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Evaluation of professional studies program by students

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EVALUATION OF PROFESSIONAL STUDIES PROGRAM BY STUDENTS

Iowa State University PH.D. 1986

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Evaluation of professional studies program by students

by

Kwiakeh Doe Subah

A Dissertation Submitted to the
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CHAPTER 1. INTRODUCTION

Higher education has experienced a period of significant expansion over the years. Most universities have become larger and more complex. As they become larger and more complex, the need for improving programs and for developing new directions within their various departments also increases.

During the past decade the emphasis on program evaluation in educational practice has greatly increased (Arns & Poland, 1980; Centra, 1977; Clark, 1983; Cooley, 1983; and Grotelueschen, 1980). Increasing attention is being paid to the evaluation of academic programs in order to determine what things to change and how to change them to respond to the changing society in which the institutions exist. Educational administrators are increasingly being held accountable for their programs. Improvement and change has to come through careful choice and decision-making. Educational administrators need information that will aid them in decision-making. Evaluation can provde such information.

Evaluation is a term used to describe many different processes for many different reasons. There are several definitions of evaluation found in the literature. Stufflebeam and Webster (1980) define evaluation as "a study designed and conducted to assist some audience to judge and improve the worth of some educational object"

(p. 6). Stufflebeam et al. (1971), view evaluation as "the process of delineating, obtaining, and providing useful information for judging decision alternatives" (p. 40).

Stufflebeam proposes that evaluation has two purposes. The first is accountability or justification of the value of the program to employers, sponsors, the client, or society itself. This he calls retroactive or summative evaluation. The second purpose is to improve decision-making by providing information to the program managers that will enable them to improve the quality of their program. He calls this proactive or formative evaluation.

Grotelueschen (1980) states many reasons why administrators of educational programs might conduct program evaluation. Among them are: 1) the documentation of major program accomplishments and examination of expedience of program goals; 2) identification of potential participants' needs and establishment of program emphasis; 3) identification of program weaknesses and assessment of progress toward stated goals (p. 79).

Kirkpatrick (1976) sees evaluation as consisting of four types, each of which he sees as one step in the total evaluation process. Two of these include: 1) reaction evaluation which takes place periodically during a program and provides data to a program manager about how the

participants are feeling about the program. Data can be used to make changes in designs, methods, personnel, faculty, and as the program moves along; 2) results evaluation, which provides data about tangible results of the program in terms of reduced cost, improved quality, increased productivity and the like.

Statement of Problem

Growing accountability pressure in higher education has focused attention on performance of academic programs (Keller, 1983). Because of this growing attention, various program performance indicators have been developed over the past two decades. However, non-observable aspects of performance, such as overall student satisfaction is just beginning to receive serious attention (Morstain, 1977). Some authors have noted some directions that have motivated such attention. One such direction is the increased attention given to students' evaluation of their courses which have caused some researchers and administrators to ponder over how those evaluations might relate to students' overall perception and attitudes toward their academic context (Hearn, 1985; Neumann & Neumann, 1981). For instance, Neumann and Neumann (1981) noted that department satisfaction, compared to course or faculty may better reflect attitudes

of students toward college, may more powerfully influence course selection, and post graduate behaviors and may reflect critical information concerning the attractiveness of the college to outsiders. Cameron (1981) maintained that student and faculty satisfaction levels are important aspects of organizational effectiveness in colleges and universities. Braskamp, Wise and Hengstler (1979) stated that "student satisfaction and perceptions of departmental organization and quality have been investigated as possible indicators of departmental excellence" (p. 494).

Olscamp (1978) has identified some important tasks for higher education; the task of providing and maintaining excellence in their academic programs. Olscamp believes that it is encumbent of institutions of higher education to achieve the highest possible standards in their academic programs and the environment consisting of those programs that are provided for students.

Morstain and Gaff (1977) propose that students should play a role in formulating policy at their institutions; and have the opportunity to influence the design and conceptualization of academic programs because these programs ultimately benefit the education of the students. This proposition seems realistic. If academic programs are to realize their full potential of improving the education of

students, it is, therefore, necessary that students be systematically involved in the endeavor. According to Gaff (1978), students can make important contributions at each stage of educational development such as "assessing needs, planning programs, participating in activities and evaluating the results" (p. 59).

Pace (1985) points out that too often educators are inclined to dismiss students' opinions as invalid or biased, which he considers a mistake. Pace maintains that students express their opinions and satisfactions forthrightly. This author states that "what students perceive to be true or characteristic is a reality in its own right, a condition that has its own inherent validity" (p. 13).

Morstain and Gaff (1977) also believe that students' views are critically important to faculty and academic administrators, for it is appropriate for those who plan and implement educational programs to consider the views of the consumers who are the students.

This study was designed to evaluate the graduate program in the department of professional studies by collecting data from students who were currently enrolled in the program (Spring 1986), thereby identifying their level of satisfaction with the program and also identifying the strengths and weaknesses of the department.

The Professional Studies Department is represented by seven sections. The organization and the general goals of the department as stated by the Governance of the Department of Professional Studies (Iowa State University, 1982) are outlined below.

Organization of the Department

The areas of emphasis within the Department of Professional Studies (Graduate Department, College of Education) include the following:

-Adult and Extension Education

-Curriculum and Instructional Media

-Educational Administration

-Higher Education

-Elementary Education

-Counselor Education

-Historical, Philosophical and Comparative Studies in Education

-Research and Evaluation

-Learning Disabilities

Seven areas are designated as sections within the department with its own staff and curriculum. Elementary Education and Learning Disabilities are administered primarily by the Department of Elementary Education and

therefore designated as affiliated programs and not considered as sections (Iowa State University, 1982).

General Goals of the Department

The general goals of the Department and of each of its sections and affiliated programs as stated by the Governance of the Department of Professional Studies (Iowa State University, 1982) are to:

(1) Conduct high quality graduate education programs, both on-campus and off-campus, for students seeking graduate degrees in a major in education and/or seeking professional certification as school service personnel;

(2) establish appropriate conditions, opportunities, and resources with which both faculty and graduate students can engage in research and scholarly activities of excellence;

(3) assist the educational enterprise of Iowa in solution of its problems of utilizing, when appropriate, the talents and expertise of the faculty and graduate student body in such activities as workshops, conferences, and consultation in small groups, both on and off- campus (p. 1).

Objectives of the Study

1. Identify differences in enrolled students' satisfaction by age, sex, graduate assistantship, job skills useful, requirements for graduate degree, types of employment, area of specialization, if they would recommend area of specialization.
2. Identify the strengths and weaknesses in the students' area of specialization and the degree to which the program meets their expectations.
3. Make recommendations for the improvement of the professional studies degree programs.

Hypotheses to be Tested

The following null hypotheses were tested to achieve the purpose of this study:

1. There is no relationship between students' level of satisfaction and the following variables: age, sex, graduate assistantship, job skills, if they would recommend area of specialization.
2. There is no significant difference in the level of satisfaction between sex with quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside

section, quality of instruction, admission standard, registration and course availability in the department and program of study committee.

3. There is no significant difference in the level of satisfaction between students who write a thesis and those who write a creative component with these factors: quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, registration and course availability in the department, and program of study committee.
4. There is no significant difference in the level of satisfaction between students who have assistantships and those who do not have assistantships with these factors: quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, registration and course availability in the department, and program of study committee.

5. There is no significant difference in age and level of satisfaction with these factors: quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, registration and course availability in the department and program of study committee.
6. There is no significant difference in student area of specialization and the level of satisfaction with the quality of graduate program and career development quality in the major section.
7. There is no significant difference in students' area of employment and the level of satisfaction with the quality of career development in the students' major section.

Basic Assumptions

The assumptions that underlie this study are:

1. Students gave answers about their satisfaction, opinions and perceptions of the program.
2. Most information obtained by the questionnaire was valid and helpful for evaluating the Professional Studies Program.

Definition of Terms

The following definitions were used for the purpose of this study:

1. Program: broadly defined, a program is a set of related activities developed to accomplish some purpose. Specifically, program is "the product resulting from all programming activities in which professional educator and learner are involved (Boyle, 1981, p. 5).
2. Evaluation: "a study that is designed and conducted to assist some audience to judge and improve the worth of some educational object" (Stufflebeam and Webster, 1980, p. 6).

Delimitation of the Study

The scope of this study was limited to students who were currently enrolled in the graduate degree program in the Professional Studies Department for the Spring semester of 1986. Data collected from this study can only be applied to programs in Professional Studies where the data were collected. Inferences cannot be made for any other population.

Organization of the Study

This study is composed of five chapters, a bibliography and some appendices. Chapter 1 includes an overview of the study consisting of introduction, a description of the organization and objectives of the Professional Studies Department, statement of the problem, hypotheses, basic assumptions, definition of terms and delineation of the study.

Chapter 2 presents a review of pertinent literature. Chapter 3 provides information on methods and procedures utilized in this study.

Chapter 4 contains findings of the study as they relate to the hypotheses presented in Chapter 1. Chapter 5 contains a summary of the problem, findings of the study, conclusions and recommendations.

CHAPTER 2. REVIEW OF LITERATURE

To understand the importance of evaluation and its potential contribution to education, a close examination of evaluation is necessary. This examination will lead to a conceptualization of evaluation that served as a basis for this study.

Program Evaluation Defined

This seciton of the review of literature begins with the historical definition of evaluation and how this meaning has changed over time. A number of the major or widely used definitions are cited. In addition, one of the new, wider definitions of evaluation is given.

Many definitions of evaluation can be found in the literature. When we look at the diversity of concepts, practices, and methods in the field of evaluation, historically and analytically, we find that the ways in which educators think about evaluation and how they go about it are necessarily related to what they are assessing and why. How evaluation should be carried on is, therefore, related to the purpose, the program and the personnel. Their differences in purpose and goal are reflected historically in the variety of ways educators have defined evaluation and

the many different schools of thought that surround these definitions.

