hallways in the entire three story building. The designers/initiators are characteristically in small spaces crowded with the paraphernalia of their programs: brochures, announcements, advertisements, newsletters, student records and files.

There is somewhat of an entrepreneurial atmosphere where one expects to be able to see the electric current of energy in the air. Choices are made by designers/initiators that seem like gambles or risks, using knowledge and reason to see things that can come about without precisely what will come about (Hébert and Link, 1988). There is an endless judgment of possibilities without the calculations of certainty. The concept of entrepreneur is derived from the discipline of economics.

Hébert and Link (1988) undertook research to look into the historical concept of the word entrepreneur and posited that there are two common characteristics: skepticism, in attitudes toward traditional ideas of ways of doing things; and open-mindedness, often verging on credulity, toward new concepts and techniques. The designers/initiators of alternative graduate programs share these characteristics. They are always creating and generating new technical and organizational alternatives. Larry Roman calls it

"having both feet ahead, instead of one foot behind, in yesterday, and one foot even, at today." Sam Baker and Matt Franklin lament that most university faculty are content with the status quo, never questioning what "alternatives might be available, what alternatives might be better to provide service to students."

Sam Baker believes that:

> One of the reasons the traditional program stays the way it is, is because there aren't enough people here [on the campus] to sit down and talk about it. You talk about a program over months, every single day, you have to talk about it. Other faculty say "well, why would you have to talk about it everyday, just save it all up and talk about it all at once". Then I respond," because that's not the way human dynamics works, and that's not the way human relations work.

The activity in the alternative graduate program offices is brisk at all times of the day, on the weekends, and during the traditional holiday times when the remainder of the ABCD University campus is quiet. One might see on a Saturday, an international teleconference being broadcast to educational leaders or one might be surprised to see a designer/initiator working late on a Friday evening to put the finishing touches on a million dollar grant proposal. Without specific directions, one would be hard pressed to find any of the offices of the alternative graduate programs. The programs are not listed on the directories in the main foyer of the buildings, they are not listed in the university telephone directories, they are not listed in the graduate bulletins. This is sometimes by choice and sometimes by the nature of the specific population that is being served through an alternative graduate program. It is also

related to the fact that some alternative graduate programs have a short longevity.

Meetings are held with people standing or removing student assignments from chairs that serve as tables and shelves. Despite the strewed look of disorganization, these offices produce large amounts of mail, both off campus and within the campus, plan and organize activities for hundreds of students, and basically operate as if they were unique entities not reliant on the university or it's structure and bureaucracy. Graduate alternative programs are serving graduate students in large numbers that are unrealistic to those who do not work in the programs, share the vision, or take the time to stop and investigate.

Traditional programs, that are the backbone of the graduate system at ABCD University, have in some ways, been deprived of the talents and innovativeness of the initiators/designers. This can be seen within the concept of the buy-out of faculty time where designers/initiators literally buy their time away, through external funding, from the traditional program. This places an additional burden on the non designers/initiators among the faculty to meet the needs of graduate students not in alternative programs as well as assume much of the responsibility for the teaching and administration of the traditional graduate program. Faculty and administration in the department and at the broader college level support alternative programs and the designers/initiators in their willingness to participate in the programs as an additional teaching assignment. This has monetary rewards for faculty and often places additional demands on the time and energy on the faculty not

involved in alternative programs within the department and at the college level.

The roles and relationships that the designers/initiators assume as faculty are integral to an understanding of the concept of program development and why the alternative graduate programs exist and flourish. Figure 18 defines the three program initiators in terms of, their titles that they use interchangeably within their alternative programs, the roles they assume in the alternative programs, and their traditional program responsibilities. All of the designers/initiators have formed their own Centers or Institutes which is the vehicle in the university to gain control of funding, scheduling, and programming. Matt Franklin says that "alternative programs provide a more localized control over the administration of the dollars where the formal system opens up more restrictions and criteria. There is more latitude on how to use your funds. You can respond more quickly." Sam Baker concurs. A final notation is the multiple numbers of alternative programs that each designer/initiator is responsible for and that were included in this study. (See Appendix L for a description of the eleven alternative graduate programs.)

Designers/initiators talk about a spirit of innovation, the willingness to take risks and accept both the negative and positive consequences. Sam Baker calls it a "gamble". The initiation of alternative graduate programs is in many ways a response to the university system and structure. Matt Franklin believes that "the more we can demonstrate this kind of responsiveness in reaching out to constituencies as opposed to them reaching in, it makes it more

Program Initiator	Titles	Roles in non-traditional programs	Other responsibilities with traditional program	Formation of University Foundation Program	Alternative Program Responsibilites
Respondent A	Director Coordinator Advisor	university liason student admissions student mentor student advising teaching program development student supervision budget responsibility course scheduling hiring faculty/staff office management International travel	teaching publishing research program coordination student supervision student advising Personnel committee consultant	Interwork Institute (facilities and offices are rented away from traditional campus department location)	Program #1 Program #2 Program #3
Respondent B	Director Coordinator Advisor	university liason student admission student mentor student advising teaching program development student supervision budget responsibility course scheduling hiring faculty/staff office management International travel	teaching publishing research program coordination student supervision student advising department chair extra mural funding consultant	Center for Educational Management: Research and Training (facilities and offices are incorporated within the assigned faculty office)	Program #4 Program #5 Program #6 Program #7
Respondent C	Director Advisor	university liason student admissions student mentor student advising program development budget responsibility course scheduling hiring faculty office management county wide liason	teaching publishing research program coordination student advising consultant	Institute for Educational Outreach (facilities and offices are incorporated within the assigned faculty office)	Program #8 Program #9 Program #10 Program #11

Figure 18. Program designers/initiators roles and responsibilities

data compiled from interviews and personal observations
and faculty work load assignments for 1993-1994

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real. I think it improves the perception of people about the university." Larry Roman warns that "you don't go into this as a teacher or a professor, you don't go in with a 'holier than thou' or as an academician type thing. You go into it as an equal. You go into it to learn, you go into it to give."

Alternative graduate programs are designed for many of the same reasons, perceived needs of students, on the part of the designers/initiators. Time is spent each day listening to, talking with, interacting with the participants in educational arenas. Matt Franklin defines the student as the consumer. "It's up to us to structure the learning experiences and courses that fit around it and put all of our own university bureaucratic structure around it." Larry Roman calls it "a spirit of intent", an elaboration of his vision.

Designers/initiators are excited by their graduate student populations, by their successes in these alternative programs. Sam Baker describes the "synergy that is created" in alternative programs. There is a "down side" which all refer to: that is the amount of time it takes to meet the needs of students. There are references to the headaches that come along with program initiation, the unpleasantness of the long tiring hours with little or no reward, the busy work of coordinating the programs, of servicing the students who due to the fact that they are in alternative programs are not in the mainstream of the university structure. Sam Baker ponders that if he "continues to develop programs, it simply means that I would have to be eventually buried, there is only one professor here to do it all, it all rests with one person." Larry Roman adds:

> It takes a big part of your life, it takes commitment and
> it takes people who are willing to take risks, who are
> willing to care enough to do a lot of things with little
> or no thanks. You're not going to get back a lot of things.
> You are not going to get a plaque, you're not going to
> get applauded for these programs. It just doesn't happen.

Designers/initiators make strong statements about doing things because it is right, in knowing that what they are doing is working, in planning for tomorrow, in not being content to wait for change. Matt Franklin states that "it just needs to be done and if we are really committed to our profession, and we really believe in high integrity in qualifying people, then it needs to be done." Designers/initiators believe that the traditional ways of educating graduates have not been very effective and as a response to that have taken personal responsibility to make changes by their contributions. Larry Roman believes what he is doing "is my best effort to make the changes I see as necessary, it's my contribution."

Designers/initiators also may be meeting personal and professional goals in the design and implementation of alternative graduate programs. There is an excitement in the collective voice of the designers/initiators when they talk about beating the system. It is somewhat of a game of us versus them. Them, referring to the larger bureaucratic organization and the system of rules and procedures that govern the logistics of a large scale university. It is not an unfriendly game in which there are winners and losers. It is more of a creative tension which stretches the formal system and tests generalities of structures. It could be viewed more as

questioning the systemic portion of the organization or simply as always asking why when faced with obstacles to a strong service commitment to the meeting of student needs. This manifests itself in many cases in frustrations with the system and somewhat negative attitudes toward the formal structure and the individuals who maintain the formal structure. Designers/initiators are not dissatisfied with the support they receive from the college but are frustrated with what they see as non responsiveness of the university system. These frustrations create tension and may explain some of the perceptions of the designers/initiators.

DePree (1992) sees this form of innovation as change. He posits that some individuals "stand out from the rest of us" (p. 94). The contributions these individuals make affect large groups and move organizations toward something better; yet they function, for the most part, outside of the organizational system. The role of a leader, which could be seen within ABCD University as the Dean of the College of Education, is "to protect these individuals from the bureaucracy and legalism so ensconced in our organizations" (p. 96). The leader's role is to give license to the contrary; provide a level of trust; be wary of the utilitarian self-concepts that may surface; and recognize that the work of creative innovators is only part of the whole, it cannot be taken in isolation (DePree, 1992). Designers/initiators within the context of this study, are somewhat the committed skeptic, who wants to be held accountable and demands a share of the risk. The leadership at the college level nurtures this need and helps in making the work and results of the alternative graduate programs real.

Why alternative graduate programs exist

Alternative graduate programs exist as opportunities to experiment, to try innovative programs, to see if there are different ways without the encumbrance of the traditions of the university. They are looking for alternatives to better mesh practice with theory in their programs. Matt Franklin suggests that

> students are frustrated with a lot of the traditional
> educational experiences, they view universities as
> a menu driven approach and one in which faculty
> present it as 'take it or leave it'. By offering another
> method they have an opportunity to have more ownership.
> It is the providing of relevant learning experiences that
> they [students] feel when they walk out of the classroom
> they can use, not something that is esoteric and irrelevant.

Sam Baker concurs. He believes the university is not "needs based". He finds the traditional program as standard, with a series of stand alone classes that are not very well integrated in terms of faculty interactions and working with individual students. Baker believes that the university's bias is for subject area courses, discrete subject area courses, as a means of university academic control. Questions surrounding alternative programs are those of articulation, curriculum control and quality control. The university term would be academic rigor. Baker sees this philosophy as the "block, when we try to reshape the [traditional] program."

Larry Roman puts the existence of his programs in terms of the differences between a traditional and alternative philosophy :

> you've set up a philosophy and environment and the
> behavior of the people within that environment is

consistent with the philosophy. What you are going
to find is students accepting the fact and that it is
okay. [In alternative programs] the fact is, it's
okay for me (the student) to do what I want to do.
I don't have to meet your standards, the real
challenge here is for me to meet my own standards.

Roman furthers that this can only happen when you "empower" students, share power, responsibility and authority. You let the students do "their stuff, you get the hell out of the way". In Roman's programs, they don't like to supervise and monitor. "We'd rather the student do their own, let them supervise and monitor themselves, we try to give them the tools, we empower them." Baker sees this dilemma of empowerment related to traditional faculty and student roles as some of the "mortal flaws and mortal weaknesses" in the traditional programs.

There is much discussion among the designers/initiators about the traditional roles they assume as faculty. There is further discussion about what a faculty member does in the regular program, the designer/initiators believe that most faculty chose not to get into areas of program development because of the great deal of work and effort that it takes as well as the risk. Further, the reward system in the university does not acknowledge program development except in terms of service which carries minimal weight in terms of the criteria utilized to evaluate faculty. It also involves making a professional decision on the research versus teaching issue that is prevalent in higher education. Sam Baker states,

If you look at the regular program, it's important to
be a good teacher. It's important to entertain and

that sort of thing. People in those regular classes
these days, especially administrators and teachers
expect to be entertained. Actually they expect
presentation...'we paid money to hear you talk, we
paid for your so called expertise, we are here to
listen to you and write it down and put it in our
notes so that at a later time we can refer back to
it'. They want to sit and listen. You learn to do
that as an instructor [at the graduate level] in
the regular classes.

Larry Roman adds that in alternative programs you "don't bring
in what is the easiest, you have to walk your talk, you bring in
what's most difficult." Matt Franklin believes his roles are
somewhat "schizophrenic" and that he could easily eliminate 80% of
what he does and "maybe more and still fulfill the role of a
traditional faculty member, I'd even be considered to be exemplary if
I wanted to be, but that's not something I want to do, it's not even in
my frame of reference." Designers/initiators see it as somewhat of
a choice and in the case of the eleven alternative graduate programs
they have developed, they have themselves become alternative and
non traditional among their colleagues. They have chosen not to be,
as Sam Baker indicates "monastic scholars who wander around a
sterile place all day, contemplating." This view, whether myth or
reality is commonly held by many outside the university culture and
environment.

There is an overall emotional commitment made by the
designers/initiators and most feel that service to students is
meeting the needs that are not being met by the traditional
programs. It is the best professional contribution they can make to

the university system. "Somebody has to be committed to meeting the needs of students and in developing programs" Larry Roman states. He continues that any program "must remain dynamic, constantly changing, be on the cutting edge, constantly evolving, never stop, never stay in place, or be allowed to become stale or stagnant." Sam Baker puts it in terms of an "effective organization, an effective human organization that takes a human relations model, it's just a better link of theory and practice."

Alternative graduate programs relationship with the traditional programs

Designers/initiators see the relationship of alternative graduate programs as a "fit" with the traditional programs and the university. They see the role of alternative programs as one where change can be made with the eventuality that changes can be made to the traditional programs. They see the university system as a bureaucratic structure with rules and regulations, traditions, policies and an environment not conducive to meeting the needs of graduate students, one that stands in the way of change. The bureaucracy is recognized as the "stone wall" that involves those in the administration as well as other colleagues in the university.

Sam Baker sees it as a matter of rules.

The more rules you need to control the direction
and the productivity of the organization, the more
control is exerted. The control assumes a lower level
of professional effort on the part of the staff. Most
of the rules are set in concrete and they are mindlessly
carried out. The bigger the organization and the older
the organization means that more rules have been

established for differing changes that have taken place. So what you have are rules that no longer apply and are generally obsolete.

Matt Franklin sees alternative programs as "difficult to manage" [for the bureaucracy]. The programs are non traditional and they don't fit into long established boxes all the way from recruitment and admissions to rules and regulations regarding courses; when they are taught, how they are taught, how grades are awarded. "It doesn't necessarily fit the predetermined timelines and structure. Anytime that you are different from the norm, you are going to stand out, it's kind of like managing by exception." One of the biggest challenges for Franklin's alternative programs is coming up with a common understanding of the principles and expectations between what the traditional university wants and what he believes students want. He believes there is a "real pragmatic difference."

Larry Roman sees it as a game of us against them, where the stakes are high and the students are usually the losers. He sees the bureaucracy as "parasitic in nature, feeding upon itself, taking in but giving back very little." Roman continues:

> I think you have to look at systems within the organization and departments and try to look at them and treat them almost like eggshells. They are always in a denial mode and a control mode. You have to be very careful how you ask [for changes] so that they don't interpret that as the fact that you are doing something different. They would love to stop you from doing anything different just so they could put another notch on their gun. It is just a control system within the bureaucracy. A mediocre institution because of the checks and balances that keep us pretty much under control, so that tomorrow is pretty much like today which

is very much like yesterday. That is the way the
system was set up and that is the way it functions.

Matt Franklin believes that many large universities are
tradition bound, not set up to be innovative or to encourage
innovation. The primary tradition is that of being bound to the
undergraduate student, responding to new learners, younger adults.
"We are not responsive to adult learners, individuals who have some
miles on them with regard to experiences and such." He finds that
students in the alternative programs are non traditional and in the
infrastructure of the university, an infrastructure which
universities are not set up to deal with, particularly for the non
traditional student.

What is rather surprising to one of the newer
designer/initiators is the lack of recognition on the part of fellow
faculty for the alternative programs. He was considerably surprised
by "actual hostility out there." Almost immediately he found
"criticism from different people asking, 'what the hell is going on
here?' I found myself at every turn having to defend the programs.
I'm not asking for gratitude or for people to say 'wow' or to have a
special day in my honor, I'm not even considering that. What
surprises me is the hostility that I have received. These programs
are somehow threatening." Baker continues with an observation of a
fellow designer/initiator,

That particular person has enormous energy and
enormous intellectual energy. The fact is that he
is not a hero though in the College. He may be the
most innovative and the most energetic, but he is

not thought of as a hero. In fact, just the opposite
is probably true. The more energy he spends, the
bigger the program gets, the more he is castigated
by the scholars who say 'he is not doing research'.

Franklin and Roman, many year veterans of alternative
programs, accept the rules of the game and operate under somewhat
of a low key kind of orientation. Franklin hopes that once a
particular program is given approval through the formal process, "I
don't want to talk to anybody about it again. I don't want to raise any
questions. I try to have as little visibility as possible, I would
prefer to have the university administration know my last name and
that be the extent of what they know about what we do."

Roman operates "behind closed doors" and prefers "no name be
known" which he feels is limiting but a necessary factor. He terms
his programs with student number in the hundreds, as clandestine
and low key. He talks about the development of a "mystique" that
surrounds you where people are so mystified that they don't ask
questions. He finds the bureaucracy takes the role of

disinterested...you can be interested, disinterested or
not interested. They choose disinterested. As long as
they are not bothering you, you can do whatever you
want. It doesn't cost them anything, and as a
matter of fact you bring in a lot of money and they
can add to their reputation. For them, its' great. We
don't do anything we didn't say we were going to do, it's
just that nobody asked.

Roman leaves "holes for the them to plug up". It is his way to
beat a system which has "organizational characteristics that find
out what you are doing and then do their best to close the loop holes

you have used to design a program." He operates from two strategies, one is "to stay one step ahead so that when the holes are plugged up you are already past that hurdle" and the second strategy is to "leave some holes for them to plug up that won't hurt or jeopardize your programs in the long run."

Designers/initiators acknowledge that the university, through the structure of the College of Extended Studies, allows for more latitude toward change in programs. Creative programs bring in money and alternative programs can be billed anywhere from 20% to 60% of their profits in order to function. Larry Roman feels it is part of an "honor system" that gives a "fair amount of latitude and allows for a fair amount of creativity, the bureaucracy allows for the opportunity, but does not encourage it, it is a choice. It's set up so that creative people can be creative as long as you don't ring their bell too loud." Franklin believes that universities should be environments that allow change to occur, "part of the culture of a university is allowing deviation and experimentation, but it's a tacit acknowledgment." Baker agrees but adds, "it's when you try to bring things into the mainstream, that you find a more difficult situation."

Baker, Franklin and Roman find the university not conducive to change, slow to change on any issue, content with operating their program as a very closed, local system. Alternative programs are viewed by most in the formal structure as "pilot tests, field tests, or experiments." Roman finds this humorous, as one of his pilot tests has been in operation for over 14 years. He likens acceptance of alternative programs to the IRS test, " you have seven years to set a precedent, although in this institution, it is more like ten years,

before you can institutionalize your program and really get away with it."

Designers/initiators hope that their programs provide for change. Roman views it "as a time to surface. Eventually what we are doing will become the new thing that the university will want to focus on. Then I can say, 'hey, we just happen to be doing that. It's a backdoor approach, but the bureaucracy does things on its' schedule, not yours. It's a matter of timing, you can't push the change." Matt Franklin hopes that "everything we learn from these alternative programs would eventually enhance our traditional program," but he views it as

> a desensitization process. As long as faculty don't believe they have to do it and it is not being forced down their throats, they see that there is some success and of some benefit to them, then there is a wider spread of acceptance. But it has to be of direct benefit to them. It's the old story of faculty espousing and teaching change but being the worst and the last and most resistant to change. They are by their very nature suspicious.

In summary, the environment that fosters the design and initiation of alternative graduate programs is the same environment that often turns the other way and overlooks their existence. A few traditional faculty chose to move away from their traditional roles and responsibilities due to a vision of something better, something different, something that will meet the needs of students in a different, more meaningful way. These designers/initiators see their roles as change agents within the institution and view their contributions in the terms of alternative programs as their "labor of

love". They stretch the boundaries of the systems in meeting individual needs for change, for being different, for innovation. There is no valid data that suggests alternative programs are preparing more effective leaders than the traditional programs. There is only speculation that change creates an environment for improvement and the acceptance of something new, something not traditional. One designer/initiator sums it up as "the challenge and excitement of dealing with the non traditional."

Summary

Overview of the study

The purpose of this study was to explore the design and initiation of alternative graduate programs and their impact on student needs, to examine the university organizational structure and environment that fosters or inhibits the initiation of these alternative graduate programs, and to identify the factors students see as important in their choice to attend and participate in an alternative graduate program. Paulsen (1990a) believes that particular departments within institutions may take on more importance than they currently do, in the beginning college choice models. He sees the development of models of graduate school choice behavior of great importance and also as one that is the most challenging. This study sought to identify a number of factors that may have had a significant impact on the choice that graduate students made in their decision to apply, attend and pursue an advanced degree or certificate program. Within this context, the

faculty who choose to initiate and develop alternative graduate programs was examined to illustrate how one department in a College of Education at the ABCD University in Southern California has responded to meeting the needs of graduate students.

Within the past few years, there have been surges in the undergraduate populations which will affect graduate populations in the near future. There has been somewhat of shift in the recruitment of older students to the undergraduate programs and this necessitates the post secondary educational institutions responding to student needs and a wider range of market requirements. Erdman (1979) suggests that traditional concepts of specialization and permanence will have to be tempered with the increasing awareness of the need for fluidity and flexibility particularly within our schools and colleges of education. As a result of the above mentioned conditions, five research questions and seven primary hypotheses were developed to investigate the impact of the large numbers of graduate students who are attending alternative programs outside of the mainstream of the traditional university graduate programs.

Through the review of the literature, themes of historical perspectives in the development of graduate education, roles and responsibilities of faculty, roles and responsibilities of graduate students, the organization of the university, and the university as it relates to change were identified to add a contextual understanding to the environment and climate under which the eleven graduate programs in this study at the ABCD University were initiated and designed. In understanding the traditions embedded in each of the

themes, the study gained a clearer perspective of the unique nature of non traditional as it applies to the designers/initiators and students who participate in alternative programs.

The historical perspective of the creation and development of graduate study suggested critical discussion and discourse over the goals, the students who would partake, and the faculty roles and responsibilities. Developed under an arts and sciences model, schools of education have had little choice but to remain second class citizens in the university infrastructure and had embued their students and faculty with the stigma of lesser than, always trying to emulate, always trying to be the same. Change within this context becomes difficult.

Significantly tied into the framework of the arts and sciences view of graduate education programs are the faculty and student roles and expectations. Research and teaching and theory and practice become the opposites of each other as institutions such as the ABCD University struggle with their perceived status in a Master Plan which relegated the teaching of undergraduates to them in lieu of graduate education and the perceived prestige of the designation as a research university. Caught in the myriad of differing opinions are the graduate students, particularly at the ABCD University, and in specific in the College of Education. Participants in the department in this study are the future leaders of our schools and educational institutions as well as our human services agencies.

The roles and responsibilities of graduate students was further identified in terms of their demographic statistics as a population. In the diverse environment of Southern California, the

variables of gender, ethnic diversity as well as stages of adult development impact the choices that potential graduate students make in pursuing an advanced degree. Traditional programs, bound by their traditions, are suffering from lower enrollments and lack of interest from many of the non traditional populations. Alternative programs are flourishing in this environment but are not, by design, significantly altering the parent institution and its culture.

The culture and organization of the university is one of loosely coupled linkages where the administration and faculty are at opposite ends of the continuum, each demanding compliance in terms of academic rigor and academic freedom. Schools and colleges of education struggle with the inter university label of a professional or practitioner discipline while faculty within these arenas struggle with the intra university dilemma of theory versus practice within their classrooms.

The literature is filled with concepts about the university and change and why these institutions remain aloof and with ivory towered perceptions. Hagebak (1982) sees universities as increasingly subject to external controls designed to ensure accountability and productivity. But these ill-suited controls to guide a complex intellectual enterprise are often no more than bureaucratic fads that have little to do with quality education and entrepreneurial research. In the cases of alternative graduate programs, it is easier to innovate, make errors and seek forgiveness than to ask for permission ahead of time. Asking for permission means delays or denials, it makes it difficult to bring together all the elements needed to try new approaches. Decentralization usually

facilitates innovation and change through empowerment. The university is a paradox in this respect.

Paulsen (1990a, 1990b) points to the need to study the patterns of graduate student school choice. Conditions require that graduate education, both academically and organizationally, assume a more open system orientation and recognize its dependence upon, and interdependence with, individuals and agencies outside the boundaries of the academy and current schooling systems.

Graduate professional education will necessarily and appropriately move farther away from its historical roots in the arts and sciences. To enable significant changes in curriculum and procedures, to encourage practice-oriented as well as traditional academic definitions of quality, and to allow graduate professional education to function as an equal and effective partner with external agencies, schools of education across the country must have increased decision-making authority within their own institution (Erdman, 1979). Alternative graduate programs have discretely and covertly done just that.

To examine the needs of graduate students and how they are being met through alternative programs, a mixed methodological approach utilizing strategies of qualitative and quantitative methods was employed. Designers/initiators of eleven alternative graduate programs were interviewed to obtain characteristics and strategies that they believed, by design, were meeting the needs of graduate students. Graduate students were then surveyed that participated in alternative graduate programs for their perceptions of the needs that are met by attending these programs. Five

dependent themes were identified and 30 individual factors within the themes were incorporated into the survey instrument which allowed a comparison of means to compare the design/initiation responses with the respondents as well as offer a view of the factors which were seen as important to the respondents in their choice of graduate schools and graduate programs. Themes and individual factors were verified through a focus group and an in-depth analysis of the interview data, document and record analysis, personal observations and archieval data.

The survey instrument was mailed to specific populations and given directly to other populations of the eleven alternative graduate programs during the months of April, May, June, and July of 1994. Five hundred six surveys were returned, of which 486 were utilized in this study (81% return rate).

Six independent variables were identified as possible factors affecting the responses given by the graduate students: gender, age, ethnic diversity, work setting, job, and work level. Seven primary hypotheses were developed to statistically test for differences between the levels of the independent variables. In addition, nine secondary hypotheses were developed to test for significant interaction effects between the independent variables. One-way and two-way ANOVA's were used to test the primary and secondary hypotheses respectively. An $\alpha = .05$ was used in all tests of significance. Following a significant finding, a Scheffé post hoc analysis was calculated to determine which of the levels of the independent variables were significant. ANOVA source tables, post

hoc analysis, and incidence tables were presented only for the significant findings in Chapter IV.

Findings of the study

The qualitative interview and focus group strategies combined with a triangulation of data such as personal observations and expertise, and record and document analysis pointed to five themes as well as individual factors that designers/initiators felt were important in each of the eleven alternative graduate programs. The identified and verified themes that resulted were: career, professional, personal; university as an institution; accessibility; flexibility; and program characteristics, program linkages.

Each identified theme resulted in individual factors being identified. Career, professional and personal factors included advancement on a salary schedule; career mobility and advancement; ability to qualify for jobs; and the meeting of professional goals. University as an institution factors included reputations of university, program, and faculty; recommendations by colleagues, former students, and employer; tuition costs; follow up to previous graduate course work; and advertisements and brochures. The theme of accessibility included the convenience of the overall program schedule, class meeting times, and location of classes; the availability of other graduate programs; faculty accessibility; and support services. Factors within the theme of flexibility included combining course work with career; the ability to develop an individual program; time within the program to network with colleagues; and the amount of interference with family

responsibilities and obligations. The final theme of program characteristics, program linkages included the maintenance of a cohort group concept; mixture of social activities with academic activities; program design that follows current research trends; a graduate program that is different from other programs; being able to attend a program with colleagues and friends; and collaboration with an employer. The last theme is somewhat specific to the eleven alternative programs within the context of this study. Research question one was addressed in these findings.

Themes and individual factors were incorporated into a survey instrument which was administered to the populations of the eleven alternative graduate programs. The descriptive statistical summary of the results addressed research question three in identifying the factors and themes important to the designers/initiators of the programs as well as the graduate student populations of the programs in their choice of programs.

Survey respondents identified the theme of university as an institution as the highest rank in choosing to attend a graduate program. This was particularly significant when interfaced with the variables of age, ethnic diversity, work setting, job, and work level. The theme of career, professional and personal was found significant by respondents in interaction with the variables of age, work setting, job and work level. A final theme that was found significant was that of accessibility. Categorical variables of ethnic diversity and job impacted this theme.

Within the themes of flexibility and program characteristics, program linkages, individual factors were found to be significant

although the individual themes were not as a whole. Factors of flexibility in the development of an individual program were meaningful to students in their choice to attend a graduate program, particularly when differentiated by gender.

Program characteristics and program linkages exhibited a larger amount of individual significance to graduate students in areas of gender and work level combined with mixing social and academic activities; age, work setting, and work level coupled with attending a program with colleagues and friends; ethnic diversity when interfaced with employer collaboration and ethnic diversity and job when linked with the cohort group concept; work setting and work level combined with the perception that the program was different from others; and work level when joined with the program design following current research trends.

Summated mean scores were utilized for both analyses of a match between designers/initiators and graduate students and the survey respondents as an individual entity in trying to focus on the reasons why graduate students chose to participate in an alternative graduate program. Survey respondents further verified the contextual domain of the questionnaire by responding in a written format to most of the identified factors and themes when given an opportunity to do so.

The comparative statistical analyses of the data resulted in sixty-two significant differences out of the 180 ANOVA's that were calculated for each of the five themes and thirty individual factors identified as the dependent variables. Each primary hypothesis produced one or more significant findings based on the thirty-five

dependent variables analyzed. Each hypothesis is reviewed and discussed below.

Hypothesis 1 examined the effects of gender on the themes and factors of the decision to attend a graduate program. The individual factors of advancement of salary, recommendations by colleagues, reputation of the program, availability of the program, development of an individual program, and the mixing of social activities with academic activities produced significant findings ($\alpha = .05$). No overall significance was found on the general themes themselves. Male graduate students make decisions on graduate programs specifically on individual items more so than female graduate students but do not differ significantly in respect to the identified themes.

Hypothesis 2 examined the effects of age on the five themes and thirty individual factors. Career, professional and personal and university as an institution proved significant ($\alpha = .05$) for the age variable overall. Factors associated with upward mobility in a career and the ability to qualify for jobs proved significant for those graduate students under the age of 30. Factors associated with reputations of the university and program proved significant for the older graduate student in the decision to attend a graduate program. No post hoc significance was noted in the finding of attending a program with colleagues and friends.

Hypothesis 3 looked at the effects of ethnic diversity on the five themes and thirty factors associated with choice of graduate program. Themes of the university as an institution and accessibility produced significant differences ($\alpha = .05$). Further

analysis revealed individual significant differences in terms of reputation of the university, recommendations by employer and collaboration with employer, lower tuition costs, follow-up to previous graduate course work, location of classes, and the design of a cohort group to be important in the choice of graduate programs. Graduate students who indicated an ethnicity of not White-non Hispanic indicated that factors impacting their choice of graduate programs to be fairly consistent with previous literature (Paulsen, 1990a) although some of the eleven alternative graduate programs were specifically designed to meet these different needs.

Hypothesis 4 investigated the effects of work setting on the themes and individual factors. Themes of career, professional and personal and university as an institution proved significant. Post hoc analysis indicated that graduate students who work in an educational setting consider the university as an institution theme more in their decision to attend a graduate program while graduate students who do not work in an educational setting consider the theme of career, professional and personal to be more significant. Individual factors associated with advancement on a salary schedule, the convenience of an overall program schedule, and class meeting times, and being able to attend a program with colleagues and friends and significant considerations for those who work in educational settings. Factors associated with reputation of a program and its faculty, as a follow-up to previous graduate course work, availability of a program, accessibility of individual faculty, and the perception that a program is different from other programs

are important factors in the choice of a program made by those who do not work in educational settings.

Hypothesis 5 involved the specific job held by respondents as a possible variable in terms of themes and individual factors. The job level designations were for the most part those associated with educational settings. Significance ($\alpha = .05$) was noted in the themes of career, professional and personal, university as an institution, and accessibility. Teachers as a group consider more significantly the career, professional, and personal theme as well accessibility theme. In an individual analysis, teachers strongly consider advancement on a salary schedule, overall program schedule, and convenience of class times more so than other job designation groups yet do not as strongly consider a program as a follow-up to previous graduate work as do other job designations. Counselors significantly consider the factor associated with the reputation of the faculty of a program. Job classifications that are not teacher, administrator or counselor indicated a significant preference for programs that maintain a cohort group structure.

Hypothesis 6 examined the effects of the work level and the five identified themes as well as thirty individual factors. Significance was noted on the themes of career, professional and personal as well as university as an institution. The variable of work level was designated to be more in alignment with those work levels associated with educational systems. Those graduate students who work at levels in higher education significantly differ in terms of the consideration of the theme of university as an institution and on an individual factor level, strongly consider the

reputation of the faculty as more important in their choice of a graduate program. Elementary work level graduate students place a high value on being able to attend a graduate program with colleagues and friends more so that other work level groups. Graduate students who indicated other as a work level differed significantly in terms of the availability of a graduate program. Junior high-middle school and high school work levels indicated a preference on the factor of advancement on a salary schedule as meaningful in their choice to pursue an advanced degree.

Hypothesis 7 posited that there would be no difference in the summated mean ranking of themes and individual factors between the designers/initiators and graduate students. Slight differences were noted between individual themes but overall, both groups ranked the themes in the same order. University as an institution ranked the highest, followed by the themes of accessibility; program characteristics, program linkages; and career, professional and personal. In a comparative ranking of the individual factors, differences were seen by students in terms of meeting a personal goal, recommendations by colleagues, and the ability to develop an individual program. Program designers/initiators indicated factors associated with faculty availability, location of classes, reputations of the university, faculty, recommendations by employers, and lower tuition costs, as well as the fact that the program was different from other graduate programs to be important considerations within the design of the program to meet the needs of graduate students.

Nine secondary hypotheses were developed to examine specific interactions between the independent variables. Seventy-five two-way ANOVA's were calculated and fourteen significant interactions (α = .05) were identified. Seven of the significant findings involved the variable of gender. Gender and age were found not to produce any significant interaction effects for Hypothesis 1 nor age and work level for Hypothesis 7.