With the progression of the measurement movement in education in the 1920s and 1930s, evaluation was defined as educational measurement (Gephart, 1973; Stufflebeam et al., 1971; Hanson, 1978). This view is seen through the writings of authors such as Thorndike and Hagen (1969) and Ebel (1965). For example, Thorndike and Hagen (1969) define evaluation as being closely related and/or synonymous with measurement. Ebel (1965) defines evaluation as "a judgement of merit, sometimes based solely on measurements such as those provided by test scores but more frequently involving the synthesis of various measurements, critical incidents, subjective impressions, and other kinds of evidence" (p. 450). Gephart (1973) recognized that the definition of evaluation was identical to measurement and separates evaluation and decision. He notes that those who hold this position do not reject the concept of the act of decision-making. Rather, decision is something else; hence, they evaluate as they measure.

The measurement approach was advantageous in introducing instrumentation and statistical analysis into the field of educational testing and evaluation. However, there are major disadvantages also. Guba (1969) observed

that defining evaluation as measurement results in an evaluation which is too narrow in focus and too mechanistic in its approach. Nevo (1974) agrees with this view. He states that

> the disadvantage of this approach is its narrow and mechanistic concept, limiting evaluation to instrument development and avoiding the consideration of other components involved in evaluation such as value judgement, criteria, purpose and influence (p. 6).

The widely accepted definition which was originated by Ralph Tyler perceives evaluation as "the process of determining to what extent the educational objectives are actually being realized" (Tyler, 1950, p. 69). In this school of thought, evaluation is thought of as the process of comparing performance data with clearly specified objectives. However, it is also limited in scope as it is concentrated on student performance as the worth of a program. This does not take into account the decision-making aspect for program planning and improvement. Nevertheless, the advantage of the Tylerian definition is that it integrates evaluation with instructional process, possible feedback, and has a defined criteria (Adams, 1972).

Another widely accepted definition of evaluation has been one which provides information for decision-making. This definition was suggested by various leading authors of evaluation such as Alkin (1969), Cronbach (1963), and

Stufflebeam (Stufflebeam et al., 1971). Another definition agreed upon by evaluators is one which perceives evaluation as the assessment of merit or worth (Eisner, 1979; Glass, 1969; House, 1980; Scriven, 1967; Stufflebeam, 1973).

Gephart (1973) contends that two subdivisions of "worth" can be identified in an evaluation effort, namely: "absolute" and "relative." Gephart maintains that quite often the determination of worth in an educational program setting calls for the use of both absolute and relative scales. Measures of time, physical space, and costs in dollars are examples of absolute scales; while percentile ranking, grade placement, rank in class, political acceptability and aesthetic quality are examples of relative scales.

There is a major disagreement concerning the judgemental definition. Cronbach et al. (1980) clearly reject the judgemental nature of evaluation which advocates an approach that views the evaluator as "an educator whose success is to be judged by what others learn" (p. 11). They consider evaluation as "a systematic examination of events...conducted to assist in improving program" (p. 14).

Another school of thought which has also gained wide acceptance in recent times has to deal with evaluation and its role in decision-making. Stufflebeam et al., (1971) defines educational evaluation as "the process of

delineating, obtaining, and providing useful information for judging decision alternatives" (p. 40). Similarly, Stake and Denny (1969) proposed that it includes the task of gathering information about the nature and worth of educational programs in order to improve decisions about the management of those programs. Alkin (1969, p. 2) views evaluation as the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives.

Hanson (1978), suggests that the decision-making nature of evaluation reflects the following assumptions or beliefs: (1) that the decision maker determines the nature of the domain to be examined; (2) that evaluation is concerned primarily with gathering information; (3) that the information gathered should be appropriate to the needs of the decision makers; and (4) that relevance of the information gathered depends on the situation and the kind of decisions to be made (p. 6). These definitions of educational evaluation suggest that by its very nature, evaluation is a dynamic process. As such, its meaning changes depending on existing conditions.

From literature review one can clearly see the absence of consensus among professionals in the field of education

in defining evaluation. In recent times, writings have been released aimed at resolving the problem of nonconsensus, and arriving at more general yet useful and practical definition of educational evaluation. Stufflebeam et al. (1971) provided a new definition of evaluation which states that "evaluation is the process of delineating, obtaining and providing useful information for judging decision alternatives" (p. 40). This definition, which has already been cited, encompasses a number of features already mentioned in the previous definitions. The CIPP model, one of the widely known evaluation models developed by Stufflebeam is based on this definition. Since the present study is based on the CIPP model, it will be discussed in detail. Other models will be discussed and a short summary of other studies related to the CIPP model will be presented.

The above discussion illustrates that even though there are striking differences among the authors in defining evaluation, commonality does exist. The commonality in these definitions centers around the concept of supplying information for decision-making. In this regard, it is therefore appropriate to conclude that educational evaluation is an instrument which brings about change through decision-making thereby leading to change (improvement) in the educational program and/or process. To do this, only positive change is useful or desirable. Improvement implies

alterations and comes only as a result of employing actions or measures different from those currently in use. Therefore, to improve the educational program, a decision maker must know the various alternatives available to him/her and choose the ones which make positive impacts on his/her program. To make this choice implies an element of understanding the various alternatives and the making of decisions.

Procedures for Academic Program Evaluation

Although many different perspectives are presented in the literature about evaluation, most of the authors agree that the fundamental reason for reviewing academic programs is to collect information that can be used to make judgements about a program's quality or value. To be useful for this purpose, Clark (1983) pointed out that the information collected must be relevant, accurate, credible, and persuasive. Clark further contends that when undertaking an evaluation task, the following questions be taken into consideration:

1. Why conduct a program evaluation?
   What questions need to be answered?
2. Who will be involved?
3. What kind of information should be collected?

Why conduct a program evaluation?

Specific evaluation purposes may vary according to the goals of the program, the situation surrounding it and those involved. Scriven (1967) suggested the distinction between "formative evaluation" and "summative evaluation" which refers to the two major functions. In its formative function, evaluation is used for the improvement and development of an ongoing activity (program, person, product, etc.). In its summative function, evaluation is used for accountability, certification or selection.

The psychological and sociopolitical function of evaluation is not often treated by evaluation literature and such functions should be considered. Besides the formative and summative purposes, evaluation is sometimes used to increase awareness of special activities, motivate desired behavior, or promote public relations (Cronbach et al., 1980; House, 1974; Patton, 1978).

In summary, evaluation may serve the purposes of program planning, policy making, program improvement, program justification or accountability, documenting the history and impact of program, and psychological or sociopolitical functions for motivating and increasing awareness (Cronbach et al., 1980; House, 1974; Patton, 1978; Grotelueschen, 1980; Seeley, 1981; Nevo, 1983; Clark, 1983).

Who will be involved?

The primary responsibility for deciding to carry out evaluation, approving the overall design, and making use of the results resides with administrators or a director of planning (Grotelueschen, 1980; Clark, 1983). Internal evaluation requires the commitment of leaders in key positions and the involvement of representatives from all the various constituencies, including faculty members in the program under review (Seeley, 1981; Nevo, 1983; Clark, 1983).

What kinds of information should be collected?

In planning an evaluation, it is important to determine what is "the thing" to be evaluated (Seeley, 1981). After an evaluation object has been identified, a decision has to be made regarding the various aspects and dimensions of the object that should be evaluated. The CIPP model suggests that evaluation focus on four variables for each evaluation object: 1) its goals, 2) its design, 3) its process of implementation, and 4) its outcomes (Stufflebeam, 1983). Regarding this approach, an evaluation of educational program, for example, would be an assessment of 1) the merits of its goals, 2) the quality of its plans, 3) the extent to which those plans are being carried out, and 4) the worth of the outcomes (Seeley, 1981; Stufflebeam, 1983).

Guba and Lincoln (1981) suggest that the evaluator should generate five types of information: 1) descriptive information concerning the evaluation object, its setting and its surrounding conditions, 2) information in response to concerns of relevant audiences, 3) information concerning relevant issues, 4) information concerning values, and 5) information concerning standards relevant to worth and merit assessments.

From the literature, it seems that a wide variation of information should be collected by evaluation concerning the evaluated object.

The decision about the best procedures to use in any given situation will depend on the purpose of the evaluation, the characteristics of the program to be evaluated, and the time and money available to carry out the evaluation (Seeley, 1981; Clark, 1983). The procedures for data collection must be appropriate to the criteria that will be used to make judgements about the program (Clark, 1983). Care must be taken to make sure that the process involves representatives of various groups that will be affected, proper treatment of each group in terms of fairness, and a variety of measures or indicators to reflect different dimensions of the program (Seeley, 1981; Clark, 1983).

Some important discussion about various methods that could be used in evaluating quality of educational programs are provided by authors such as Dressel (1976), Stauffer (1981), and Webster (1981). Various types of check lists, questionnaires and other evaluation procedures are included in these sources. The program or the department self-study tends to be the most frequent form of data collection (Stake, 1976; Clark, 1977).

Models of Program Evaluation

There are several approaches to evaluation. Most of these approaches are subsumed under a few basic types. Some authors refer to these basic types as "models," while others prefer to call them "approaches." These models have prominent advocates. The models are designs or structures that can be used as a guide to focus on inquiry. In other words, the models are idealizations of evaluation approaches. Actual evaluations have been conducted according to the basic design.

In this section, some major evaluation models will be reviewed. Because this study is somewhat similar to some aspects of the CIPP evaluation model, it will be examined closely in terms of how it was developed, and an overview of the categories will be presented. A short summary of other studies related to the CIPP model will also be presented.