Hypothesis 2, which examined the interaction of the gender variable with the ethnic diversity variable, showed that not White-non Hispanic males may consider the theme of the university as an institution as well as the theme of accessibility more than other groups in deciding to apply to a graduate program. Not White-non Hispanic males indicated that program schedules, class locations and meeting times, availability of programs and faculty as well as non academic support were factors considered in attending a graduate program.

The themes of gender and work setting, set forth in Hypothesis 3, revealed two significant interaction effects. Data indicated that the themes of university as an institution and program characteristics, program linkages showed that male students who work in an educational setting may place a higher value on the institutional factors related to reputation and recommendations, tuition costs, follow-up programs and advertisements and brochures to play a more important role in their choice to apply to a program than do females. In a similar finding, male students who do not work in an educational setting favor factors associated with employer collaboration, attending with colleagues and friends,

program design that follows current trends and mixing social activities with academic activities to be substantial in their choice of attending a graduate program more than females.

The variable of gender was also revealed to be significant in terms of work level, as stated in Hypothesis 4. Significant findings were noted on three themes: career, professional and personal; university as an institution; and accessibility. Males and females in higher education were found to have higher mean scores for the theme of university as an institution as well as the accessibility theme. Male graduate students in higher education had a slightly higher mean score on the accessibility theme that females in higher education.

Hypotheses 5 and 6 revealed significant interactions between the variables of age and job, and age and ethnic diversity. Interaction effects were noted in the themes of accessibility, where the age group of 40-49 proved significant; flexibility, where the age group of under 30 for not White-non Hispanic graduate students revealed the lower of all mean scores than the interaction of other groups; and the theme of university as an institution, where under 30 White non-Hispanic graduate students revealed a lower mean score than other age groups and ethnic diversity categories.

Hypothesis 8 and 9 examined the interaction effects of ethnicity related to work level and job. Significant interactions were revealed in the themes of career, professional and personal and accessibility for the work level variable and in the themes of university as an institution and flexibility for the job variable.

Small differences were noted in the mean scores but they may be attributed to small cell sizes in some instances.

If the results of this research effort have identified the needs of graduate students and how these needs are met through the vehicles of alternative graduate programs, and traditional program administrators take note of what seems to be successful in meeting the needs of a large number of graduate students, then this research will have been worthwhile. A secondary impact of this research involves the initiation and design of alternative programs to meet the needs of graduate program and how they can be utilized to experiment with innovations and concepts about change in graduate programs. If administration within colleges and schools of education are concerned with the recruitment of graduate student populations and in particular the ABCD University, then it is important to understand the role and function that alternative graduate programs play toward that end. There are many findings of significance in this research that can be of a high practical value with relatively little implementation cost that may greatly impact on numbers of students and student satisfaction with the traditional programs offered within the university's regular structure for programming.

The university structure as it currently exists at the ABCD University allows for alternative graduate programs to exist but they are delegated to positions of non entities within the system. Relatively little value or recognition is accorded to these programs and in many cases they are fraught with the complications of remaining low key and inconspicuous, denying their success and existence, as well as constantly battling with the bureaucracy for

basic services and justifying the time and effort it takes to their own colleagues, often resulting in a disinterested acceptance of the programs but not a relevance to the organization as a whole. Traditional roles and responsibilities are in question regarding faculty, students and graduate programs.

The implications from this study can be of value to universities and institutions of higher learning in the development of graduate programs. The relationship of students to graduate study indicates that choices are made and values are placed on themes and individual factors when the initial decision to choose a program and a university is made. Factors and characteristics of alternative graduate programs should point toward a positive direction for the administration of such institutions in the recognition of the factors influencing the graduate student's decision and in the ultimate choice of institutions to better service the needs of their graduate students.

Conclusions

This study has examined the phenomena of eleven alternative graduate programs at the ABCD University in the College of Education. Themes and factors were identified that were utilized in the design and initiation of the programs and then formulated into a survey instrument to measure graduate student responses as well as obtain a comparative ranking between both groups. Many statistically significant differences were identified and many significant interactions between independent variables were found

to exist from the respondents data. Based on the findings of the research, ten conclusions have been delineated:

1. The design and initiation of the eleven alternative graduate programs are composed of changes made to the traditional graduate programs in terms of delivery and strategy in structure. These programs attract large numbers of students for various reasons one of which is the observation and perception that the program is different from the traditional.

2. The designers/initiators of the eleven alternative graduate programs are in constant connection with the graduate student populations and have assumed the task of meeting the needs of these students through the vehicle of alternative programs. The designers/initiators are those individuals with high levels of commitment to graduate students and who have chosen to add to their roles and responsibilities, program development.

3. The ABCD University has allowed for innovation in graduate programs through a non traditional method where alternative programs can function away from the mainstream with little interference and where relatively small amounts of conflict exist. These programs have a tendency to operate outside the domain of the traditional university campus, either by geographic location or by special sessions not in competition with the traditional university calendar. Through the vehicle of allowance comes the price of little or no recognition, colleague and peer tension, the administration and management of students, and the total responsibility for ensuring a profit from the transactions of the

program as well as a self supporting mode of operation from a financial standpoint.

4. The existence and popularity of alternative programs indicates that there is indeed a difference between the alternative graduate program and the traditional graduate program. Many variables may be singled out on an individual basis or combined to produce the perceived differences on the part of the graduate student who has the choice to attend either program.

5. Graduate students do make choices in their decision to apply and attend a particular graduate program. The boundary of these reasons is as individual as each graduate student yet has similar characteristics that can be measured to suggest a clearer picture and understanding of why a decision is made for a particular program.

6. Many variables were perceived to create significantly different degrees of reasons impacting the choice of a graduate program. Significant findings resulted from the comparison of levels of each of the six independent variables for at least one of the dependent variables in terms of identified theme or individual factor. From this framework, the graduate alternative survey was sensitive to differences between and among groups specified by the independent variables. Therefore, the survey instrument designed from the interview data, and other qualitative strategies, was judged to be a valuable tool in the assessment of needs of graduate students that are met in alternative graduate programs.

7. Many variables were perceived to be relevant to the decision that a graduate student makes in their choice of a graduate

program. The survey instrument identified several dependent variables that failed to produce any significant differences or interaction effects. These variables are important as well as they point to areas for further research or investigation in the traditional programs as well as within the alternative programs. They also may suggest a reordering of factors within a specific theme.

8.   The strongest theme supported by both graduate students and designers/initiators is the university as an institution area. It is important that persons responsible for program development and change within the traditional program recognize the value that recommendations, reputations, tuition costs, advertisements and brochures, and follow-ups to previous graduate programs play in the recruitment of graduate students.

9.   Significant interaction effects resulted from the variables of gender, ethnic diversity and age. As the graduate populations continue to change and exercise more choice in their options for programs, administration will need to examine these factors relevant to their programs and the types of students they hope to attract to their individual disciplines.

10.   The designers/initiators and graduate students that participate in alternative graduate programs are expressing through the implementation and popularity of these eleven alternative graduate programs a dissatisfaction with traditional graduate programs in the College of Education at the ABCD University. The literature is divided on whether this is way it should be to protect the integrity of the traditional programs or if it is a future

prediction that students are indeed making known their preferences and demanding that programs be more customer sensitive and consumer oriented.

This study has examined a number of concepts and factors that have been identified by a limited amount of prior research as having an impact on the choice of advanced degree programs. If graduate programs could be designed to recognize and implement changes in programs and in types of delivery, then graduate students would respond to making a choice based on the meeting of their needs. As a result, graduate programs would continually be seeking innovation, adaptation, and change, and graduate students would seek these programs out as their choice. The following outlines a number of recommendations for future research, study and investigation based on the outcomes of this study.

Recommendations

Many recommendations for action and future research have been both stated and implied through the discussion of the results of this research. Two areas of recommendations will be made, one in terms of specifics for continued validation of this research and another in a broad sense to allow for flexibility of implementation and to foster what hopefully will be a continued expansion of innovation and change in graduate programs.

To extend the scope and areas of inclusion of this study beyond its current level, the researcher recommends that:

1.   Alternative graduate programs in other colleges and disciplines should be carried out to include an overall picture of the meeting of students needs in the university environment.

2.   A future study of the reasons why students who inquire about a graduate program do not chose to apply or attend could suggest more definitive reasons of needs that are not being met by particular graduate programs.

3.   Designers and initiators of alternative graduate programs who represent equitable gender and ethnic diversity areas should be included in future studies. Investigating the connections and relationship from other perspectives can broaden the understanding and meaning of any research effort.

4.   Future studies could include the administration of the university, the formal structures such as graduate admissions, graduate research, graduate curriculum and those responsible for the management of graduate programs in soliciting their reactions to meeting graduate students needs in terms of program design and delivery. If these are indeed some of the points of interference which have been implied, then efforts at change must certainly include these levels which interact with graduate students and graduate faculty.

5.   Further research needs to be conducted with more of a qualitative strategy in terms of the student population. There are certainly more areas involved in the choice process than can be determined and measured by a quantitative analysis. Ethnographic and phenomenological research would add a richness to the understanding of graduate student choice and could either

triangulate current research or point to new directions for investigation.

6.   A future study could be undertaken with specific populations involved as the respondents in this research crossed international boundaries and involved those graduate programs at a certificate, masters and doctoral levels of advanced study. Graduate program planners could utilize this information with a more informed set of data and could eventually determine the student population they will attract by the various components either designed into the structure of their programs or those that are intentionally not designed into the program structure.

On a much broader level and aimed more at institutions and change, it is evident that innovation and change will require both leadership from the administration of graduate programs and support from the graduate faculty. Professional graduate education must respond to the needs of the non traditional post baccalaureate students who are seeking professional advancement as well as personal enrichment. Professional schools have been criticized generally for being too rigid and restrictive in their program structure and content (Schein, 1972).

The dilemma between theory and practice has intensified in today's competitive environment. The issue seems to be whether change and innovation are possible within the hierarchical structure of the university educational system, whether the dominant model of block program scheduling permits an adequate response to individual students' interests, abilities, and needs or whether students must conform to requirements for a degree designed by faculty, endorsed

by accrediting and licensing agencies, and reified by tradition into established policies and dogma.

Future trends suggest that there will be persistent demand for access to education. Differentiation among institutions is likely to occur if this trend becomes more significant. Professional education may become the dominant zone of social differentiation and advancement (Benveniste, 1994). Education is a major factor in population and demographic issues, the countries that seem well positioned for the 21st Century are those which have excellent educational systems (Kennedy, 1993). The United States is not listed as in good position in terms of its ability to remain competitive in the economic strata where higher education must move into arenas of professional training and retraining to meet rapidly changing career and job markets.

It would seem that all graduate schools of education, in particular, have choice points to make. Choice points make major impacts on the future course of the organization. The first choice point cannot be reversed and that is the existence of alternatives to the traditional graduate program. Organizations that have been successful over a long period of time may be likely to have developed a strong culture. Strong cultures define an accepted set of norms, decision criteria, and way of doing things, they may limit innovative approaches that are not within the culture (Ledford, Mohrman, Mohrman, and Lawler, 1989). Attitudes are not embedded in the structures of an organization or even in the ongoing processes of the people who work within these structures. They are embedded

primarily in the culture and the climate of the organization (Burke, 1987).

It is natural for any system, to attempt to quell a disturbance when it first appears. If the disturbance survives, as alternative graduate programs appear to be, those first attempts at suppression remain lodged within the system, this begins an iterative process. The disturbance increases and finally becomes so amplified it cannot be ignored (Wheatley, 1992). This premise supports that organizational change, even in large systems, can be created by a small group or committed individuals or champions.

Innovation is fostered by information gathered from new connections, from insights gained by journeys into other disciplines or places; from active, collegial networks with fluid, open boundaries. Innovation and change arise from ongoing circles of exchange where information is not just accumulated or filed away, but created. Alternative graduate programs and alternative graduate students create the information necessary for change at the graduate level of study. Collegial networks of faculty as well as individuals have created innovative alternative graduate programs in the College of Education at the ABCD University.

New programs must be developed and installed. They require a prior achievement of acceptance, for no university will offer programs that are treated derisively by the very faculty who must teach them (Guba and Lincoln, 1987). Change in graduate programs is being reinvented at the local level. Self invention strategies are examples of the new paradigm of change. Frequent rejection by the established management is to be expected because of the lack of

control and ambiguity that accompanies the strategy (Mohrman & Mohrman, 1989).

Success in the future [of graduate programs] will depend upon people who have a passion for the business, who generate new ideas, ways of doing things that result in new knowledge that results in innovative and unique products (Block, 1993). Much of the change occurring today in organizations is not being guided by theory. Rather, it is both a creative and a pragmatic response of insightful individuals to the challenges and opportunities they perceive in the changing environment.

The final recommendation can only be one where institutionally based education can be made appropriate to the needs and interests of the whole population. We have no choice but to try to be competent in ways that are appropriate for coping with complexity and ambiguity in the future, we have no choice but to take risks, accept the pain and the excitement and the exhilaration of renewing our graduate institutions.

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APPENDICES

APPENDIX A

INFORMAL SURVEY OF FACULTY

Gareth Morgan, author of Images of Organization and Bolman and Deal, authors of Modern Approaches to Understanding and Managing Organizations, theorize that organizations operate under various metaphors and Schools of Thought. Below are 2 basic questions regarding YOUR beliefs about the XXXXXXX portion of our department. Please answer these questions as you see us TODAY and not about where we should or should not be.

I. In your estimation, is the XXXXXXXXXXXXXXXXXXXX department organized as a(n): (check 1 or if you think it is a combination, rank them in consecutive order)

_____**Machine** (Do we operate from a mechanistic approach, where each us is an interlocking part that plays with a clearly defined role in our function as a whole?)

_____**Organismic** (Do we operate to meet environment needs appropriate to our organization and key to our tasks?)

_____**Culture** (Do we operate by sharing meanings, norms, values, visions, ideas?)

_____**Political** (Do we operate by an interplay of different competing interests, achieving unity through negotiating, compromise and power plays?)

_____**Holographic** (Do we operate as a self-organizing process, the opposite of machine metaphor?)

_____**Psychic Prison** (Do we operate where people are trapped by their own ideas, thoughts and beliefs?)

_____**Brain** (Do we operate for information processing, learning and a high degree of flexibility and fostering innovation?)

_____**Flex** (Do we operate as in a 'state of flux' and transformation?)

_____**Domination** (Do we operate by imposing our will on others to highlight and marshall resistance?)

****

II. How do you perceive our organization in terms of how we operate? (check one that best fits your opinion)

_____**Structural** (we emphasize formal roles and responsibilities)

_____**Human Resource** (we tailor our organization to people to enable them to get their jobs done and feel good about it)

_____**Political** (we are an arena of scare resources where power and influence constantly interact, conflict can be expected and bargaining, coercion and compromise are part of our everyday life)

_____**Symbolic** (we are held together by shared visions, values and culture-our rituals, myths, stories, heroes and ceremonies propel us)

APPENDIX B

INTERVIEW GUIDE

Interview Guide

[for collection of data from the designers of alternative graduate programs] These questions are an overall guideline to ensure that all respondents are asked the same questions during the course of the interview series. They assume somewhat of a thematic approach.

Demographics of respondents
1. Could you give me a brief background of yourself and how you came to be involved with alternative educational leadership programs?

Development of program concept/design/implementation
2. Please describe the alternative graduate program(s) that you initiated?
How did you come up with idea of this particular program?
From your original concept to the implementation of your alternative program(s), what adaptations or changes have/had to be made in order to get your program underway?
What needs of students did you consider in designing this program?

Faculty loads/responsibilities outside the general realm of teaching/research
3. How is your day different with an alternative program compared to those who don't work with alternative programs?
What activities do you do that may differ from what others do who do not work with alternative programs?

Organizational structure/adaptability to change initiatives
4. Within the framework of the university and this department, how does an alternative graduate program fit? How receptive or resistant is or was the organization to your change initiative? Does an alternative program provide benefits to you? How?

5. What, in your opinion, contributes to the large amount of interest that is generated by alternative graduate programs?

6. How does the university structure work with alternative programs?

7. What benefits or advantages, frustrations or limitations, do alternative graduate programs bring
to the university?   financially to the institution?
as a vehicle for change?   to you as an individual?
to graduate students participating in these programs?

APPENDIX C

LETTER OF SUPPORT FROM DEPARTMENT

ABCD UNIVERSITY

San Diego CA

November 2, 1993

Debra J. Wright
University of San Diego
School of Education
San Diego, CA 92110

Dear Debra,

re: doctoral research-graduate alternative programs

After careful review of your abstract and conceptual framework regarding
your dissertation research, I am pleased to provide this letter of support on behalf
of the ARPE department. Your study seems to be most appropriate and important
to our understanding of faculty and student participation in alternative programs.

Your methodological design is unobtrusive and should provide us with
valuable information and feedback about our programs currently in operation.
We also hope to be able to utilize your results as we continuously strive to improve
our programs and services to graduate students. We look forward to the results of
your research as they become available.

You have demonstrated the requisite knowledge and skill to undertake the
described research and I am confident that you will be successful and your study
well done. I wish you continued success in your studies and your research.