Program Self-study Model

The self-study has the great value of keeping problem-solving responsibility at the site of the problem (Stake, 1976). The purpose of self-study can be divided into two categories: 1) those that are concerned with the life of the institution or its programs, and 2) those that are concerned with any use of the self-study results in an accreditation process. According to Kells (1983) and Kauffman (1984), those related to the institution or its program are self-study processes to help institutions and programs improve by clarifying goals, identifying problems, reviewing programs, procedures, and resources, and identifying and introducing needed changes. Kells noted that as a result of a self-study, institutions and programs can become more effective. The self-study process should result in useful institutional research and self-analysis. Self-study processes are the firm foundation for all planning efforts. Self-study can improve openness of communication patterns and trust among staff and heighten effective group functioning to face and solve problems.

In a survey developed by M. J. Clark, more than 450 heads of university departments reported on the purposes, number and content or program reviews conducted by their departments (Clark, 1977, 1983). Most of the departments had conducted three or more reviews within the past ten years.

Clark reported that approximately 40 percent of the most recent reviews were conducted primarily to provide information for departmental use; another 40 percent focused on information for outside groups such as professional accreditation committees or state coordinated agencies. Clark noted that the frequently collected information included descriptive data about faculty training and publications, program resources, and course enrollments, student evaluation of courses and student and faculty judgements about the quality of various program elements. Obviously absent were measures of what was learned in the program, explanations of why some students dropped out and reports on the activities and opinions of program graduates. Most respondents thought more survey data from students, graduates, and faculty members would be helpful as part of internal reviews of self-studies (Clark, 1980, 1983).

Kells (1983) listed the following desirable attributes in a self-study of an institution or a program:

1. The process should be internally motivated.
2. The top leaders should be committed to the process.
3. The design of the self-study must be appropriate to the circumstances of the institution.
4. The process should contain an informed attempt to clarify organization's goals and to assess achievement of the goals (to study 'outcomes') for purposes of improvement.

5. There should be representative, appropriate, and useful participation of members of various segments of the academic community.
6. Process must be well led.
7. The ability of the organization to function effectively should be studied and enhanced.
8. Some improvement should occur both during and as a result of the process.
9. A readable report, potentially useful to several audiences, should result from the process (p. 17).

In the self-studies procedures, several questionnaires have been developed for use in the assessment of program processes, such as environment for learning, faculty-student relationships, and management, and in the assessment of student and faculty activities and satisfaction with programs (Kells, 1983; Tritschler, 1981, Clark, 1983). Clark (1983) points out that systematic procedures for data collection of the kind provided by the questionnaires, such as the ones indicated in the references cited above, can save time and money for individual institutions and make it possible to compare results across programs and help develop relationships between evaluation results and planning process.

Many of these assessment procedures are concerned primarily with program process rather than with results or effectiveness, however, there are some exceptions. Clark (1983) urged more attention to measurements of outcomes when educational programs are being evaluated.

The Systems Analysis Model

In the systems analysis approach, the evaluator defines a few output measures, such as test scores in education and tries to relate differences in programs or policies to variations in the indicators. The data are quantitative, and the outcome measures are related to the program via correctional analysis or other statistical techniques (House, 1980; Cooley & Lohnes, 1976).

This approach was developed in the Department of Defense under Secretary McNamara. It has served as a major evaluation perspective in the Department of Health, Education, and Welfare since 1965 (House, 1980). This model was drawn from the micro-economic theory. The basic assumption is that individuals and organizations behave so as to maximize some identifiable outcome or set of outcomes. An analyst then should be able to model organizational choices and deduce desired objectives and the relative effectiveness of different strategies for attaining them (House, 1980; McLaughlin, 1975). According to McLaughlin (1975), this analytical framework presumes the existence of a stable production function, a regular and quantifiable relationship between inputs to an activity and the outputs.

Behavioral Objectives Model

This approach advanced by Tyler (1950) was built upon by other authors. The behavioral objectives approach compares performance data with clearly specified objectives. It takes the goals of the program as stated and then collects evidence as to whether it has achieved those goals. The goals serve as the source of standards and criteria. The evaluator assesses what the program developers state they intend to achieve. The discrepancy between the stated goals and outcomes is the measure of program success. Quantified outcome variables, such as achievement tests in education were the means of measuring the students' behavior (Tyler, 1950; Bloom, Hastings & Madaus, 1971; Popham, 1975; House, 1980; Nevo, 1974, 1983). At the present time, the focus has shifted away from the proper statement of objectives to a concern about how the objectives are to be measured.

This approach is not only used for measuring students' behavior, it is also used in other areas as well. For example, according to House (1980), management-by-objectives is essentially an objectives approach applied to business and government organizations. Organizations and individuals are asked to define their objectives and judged on how well they meet them.

The Goal-Free Model

Michael Scriven introduced the goal-free evaluation model. Scriven (1973) maintained that the evaluator should not base his evaluation on program goals. He stressed that there should be a distance between the evaluator and program staff, even to the extent that the evaluator remain deliberately uninformed about what these goals are so that he/she may not be biased by them.

Stake (1976) stated that

> Scriven's goal-free evaluator is aware of what goals are usually pursued and is supposed to be sensitive to a great range of indicators that attainments were made, so the approach is not goal-free in that sense. A highly structured checklist of evidence is utilized (p. 27).

House (1980) pointed out that the goal-free approach has been the least used, even to the point where some people would question it as a major model. House further points out that in the social services area, evaluators and developers often find it difficult to envision where evaluators would find criteria for the evaluation if not from the program developer's goals.

The Case Study Model

This approach is also known as transactional approach by some authors. It concentrates on the program processes

themselves and on how people view the program (Stake, 1976, 1978; House, 1980). House (1980) points out that the major question is "What does the program look like to various people who are familiar with it" (p. 39)? According to House, the usual methodology is to conduct interviews with many people to make observations at the program site, and to present the findings in the form of a case study. Stake (1976) also states that issues are often drawn from the preceedings rather than from theory or from goal statements.

The aim of the case study approach is to improve the understanding of the reader or audience of the evaluation by showing them how others perceive the program being evaluated (Stake, 1976; House, 1980). House (1980) stated that "When the aim of inquiry is understanding rather than explanation and propositional knowledge, the case study is often superior to other modes of inquiry" (p. 39).

CIPP - A Decision-Making Model

Evaluation is a critical tool in terms of program decision-making. It should be of practical use to decision-makers. The decision-making approach suggests that the evaluation be structured by the actual decision to be made. The writing of Alkin (1969) is illustrative. Alkin sees evaluation as

> the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives (p. 2).

The decision-making approach has many prominent advocates and they all agree basically that evaluation is concerned primarily with gathering information, that the information gathered should be appropriate to the needs of the decision maker, and what information is relevant depends on the situation and kinds of decisions to be made.

Patton (1978) proposed that the first step in the decision-making approach is "identification and organization of relevant decision makers for and information users of the evaluation" (p. 61). Patton believes that evaluation findings are used when some individual takes direct, personal responsibility for getting the information to the right people. Hanson (1978) contends that the decision maker should determine the nature of planning to be examined.

According to House (1980), the decision-making approach in evaluation draws heavily from survey methodology such as questionnaires and interviews and the evaluation works more with variation in program settings rather than trying to arrange experiments. House points out that the questions answered are those of the decision-makers, but these usually involve the effectiveness of the program or some dimension, and, in particular, which parts of the program are working.

In education, the main proponent of this approach is Daniel Stufflebeam. Stufflebeam developed the CIPP model which is based on the analysis of the decision-making process. Stufflebeam (1973) defined evaluation as a "process of delineating, obtaining, and providing useful information for judging decision alternatives" (p. 129).

A detailed examination reveals four types of decisions (planning, structuring, implementing, and recycling); three steps in the evaluation process (delineating, obtaining, and providing); and four types of evaluation (context, input, process and products).

How the CIPP model came into existence

The CIPP model was conceptualized by Stufflebeam as a result of attempts to evaluate projects that had been funded through the Elementary and Secondary Education Act (ESEA) of 1965. This act required that educators evaluate their funded projects. According to Stufflebeam (1983), this created a crisis because educators lacked evaluation training and experience. They were not prepared to design and conduct evaluation studies. Guba (1969) observed that the available evaluation approaches did not meet the evaluation needs of ESEA. As a result, several agencies attempted to develop new and better ways of evaluating educational programs and to provide training in the use of these approaches.

Ohio State University Center for Education was among these agencies. According to Stufflebeam (1983), it was through the work of that center in the late 1960s that the original version of the CIPP model was developed. The evaluation center had been created in 1965 for the purpose of assisting educational agencies to improve their evaluation programs by conceptualizing improved ways of doing evaluation, by devising tools and strategies to carry out new ideas about evaluation, and by training educators to use the new tools and strategies (Stufflebeam, 1983).

In order to pursue their evaluation task, they set out to determine whether the projects were achieving their objectives by identifying the behavioral objectives for each project selected or develop appropriate instruments for measuring student performance, administering the instruments after instruction, and then comparing student performance with project objectives (Stufflebeam, 1983). They used the Tylerian Evaluation Model which is recognized by many educators. The staff at the center found out that the Tylerian approach was not adequate for evaluating many of the ESEA projects. Stufflebeam (1983) states that:

> the assumption that educators knew or could easily determine what student behaviors should result from the projects was far from realistic. The original objectives contained in the funding proposal were general and did not reflect data about the functioning of the

> student to be served. In fact, the objectives usually had been written by consultants and administrators who had little or no direct experience with their students.... Also, and more seriously, our employment of the Tylerian approach promised to yield reports only at the end of each project year, which was far from the most evaluative feedback that might have been provided" (p. 119).

According to Stufflebeam's observations of the ESEA projects and staff activities, the projects being implemented across schools and classrooms had no degree of consistency, instead, there was widespread confusion on the part of the teachers concerning what they were supposed to be doing (Stufflebeam, 1983). Because of the inadequacy of the Tylerian approach to evaluate all aspects of the ESEA programs, among other reasons, Stufflebeam proposed that educators needed a broader definition of evaluation than the Tylerian definition which was constrained to determine whether objectives had been achieved (Stufflebeam, 1983; Nevo, 1983; Stufflebeam et al., 1971). Stufflebeam proposed that the needed definition should lead to evaluations that would aid in managing and improving programs. He noted that the best hope would be to supply the school administrators, project directors, and school staff with information they could use to decide on and bring about needed changes in the projects. As an alternative to Tyler's definition, Stufflebeam proposed that evaluation be redefined (Stufflebeam, 1983; Nevo, 1983; Stufflebeam et al., 1971).