Sincerely,

THE CALIFORNIA STATE UNIVERSITY

APPENDIX D

DEMOGRAPHICS OF ABCD UNIVERSITY

GRADUATE STUDENTS

Age of Graduate Students
Spring Semester
1993
ABCD University

Age	Percent
20-24	16.99%
25-29	33.00%
30-34	18.83%
35-39	12.25%
40-44	9.83%
45-49	5.46%
>50	3.63%

ABCD University Graduate Student Gender Breakdown
by percentages
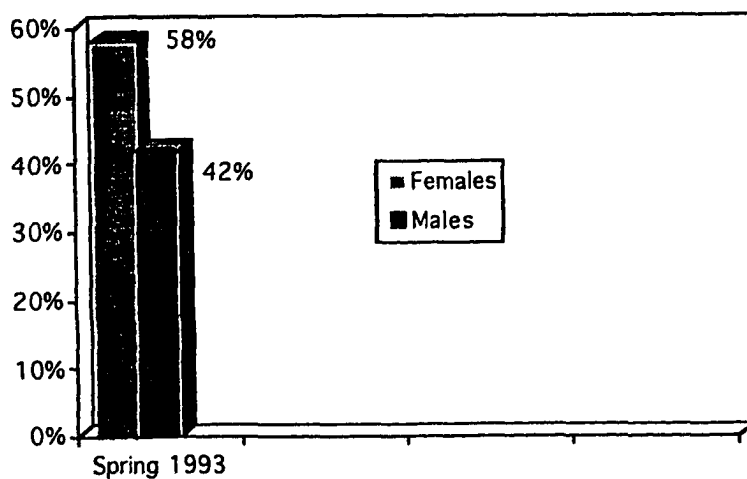
Category	Graduate 1987	Graduate 1992
American Indian	62	43
Black non-Hispanic	108	169
Chicano, Mexican American	276	366
Other Hispanic	120	143
Asian	242	279
Pacific Islanders	20	16
Filipino	60	67
White non-Hispanic	4835	4257
Other and refused to answer	415	593

ABCD University ethnic breakdown for graduates comparison over a five year period

APPENDIX E

INTERVIEW PROTOCOL

Interview Protocol

Initial Contact by telephone or in person
prior to interview

* Introduction: "This is ----- and I would like to schedule an appointment to interview you regarding the design and development of alternative graduate programs. I will be looking specifically at the programs that you have recently implemented. I am doing this research as part of my doctoral course work at the University of San Diego".

* Confidentiality: "Your responses will remain anonymous and confidential. The information that I gather will be available to you at your request. You have the right to critique, edit, add or delete any information in the written transcript. A copy of the transcript will be provided to you shortly after your series of interviews is completed. You may also ask any questions throughout the interview. In the final report, your identity will be disguised. I would like to be able to tape record these interviews."

•Request: "Would you be willing to meet with me to answer questions and share your opinions and perceptions? I anticipate the interview will take about 45 minutes to an hour. I would like to do a series of three interviews in total".

•Interviews are to be scheduled at each participant's office or a place mutually agreeable to both participant and researcher.

APPENDIX F

SURVEY INSTRUMENT

Graduate Alternative Program Survey

1. gender: male   female
[circle one]

2. age: [please check one]
_____ under 30
_____ 30-39
_____ 40-49
_____ 50 and over

3. Ethnicity: [please ck one]
___White non-Hispanic ___Black non-Hispanic ___Chicano Mexican Amer.
___Other Hispanic ___American Indian ___Canadian First Nations
___French Canadian ___Asian ___Pacific Islanders
___All others

4. Do you work in an educational setting?

no   yes (please indicate current job title)

4.1 _____teacher _____administrator _____counselor

_____ other   Please identify _____

please indicate job title

4.2 ___elementary _____jr high middle sch
___high school _____higher education

district level _____other

Please respond to all of the statements listed below. Consider each statement in terms of your *initial* decision to pursue a graduate degree in this program. You are being asked to rate each statement in terms of:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

	SD	D	N	A	SA
I am pursuing an advanced graduate degree because:					
5. ....it will advance me on the salary schedule.	1	2	3	4	5
6. ....it will meet my professional development goals	1	2	3	4	5
7. ....it will allow me to qualify for jobs.	1	2	3	4	5
8. ....it will allow me to move upward in my career.	1	2	3	4	5
9. ....it is a personal goal.	1	2	3	4	5
10. .... other_____	1	2	3	4	5

please be specific

....

I chose to apply to this alternative graduate program because:

11. ....it was recommended to me by colleagues.	1	2	3	4	5
12. ....it was recommended to me by former students.	1	2	3	4	5
13. ....of the reputation of the program.	1	2	3	4	5

Please turn over to complete questions.

1	2	3	4	5	
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

I chose to apply to this alternative graduate program because:

14.	....of the reputation of the university.	1	2	3	4	5
15.	....of the reputation of the faculty.	1	2	3	4	5
16.	....it was recommended by my employer.	1	2	3	4	5
17.	....the tuition costs are less than other graduate programs.	1	2	3	4	5
18.	....it is a follow-up to my previous graduate program.	1	2	3	4	5
19.	....I saw advertisements and brochures.	1	2	3	4	5
20.	.... other _____	1	2	3	4	5
	please be specific					

I chose to attend this alternative graduate program because:

21.	....the overall program schedule meets my needs.	1	2	3	4	5
22.	....the classes meet when it is convenient for me.	1	2	3	4	5
23.	....the location of the classes is convenient for me.	1	2	3	4	5
24.	....there is no graduate program available in my area.	1	2	3	4	5
25.	.....it does not interfere with my family responsibilities.	1	2	3	4	5

26.	....my employer is collaborating with the university.	1	2	3	4	5
27.	....I can combine my coursework with my job.	1	2	3	4	5
28.	....I can attend with my colleagues and friends.	1	2	3	4	5
29.	....I can develop my own program of study.	1	2	3	4	5
30.	....the design of the program follows current research trends.	1	2	3	4	5

31.	....the program provides time to network with colleagues.	1	2	3	4	5
32.	....individual faculty members are more accessible to me.	1	2	3	4	5
33.	....the program maintains a cohort group.	1	2	3	4	5
34.	....social activities are mixed with academic activities.	1	2	3	4	5
35.	....the program provides support for me when I'm not in class.	1	2	3	4	5
36.	....the program is different from other graduate programs.	1	2	3	4	5
37.	....other _____	1	2	3	4	5
	please be specific					

APPENDIX G

COVER LETTER FOR MAILED SURVEYS

INSTRUCTIONS FOR SURVEY COMPLETION

DEBRA J. WRIGHT
Program Administrator, MA & EdD
International Leadership Programs

⌣⌣∟
SAN DIEGO STATE UNIVERSITY
SAN DIEGO CA 92182-0163

....   ;

SAN DIEGO CA 92182-0163
(619) 594-3767   FAX (619) 594-4687

[date specific for each individual program], 1994

Dear [name of specific group inserted here},

Enclosed with this letter is a brief survey instrument. The survey is part of a research study that I have undertaken as a graduate student at the University of San Diego.

I have spoken extensively with [name of program director, coordinator inserted here] about your program and would like to identify the reasons why you chose to attend this program.

The enclosed questionnaire has been approved by [name of Department Chair] and has been piloted with another group of students in a similar program. It should only take about 10 to 15 minutes of your time. It is important that you think about the reasons you **initially** decided to participate in this program.

Your survey responses will be kept confidential and anonymous. Please do not write your name anywhere on the survey instrument. When you have completed the survey, return it in the self-addressed, stamped envelope that has been provided. Results of this data will be shared with [name of program director inserted here]. These results will be available sometime in early 1995. If you would like a copy of the results for your program, please call me.

I hope to provide meaningful and useful data to the university and College of Education for future planning of graduate programs. Thank you for taking time to assist me in this research study. If you have any questions regarding this survey, please feel free to contact me at the above listed address or phone number.

Sincerely,

Debra Wright

enc: SASE
       Survey

APPENDIX H

CONSENT FORM TO ACT AS A RESEARCH SUBJECT

University of San Diego
CONSENT TO ACT AS A RESEARCH SUBJECT

You are being asked by Debra Wright, a doctoral student in the School of Education at the University of San Diego, to participate in a series of two to three interviews over a three week time frame related to educational leadership and alternative program development for graduate students. The following is an agreement for the protection of your rights in this research that is being conducted.

1. The purpose of these interviews to investigate the personal and professional dynamics of program development. You have been selected because of your design and development of an alternative graduate program. The intent is that information will be gathered which may lead to a conceptual understanding of the design of alternative graduate programs and how these match with students' needs and expectation.

2. Data will be gathered through the use of interviews, written records and observations. These interviews will be audio taped with your permission. Audio cassette tapes will be kept by the researcher and numbered for confidentiality. Transcription, if done by other than the researcher, will be referred to by said number. The audio tapes will be erased after the dissertation is granted final approval. Your interview will be transcribed verbatim. You will be given a copy and asked to review and amend any statements so that they can accurately reflect your point of view prior to publication.

3. If any quotes from your interview are used in the final document, your comments will be anonymous. Confidentiality will be maintained by the use of pseudonyms. The results of this research may, at a later date, be utilized for a journal article. References to this research will continue to remain anonymous.

4. Your participation is entirely voluntary and may be withdrawn at any time without risk or penalty.

5. Please ask any questions you may have at any time during the interview.

6. There is no agreement, written or verbal, beyond that which is expressed in this consent form.

7. Little risk, discomfort, or expense is expected as a result of your participation in these interviews. A possible benefit from your participation may be clarification and enhancement of your own understanding of the development of alternative graduate programs.

I, the undersigned, understand the above explanation and on that basis give consent to my voluntary participation in this research.

_____   _____
Signature of Participant   Date

_____   _____
Signature of Researcher   Date

_____   _____
Location   Witness

APPENDIX I

FIGURES FOR RESPONDENT DEMOGRAPHICS

Pie Chart of X_1: gender

☒ male
☒ female

Pie Chart of X_1: age

☒ under 30
☒ 30-39
☒ 40-49
☒ 50 and over

Pie Chart of X_1**: Recode of ethnic**

⊞ BAR #1
⊠ BAR #2

Pie Chart of X_1**: work set**

⊞ no
⊠ yes

Pie Chart of X_1: job

- ⊞ tch
- ⊠ admin
- ■ coun
- ■ other

Pie Chart of X_1: Work level

- ⊞ elem
- ⊠ jr/mid
- ▧ high sch
- ▨ higher ed
- ☐ distr
- ▨ other
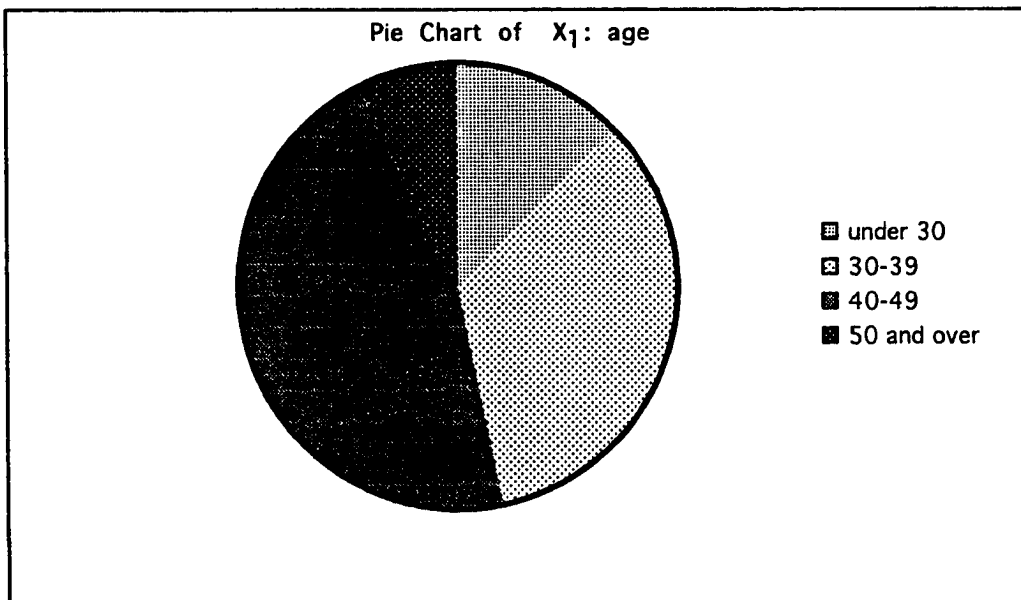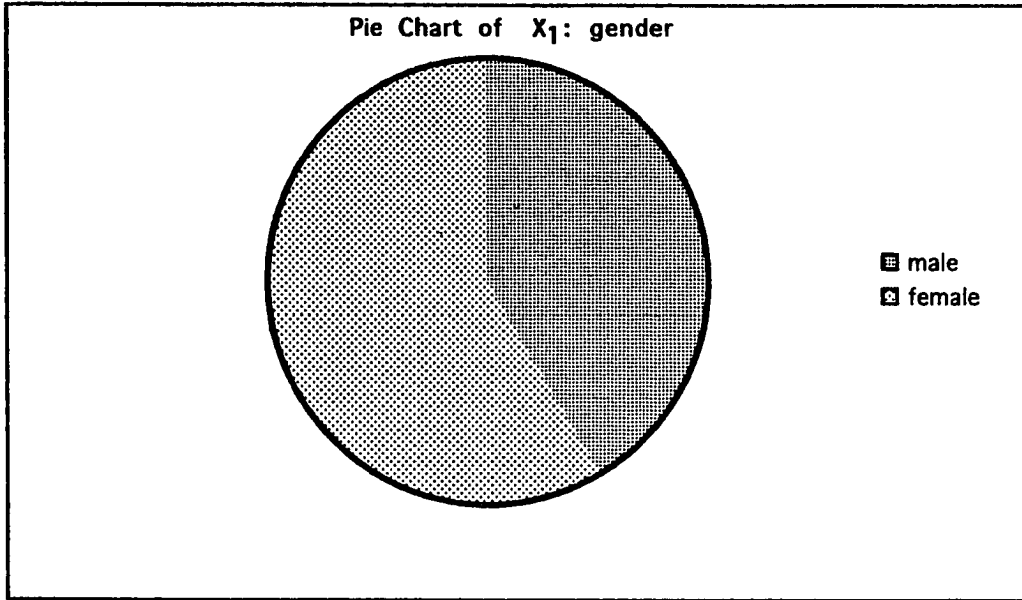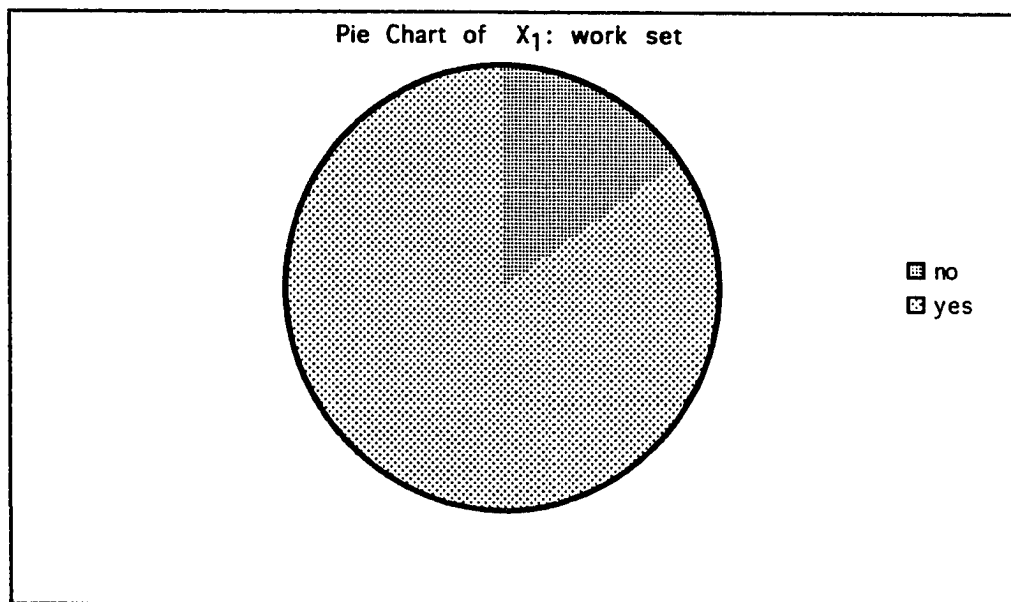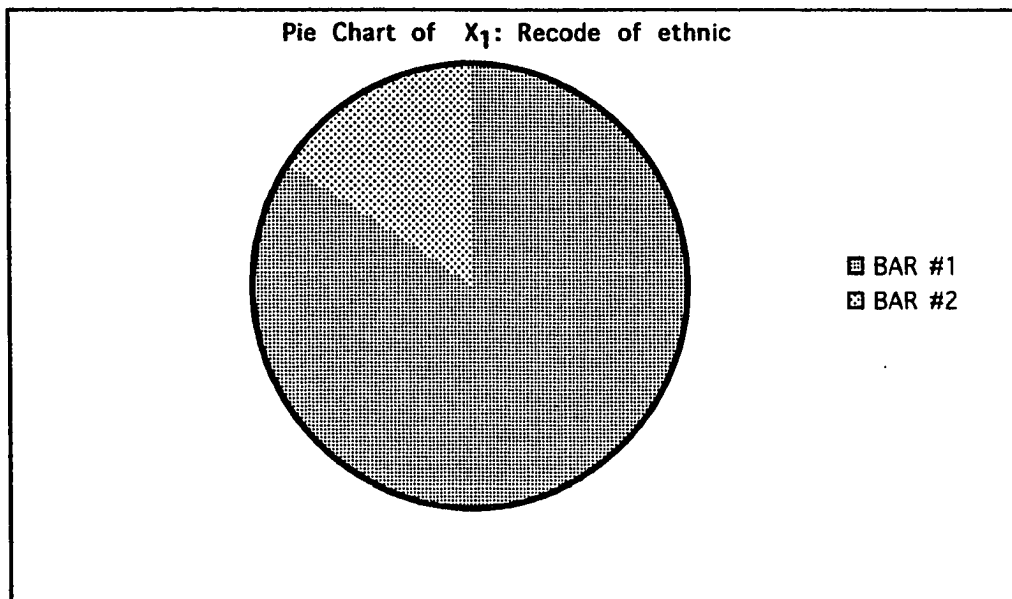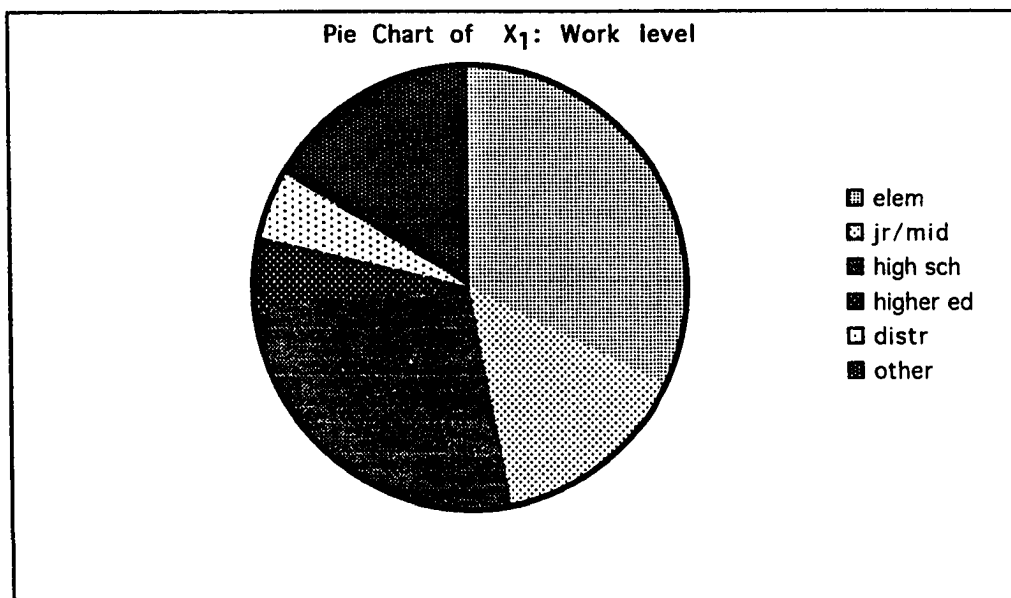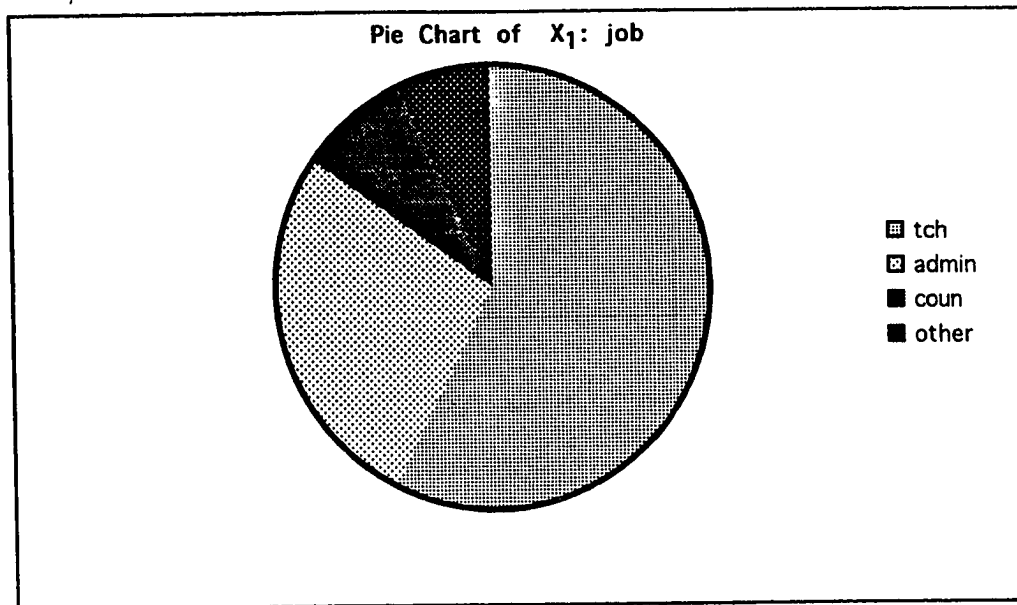
APPENDIX J

ORIGINAL ETHNIC DIVERSITY BREAKDOWN

SURVEY RESPONDENTS

Pie Chart of X_1: ethnic

- ▣ white non-hisp
- ⊠ Black non-hisp
- ■ Chicano/Mex Amer
- ■ Other Hisp
- ❏ Amer Indian
- ■ Can First Nat
- ❏ French Canad
- ▥ Asian
- ■ Pac Island
- ▤ others
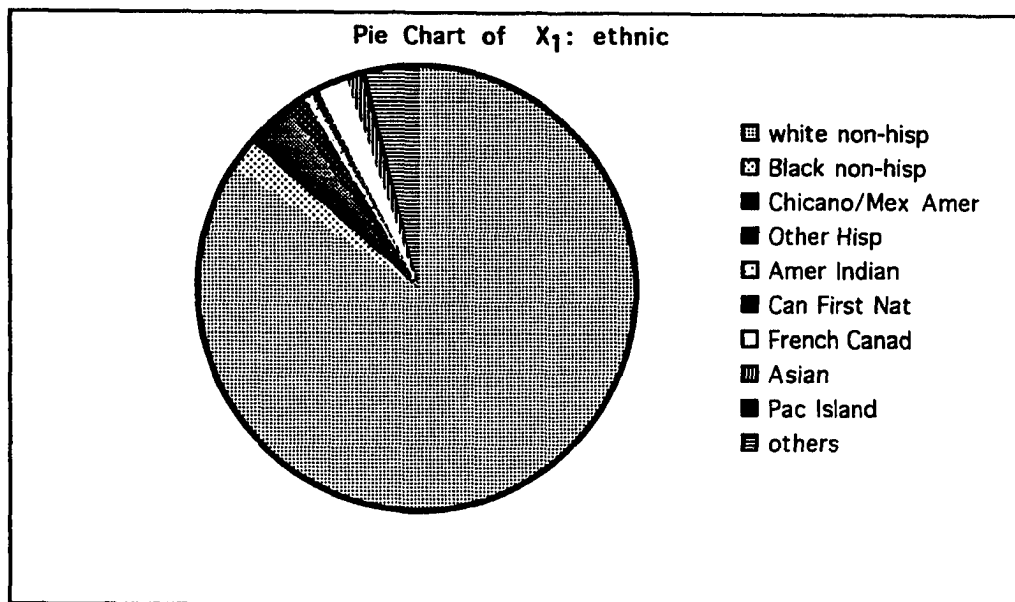
X_1: ethnic

Bar:	Element:	Count:	Percent:	
1	white non-hisp	401	84.067%	-Mode
2	Black non-hisp	11	2.306%	
3	Chicano/Mex Amer	17	3.564%	
4	Other Hisp	7	1.468%	
5	Amer Indian	2	.419%	
6	Can First Nat	3	.629%	
7	French Canad	11	2.306%	
8	Asian	5	1.048%	
9	Pac Island	1	.21%	
10	others	19	3.983%	

APPENDIX K

TABLES OF MEANS AND STANDARD DEVIATIONS

DESIGNER/INITIATOR SURVEY RESPONSE

THEMES AND INDIVIDUAL FACTORS

Means and Standard Deviations for Themes

X₁: SUM Q 5-9					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
20.667	1.155	.667	1.333	5.587	3
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
20	22	2	62	1284	0

X₂: SUM Q 11-19					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
33.333	8.021	4.631	64.333	24.062	3
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
25	41	16	100	3462	0

X₃: SUM Q 21-24, 32, 35					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
24.667	.577	.333	.333	2.341	3
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
24	25	1	74	1826	0

X₄: SUM Q 25, 27, 29, 31					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
13.667	3.512	2.028	12.333	25.697	3
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
10	17	7	41	585	0

X₅: SUM Q 26, 28, 30, 33, 34, 36					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
23.333	2.082	1.202	4.333	8.921	3
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
21	25	4	70	1642	0

Designers/Initiators

X$_1$: Q5

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1	.577	1	25	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	12	50	0

X$_2$: Q6

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X$_3$: Q7

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X$_4$: Q8

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	1.155	.667	1.333	26.647	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	13	59	0

X$_5$: Q9

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.667	.577	.333	.333	15.746	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	4	1	11	41	0

Designers/Initiators

X6: Q11

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3	2	1.155	4	66.667	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1	5	4	9	35	0

X7: Q12

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.333	2.082	1.202	4.333	62.45	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1	5	4	10	42	0

X8: Q13

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1	.577	1	25	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	12	50	0

X9: Q14

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X10: Q15

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	1.155	.667	1.333	26.647	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	13	59	0

Designers/Initiators

Means and Standard Deviations for Survey Factors

X₁₁: Q16

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X₁₂: Q17

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	0	0	0	0	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	4	0	12	48	0

X₁₃: Q18

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3	0	0	0	0	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	3	0	9	27	0

X₁₄: Q19

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3	1	.577	1	33.333	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	4	2	9	29	0

X₁₅: Q21

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

Designers/Initiators

X16: Q22

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X17: Q23

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1	.577	1	25	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	12	50	0

X18: Q24

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.333	1.528	.882	2.333	45.826	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	5	3	10	38	0

X19: Q25

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.333	1.528	.882	2.333	65.465	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1	4	3	7	21	0

X20: Q26

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	0	0	0	0	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	4	0	12	48	0

Designers/Initiators

Means and Standard Deviations for Survey Factors

X21: Q27

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1.732	1	3	43.301	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	5	3	12	54	0

X22: Q28

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	0	0	0	0	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	4	0	12	48	0

X23: Q29

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3	1	.577	1	33.333	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	4	2	9	29	0

X24: Q30

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1	.577	1	25	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	12	50	0

X25: Q31

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

Designers/Initiators

Means and Standard Deviations for Survey Factors

X₂₆: Q32

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.333	.577	.333	.333	13.323	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	13	57	0

X₂₇: Q33

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4	1	.577	1	25	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	5	2	12	50	0

X₂₈: Q34

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.667	1.528	.882	2.333	41.66	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	5	3	11	45	0

X₂₉: Q35

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.667	.577	.333	.333	15.746	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3	4	1	11	41	0

X₃₀: Q36

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
4.667	.577	.333	.333	12.372	3

Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	5	1	14	66	0

Designers/Initiators

APPENDIX L

DESCRIPTION OF ELEVEN ALTERNATIVE

GRADUATE PROGRAMS

Alternative Graduate Program Descriptions
[Information compiled from interviews, promotional literature and observations]

Program 1   This program is a Master of Arts in Education with a concentration in Administration and Supervision. The degree component is part of a larger program with international linkages in the Pacific Basin. The program mission is to prepare future supervisors and administrators as well as vocational instructors in post-secondary settings. The degree program requires thirty semester hours, forty-two which are lecture based and eighteen which involve clinical practicum/field experience. The alternative program provides lecture based courses at the home site of the participants. These courses are taught by a campus faculty and generally meet over a ten day period with intense class meetings over the weekends (typically a Friday evening, all day Saturday or a Sunday/Monday arrangement). Students are then required to attend campus based programs during the months of June and July for a one or two year period. Practicum/field experiences are set up at the home sites with cooperation of the participant's employers. Generally, the students maintain a cohort group through the degree requirements with some exceptions during the summer sessions. Faculty associated with this program join with students in social activities such as dinner at the home of the faculty member and deep sea fishing. Extra mural support is common for this program in the form of grants. The coordinator of the program also teaches in the program. There is one coordinator for the program but multiple persons are involved in student support services both on the campus and at the home site.

Program 2   This program is a Certificate Program where completion of the program can be applied, in total, to doctoral programs at two institutions through an articulated agreement. The program has been through two three year cycles and is currently beginning a third cycle. It is generally done at the post Masters level. The program is intended for professionals who are seeking an opportunity to develop and/or upgrade administrative skills and assume management positions. The program consists of twenty-one semester units of graduate credit, fifteen units which are completed in a twelve month period and six units which are completed during the same twelve month period in the work organization. The on campus component of the program has varied in delivery ranging from once a month meetings (Sunday evening, all day Monday and Tuesday), to a one month intensive seminar in the month of June for twenty-one days of instruction and a Thursday evening, all day Friday and Saturday for twelve or thirteen months. The design of delivery was dependent upon the individual group and location of the home sites. The organization based component of the program includes special study research and an internship. Each new group that enters the program is

maintained as a cohort group. Faculty teaching in this program are a mixture of full-time tenured professors and adjunct faculty including graduates of the program. This program is totally funded and supported by extra mural funding sources. There is a full-time coordinator of the program in addition to the program developer who also coordinates Program #1.

Program 3   This program is a Master of Science in Rehabilitation Counseling. It specializes in the area of deafness. The traditional program goal is to prepare graduate degree rehabilitation counselors to provide vocational rehabilitation services to individuals who have severe disabilities. It was initiated in 1966. The degree requires sixty semester units, forty-two which are lecture based and eighteen which involve clinical practicum/field experience. Campus based instruction takes place over an intensive four week period in the month of June with classes meeting Monday through Friday. The clinical/practicum field experience is done at the participants home site over a period of two or more years. Faculty from the campus visit the home site once a year and work closely with the supervisor from the individual's organization. Multiple full-time tenured and adjunct faculty are involved in the program Extra mural support ranging from student stipends to housing subsidies have been in existence for eight years. A cohort group is maintained when each new cycle of students is admitted to the program. Social activities are encouraged during the on campus portion of the program and are the responsibility of the program coordinator from program #2. The overall facilitator, initiator of the program is the same as in programs #1 and #2.

Program 4   This program is a Master of Arts in Education with a concentration in administration and leadership. It has been in operation in some form for eighteen years. The emphasis in the program is in servicing international students not necessarily preparing for the California Administrative Services credential. The program has strong linkages with Ministries of Education throughout Canada. Thirty-six units of graduate credit are required over a minimum of three summer periods. Students complete a minimum of twelve graduate credits each summer. Academic, seminar based classes are held on the main university campus. Participants have the option of completing field internships and special projects (up to six units) during the academic year that are evaluated by an on site advisor as well as a university advisor. Faculty from the traditional university program generally teach the academic campus based courses with a substantial number of adjunct faculty teaching elective courses. Participants have the choice of four concentrations with the M.A. degree: Leadership and Supervision; Leadership and Counseling; Leadership and Special Education; and Leadership and Curriculum and Instruction. One half of the total units can be within the chosen

emphasis. During each six week summer term, participants are required to attend a three day intensive academic institute which highlights special global trends affecting education. There are multiple partnerships with school districts throughout Canada. Other course offerings include variable title courses that allow participants to visit local schools and schools districts. Each new group of students admitted to the program are maintained in a cohort group. Social activities are a strong component of the program and include picnics, tailgate parties, graduation dinners, baseball games, sailing and other activities. The program receives no extra mural funding. Administration of this program includes an assistant director, recently given full time funding and the initiator/designer of the program who is a full time tenured faculty member who has a .5 buyout for this program. Much of the student support in this program involves volunteers, graduates and the students themselves.

Program 5   This program was developed as a follow-up to program #4. The program is an articulated doctorate in educational leadership and is partnered with a private, Catholic university. The program has completed one full cycle (beginning Summer, 1992 and ending Summer, 1994) with the first group and will begin a second cycle in the Summer of 1995. Sixty-three units of credit are required with one university responsible for twenty-four units of course work and the other university responsible for twenty-nine units of course work. The dissertation component of the program (10 units) is taken through the degree granting institution. Academic courses are held during three summer sessions over a six to seven week period beginning in July. Three courses are completed during the first two academic years at the home site of the participant. Faculty from both institutions offer two seminars over each academic year usually combined with a national conference in a location somewhat convenient to most participants. Courses are taught by the traditional tenured faculty from both institutions with some faculty actually teaching for the partner university. The program maintains a cohort group throughout the program. A residency period of six months prior to the third summer is required. Extra curriculum activities are offered to the students such as "Breakfast of Champions" seminars where local programs and leaders from local educational institutions are invited to speak to the participants. Social activities in the format of luncheons, overnight retreats and periodic celebration activities are in strong evidence. Graduate fellowships and teaching opportunities are available for the participants throughout the entire cycle of the program at both institutions. Staffing for the program is incorporated into the traditional programs at both universities. The initiator of the program also directs Program #4.