Because Stufflebeam (1983) wanted to gear evaluation to serve the information requirements of decision-makers, he identified the main types of decisions that confronted them in order to derive appropriate evaluation strategies. Based on his experience with the ESEA projects, he observed that decisions of immediate concern seemed to be the ones associated with implementing the project designs. Some examples of such decisions are: how to allocate resources, how to update teachers in carrying out projects, how to adapt instructional materials and how to foster communication among those participating in the projects. The results of those activities he called process results. Among the other main types of decisions are decisions related to continuing or terminating a project, increasing or decreasing funding. These he called recycling decisions and proposed that they be supported by information about what the project had produced.

Some of Stufflebeam's critics noted that Stufflebeam's evaluation approach ignored the fundamental concern for assessing goals (Randall, 1969; Nevo, 1983). To address this deficiency, Stufflebeam proposed that evaluators assess and report on student needs and system problems as a means of aiding educators to choose among goals. He advised educators to conduct context evaluation as a means of servicing planning decisions.

Stufflebeam noted a gap in his scheme for evaluation, since it did not consider decisions that are required in specifying what "means" were required to achieve a given set of goals, or a set of assessed needs. To correct this, he proposed the use of "structuring decisions" which could be serviced by "input evaluation" (Stufflebeam, 1983; Stufflebeam et al., 1971). These are studies which identify and assess the relative merits of alternative project designs.

With all these components in place, the evaluation scheme developed by Stufflebeam was completed and the CIPP model came into existence.

An overview of CIPP categories

Context evaluation Context evaluation defines the relevant environment, identifies unmet needs and provides the basis for developing them (Randall, 1969; Nevo, 1974; Stufflebeam, 1973; Stufflebeam et al., 1971). The primary orientation of a context evaluation is to identify the strengths and weaknesses of some object, such as an institution or a program. According to Stufflebeam (1983), the main objectives of this type of study are to assess the object's overall status, to identify its deficiencies, to inventory the strengths at hand that could be used to remedy the deficiencies and diagnose problems whose solution would improve the object's well-being.

Input evaluation Input evaluation provides information for utilization of resources to structure the strategy to be used for achieving the determined objectives (Nevo, 1974; Stufflebeam et al., 1971; Adams, 1972). The overall intent of an input evaluation is to help the clients consider alternatives in the context of their needs and environmental circumstances and to evolve a plan that will work for them (Stufflebeam, 1983).

Process evaluation Process evaluation detects defects in the implementation stages, provides information for programmed decisions and maintains a record of the process to be used later to aid in the interpretation of the outcomes (Stufflebeam et al., 1971; Nevo, 1974). In essence, this type of evaluation provides feedback to managers and staff about the extent to which the program activities are being carried out as planned. The main use of process evaluation is to obtain feedback that can aid staff to carry out a program as planned or to modify it as needed (Stufflebeam, 1983).

Product evaluation Product evaluation provides information on the accomplishment of goals at the end of the process and also as often as necessary during the process (Stufflebeam et al., 1971; Nevo, 1974). According to Stufflebeam (1983), feedback about what is being achieved is

important during a program cycle and at its conclusion. He believes that a product evaluation should gather and analyze judgement of the program's success from a broad range of people associated with the program.

Limitations of the CIPP model

Although the CIPP model is used widely and has been shown to have many advantages over other evaluation models, it has certain limitations. Some major problems associated with the CIPP model may be grouped in the following categories: identifying decision alternatives; identifying decision makers and timing of decisions (Randall, 1969; House, 1980).

The CIPP approach assumes that the most effective decisions are those based on the best information. Therefore, the task is to get the best information to decision makers in the time that is available. However, in operation this task poses some problems. Randall (1969) observed the following:

> Identifying decisions. Decisions that are faced are not always easily recognized. Often decision-makers themselves are not fully aware of the decisions they may face. Another problem in identifying the nature of decisions is that decision criteria may change as time passes. New development occurs; new information is obtained; conditions change as time goes by.

> Identifying decision-makers. Another problem is the identification of persons involved in the decision process. These include not only those who have final authority in making decisions but others involved in the decision process who may influence the final decision-maker.
> Timing of decisions. The best information is of no use if it does not arrive in time to base a decision on it. It is possible to postpone the time of decision, but often such a delay is not possible (p. 44).

In his critique of this model, House (1980) noted some problems. One such problem is that because the evaluator is usually himself an administrator of the program, questions exist as to the ethical standing or fairness of the evaluation system. A second set of problems arises when the evaluator tries to define the specific decisions to be served. It is difficult to specify and anticipate decisions to be served before the evaluation is completed. Therefore, the decision alternatives established at the outset of an evaluation may only be tentative. Thirdly, because evaluators are at the service of program administrators, information provided for decision-makers gives a strong management slant to the evaluation.

Studies Related to CIPP Evaluation Model

The CIPP approach has been used in many institutions and has been widely discussed and a number of studies have been conducted using this model as a theoretical base. Nevo (1974)

used the CIPP model as his theoretical base to identify the evaluation needs within the school building as perceived by students, teachers and of principals regarding implementation and outcomes of their educational activities.

Adams also conducted a descriptive study in 1972. The study was designed to answer questions related to how superintendents perceived the scope and nature of evaluation within their districts. Concerning the CIPP model, the study showed that evaluation was functioning mainly as a system for assessment of outcomes of programs (product evaluation). One of the conclusions of Adams' study is as follows:

> Evaluation as an information system to serve a number of types of decisions, i.e., planning, structuring and implementing decisions, has not materialized thus far, in a significant number of school districts in the state (p. 211).

Root (1971) did a study at Ohio State University which was intended to determine the educational evaluation training needs of superintendents of schools, and subsequently developed a list of skills that could be included in an evaluation training program for superintendents and evaluators. A sample of superintendents and evaluators were requested to respond to the instrument developed on the basis of the CIPP model. The general conclusion of the study was that the subjects agreed generally with the importance of evaluation

tasks and roles suggested by the CIPP model, but appeared to have the greatest concern for the expertise in context and product evaluation (Root, 1971).

Methodology for input evaluation, which is a component of the CIPP model, has been used involving the advocate teams. An advocate team was suggested by Egbon Guba, John Horvat and Daniel Stufflebeam as a means to generate and evaluate alternative strategies and designs for educational activities within the framework of input evaluation (Guba & Lincoln, 1981).

Reinhard (1972) conducted a study which was intended to develop and assess methodology for input evaluation using advocate and design teams. The study consisted of three major sessions. In the first session, an analysis of the advocate team approach was obtained by conducting four case studies on previous users of advocate teams. In the second session, a technical manual was developed which included a basic conceptualization and also procedures for conducting input evaluation using advocate teams. In the third session of the study, the manual which was developed was evaluated in terms of its conceptual adequacy and practical utility. The significance of this study is the provision of useful methodology for input evaluation as suggested by the CIPP model.

Slimmer (1981) conducted a study intended to develop a conceptual process for evaluation of a program in higher education; to apply that process to an on-going program; and to provide an information base for decision makers. An instrument was developed to measure the constituencies' satisfactions and dissatisfactions. Respondents were currently enrolled students, graduates, transfer students, administrators, instructional faculty, and high school principals and counselors.

The evaluation model developed by Slimmer encompassed the component functions of collecting, analyzing, interpreting and decision making with delineation of each function. According to Slimmer (1981), outcomes of the program that could be substantiated by the evaluation process included:

1. rationale for goals of the program;
2. department organization;
3. assessment of physical facilities;
4. perception of program quality;
5. field-based assessment relating to current concerns;
6. faculty and student interaction;
7. utilization of constituent groups for program development;
8. professional preparation guidelines;
9. career option information;
10. course scheduling to meet students' wants and needs;
11. continuing education attitudes of graduates;
12. program viability (p. 60).

Data compiled from the instruments revealed important information for decision makers and pertinent information to help provide guidelines for an institution of higher education. The study concluded that:

> the final report to the decision makers presented an assessment of strengths and weaknesses of the program and assisted in the determination of what components should be improved, expanded, curtailed or advocated (p. 68).

In conclusion, educational evaluation is an essential component for improving programs. Many educators have used the CIPP model as a theoretical base for educational research in their respective areas. Studies related to the CIPP evaluation model demonstrated the applicability of this model to the study of educational evaluation.

Student Evaluation of Academic Programs

To maintain and improve the quality of an educational program that is already being implemented, there is a responsibility or an obligation to evaluate strengths and weaknesses (Grotelueschen, 1980; Kells, 1983). It is essential that an assessment be made of each component part of educational programs considering that if particular aspects were not available for students, there should be an adjustment in the goals of the institution (Wood & Davis, 1978; Gaff & Morstain, 1977; Kauffman, 1984).

The image of the program can be determined by assessing the perceptions and satisfactions of the students and graduates concerning the depth and width of the program, rapport of instructors with students, and the extent to which students encounter learning experiences that they value (Cooley & Lohnes, 1976; Marsh, Fleiner & Thomas, 1975). The investigation instruments should measure for satisfaction in instruction, interaction of the environment and students, curriculum offered, social activities, and the recognition given to the student as an individual (McAlduff, 1975; Cooley & Lohnes, 1976).

The "Involvement in learning" report of 1984, which is found in the Chronicle of Higher Education, October 24, 1984, emphasized that student reactions to academic programs may be significant both for program evaluation and for educational achievement. Some authors (Startup, 1972; McAlduff, 1975, Centra, 1977; Gaff, 1978; Kauffman, 1984) believe that students' opinions and perceptions are unbiased and a valuable source of information. According to McAlduff (1975) "students are frank and sincere in their assessments. They give praise where praise is due" (p. 29).