Program 6   This program is a Master of Arts in Education with a concentration in Administration and Leadership. The program is an alternative design to Program #4. There are strong international linkages particularly in Canada with local school districts and consortiums of school districts. The two year program runs year round and participants complete eighteen units of course work at their home sites and eighteen units of course work on the campus. The campus course work consists of two six week summer sessions beginning in July. The M.A. degree requires thirty-six units of graduate credit. Within the total unit requirements, the participant completes a field experience and an independent project for a total of six units. The campus program is taught by full-time tenured faculty and adjunct faculty during the summer sessions. The home site courses are taught by a combination of local identified faculty and full-time tenured faculty who travel to each of the eight sites at least twice a semester. This program runs on a two year cycle and is currently completing its first cycle and beginning the second cycle concurrently. Courses offered in the field are seminar based and are in a variable title format not available to campus students. Campus courses are traditional academic courses as listed in the graduate catalogue. Participants have the option of choosing an emphasis in the areas of administration and leadership, counseling and leadership, curriculum-instruction and leadership and special education and leadership. Elective options (up to nine units) can be chosen in these four areas. Campus based programs offer electives such as three day institute seminars and school and district visitation seminars. Site based programs offer courses in technology, leadership and themes relevant to that particular site. All students participate in a number of teleconferences originated from the campus. The home sites maintain a strong cohort group with each cycle. Social activities are in strong evidence during the summer sessions. Staffing at the campus level consists of a .50 director and a full-time assistant director. These persons also are responsible for programs #4 and #5. Individual centers are coordinated by a local superintendent or designee who is paid a stipend.

Program 7   This program is a California credential program and is representative of limited partnerships with local school districts. There have been multiple offerings of similar programs throughout the history of the department. An alternative program of this nature is initiated when a need is perceived or a community contact is made. The program requires twenty-four post masters credit units, twelve units are seminar courses; nine units are internship related and there is a three units elective. The mission of the program is to directly link theory, classroom and administrative experiences, and applications within the field of education. Courses are held off campus, at a designated site,

generally the district board office. Classes are taught by full-time tenured faculty from the campus program with a mixture of adjunct faculty mentored by a campus faculty, from the local district. Classes are held in the evenings and on Saturdays, decided upon by the participants and the faculty member for each course. The entire schedule is accelerated and usually completed within a one year, year round time frame, as opposed to a two year, academic year time frame for the traditional program. Participants have a variety of elective choices since they can complete course work in the summer and intersession terms, although most electives are prechosen as part of the program design. The program maintains a cohort group. Coordination of the program is handled by the initiator of the program, currently the same person as in programs #4, #5 and #6.

Program 8   This program is a Master of Arts in Education with a concentration in Curriculum and Instruction. The degree can be taken with an emphasis in Secondary English or an emphasis in Elementary Language Arts. The program was originally designed to service students populations outside the boundary areas of San Diego County but in the first cycle enrolled 90% local students. This program is a linkage between two departments within the College of Education at ABCD University. The program has been in operation for two years and began its second cycle in the summer of 1994. The degree requires 30-33 units of credit taken over a three summer period for five weeks each summer, beginning in June. Classes are taught on the local campus and include one week intensive institutes aimed toward advanced teaching techniques. It is expected that students will collaborate with colleagues and share research that is conducted within their classroom during the academic year. Faculty who teach in the program are full-time tenured faculty. The program maintains s cohort group concept with each new cycle of students. There is no extra mural support for the program. Staffing for this program consists of one part-time graduate student and a full-time faculty member who has a .5 buy-out. The designer/initiator also coordinates programs, #9, #10, and # 11.

Program 9   This program is a lead-in to a California credential program and has initiated an advisor/mentor component that is unique in the area. The program is meant to provide support for first time administrators in a large Southern California school district. The partnership contributes funding to support a stipend program for each advisor/mentor. The program is in its second year of operation. The credential portion of the program consists of 24 post masters units, twelve units are seminar courses, nine units are internship related, and there is a three unit elective. The courses are taken in a mixture of on the campus and off the campus depending upon the number of students in the program.

Off campus courses are generally taught by adjunct faculty from the district who incorporate specifics of the district into the required course work. This program is a portion of a partnership combined with program #11 with the purpose of providing a continuum of administrator preparation, support and development for aspiring, new and experienced administrators through a field- based program. The County Office of Education is also involved in providing inservice needs. The program is coordinated by a full-time faculty member who also has responsibilities for programs, #8, 10, and 11. There is a .2 part-time faculty who also works with this program as well as one identified person in the school district that it is partnered with.

Program 10   This program is a California credential program similar in design to program # 7. It is representative of a limited partnership with a north county area to provide services to graduate students who have no other program available in their area. The program requires twenty-four post masters credit units, twelve units which are seminar courses, nine units which are internship related and a three unit elective course. The mission of the program is to directly link theory, classroom and administrative experiences, and applications within the field of education. Courses are held off campus, at a designated site, generally a district board office. Classes are taught by a mixture of full-time tenured faculty from the university and adjunct faculty from the local school districts. Classes are held in the early evenings and on the weekends, the decision made by the participants in the program. In some cases, courses may be combined with a campus course but these are limited to those courses which meet on a weekend schedule. This program in primarily a geographic facilitation of the campus based program. Some non academic support is provided to the program from the traditional program office. Coordination of the program is handled by the initiator of the program, who is also responsible for programs #8, #9, and #11.

Program 11   This program is a combination of an M.A. degree and California credential for aspiring administrators. It is unique in that it is part of a partnership with a large local school district aimed at servicing non traditional students. There is a strong emphasis on the recruitment of ethnic diverse students. Students are identified for the program by the school district. The degree component of the program consists of 30 units of graduate credit, ten of which are a field-based internship experience. To obtain the credential and the degree, a student must complete 37 units of graduate course work. Classes are held within the local school district and are limited to the members of the cohort group, although in recent months, there has been increased pressure to fold these students into the traditional campus based program. Courses are taught by adjunct faculty identified within the school district and are mentored by full-

time faculty from the campus. The make-up of the courses is no different from the traditional program although there is a strong emphasis on localizing some of the content to the particulars of the school district. The program is well into it's second cycle where each cycle takes two years to complete. The program has been highly successful in terms of the student population and its goal of serving non traditional students. Coordination of the program rests with the designer/initiator who is also responsible for programs #8, #9, and #10. There is some limited non academic support from the traditional program office. There has also been some limited extra mural support from a national educational leadership foundation.

APPENDIX M

COMPUTER GENERATED TABLES

POST HOC ANALYSIS

One Factor ANOVA X₁: gender   Y₁: Q5

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	3.766	1.183	.083
female	285	3.533	1.312	.078

One Factor ANOVA X₁: gender   Y₁: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	.233	.228*	4.022*	2.006

* Significant at 95%

individual factors

One Factor ANOVA X₁: gender   Y₂: Q11

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	3.647	1.28	.09
female	285	3.382	1.352	.08

One Factor ANOVA X₁: gender   Y₂: Q11

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	.264	.239*	4.704*	2.169

* Significant at 95%

individual factors

One Factor ANOVA   X$_1$: gender   Y$_3$: Q13

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	3.328	1.096	.077
female	285	3.063	1.214	.072

One Factor ANOVA   X$_1$: gender   Y$_3$: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	.265	.211*	6.087*	2.467

* Significant at 95%

individual factors

One Factor ANOVA   X$_1$: gender   Y$_4$: Q24

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	2.527	1.453	.102
female	285	2.849	1.539	.091

One Factor ANOVA   X$_1$: gender   Y$_4$: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	-.322	.272*	5.396*	2.323

* Significant at 95%

individual factors

One Factor ANOVA X₁: gender   Y₅: Q29

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	3.706	1.062	.075
female	285	3.456	1.265	.075

One Factor ANOVA X₁: gender   Y₅: Q29

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	.25	.215*	5.254*	2.292

* Significant at 95%

individual factors

One Factor ANOVA X_1: gender Y_6: Q34

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
male	201	3.493	.97	.068
female	285	3.235	1.122	.066

One Factor ANOVA X_1: gender Y_6: Q34

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
male vs. female	.257	.192*	6.932*	2.633

* Significant at 95%

individual factors

One Factor ANOVA X₁: age   Y₁: sum q 5-9

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	22.082	2.485	.318
30-39	164	21.268	2.829	.221
40-49	222	20.806	3.556	.239
50 and over	35	19.743	3.492	.59

One Factor ANOVA X₁: age   Y₁: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.814	.942	.96	1.697
under 30 vs. 40-49	1.276	.908*	2.54	2.761
under 30 vs. 50 and over	2.339	1.332*	3.97*	3.451
30-39 vs. 40-49	.462	.647	.657	1.404
30-39 vs. 50 and over	1.525	1.17*	2.19	2.563

* Significant at 95%

One Factor ANOVA X₁: age   Y₁: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	1.063	1.142	1.115	1.829

One Factor ANOVA   X₁: age   Y₂: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	26.869	5.051	.647
30-39	164	26.726	5.814	.454
40-49	222	27.477	5.782	.388
50 and over	35	29.943	5.412	.915

One Factor ANOVA   X₁: age   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.143	1.674	.009	.168
under 30 vs. 40-49	-.609	1.614	.183	.741
under 30 vs. 50 and over	-3.074	2.367*	2.171	2.552
30-39 vs. 40-49	-.752	1.15	.551	1.285
30-39 vs. 50 and over	-3.217	2.079*	3.084*	3.042

* Significant at 95%

One Factor ANOVA   X₁: age   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	-2.465	2.03*	1.898	2.386

* Significant at 95%

One Factor ANOVA   X₁: age   Y₃: Q7

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	4.41	.783	.1
30-39	164	4.335	.838	.065
40-49	222	4.149	1.02	.068
50 and over	35	3.714	1.1	.186

One Factor ANOVA   X₁: age   Y₃: Q7

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.074	.277	.093	.528
under 30 vs. 40-49	.261	.267	1.231	1.922
under 30 vs. 50 and over	.696	.392*	4.057*	3.489
30-39 vs. 40-49	.187	.19	1.24	1.929
30-39 vs. 50 and over	.621	.344*	4.196*	3.548

* Significant at 95%

One Factor ANOVA   X₁: age   Y₃: Q7

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	.434	.336*	2.151	2.54

* Significant at 95%

One Factor ANOVA   X₁: age   Y₄: Q8

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	4.492	.744	.095
30-39	164	4.287	.774	.06
40-49	222	4.149	1.064	.071
50 and over	35	3.743	1.12	.189

One Factor ANOVA   X₁: age   Y₄: Q8

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.205	.277	.704	1.454
under 30 vs. 40-49	.343	.267*	2.12	2.522
under 30 vs. 50 and over	.749	.392*	4.693*	3.752
30-39 vs. 40-49	.138	.19	.675	1.423
30-39 vs. 50 and over	.544	.344*	3.208*	3.102

* Significant at 95%

One Factor ANOVA   X₁: age   Y₄: Q8

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	.406	.336*	1.873	2.37

* Significant at 95%

One Factor ANOVA X$_1$: age Y$_5$: Q13

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	3.082	1.005	.129
30-39	164	2.976	1.172	.092
40-49	222	3.266	1.202	.081
50 and over	35	3.629	1.114	.188

One Factor ANOVA X$_1$: age Y$_5$: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.106	.343	.124	.61
under 30 vs. 40-49	-.184	.33	.399	1.094
under 30 vs. 50 and over	-.547	.484*	1.639	2.217
30-39 vs. 40-49	-.29	.235*	1.959	2.424
30-39 vs. 50 and over	-.653	.425*	3.033*	3.017

* Significant at 95%

One Factor ANOVA X$_1$: age Y$_5$: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	-.363	.415	.982	1.716

One Factor ANOVA X_1: age Y_6: Q14

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	3.033	.875	.112
30-39	164	3.018	.975	.076
40-49	222	3.203	.96	.064
50 and over	35	3.457	.886	.15

One Factor ANOVA X_1: age Y_6: Q14

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.014	.28	.003	.102
under 30 vs. 40-49	-.17	.27	.51	1.237
under 30 vs. 50 and over	-.424	.396*	1.479	2.106
30-39 vs. 40-49	-.184	.192	1.185	1.885
30-39 vs. 50 and over	-.439	.348*	2.052	2.481

* Significant at 95%

One Factor ANOVA X_1: age Y_6: Q14

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	-.254	.34	.723	1.473

One Factor ANOVA   X₁: age   Y₇: Q28

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
under 30	61	3.426	1.284	.164
30-39	164	3.28	1.186	.093
40-49	222	3.55	1.296	.087
50 and over	35	3.857	1.115	.189

One Factor ANOVA   X₁: age   Y₇: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
under 30 vs. 30-39	.146	.367	.203	.78
under 30 vs. 40-49	-.123	.354	.156	.685
under 30 vs. 50 and over	-.431	.519	.888	1.632
30-39 vs. 40-49	-.269	.252*	1.468	2.098
30-39 vs. 50 and over	-.577	.456*	2.062	2.487

* Significant at 95%

One Factor ANOVA   X₁: age   Y₇: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
40-49 vs. 50 and over	-.308	.445	.615	1.358

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_1$: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	27.007	5.499	.275
Group 2	76	29.132	6.612	.758

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_1$: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-2.124	1.399*	8.905*	2.984

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Recode of ethnic   Y₂: sum q21-24,32,35

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	21.115	3.55	.177
Group 2	76	22.684	3.93	.451

One Factor ANOVA   X₁: Recode of ethnic   Y₂: sum q21-24,32,35

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-1.569	.888*	12.059*	3.473

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Recode of ethnic   Y₃: Q14

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	3.08	.935	.047
Group 2	76	3.395	1.072	.123

One Factor ANOVA   X₁: Recode of ethnic   Y₃: Q14

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.315	.235*	6.91*	2.629

* Significant at 95%

themes/factors

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_4$: Q16

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	2.591	1.211	.06
Group 2	76	3.289	1.263	.145

One Factor ANOVA   X$_1$: Recode of ethnic   Y$_4$: Q16

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.698	.3*	20.954*	4.578

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Recode of ethnic Y_5: Q17

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	2.683	1.234	.062
Group 2	76	3.145	1.293	.148

One Factor ANOVA X_1: Recode of ethnic Y_5: Q17

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.461	.306*	8.802*	2.967

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Recode of ethnic   Y₆: Q18

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	2.494	1.219	.061
Group 2	76	2.934	1.258	.144

One Factor ANOVA   X₁: Recode of ethnic   Y₆: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.44	.301*	8.258*	2.874

* Significant at 95%

themes/factors

One Factor ANOVA X₁: Recode of ethnic   Y₇: Q23

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	3.339	1.3	.065
Group 2	76	4.105	1.014	.116

One Factor ANOVA X₁: Recode of ethnic   Y₇: Q23

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.766	.31*	23.654*	4.864

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Recode of ethnic Y_8: Q26

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	400	2.56	1.395	.07
Group 2	76	3.263	1.552	.178

One Factor ANOVA X_1: Recode of ethnic Y_8: Q26

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.703	.349*	15.635*	3.954

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Recode of ethnic   Y₉: Q33

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Group 1	401	3.686	.96	.048
Group 2	76	3.961	.972	.112

One Factor ANOVA   X₁: Recode of ethnic   Y₉: Q33

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
Group 1 vs. Group 2	-.275	.236*	5.215*	2.284

* Significant at 95%

themes/factors

One Factor ANOVA X_1: work set Y_1: sum q 5-9

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	20.176	2.944	.342
yes	411	21.204	3.254	.16

One Factor ANOVA X_1: work set Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	-1.029	.796*	6.445*	2.539

* Significant at 95%

themes/factors

One Factor ANOVA X_1: work set Y_2: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	28.811	5.639	.656
yes	411	27.019	5.707	.281

One Factor ANOVA X_1: work set Y_2: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	1.791	1.414*	6.201*	2.49

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₃: Q5

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	2.932	1.114	.13
yes	411	3.754	1.252	.062

One Factor ANOVA   X₁: work set   Y₃: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	-.822	.306*	27.914*	5.283

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₄: Q13

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.568	1.251	.145
yes	411	3.102	1.147	.057

One Factor ANOVA   X₁: work set   Y₄: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	.465	.289*	10.032*	3.167

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₅: Q15

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.622	1.179	.137
yes	411	3.192	1.026	.051

One Factor ANOVA   X₁: work set   Y₅: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	.429	.261*	10.474*	3.236

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₆: Q18

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.176	1.408	.164
yes	411	2.433	1.17	.058

One Factor ANOVA   X₁: work set   Y₆: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	.743	.3*	23.67*	4.865

* Significant at 95%

themes/factors

One Factor ANOVA   X$_1$: work set   Y$_7$: Q21

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	4.122	1.006	.117
yes	411	4.411	.805	.04

One Factor ANOVA   X$_1$: work set   Y$_7$: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	-.29	.208*	7.483*	2.735

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₈: Q22

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.824	1.052	.122
yes	411	4.231	.928	.046

One Factor ANOVA   X₁: work set   Y₈: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	-.407	.235*	11.557*	3.4

* Significant at 95%

themes/factors

One Factor ANOVA X₁: work set   Y₉: Q24

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.608	1.373	.16
yes	411	2.555	1.481	.073

One Factor ANOVA X₁: work set   Y₉: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	1.053	.364*	32.404*	5.692

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: work set   Y₁₀: Q32

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.676	.981	.114
yes	411	3.345	.999	.049

One Factor ANOVA   X₁: work set   Y₁₀: Q32

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	.33	.247*	6.891*	2.625

* Significant at 95%

themes/factors

One Factor ANOVA X_1: work set Y_{11}: Q28

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	3.122	1.249	.145
yes	411	3.533	1.242	.061