Students can also make important contributions in improving program quality. Kauffman (1984) states that "serious efforts at surveying student perceptions and

experiences and feeding that data back to faculty and staff are key indicators of an attempt to improve program quality" (p. 33).

Even though the literature shows that eliciting students' opinions is becoming popular in recent times, student information was not always available in the past. For example, Russo, Brown, and Rothweiler (1977) state that "student information systems have been seriously lacking and are being modified" (p. 297). Pace (1985) states that

> too often we are inclined to dismiss student opinions as invalid or biased. This is a mistake. All evidence that we have indicates that students are conscientious and generally accurate reporters about their activities, that they express their opinions and satisfactions forthrightly, and that their judgements of what they have gained are consistent both with external evidence, when it exists and with what we might expect in light of their activities and interests (p. 13).

Authors such as Gaff (1978), Morstain and Gaff (1977) and Pace (1985) agreed that many programs progress without student involvement. They stressed that attention be paid to what students think about their college programs and activities. If colleges and universities are to realize their full potential in providing high quality programs for students, it seems apparent that students should be more systematically involved at each stage of program development, participating in activities and evaluating the results. Students and faculty are usually regarded as partners in

the teaching and learning endeavors. It is important that this partnership be extended to all areas of the academic arena, especially if students as well as faculty are thought to be the beneficiaries of these activities. Russo, Brown and Rothweiler (1977) believe in this "total involvement" concept. They suggest that the act of asking current students, graduates and faculty questions about goals, objectives, educational processes and their relationship to each other will cause each of these groups to contemplate these matters. They believe that specific program strengths and weaknesses are identified through such activities.

The literature cited above suggests that students' opinions can have some modest effects on improving educational programs. The literature has shown that there is an increased effort to elicit student opinion. Despite the diversities in purposes or reasons, most programs share a common goal of improving quality. Whether activities are concerned with teaching, learning, advising, interpersonal relationships, these efforts are intended ultimately to benefit the education of students. Since this study is concerned with student evaluation of academic programs, a short summary of related studies will be presented below.

Hearns (1985) conducted a study which was designed to investigate the determinants of college students' overall

evaluations of their academic programs in their major departments. The research was conducted with a sample of 775 students at two universities. The results suggested that in general, stimulating course work and good teaching were somewhat more important than opportunities for faculty student interaction or perceived faculty knowledgeability. There were significant field or gender differences however. For example, faculty availability and course stimulation were more critical among women than among men and faculty teaching ability was particularly significant in artistic fields.

Pace (1985) conducted a college students experience survey to provide a systematic theory based on a pragmatic inventory of what students do and progress that they believe they have made. The questionnaire collected background information about the students, assessed their satisfaction with college, and asked them to characterize various aspects of the college environment. Results from the instrument showed that students' quality of effort is the best predictor of attainment and that the breadth or scope of high-quality student effort may be an excellent indicator of the quality of undergraduate education on a campus.

Startup (1972) reported a study at a provincial university which used second year students as its sample. Of those selected, 70 percent returned the questionnaires. The

survey revealed student satisfaction with presentation and content of the lectures, but there was dissatisfaction with the fact that there was not enough consultation with them concerning the content of the courses. The study further reported that a quarter of the students surveyed were dissatisfied with the amount of individual help received from the staff. In this study, the greatest source of student dissatisfaction was the limited opportunity for informal contact with staff.

Efforts to elicit students' opinion in order to improve and evaluate universities' advising have gained increased national attention (Wood & Wood, 1979). In a study by Wood and Wood (1979), a survey was designed to elicit student opinion concerning advisement. Variations of a questionnaire were sent to a random sample of students and given to a random sample of students in classes. Analysis of data from 519 respondents showed that the most valued advisor characteristics were: 1) knowledge about program requirements, courses and schedules, uinversity rules and regulations, and advisee's progress or status; 2) dependability and availability; 3) willingness and the ability to listen. According to the conclusion,

> many more students were dissatisfied with faculty advising than were dissatisfied with course work, and nonacademic university life. Almost all felt that advisement should be

> regularly evaluated as well as instruction. Two-thirds felt that evaluation of faculty advisement should be placed in faculty personnel files and should be considered in promotion (p. 23).

Studies by Moomaw (1977), Gaff (1978), and Gaff, Festa, and Gaff (1978) were designed to elicit student opinions and determine their attitudes about a particular aspect of educational programming such as teaching improvement, faculty advisement, etc. These studies provided evidence that both college students and college administrators perceived advisement to be an important function that too often is poorly conducted, poorly rewarded and poorly evaluated. Beak and Noel (1979) reported that administrators and students at 858 colleges and universities rated "inadequate academic advising" as the most important negative influence upon student retention. High quality teaching, adequate financial aide, student involvement, quality advisement and excellent career-planning services were ranked in order of decreasing importance behind caring attitude.

In the use of students' opinion and judgment, Terenzini and Pascarella (1977) demonstrated that student integration in both social and academic systems of a university system correlated with retention. Informal interaction with faculty was found to contribute to both types of integration and was consistently related to students' desire to persist or withdraw from the university.

The Council of Graduate Schools and the Graduate Record Examination Board sponsored a survey of graduate deans to identify the kinds of information that should be collected in assessing the quality of graduate programs. In this study, the deans endorsed the use of the judgments by enrolled students and recent alumni as indicators of program status on dimensions such as program resources, program processes and program outcomes (Clark, Harnett & Baird, 1976; Clark, 1980).

Braskamp, Wise, and Hengstler (1981) conducted a study in which they used alumni and student ratings to assess departmental qualities. They reported that groups of alumni and enrolled students from 22 university departments responded to 11 satisfaction items concerning instructional, curricular, advising, and operational aspects of their major departments. According to the report, factor structures obtained for the two groups were identical and included two factors. The two factors were general satisfaction with major and satisfaction with membership. They further reported that comparison of department means showed differences between alumni and enrolled students on several items, particularly on vocational evidence.

In conclusion, the literature has shown that students' opinion can have some modest effect on improving educational

program qualities. It was shown that students are conscientious and generally honest in giving their opinions and that their judgements are consistent with external evidence (Pace, 1985; Morstain and Gaff, 1977; Gaff, 1978). Evaluation in education is undertaken for many reasons, including planning and policy purposes, to provide information for decision-making concerning improvement, expansion, elimination or advocacy of a particular program in education. The efforts in these activities are intended ultimately to benefit students by giving them quality education. Since they are thought to be the beneficiaries, the literature has shown that they should be allowed to make contributions at each stage of educational program development and participate in evaluating the results.

Conclusion

This section has traced the historical definition of evaluation of educational programs. The theoretical framework of the most important models have been discussed. Because the present study will use the CIPP model of evaluation as a theoretical base, a summary of other studies related to the same model was presented. Special attention has been given to studies aimed at student evaluation of academic programs.

The following conclusions may be seen as a summary for the review of related literature:

(a) It appears that in order to optimize an educational program, evaluation needs to be an integral part of program planning and execution.

(b) The ways in which educators define evaluation and how they evaluate are related to what they are assessing and why.

(c) Even though differences were found in defining evaluation, there was also a commonality. The commonality in defining evaluation centered around the concept of supplying useful information for decision making. The majority of the authors cited in the review perceived evaluation as a systematic examination of events conducted to assist improving program quality.

(d) Departmental self-study tends to be the most frequent form of data collection for program evaluation. Many of the self-study procedures use questionnaires in the assessment and are mostly concerned with assessment of program processes such as environment for learning, faculty-student relationships, management, and students' satisfaction with program and faculty rather than with results or effectiveness.

(e) There is an increased effort to elicit students' opinions in evaluating academic programs. Students' opinions and perceptions are valuable sources of information. Specific program strengths and weaknesses are identified by assessing perception and satisfaction of students and graduates concerning the programs.

(f) Studies related to the CIPP model demonstrated the applicability of this model to the study of educational evaluation. The context, input, process, and product (CIPP) model (Stufflebeam et al., 1971) provides a holistic, directive broad base for program evaluation. It provides a means through which it is possible to identify key decision points in the program, and to predict more readily the consequences of a decision in a particular situation. Furthermore, it becomes feasible to detect specific weak or strong links within the program and therefore strategies or revisions can be planned and put into effect at an early stage so as to maintain a desired outcome.

CHAPTER 3. METHODOLOGY

This chapter was divided into the following sections: survey procedures, instrumentation, selection and characteristics of the sample, treatment of data, method of analysis and model providing framework for the study. Details for each step in the study are included in this chapter.

Survey Procedures

Data for this study were collected as part of a larger evaluation study of the professional studies department. One phase included graduates from 1980-1985. The present study included graduate students enrolled for spring semester of 1986. The goal of this particular study is to assess the satisfaction of enrolled graduate students of the professional studies department with instructional curriculum, advising, and operational aspects of their major sections in the department and make recommendations for improvement based on the perceptions of the students.

The research methodology for this study incorporated the use of survey research. The survey research, as defined by Ball and Gall (1979), "...is a method of collecting information to...explore relationships between different variables" (p. 282). The questionnaire used for collecting data for this study is included in Appendix A.

Prior to beginning classes in the spring, a list of classes in professional studies was obtained with names of professors teaching each class. Each professor was contacted and informed about the study and permission was obtained to distribute the questionnaires during the first five minutes of the class session. All professors contacted were willing to cooperate. While the questionnaires for the alumni were distributed by mail, the questionnaires for enrolled graduate students were distributed in the participating classes by the researcher and the researcher's major professor. The cover letter is included in Appendix A.

In the cover letter, a request was made to students to participate in the study by filling out the questionnaire. Also included was a statement of the objectives of the study.

When the questionnaires were distributed, participants were asked to take the questionnaires home, fill them out, and return them after a week. They were told not to write their names on the questionnaire. After a week, the two distributors returned twice to the participating classes to receive those not previously returned.

Instrumentation

The program evaluation instrument, adapted by Beavers and Photisuvan (1985) for alumni from Braskamp, Wise and Hengstler (1981) was revised by changing wording on some

items and deleting others. The revised questionnaire was used for enrolled graduate students. The questionnaire consisted of two parts: background and demographic information and items related to satisfaction with the graduate program. Part 2 was divided into 3 sections: 1) items related to students' level of satisfaction with major program, 2) items related to students' level of satisfaction with courses taken in the department which were part of the students' program of study, and 3) items which dealt with overall satisfaction with the professional studies department.

The satisfaction items contained a 5-point scale labeled in the following manner: highly satisfied (5), satisfied (4), undecided (3), dissatisfied (2), highly dissatisfied (1), not applicable (0).

Selection and Characteristics of the Sample

The subjects participating in this study were masters and doctoral students enrolled for the spring semester of 1986. The students were majoring in one of these major programs: Education, Adult and Extension Education, Curriculum and Instructional Media, Educational Administration, Elementary Education, Counselor Education, Higher Education, History, Philosophy and Comparative Education, Learning Disabilities, and Research and Evaluation. A total

of 205 students from these respective major areas participated in the survey. This was 52% of the 397 students who were enrolled and seeking a degree spring semester. Of the 205 questionnaires returned, 172 were fully completed and usable; 33 were incomplete and these were deleted. Thus, 172 subjects provided data for this study.

Treatment of Data

After the questionnaires were collected, the responses from the questions were coded numerically. The location and number of columns for each item was specified. All survey instruments were proofed and corrected if necessary. The coded surveys were taken to Iowa State University Computation Center and were key punched. Frequencies were run on the data and few errors were found. The errors were identified by the code number, the instruments were examined to determine the correct response, and the errors were corrected. The varied data set was then ready for analysis.

Method of Analysis

The data were analyzed using two steps, (1) preliminary, and (2) hypothesis testing. The preliminary anaysis included frequency counts, percentages, factor analysis, reliability, and Pearson product moment correlations. In step two, one

way analysis of variance and t-tests were used to test differences among the variables and the mean scores of the factors.

Model Providing Framework for the Study

The theoretical framework for the study was the modification of the context, input, process and product (CIPP) program evaluation model. The CIPP program evaluation model provides a holistic, directive broad base for program evaluation. As was stated in Chapter 2 of this study, the CIPP model is feasible to detect specific weak or strong links within programs, and therefore, strategies and revisions can be planned and put into effect at an early stage so as to maintain a desired outcome.

Human Subjects

The Iowa State University Committee on the Use of Human Subjects in research reviewed the study and concluded that the rights and welfare of the human subjects were adequately protected, that risks were outweighed by the potential benefits and expected value of the knowledge sought, that confidentiality of data was assured, and that informed consent was obtained by appropriate procedures.

CHAPTER 4. RESULTS AND DISCUSSION

Findings and statistical analyses are presented in this chapter. Data used in this study were subjected to a number of statistical procedures: factor analysis, reliability, Pearson correlation, one way analysis of variance, and t-test. The results from the above procedures will be discussed in the following sections: demographic characteristics, factor analysis, reliability of factors, relationship between factors and variables, t-test analysis for differences between factors and variables, one way analysis of variance between factors and variables, and discussion of findings.

Demographic Characteristics

The data collection procedure used in this study generated a total of 205 samples, of which 172 were usable. The demographic information is presented in Table 1. Of the total of 172, the majority were females (56.4%) and 43.6 were males. The majority (45.3%) of the sample were in the 31-40 age bracket, 39.0% in the age range of 20-30, while the age range of 41 and above comprise 15.7% of the sample.

Among the total sample, 82 (47.7%) had completed M.S. or M.Ed. degrees, while 90 (52.3%) had no other graduate degree.

Table 1. Statistical profile of sample

Demographic Variable	N[a]	Frequency	Percentage
Age	172		
20-30		67	39.0
31-40		78	45.3
41+		27	15.7
Sex	172		
Female		97	56.4
Male		75	43.6
Degree Completed at Other Institution	172		
M.S. or M.Ed. Degree		82	47.7
No Other Graduate Degree		90	52.3
Area of Specialization	172		
Education		9	5.2
Adult & Extension Education		19	11.0
Curriculum & Instructional Media		26	15.1
Educational Administration		33	19.2
Elementary Education		13	7.6
Counselor Education		26	15.1
Higher Education		46	26.7
Requirements for Degree at ISU	172		
Thesis or Dissertation		100	64.0
Creative Component		55	32.0
Other		7	4.1
Graduate Assistantship	171		
Yes		48	28.1
No		123	71.9
Employment Classification	165		
State Government		23	13.9
Industry-Business		42	25.5
Two Year College		56	33.9
Local School District		44	26.7

[a]Numbers vary because of no responses to certain items.

Table 1. (Continued)

Demographic Variable	N[a]	Frequency	Percentage
Recommend Area of Specialization	171		
Great deal		87	50.9
Somewhat		68	39.8
Very little		15	8.8
Not at all		1	.6
Utilize Job Skills on Job	152		
Great deal		39	25.7
Somewhat		47	30.9
Very little		8	5.3
Not at all		8	5.3
No job		21	13.8
Not applicable		29	19.1

In Table 1, the number and percentage of the sample representing areas of specialization are presented. Some of the sections were combined to form one. Research and evaluation, and history, philosophy and comparative education were merged into education. Learning disabilities and elementary education were combined. The representation of higher education was 46 (26.7%), which was the highest, and educational administration was next with 33 (19.2%). The lowest representation was that of education which totaled nine (5.2%).

Concerning requirements for a degree at Iowa State University, 110 (64.0%) will complete a thesis or dissertation while 55 (32.0%) preferred to complete a creative

component. The total number of the sample who were on assistantships was 48 (28.1%) and 123 (71.9%) had no assistantship.

The frequencies on the item of employment classification indicated the majority of the sample, 56 (33.9%) were employed in a two-year college position. Others were: 42 (25.5%) with business and industry, 44 (26.7%) with local school districts, and 23 (13.9%) with state government.

Factor Analysis

A factor analysis was completed on items in part two of the questionnaire. The analysis used the extraction technique of PA2 and varimax rotation from the SPSSx package (Nie, Hull, Jenkins, Steinbrenner & Bent, 1983). Part two was concerned with satisfaction with the graduate program and was divided into the following sections: 1) items related to students' level of satisfaction with major program in section, 2) level of satisfaction with courses taken in department which are part of students' program of study, and 3) overall satisfaction with the Department of Professional Studies.

Satisfaction with section in department

A factor analysis was completed for items related to satisfaction with section in the department. Factors were formed by including those items loading .40 or greater, were similar in content with other items, and loaded uniquely on the factor. The factor categories show common categories within the respective groups. The 28 satisfaction items converged into five factors and were named: 1) quality of graduate program, 2) quality of courses, 3) relationship with major professor, 4) enrichment activities in section, and 5) sensitivity to students (Table 2).

The factor pattern matrix on items related to satisfaction with section in department is presented in Table 3. Factor 1 contained seven items and had factor loadings from .41 to .73 (Table 3). Factor 2 contained five items having factor loadings from .43 to .71. Factor 3 had three items with factor loadings from .69 to .79. Factor 4 had three items with factor loadings from .42 to .55. Factor 5 had four items with factor loadings from .43 to .57.

In addition, two couplets were found: 1) career development with two items loading at .54 and .65, and 2) admission standards with two items loading at .65 and .69. One item, loading on factor 2 which was loading below .40,

Table 2. Factor categories on items related to satisfaction of section (SR)

Major Categories	Item No.	Item Statement
Factor 1		
Quality of Graduate Program	SR 26	Satisfaction with graduate program
	SR 25	Graduate program worth while
	SR 13	Instructor's ability to teach
	SR 11	Quality of instruction
	SR 10	Communicate with faculty and student in class
	SR 8	Relevance of course work toward job
	SR 15	Usefulness of instructional material
Factor 2		
Quality of Courses	SR 6	Variety of different course offering
	SR 5	Well integrated set of courses
	SR 14	Sound theoretical framework
	SR 28	Quality of student in area of specialization
	SR 4	Challenged by course work
	SR 7	Structure in graduate program
Factor 3		
Relationship with Major Professor	SR 22	Availability of major professor
	SR 21	Quality of advising
	SR 23	Relationship between you and major professor
Factor 4		
Enrichment Activities	SR 9	Size of classes
	SR 18	Attention to writing and course work
	SR 17	Availability of enrichment activities
Single Item	SR 19	Contact with faculty outside of class

Table 2. (Continued)

Major Categories	Item No.	Item Statements
Factor 5		
Sensitivity to Students	SR 27	Overall treatment as student
	SR 12	Instructor's sensitivity to different race
	SR 24	Length of time required to complete program
	SR 16	Evaluation procedures
Couplet 1		
Career Development Quality	SR 20	Quality of career development
	SR 3	Orientation to section
Couplet 2		
Admission Standard	SR 1	Admission standard in section
	SR 2	Admission procedures

Table 3. Factor analysis results on items related to satisfaction of section in the department (SR)

Item	Factors					Couplets	
	1	2	3	4	5	1	2
Quality of Graduate Program							
SR 26	.73[a]	.24	.29	.15	.27	.06	.25
SR 25	.71[a]	.22	.32	.16	.19	.00	.12
SR 13	.70[a]	.30	.01	.02	.09	.27	-.01
SR 11	.69[a]	.26	.11	.02	.12	.29	.09
SR 10	.48[a]	.05	.25	.35	.20	.28	.06
SR 8	.44[a]	.39	.24	.23	.13	.05	.03
SR 15	.41[a]	.35	.11	.32	-.11	-.05	.10
Quality of Courses							
SR 6	.26	.71[a]	.03	.17	.21	.15	.07
SR 5	.41	.63[a]	.17	.18	.28	.13	.10
SR 14	.20	.59[a]	.14	.15	.05	.08	.20
SR 28	.13	.58[a]	.05	.09	.05	.19	.17
SR 4	.38	.43[a]	.10	.19	.19	.06	.25
SR 7	.34	.39	.20	.31	.22	.08	.05
Relationship with Major Professor							
SR 22	.14	.16	.79[a]	.17	.03	.12	.06
SR 21	.23	.10	.77[a]	.12	.04	.22	.05
SR 23	.12	.05	.69[a]	.05	.32	.10	.09

[a]Loading of items on factors and couplets. .40 is cutoff point for factor loading.