One Factor ANOVA X_1: work set Y_{11}: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	-.411	.308*	6.864*	2.62

* Significant at 95%

themes/factors

One Factor ANOVA X_1: work set Y_1: Q36

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
no	74	4.108	.93	.108
yes	411	3.73	.904	.045

One Factor ANOVA X_1: work set Y_1: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
no vs. yes	.378	.225*	10.88*	3.298

* Significant at 95%

themes/factors

One Factor ANOVA X_1: job Y_1: sum q 5-9

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	21.446	3.211	.193
admin	130	20.215	3.353	.294
coun	40	20.925	2.702	.427
other	33	21.333	2.933	.511

One Factor ANOVA X_1: job Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	1.23	.668*	4.37*	3.621
tch vs. coun	.521	1.062	.309	.963
tch vs. other	.112	1.156	.012	.191
admin vs. coun	-.71	1.135	.503	1.229
admin vs. other	-1.118	1.224	1.075	1.796

* Significant at 95%

One Factor ANOVA X_1: job Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.408	1.476	.099	.544

One Factor ANOVA X₁: job   Y₂: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	26.859	5.683	.342
admin	130	27.269	6.232	.547
coun	40	29.425	4.787	.757
other	33	28.667	4.587	.799

One Factor ANOVA X₁: job   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.411	1.193	.153	.677
tch vs. coun	-2.566	1.897*	2.357	2.659
tch vs. other	-1.808	2.065	.987	1.721
admin vs. coun	-2.156	2.027*	1.456	2.09
admin vs. other	-1.397	2.185	.526	1.257

* Significant at 95%

One Factor ANOVA X₁: job   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	.758	2.636	.107	.565

One Factor ANOVA   X₁: job   Y₃: sum q21-24,32,35

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	21.275	3.563	.214
admin	130	21.077	3.747	.329
coun	40	21.925	3.583	.567
other	33	23.091	3.868	.673

One Factor ANOVA   X₁: job   Y₃: sum q21-24,32,35

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.198	.76	.088	.513
tch vs. coun	-.65	1.209	.372	1.056
tch vs. other	-1.816	1.316*	2.449	2.71
admin vs. coun	-.848	1.292	.555	1.29
admin vs. other	-2.014	1.393*	2.691*	2.841

* Significant at 95%

One Factor ANOVA   X₁: job   Y₃: sum q21-24,32,35

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-1.166	1.681	.62	1.363

One Factor ANOVA   X₁: job   Y₄: Q5

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	4.007	1.135	.068
admin	130	3.092	1.21	.106
coun	40	3.05	1.26	.199
other	33	3.333	1.407	.245

One Factor ANOVA   X₁: job   Y₄: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.915	.248*	17.532*	7.252
tch vs. coun	.957	.394*	7.587*	4.771
tch vs. other	.674	.429*	3.172*	3.085
admin vs. coun	.042	.421	.013	.197
admin vs. other	-.241	.454	.362	1.043

* Significant at 95%

One Factor ANOVA   X₁: job   Y₄: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.283	.548	.344	1.016

One Factor ANOVA X₁: job   Y₅: Q6

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	4.406	.801	.048
admin	130	4.392	.812	.071
coun	40	4.7	.608	.096
other	33	4.758	.435	.076

One Factor ANOVA X₁: job   Y₅: Q6

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.013	.161	.009	.165
tch vs. coun	-.294	.256*	1.698	2.257
tch vs. other	-.352	.279*	2.048	2.479
admin vs. coun	-.308	.274*	1.626	2.209
admin vs. other	-.365	.295*	1.972	2.432

* Significant at 95%

One Factor ANOVA X₁: job   Y₅: Q6

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.058	.356	.034	.318

One Factor ANOVA X₁: job   Y₆: Q15

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	3.174	1.04	.063
admin	130	3.215	1.107	.097
coun	40	3.8	.883	.14
other	33	3.455	1.092	.19

One Factor ANOVA X₁: job   Y₆: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.041	.22	.046	.371
tch vs. coun	-.626	.349*	4.136*	3.523
tch vs. other	-.281	.38	.701	1.45
admin vs. coun	-.585	.373*	3.158*	3.078
admin vs. other	-.239	.402	.455	1.168

* Significant at 95%

One Factor ANOVA X₁: job   Y₆: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	.345	.485	.652	1.398

One Factor ANOVA X_1: job Y_7: Q18

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	2.348	1.116	.067
admin	130	2.692	1.287	.113
coun	40	3.05	1.518	.24
other	33	3.091	1.234	.215

One Factor ANOVA X_1: job Y_7: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.344	.253*	2.389	2.677
tch vs. coun	-.702	.402*	3.925*	3.431
tch vs. other	-.743	.438*	3.708*	3.335
admin vs. coun	-.358	.43	.892	1.636
admin vs. other	-.399	.463	.953	1.691

* Significant at 95%

One Factor ANOVA X_1: job Y_7: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.041	.559	.007	.144

One Factor ANOVA X_1: job Y_8: Q21

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	4.442	.768	.046
admin	130	4.177	.944	.083
coun	40	4.375	.925	.146
other	33	4.455	.905	.157

One Factor ANOVA X_1: job Y_8: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.265	.176*	2.922*	2.961
tch vs. coun	.067	.28	.074	.471
tch vs. other	-.013	.305	.002	.081
admin vs. coun	-.198	.299	.565	1.301
admin vs. other	-.278	.322	.954	1.692

* Significant at 95%

One Factor ANOVA X_1: job Y_8: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.08	.389	.054	.402

One Factor ANOVA   X₁: job   Y₉: Q22

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	4.257	.863	.052
admin	130	3.954	1.085	.095
coun	40	4.125	1.114	.176
other	33	4.364	.895	.156

One Factor ANOVA   X₁: job   Y₉: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.303	.199*	2.992*	2.996
tch vs. coun	.132	.317	.225	.821
tch vs. other	-.106	.345	.123	.607
admin vs. coun	-.171	.338	.33	.994
admin vs. other	-.41	.365*	1.626	2.208

* Significant at 95%

One Factor ANOVA   X₁: job   Y₉: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.239	.44	.379	1.066

One Factor ANOVA   X$_1$: job   Y$_{10}$: Q24

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	2.518	1.468	.088
admin	130	2.915	1.53	.134
coun	40	3.175	1.5	.237
other	33	3.061	1.6	.278

One Factor ANOVA   X$_1$: job   Y$_{10}$: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.397	.313*	2.074	2.495
tch vs. coun	-.657	.498*	2.242	2.593
tch vs. other	-.542	.542*	1.29	1.967
admin vs. coun	-.26	.532	.307	.959
admin vs. other	-.145	.573	.083	.498

* Significant at 95%

One Factor ANOVA   X$_1$: job   Y$_{10}$: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	.114	.692	.035	.325

One Factor ANOVA X₁: job   Y₁₁: Q35

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	3.188	1.086	.065
admin	130	3.346	1.032	.091
coun	40	3.275	.847	.134
other	33	3.788	.893	.155

One Factor ANOVA X₁: job   Y₁₁: Q35

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.158	.218	.676	1.424
tch vs. coun	-.087	.346	.081	.492
tch vs. other	-.599	.377*	3.256*	3.125
admin vs. coun	.071	.37	.048	.378
admin vs. other	-.442	.399*	1.578	2.176

* Significant at 95%

One Factor ANOVA X₁: job   Y₁₁: Q35

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.513	.481*	1.462	2.094

* Significant at 95%

One Factor ANOVA X_1: job Y_1 $_2$: Q33

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	3.721	.964	.058
admin	130	3.623	.983	.086
coun	40	3.675	1.163	.184
other	33	4.212	.74	.129

One Factor ANOVA X_1: job Y_1 $_2$: Q33

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	.098	.204	.298	.946
tch vs. coun	.046	.324	.026	.279
tch vs. other	-.491	.352*	2.499	2.738
admin vs. coun	-.052	.346	.029	.295
admin vs. other	-.589	.373*	3.211*	3.104

* Significant at 95%

One Factor ANOVA X_1: job Y_1 $_2$: Q33

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.537	.45*	1.834	2.346

* Significant at 95%

One Factor ANOVA X_1: job Y_{13}: Q36

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
tch	276	3.699	.907	.055
admin	130	3.846	.952	.083
coun	40	3.975	.891	.141
other	33	4.121	.82	.143

One Factor ANOVA X_1: job Y_{13}: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
tch vs. admin	-.147	.191	.763	1.513
tch vs. coun	-.276	.303	1.063	1.786
tch vs. other	-.422	.33*	2.101	2.511
admin vs. coun	-.129	.324	.203	.781
admin vs. other	-.275	.35	.797	1.547

* Significant at 95%

One Factor ANOVA X_1: job Y_{13}: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
coun vs. other	-.146	.422	.155	.681

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	21.278	3.066	.25
jr/mid	69	21.638	2.651	.319
high sch	125	21.288	3.384	.303
higher ed	23	20.435	3.824	.797
distr	23	19.783	3.729	.778

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	20.114	3.289	.37

themes/factors

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	-.36	.917	.119	.771
elem vs. high sch	-.01	.763	1.289E-4	.025
elem vs. higher ed	.843	1.412	.276	1.174
elem vs. distr	1.496	1.412*	.867	2.082
elem vs. other	1.164	.876*	1.365	2.612

* Significant at 95%

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	.35	.946	.106	.726
jr/mid vs. higher ed	1.203	1.519	.485	1.557
jr/mid vs. distr	1.855	1.519*	1.153	2.401
jr/mid vs. other	1.524	1.039*	1.66	2.881
high sch vs. higher ed	.853	1.431	.275	1.172

* Significant at 95%

One Factor ANOVA X_1: Work level Y_1: sum q 5-9

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	1.505	1.431*	.855	2.067
high sch vs. other	1.174	.907*	1.296	2.545
higher ed vs. distr	.652	1.86	.095	.689
higher ed vs. other	.321	1.494	.036	.422
distr vs. other	-.331	1.494	.038	.436

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₂: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	26.907	5.397	.439
jr/mid	69	25.232	6.526	.786
high sch	125	27.576	5.267	.471
higher ed	23	30.261	4.864	1.014
distr	23	27.957	6.19	1.291

One Factor ANOVA   X₁: Work level   Y₂: sum q 11-19

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	28.165	5.995	.674

themes/factors

One Factor ANOVA X₁: Work level   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	1.675	1.617*	.83	2.037
elem vs. high sch	-.669	1.345	.191	.977
elem vs. higher ed	-3.354	2.49*	1.401	2.646
elem vs. distr	-1.049	2.49	.137	.828
elem vs. other	-1.257	1.545	.512	1.599

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-2.344	1.669*	1.524	2.761
jr/mid vs. higher ed	-5.029	2.679*	2.722*	3.689
jr/mid vs. distr	-2.725	2.679*	.799	1.999
jr/mid vs. other	-2.933	1.833*	1.977	3.144
high sch vs. higher ed	-2.685	2.524*	.874	2.09

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₂: sum q 11-19

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.381	2.524	.018	.296
high sch vs. other	-.589	1.599	.105	.723
higher ed vs. distr	2.304	3.281	.381	1.38
higher ed vs. other	2.096	2.636	.488	1.563
distr vs. other	-.208	2.636	.005	.155

themes/factors

One Factor ANOVA X_1: Work level Y_3: Q5

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.755	1.227	.1
jr/mid	69	3.913	1.21	.146
high sch	125	3.96	1.117	.1
higher ed	23	3.261	1.389	.29
distr	23	2.957	1.461	.305

One Factor ANOVA X_1: Work level Y_3: Q5

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	2.899	1.105	.124

themes/factors

One Factor ANOVA   X₁: Work level   Y₃: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	-.158	.342	.165	.909
elem vs. high sch	-.205	.284	.401	1.417
elem vs. higher ed	.494	.527	.68	1.844
elem vs. distr	.798	.527*	1.776	2.98
elem vs. other	.856	.327*	5.308*	5.152

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₃: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.047	.353	.014	.262
jr/mid vs. higher ed	.652	.566*	1.024	2.263
jr/mid vs. distr	.957	.566*	2.203	3.319
jr/mid vs. other	1.014	.388*	5.29*	5.143
high sch vs. higher ed	.699	.534*	1.325	2.574

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₃: Q5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	1.003	.534*	2.731*	3.695
high sch vs. other	1.061	.338*	7.611*	6.169
higher ed vs. distr	.304	.694	.149	.862
higher ed vs. other	.362	.557	.326	1.277
distr vs. other	.058	.557	.008	.204

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₄: Q11

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.43	1.304	.106
jr/mid	69	3.159	1.441	.174
high sch	125	3.728	1.24	.111
higher ed	23	4.13	1.014	.211
distr	23	3.348	1.465	.305

One Factor ANOVA   X₁: Work level   Y₄: Q11

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.367	1.322	.149

themes/factors

One Factor ANOVA X₁: Work level   Y₄: Q11

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.271	.373	.407	1.427
elem vs. high sch	-.298	.311	.708	1.882
elem vs. higher ed	-.7	.575*	1.144	2.392
elem vs. distr	.083	.575	.016	.282
elem vs. other	.063	.357	.024	.349

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₄: Q11

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.569	.385*	1.682	2.9
jr/mid vs. higher ed	-.971	.619*	1.903	3.085
jr/mid vs. distr	-.188	.619	.072	.598
jr/mid vs. other	-.208	.423	.186	.964
high sch vs. higher ed	-.402	.583	.368	1.357

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₄: Q11

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.38	.583	.328	1.282
high sch vs. other	.361	.369	.738	1.921
higher ed vs. distr	.783	.758*	.824	2.03
higher ed vs. other	.763	.609*	1.214	2.464
distr vs. other	-.019	.609	.001	.062

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₅: Q12

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3	1.322	.108
jr/mid	69	2.696	1.332	.16
high sch	125	3.344	1.403	.126
higher ed	23	3.043	1.364	.285
distr	23	3.174	1.337	.279

One Factor ANOVA   X₁: Work level   Y₅: Q12

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	2.937	1.333	.15

themes/factors

One Factor ANOVA X₁: Work level Y₅: Q12

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.304	.386	.481	1.551
elem vs. high sch	-.344	.321*	.888	2.107
elem vs. higher ed	-.043	.594	.004	.144
elem vs. distr	-.174	.594	.066	.575
elem vs. other	.063	.368	.023	.338

* Significant at 95%

One Factor ANOVA X₁: Work level Y₅: Q12

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.648	.398*	2.051	3.202
jr/mid vs. higher ed	-.348	.639	.229	1.07
jr/mid vs. distr	-.478	.639	.433	1.471
jr/mid vs. other	-.241	.437	.235	1.084
high sch vs. higher ed	.301	.602	.192	.981

* Significant at 95%

One Factor ANOVA X₁: Work level Y₅: Q12

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.17	.602	.062	.555
high sch vs. other	.407	.381*	.881	2.099
higher ed vs. distr	-.13	.782	.021	.328
higher ed vs. other	.107	.629	.022	.334
distr vs. other	.237	.629	.11	.742

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₆: Q13

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.046	1.122	.091
jr/mid	69	2.928	1.204	.145
high sch	125	3.248	1.126	.101
higher ed	23	3.826	.937	.195
distr	23	2.913	1.083	.226

One Factor ANOVA   X₁: Work level   Y₆: Q13

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.405	1.345	.151

themes/factors

One Factor ANOVA   X₁: Work level   Y₆: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.119	.333	.098	.701
elem vs. high sch	-.202	.277	.409	1.43
elem vs. higher ed	-.78	.513*	1.785	2.988
elem vs. distr	.133	.513	.052	.511
elem vs. other	-.359	.318*	.982	2.216

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₆: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.32	.344	.672	1.833
jr/mid vs. higher ed	-.899	.552*	2.049	3.201
jr/mid vs. distr	.014	.552	.001	.052
jr/mid vs. other	-.478	.378*	1.236	2.486
high sch vs. higher ed	-.578	.52*	.955	2.185

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₆: Q13

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.335	.52	.321	1.266
high sch vs. other	-.157	.329	.176	.937
higher ed vs. distr	.913	.676*	1.41	2.656
higher ed vs. other	.421	.543	.465	1.524
distr vs. other	-.492	.543	.634	1.781

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₇: Q15

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.238	.998	.081
jr/mid	69	3.029	1.098	.132
high sch	125	3.168	1.022	.091
higher ed	23	3.913	.9	.188
distr	23	3.174	.984	.205

One Factor ANOVA   X₁: Work level   Y₇: Q15

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.456	1.228	.138

themes/factors

One Factor ANOVA   X₁: Work level   Y₇: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.209	.302	.372	1.365
elem vs. high sch	.07	.251	.061	.551
elem vs. higher ed	-.675	.465*	1.629	2.854
elem vs. distr	.064	.465	.015	.273
elem vs. other	-.217	.288	.439	1.482

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₇: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.139	.311	.154	.878
jr/mid vs. higher ed	-.884	.5*	2.417*	3.477
jr/mid vs. distr	-.145	.5	.065	.57
jr/mid vs. other	-.427	.342*	1.202	2.452
high sch vs. higher ed	-.745	.471*	1.933	3.109

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₇: Q15

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.006	.471	1.218E-4	.025
high sch vs. other	-.288	.298	.718	1.895
higher ed vs. distr	.739	.612*	1.126	2.373
higher ed vs. other	.457	.492	.668	1.828
distr vs. other	-.282	.492	.254	1.126

* Significant at 95%

themes/factors

One Factor ANOVA X₁: Work level   Y₈: Q18

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	2.47	1.124	.091
jr/mid	69	2.29	1.214	.146
high sch	125	2.312	1.11	.099
higher ed	23	3.304	1.259	.263
distr	23	2.739	1.137	.237

One Factor ANOVA X₁: Work level   Y₈: Q18

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.051	1.422	.16

themes/factors

One Factor ANOVA X₁: Work level   Y₈: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.18	.342	.215	1.038
elem vs. high sch	.158	.284	.239	1.094
elem vs. higher ed	-.834	.526*	1.942	3.116
elem vs. distr	-.269	.526	.202	1.005
elem vs. other	-.58	.326*	2.443*	3.495

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₈: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.022	.353	.003	.123
jr/mid vs. higher ed	-1.014	.566*	2.482*	3.523
jr/mid vs. distr	-.449	.566	.487	1.56
jr/mid vs. other	-.761	.387*	2.98*	3.86
high sch vs. higher ed	-.992	.533*	2.675*	3.657

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₈: Q18

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.427	.533	.495	1.574
high sch vs. other	-.739	.338*	3.692*	4.297
higher ed vs. distr	.565	.693	.514	1.603
higher ed vs. other	.254	.557	.16	.895
distr vs. other	-.312	.557	.242	1.099

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Work level Y_9: Q21

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	4.404	.759	.062
jr/mid	69	4.304	.944	.114
high sch	125	4.416	.805	.072
higher ed	23	4.478	.73	.152
distr	23	4.739	.449	.094

One Factor ANOVA X_1: Work level Y_9: Q21

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	4.127	1.017	.114

themes/factors

One Factor ANOVA   X₁: Work level   Y₉: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.1	.239	.135	.82
elem vs. high sch	-.012	.199	.003	.119
elem vs. higher ed	-.074	.368	.032	.397
elem vs. distr	-.335	.368	.642	1.791
elem vs. other	.277	.228*	1.142	2.39

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₉: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.112	.246	.159	.891
jr/mid vs. higher ed	-.174	.396	.149	.864
jr/mid vs. distr	-.435	.396*	.933	2.16
jr/mid vs. other	.178	.271	.333	1.291
high sch vs. higher ed	-.062	.373	.022	.328

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₉: Q21

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.323	.373	.581	1.704
high sch vs. other	.289	.236*	1.16	2.409
higher ed vs. distr	-.261	.484	.224	1.058
higher ed vs. other	.352	.389	.631	1.776
distr vs. other	.613	.389*	1.913	3.093

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₁: Q22

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	4.258	.868	.071
jr/mid	69	4.319	.883	.106
high sch	125	4.168	.931	.083
higher ed	23	4.261	.915	.191
distr	23	4.261	1.287	.268

One Factor ANOVA   X₁: Work level   Y₁: Q22

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.835	1.067	.12

themes/factors

One Factor ANOVA   X₁: Work level   Y₁: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	-.061	.271	.039	.44
elem vs. high sch	.09	.225	.124	.787
elem vs. higher ed	-.003	.417	2.982E-5	.012
elem vs. distr	-.003	.417	2.982E-5	.012
elem vs. other	.423	.259*	2.063	3.212

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₁: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	.151	.279	.225	1.061
jr/mid vs. higher ed	.058	.449	.013	.254
jr/mid vs. distr	.058	.449	.013	.254
jr/mid vs. other	.483	.307*	1.915	3.094
high sch vs. higher ed	-.093	.423	.037	.432

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₁: Q22

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.093	.423	.037	.432
high sch vs. other	.333	.268*	1.191	2.44
higher ed vs. distr	0	.549	0	0
higher ed vs. other	.425	.441	.717	1.894
distr vs. other	.425	.441	.717	1.894

* Significant at 95%

themes/factors

One Factor ANOVA   X₁: Work level   Y₂: Q24

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	2.689	1.471	.12
jr/mid	69	2.478	1.471	.177
high sch	125	2.264	1.369	.122
higher ed	23	3.304	1.46	.304
distr	23	2.652	1.526	.318

One Factor ANOVA   X₁: Work level   Y₂: Q24

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.57	1.499	.169

themes/factors

One Factor ANOVA   X₁: Work level   Y₂: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.21	.414	.199	.998
elem vs. high sch	.425	.345*	1.171	2.42
elem vs. higher ed	-.616	.638	.718	1.895
elem vs. distr	.037	.638	.003	.113
elem vs. other	-.881	.396*	3.821*	4.371

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₂: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	.214	.428	.194	.984
jr/mid vs. higher ed	-.826	.687*	1.118	2.364
jr/mid vs. distr	-.174	.687	.05	.498
jr/mid vs. other	-1.091	.47*	4.165*	4.564
high sch vs. higher ed	-1.04	.647*	1.996	3.159

* Significant at 95%

One Factor ANOVA   X₁: Work level   Y₂: Q24

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	-.388	.647	.278	1.179
high sch vs. other	-1.306	.41*	7.835*	6.259
higher ed vs. distr	.652	.841	.464	1.524
higher ed vs. other	-.265	.676	.119	.771
distr vs. other	-.917	.676*	1.424	2.668

* Significant at 95%

themes/factors

One Factor ANOVA X₁: Work level   Y₃: Q28

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.702	1.176	.096
jr/mid	69	3.348	1.391	.168
high sch	125	3.52	1.147	.103
higher ed	23	3.522	1.344	.28
distr	23	3.261	1.356	.283

One Factor ANOVA X₁: Work level   Y₃: Q28

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.089	1.263	.142

themes/factors

One Factor ANOVA X₁: Work level   Y₃: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.354	.353*	.78	1.974
elem vs. high sch	.182	.293	.297	1.219
elem vs. higher ed	.18	.543	.085	.652
elem vs. distr	.441	.543	.51	1.597
elem vs. other	.613	.337*	2.561*	3.579

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₃: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.172	.364	.173	.93
jr/mid vs. higher ed	-.174	.584	.068	.585
jr/mid vs. distr	.087	.584	.017	.293
jr/mid vs. other	.259	.4	.325	1.274
high sch vs. higher ed	-.002	.55	7.712E-6	.006

One Factor ANOVA X₁: Work level   Y₃: Q28

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.259	.55	.171	.925
high sch vs. other	.431	.349*	1.182	2.432
higher ed vs. distr	.261	.715	.103	.717
higher ed vs. other	.433	.575	.439	1.481
distr vs. other	.172	.575	.069	.589

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Work level Y_{10}: Q30

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.94	.889	.072
jr/mid	69	3.754	1.205	.145
high sch	125	3.936	.896	.08
higher ed	23	4.174	.65	.136
distr	23	3.348	1.265	.264

One Factor ANOVA X_1: Work level Y_{10}: Q30

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.709	1.064	.12

themes/factors

One Factor ANOVA X_1: Work level Y_{10}: Q30

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.187	.281	.341	1.306
elem vs. high sch	.004	.234	2.730E-4	.037
elem vs. higher ed	-.234	.433	.225	1.06
elem vs. distr	.593	.433*	1.447	2.689
elem vs. other	.232	.269	.574	1.694

* Significant at 95%

One Factor ANOVA X_1: Work level Y_{10}: Q30

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.182	.29	.305	1.235
jr/mid vs. higher ed	-.42	.466	.629	1.773
jr/mid vs. distr	.406	.466	.586	1.712
jr/mid vs. other	.045	.319	.015	.276
high sch vs. higher ed	-.238	.439	.227	1.065

One Factor ANOVA X_1: Work level Y_{10}: Q30

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.588	.439*	1.387	2.634
high sch vs. other	.227	.278	.515	1.605
higher ed vs. distr	.826	.57*	1.62	2.846
higher ed vs. other	.465	.458*	.795	1.994
distr vs. other	-.361	.458	.479	1.548

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Work level $Y_{1\,1}$: Q34

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.252	1.021	.083
jr/mid	69	3.159	1.171	.141
high sch	125	3.656	.976	.087
higher ed	23	3.609	1.076	.224
distr	23	3.043	.825	.172

One Factor ANOVA X_1: Work level $Y_{1\,1}$: Q34

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	3.177	1.174	.132

themes/factors

One Factor ANOVA X₁: Work level   Y₁₁: Q34

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	.092	.301	.072	.602
elem vs. high sch	-.404	.251*	2.011	3.171
elem vs. higher ed	-.357	.464	.458	1.513
elem vs. distr	.208	.464	.156	.882
elem vs. other	.074	.288	.052	.508

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₁₁: Q34

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.497	.311*	1.972	3.14
jr/mid vs. higher ed	-.449	.499	.626	1.77
jr/mid vs. distr	.116	.499	.042	.457
jr/mid vs. other	-.018	.341	.002	.102
high sch vs. higher ed	.047	.47	.008	.198

* Significant at 95%

One Factor ANOVA X₁: Work level   Y₁₁: Q34

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.613	.47*	1.311	2.56
high sch vs. other	.479	.298*	1.996	3.159
higher ed vs. distr	.565	.611	.661	1.818
higher ed vs. other	.431	.491	.597	1.727
distr vs. other	-.134	.491	.057	.535

* Significant at 95%

themes/factors

One Factor ANOVA X_1: Work level Y_{12}: Q36

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
elem	151	3.642	.795	.065
jr/mid	69	3.71	1.139	.137
high sch	125	3.808	.859	.077
higher ed	23	4.261	.864	.18
distr	23	3.739	1.096	.229

One Factor ANOVA X_1: Work level Y_{12}: Q36

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
other	79	4.063	.911	.102

themes/factors

One Factor ANOVA   X$_1$: Work level   Y$_1$ 2: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
elem vs. jr/mid	-.068	.259	.053	.514
elem vs. high sch	-.166	.216	.456	1.51
elem vs. higher ed	-.618	.399*	1.856	3.046
elem vs. distr	-.097	.399	.045	.476
elem vs. other	-.421	.248*	2.233*	3.342

* Significant at 95%

One Factor ANOVA   X$_1$: Work level   Y$_1$ 2: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
jr/mid vs. high sch	-.098	.267	.103	.719
jr/mid vs. higher ed	-.551	.429*	1.272	2.521
jr/mid vs. distr	-.029	.429	.004	.133
jr/mid vs. other	-.353	.294*	1.116	2.363
high sch vs. higher ed	-.453	.404*	.968	2.2

* Significant at 95%

One Factor ANOVA   X$_1$: Work level   Y$_1$ 2: Q36

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
high sch vs. distr	.069	.404	.022	.335
high sch vs. other	-.255	.256	.767	1.958
higher ed vs. distr	.522	.526	.761	1.95
higher ed vs. other	.198	.422	.169	.919
distr vs. other	-.324	.422	.455	1.508

themes/factors

APPENDIX N

COMPUTER GENERATED TABLES

AB INCIDENCE INTERACTION

The AB Incidence table on Y_1: sum q 11-19

Recode of eth...		level 1	level 2	Totals:
gender	male	179	19	198
		26.927	31.947	27.409
	female	222	57	279
		27.072	28.193	27.301
Totals:		401	76	477
		27.007	29.132	27.346

The AB Incidence table on Y_2: sum q21-24,32,35

Recode of eth...		level 1	level 2	Totals:
gender	male	179	19	198
		20.715	24.211	21.051
	female	222	57	279
		21.437	22.175	21.588
Totals:		401	76	477
		21.115	22.684	21.365

univ as inst/accessibility

The AB Incidence table on Y_1: sum q 11-19

	work set:	no	yes	Totals:
gender	male	30	171	201
		30.4	26.848	27.378
	female	44	240	284
		27.727	27.142	27.232
	Totals:	74	411	485
		28.811	27.019	27.293

The AB Incidence table on Y_2: sum q 26,28,30,33,34,36

	work set:	no	yes	Totals:
gender	male	30	171	201
		22.567	20.942	21.184
	female	44	240	284
		19.409	20.8	20.585
	Totals:	74	411	485
		20.689	20.859	20.833

Work level:		elem	jr/mid	high sch	higher ed	distr
gender	male	46	30	70	7	10
		21.739	21.533	21.286	21.429	17.5
	female	105	39	55	16	13
		21.076	21.718	21.291	20	21.538
	Totals:	151	69	125	23	23
		21.278	21.638	21.288	20.435	19.783

Page 2 of the AB Incidence table on Y_1: sum q 5-9

Work level:		other	Totals:
gender	male	33	196
		20.121	21.046
	female	46	274
		20.109	21.007
	Totals:	79	470
		20.114	21.023

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Work level:	elem	jr/mid	high sch	higher ed	distr
gender male	46	30	70	7	10
	25.761	24.2	28.2	31.571	26.6
female	105	39	55	16	13
	27.41	26.026	26.782	29.688	29
Totals:	151	69	125	23	23
	26.907	25.232	27.576	30.261	27.957

Page 2 of the AB Incidence table on Y2: sum q 11-19

Work level:	other	Totals:
gender male	33	196
	29.848	27.332
female	46	274
	26.957	27.219
Totals:	79	470
	28.165	27.266

c-p-p/univ as inst/access

Page 1 of the AB Incidence table on Y3: sum q21-24,32,35

Work level:		elem	jr/mid	high sch	higher ed	distr
gender	male	46 20.783	30 19.9	70 21.129	7 23.571	10 19.4
	female	105 21.867	39 21.974	55 20.636	16 23.062	13 23.308
Totals:		151 21.536	69 21.072	125 20.912	23 23.217	23 21.609

Page 2 of the AB Incidence table on Y3: sum q21-24,32,35

Work level:		other	Totals:
gender	male	33 22.303	196 21.056
	female	46 21.283	274 21.675
Totals:		79 21.709	470 21.417

c-p-p/univ as inst/access

The AB Incidence table on Y_1: sum q21-24,32,35

job:		tch	admin	coun	other	Totals:
age	under 30	48	3	4	4	59
		21.292	21.333	22.75	21.25	21.39
	30-39	98	40	14	9	161
		20.786	22.25	21.571	21.111	21.236
	40-49	110	73	21	16	220
		21.473	20.356	22.19	24.688	21.405
	50 and over	17	13	1	4	35
		22.882	21.615	18	23	22.286
Totals:		273	129	40	33	475
		21.282	21.093	21.925	23.091	21.411

The AB Incidence table on Y_1: sum q 11-19

Recode of eth...		level 1	level 2	Totals:
age	under 30	49	11	60
		27.449	24.727	26.95
	30-39	139	21	160
		26.496	28.381	26.744
	40-49	183	36	219
		27.011	30.333	27.557
	50 and over	27	7	34
		29.259	32.429	29.912
Totals:		398	75	473
		27.038	29.16	27.374

The AB Incidence table on Y₂: sum q 25,27,29,31

Recode of eth...	level 1	level 2	Totals:
under 30	49	11	60
	15.571	12.818	15.067
30-39	139	21	160
	14.381	14.524	14.4
40-49	183	36	219
	14.372	14.861	14.452
50 and over	27	7	34
	15.333	15.429	15.353
Totals:	398	75	473
	14.588	14.52	14.577

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Page 1 of the AB Incidence table on Y_1: sum q 5-9

Work level:	elem	jr/mid	high sch	higher ed	distr
level 1	117	54	104	18	19
	21.453	22.185	20.971	19.667	19.526
level 2	30	12	21	5	3
	20.833	19.75	22.857	23.2	20
Totals:	147	66	125	23	22
	21.327	21.742	21.288	20.435	19.591

(Recode of...)

Page 2 of the AB Incidence table on Y_1: sum q 5-9

Work level:	other	Totals:
level 1	75	387
	19.96	20.959
level 2	4	75
	23	21.467
Totals:	79	462
	20.114	21.041

(Recode of...)

c-p-p/access

Page 1 of the AB Incidence table on Y₂: sum q21-24,32,35

Work level:	elem	jr/mid	high sch	higher ed	distr
level 1	117 / 21.274	54 / 21.37	104 / 20.365	18 / 22.611	19 / 21.316
level 2	30 / 22.233	12 / 19.583	21 / 23.619	5 / 25.4	3 / 23
Totals:	147 / 21.469	66 / 21.045	125 / 20.912	23 / 23.217	22 / 21.545

Page 2 of the AB Incidence table on Y₂: sum q21-24,32,35

Work level:	other	Totals:
level 1	75 / 21.48	387 / 21.147
level 2	4 / 26	75 / 22.64
Totals:	79 / 21.709	462 / 21.39

c-p-p/access

The AB Incidence table on Y_1: sum q 11-19

job:		tch	admin	coun	other	Totals:
Recode of...	level 1	224	110	34	26	394
		26.665	26.509	29.794	28.577	27.018
	level 2	44	20	5	7	76
		28.341	31.45	27	29	29.132
Totals:		268	130	39	33	470
		26.94	27.269	29.436	28.667	27.36

The AB Incidence table on Y_2: sum q 25,27,29,31

job:		tch	admin	coun	other	Totals:
Recode of...	level 1	224	110	34	26	394
		14.67	14.127	15.265	14.962	14.589
	level 2	44	20	5	7	76
		13.773	15.75	16.8	14.286	14.539
Totals:		268	130	39	33	470
		14.522	14.377	15.462	14.818	14.581

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