Table 3. (Continued)

Item	Factors 1	2	3	4	5	Couplets 1	2
Enrichment Activities							
SR 9	.01	.27	.06	.55[a]	.17	.11	-.01
SR 18	.21	.19	.25	.51[a]	.20	.10	.15
SR 17	.24	.12	.24	.42[a]	.08	.35	.34
SR 19	.16	.08	.25	.37	.13	.32	.12
Sensitivity to Student							
SR 27	.40	.21	.25	.17	.57[a]	.28	.11
SR 12	.14	.17	.09	.10	.47[a]	.36	.17
SR 24	.10	.13	.20	.15	.46[a]	.01	.19
SR 16	.30	.16	.05	.39	.43[a]	.08	.14
Career Development Quality							
SR 20	.18	.28	.23	.12	.04	.56[a]	.01
SR 3	.11	.09	.14	.09	.26	.54[a]	.22
Admission Standard							
SR 1	.07	.36	.09	.08	.11	.07	.69[a]
SR 2	.11	.09	.05	.07	.23	.16	.65[a]

was treated as a single item (SR 7). One item, which also loaded on factor 4, was treated as a single item because this one item was loading at .37 (SR 19).

Satisfaction with courses in the department

The analysis on the 12 items related to satisfaction with courses in the department extracted two factors: 1) quality of instruction, and 2) course structure. The factor categories show that common characteristics are shared by items in the respective group (Table 4).

Table 4. Factor categories on items related to satisfaction with courses in the department (SCR)

Major Categories	Item No.	Item Statements
Factor 1		
Quality of Instruction	SCR 7	Classes outside section
	SCR 1	Challenged by course work
	SCR 8	Overall quality of instruction
	SCR 2	Well integrated program
	SCR 9	Usefulness of instructional materials
	SCR 10	Evaluation procedures in courses outside section
	SCR 5	Sound theoretical framework
	SCR 12	Contact with faculty outside class in department
	SCR 11	Communicate with faculty and student within classroom
Factor 2		
Course Structure	SCR 3	Number of courses repeated
	SCR 4	Course offering outside section
	SCR 6	Size of classes outside section

The factor matrix for the items related to satisfaction with courses in the department is presented in Table 5. Factor 1 contained nine items with factor loadings from .56 to .77. Factor 2 contained three items with factor loadings from .45 to .73 (Table 5).

Table 5. Factor analysis results on items related to satisfaction with courses on program of study (SCR)

Item No.	Factor 1	Factor 2
Quality of Instruction		
SCR 7	.77[a]	.21
SCR 1	.75[a]	.19
SCR 8	.67[a]	.23
SCR 2	.67[a]	.34
SCR 9	.66[a]	.15
SCR 10	.66[a]	.25
SCR 5	.60[a]	.35
SCR 12	.57[a]	.30
SCR 11	.56[a]	.36
Course Structure		
SCR 3	.14	.73[a]
SCR 4	.25	.70[a]
SCR 6	.33	.45[a]

[a]Items loading on factors.

Overall satisfaction with the department of professional studies

The analysis on the seven items which related to overall satisfaction with the department converged into one factor and two couplets: 1) program of study committee, 2) career development, and 3) registration/course availability (Table 6). The factor categories indicating common characteristics which are shared by items in the respective groups are found in Table 6.

Table 6. Factor categories on items related to overall satisfaction with department (OSR)

Major Categories	Item No.	Item Statements
Factor 1		
Program of Study Committee	OSR 6	Appropriateness of program study committee
	OSR 5	Usefulness of program of study
	OSR 7	Support staff
Couplet 1		
Career Development	OSR 4	Quality of career development assistance
	OSR	Availability of enrichment activities
Couplet 2		
Registration/ Course Availability	OSR 1	Procedures for registration
	OSR 2	Availability of courses in summer

The factor pattern matrix on overall satisfaction with the department is presented in Table 7. Factor 1 contains three items with factors loading from .49 to .92. The two couplets contain two items each with loadings from .57 to .86 and .40 and .75 respectively.

Table 7. Factor analysis results on items related to overall satisfaction with department (OSR)

Item No.	Factor 1	Couplet 1	Couplet 2
Factor 1			
Program of Study Committee			
OSR 6	.92[a]	.07	.23
OSR 5	.68[a]	.30	.03
OSR 7	.49[a]	.11	.08
Couplet 1			
Career Development			
OSR 4	.27	.86[a]	.07
OSR 3	.12	.57[a]	.28
Couplet 2			
Registration/Course Availability			
OSR 1	.17	.04	.75[a]
OSR 2	.04	.18	.40[a]

[a]Items loading on factors.

Reliability of Factors

Cronbach's Alpha technique was employed to estimate reliability on items related to satisfaction with section in the department, courses in the department, and overall satisfaction with the department of professional studies. Results of this procedure are listed in Table 8, 9, and 10.

Satisfaction with section in the department

Reliability estimates were computed for the five factors and two couplets on satisfaction with section in the department. As shown in Table 8, the estimates ranged from .61 for factor 4, enrichment activities, to .88 for factor 1, quality of graduate program. It was decided to use all the factors and couplets in the statistical analysis. Upon examination of Table 8, it can be seen that quality of graduate program (27.68) had the highest mean score while career development quality (6.02) had the lowest mean score.

Satisfaction with courses in the department

Table 9 presents the results of reliability estimates for items on courses in the department. The estimates range from .69 for factor 2, course structure, to .90 for factor 1, quality of instruction, which demonstrates strong reliability. Upon examination of Table 9, the factor having the highest

Table 8. Reliability information on factors and couplets related to sections in the department

Factors/Couplets	Number of Items	Mean	Standard Deviation	Average Correlation	Alpha
Factor 1					
Quality of Graduate Program	7	27.68	4.75	.52	.88
Factor 2					
Quality of Courses	5	22.62	4.26	.49	.85
Factor 3					
Relationship with Major Professor	3	11.88	2.68	.65	.84
Factor 4					
Enrichment Activities	3	6.88	1.56	.44	.61
Factor 5					
Sensitivity to Students	4	8.14	1.57	.52	.68
Couplet 1					
Career Development Quality	2	6.02	1.85	.46	.63
Couplet 2					
Admission Standards	2	7.97	1.32	.54	.70

Table 9. Reliability information on factors related to satisfaction with courses in the department

Factors/Couplets	Number of Items	Mean	Standard Deviation	Average Correlation	Alpha
Factor 1					
Quality of Instruction	9	33.89	5.50	.50	.90
Factor 2					
Course Structure	3	7.33	1.27	.53	.69

Table 10. Reliability information on factors and couplets related to overall satisfaction with department

Factors/Couplets	Number of Items	Mean	Standard Deviation	Average Correlation	Alpha
Factor 1					
Program of Study Committee	3	7.15	1.48	.65	.79
Couplet 1					
Career Development	2	6.37	1.62	.55	.71
Couplet 2					
Registration/ Course Availability	2	7.04	1.71	.31	.46

mean score was quality of instruction (33.89) and the lowest score was course structure (7.33).

Overall satisfaction with department

Results of reliability estimates computed for the one factor and two couplets on items relating to overall satisfaction with department are presented in Table 10. As can be seen, the estimates ranged from .46 for the one couplet, registration/course availability, to .79 for factor 1, program of study committee. It was decided to use the factor and the couplets in this group in the statistical analysis. However, reliability for couplet 2 is weak. It would be desirable to have a higher reliability for couplet 2.

Mean scores for the factors for overall satisfaction with the department were similar with the highest score for program of study committee (7.15) and the lowest for career development (6.37).

Relationships between Factors and Variables

All factors and couplets (dependent variables) and independent variables (age, sex, graduate assistantship, job skills, and whether students would recommend their area of specialization) were subjected to Pearson correlation analysis procedure to determine the relationships between

the factors and the independent variables. The correlation coefficients for all factors and independent variables can be seen in Table 11. Pearson correlation procedure was also used with all the individual factors and couplets to estimate the inter-factor/couplet relationships. Correlation between the factors and the couplets are shown in Table 12.

Dependent and independent variables

Significant positive correlations were found between age and all of the factors and between age and one of the couplets related to section in the department. The factors and couplets included: quality of graduate program, quality of courses, relationship with major professor, enrichment activities, sensitivity to students, and career development quality. The highest significant correlation between these was 0.23 (enrichment activities) and the lowest significant correlation coefficient was 0.16 (quality of graduate program). Table 11 also shows a significant positive correlation between age and one factor related to courses in the department (quality of instruction). There was a significant positive correlation found between age and factor 1 (program of study committee) for factors related to overall satisfaction with the department and between age

Table 11. Correlation of dependent and independent variables (all factors)

Factors/Couplets	Age	Sex	Graduate Assistant-ship	Job Skills	Recommend Area of Speciali-zation
RELATED TO SECTION IN DEPARTMENT					
Factor 1 Quality of graduate program	0.16*	0.21**	-0.01	-0.04	-0.32**
Factor 2 Quality of courses	0.21**	0.22**	0.08	-0.01	-0.41**
Factor 3 Relationship with major professor	0.19**	0.18**	-0.05	-0.13	-0.23**
Factor 4 Enrichment activities	0.23**	0.21**	-0.01	-0.02	-0.26**
Factor 5 Sensitivity to students	0.20**	0.16*	0.01	-0.02	-0.24**
Couplet 1 Career development quality	0.19**	0.23**	0.09	-0.03	-0.04

*Significant at .05 level of significance.

**Significant at .01 level of significance.

Table 11. (Continued)

Factors/Couplets	Age	Sex	Graduate Assistant-ship	Job Skills	Recommend Area of Speciali-zation
Couplet 2 Admission standard	0.12	0.16*	0.03	-0.02	0.14
RELATED TO COURSES IN THE DEPARTMENT					
Factor 1 Quality of instruction	0.23**	0.22**	-0.01	0.02	-0.29**
Factor 2 Course structure in section	0.15	0.26**	-0.08	0.01	-0.20**
RELATED TO OVERALL SATISFACTION WITH THE DEPARTMENT					
Factor 1 Program of study committee	0.19*	0.12	-0.07	-0.05	-0.20**
Couplet 1 Career development	0.14	0.11	0.06	-0.06	-0.13
Couplet 2 Registration/course availability	0.27**	0.25**	0.19*	0.06	-0.01

Table 12. Correlation of dependent variables

Factors/Couplets	Factors 1 Quality of Graduate Program	2 Quality of Courses	3 Relation-ship with Major Professor	4 Enrichment Activities	Se ti to St
RELATED TO SECTION IN THE DEPARTMENT					
Factors					
1. Quality of graduate program	1.00				
2. Quality of courses	0.73**	1.00			
3. Relationship with major professor	0.48**	0.36**	1.00		
4. Enrichment activities	0.55**	0.48**	0.43**	1.00	
5. Sensitivity to students	0.61**	0.58**	0.39**	0.42**	1.
Couplets					
1. Career development quality	0.46**	0.46**	0.44**	0.45**	0.
2. Admission standards	0.33**	0.42**	0.21**	0.32**	0.
RELATED TO COURSES IN THE DEPARTMENT					
Factors					
1. Quality of instruction	0.65**	0.63**	0.39**	0.46**	0.
2. Course structure in department	0.32**	0.46**	0.21**	0.30**	0.
RELATED TO OVERALL SATISFACTION WITH THE DEPARTMENT					
Factor					
1. Program of study committee	0.40**	0.43**	0.45**	0.39**	0.
Couplets					
1. Career development	0.38**	0.43**	0.38**	0.60**	0.
2. Registration/course availability	0.16*	0.23	0.10	0.20**	0.

*Significant at .05 level of significance.

**Significant at .01 level of significance.

		Couplets		Factors			Couplets	
4	5	1	2	1	2	1	1	2
Enrichment Activities	Sensitivity to Students	Career Development Quality	Admission Standards	Quality of Instruction	Course Structure in Department	Program of Study Committee	Career Development Quality	Registration /Course Availability
1.00								
0.42**	1.00							
0.45**	0.48**	1.00						
0.32**	0.39**	0.24**	1.00					
0.46**	0.55**	0.47**	0.46**	1.00				
0.30**	0.31**	0.24**	0.29**	0.47**	1.00			
0.39**	0.40**	0.35**	0.36**	0.50**	0.46*	1.00		
0.60**	0.35**	0.64**	0.29**	0.46**	0.24**	0.36**	1.00	
0.20**	0.20**	0.26**	0.20**	0.22**	0.28**	0.25**	0.26**	1.00

and couplet 2 (registration/course availability). The correlation coefficient for age and factor 1 (program of study committee) was 0.19. The correlation coefficient for age and couplet 2 (registration/course availability) was 0.27.

A significant positive correlation was found between sex and four of the five factors related to section in the department. Quality of graduate program was not significant. Also, a significant positive correlation was found between sex and two couplets in this same category. The four factors and two couplets included: quality of courses, relationship with major professor, enrichment activities, sensitivity to students, career development quality and admission standard. The highest positive significant correlation in this category was 0.23 (career development quality), whereas the lowest significant correlation was 0.16 (sensitivity to student, 0.16, and admission standard, 0.16). The two factors dealing with courses in the department, quality of instruction and course structure, had significant positive correlation with sex. The highest significant correlation among those two factors was 0.26 (course structure in section) and the lowest significant positive correlation was 0.22 (quality of instruction).

There was only one significant positive correlation found between graduate assistantship and all of the factors and couplets relating to the three areas which include: major section, courses in the department, and overall satisfaction with the department. The one significant positive correlation was between graduate assistantship and registration procedures and course availability in the department (0.19).

There was no significant correlation found between job skills and any of the factors in the three categories: factors related to major section in the department, courses in the department and overall satisfaction in Table 11. Table 11 also shows that a significant negative correlation was found between recommend area of specialization and all the factors related to the major section in the department. These factors included quality of graduate program, quality of courses, relationship with major professor, enrichment activities and sensitivity to students. The highest negative correlation in this category was -0.41 (quality of courses).

Negative correlation was also found between the recommended area of specialization and the two factors concerning courses in the department and one factor concerning overall satisfaction with the department. These included: quality of instruction, course structure, and program of study

committee. The highest significant negative correlation was -0.29 (quality of instruction).

Intercorrelation of factors

An examination of Table 12 indicates that all the factors and couplets (dependent variables) correlate significantly and positively with each except for one correlation. The correlation which was not significant was between the major professor and registration procedures/course availability (0.10). The highest correlation (0.73) was between quality of graduate program and quality of courses as it related to the section in the department.

T-test Analysis for Differences between Factors and Variables

A t-test procedure was used to test mean differences between the independent variables (sex, graduate assistantship, and requirement for graduate degree at I.S.U.) to determine the level of satisfaction with the following (dependent variables): quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside major section, quality of instruction, admission

standard, and registration and course availability in the department. The Alpha was set at the .05 level of significance.

The hypotheses to be tested:

(1) There is no significant difference in the level of of satisfaction between sex and quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, registration and course availability in the department and program of study committee.

(2) There is no significant difference in the level of satisfaction between students who write a thesis and those who write a creative component with the factors: quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, registration and course availability in the department, and program of study committee.

(3) There is no significant difference in the level of satisfaction between students who have assistanships and those who do not have assistantships and these factors: quality of graduate program in major section, quality of courses, relationship with major professor, enrichment activities in major section, sensitivity to students, career development quality, required courses outside section, quality of instruction, admission standard, and registration and course availability in the department, and program of study committee.

Testing Hypothesis 1

Quality of graduate program

The hypothesis was rejected ($t = -2.76$, $P < .01$). The results of the analysis in Table 13 shows that a highly significant difference was found between the mean satisfaction score for females and the mean satisfaction score for males. The mean satisfaction score for females was 3.83 whereas the mean score for males was 4.10. However, there was no significant difference in variances for the two groups (F ($N = 97, 75$) $= 1.38$), indicating that there was less diversity among the sexes. Therefore, the pooled-t formula was used.

Quality of courses

The results of the analysis of satisfaction with quality of courses by sex are shown in Table 13. A highly significant difference was found between the mean satisfaction score for females and the mean satisfaction score for males. Therefore, the hypothesis was rejected ($t = -2.96$, $P < .00$). The mean satisfaction score for females was 3.64 whereas the mean satisfaction score for males was 3.95. There was no significant difference in variance for the two groups (F ($N = 97, 75$) $= 1.46$) indicating that there was no diversity among the sexes, therefore, the pooled-t formula was used.

Table 13. Analysis of students' satisfaction by independent variable and sex

Variable	Sex	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Quality of graduate program	Female	97	3.83	0.70	-2.76**	0.010
	Male	75	4.10	0.60		
Quality of courses	Female	97	3.64	0.60	-2.96**	0.004
	Male	75	3.95	0.73		
Relationship with major professor	Female	97	3.75	0.99	-2.44*	0.020
	Male	75	4.09	0.84		
Enrichment activities	Female	96	3.28	0.78	-2.74**	0.010
	Male	75	3.61	0.76		
Sensitivity to student	Female	97	3.94	0.81	-2.14*	0.034
	Male	75	4.20	0.74		
Career development quality	Female	94	2.81	0.85	-3.15**	0.002
	Male	74	3.24	0.92		
Courses outside section	Female	91	3.48	0.60	-3.38**	0.001
	Male	70	3.81	0.63		
Quality of instruction	Female	91	3.64	0.57	-2.88**	0.004
	Male	71	3.90	0.60		

*Significant at .05 level of significance.

**Significant at .01 level of significance.

Table 13. (Continued)

Variable	Sex	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Admission standard	Female	95	3.93	0.70	=2.04*	0.043
	Male	75	4.15	0.62		
Registration/ course availability	Female	96	3.31	0.86	-3.40**	0.001
	Male	75	3.73	0.72		
Program of study committee	Female	79	3.51	0.71	-1.42	0.159
	Male	71	3.68	0.76		

Relationship with major professor

The hypothesis was rejected ($t = -2.44$, $P < .05$). The results of the analysis shown in Table 13 demonstrate that a significant difference existed between the mean satisfaction score for females and the mean satisfaction score for males. The mean satisfaction score for females was 3.75 whereas the mean score for males was 4.09. However, there was no significant difference in variance for the two groups (F ($N = 97, 75$) $= 1.36$). The pooled-t formula was used.

Enrichment activities

The analysis of satisfaction with enrichment activities by sex showed a highly significant difference between the mean satisfaction score for females and the mean satisfaction score for males. The hypothesis was rejected ($t = -2.74$, $P < .01$). The results can also be seen in Table 13. The mean satisfaction score for females was 3.28 whereas the mean for males was 3.61.

There was a significant difference in variance for the two groups indicating a great diversity among the sexes (f ($N = 96, 75$) $= 2.74$). The separate-t formula was used.

Sensitivity to students

The test showed that there was a significant difference between mean satisfaction score for females and the mean satisfaction score for males. The hypothesis was rejected ($t = 02.14$, $P < .05$). The mean satisfaction score for females was 3.94 whereas the mean satisfaction score for males was 4.20. The results can be seen in Table 13. There was no significant difference in the variance for the two groups ($f\ (N = 97, 75) = 1.18$). Hence, the pooled-t formula was used.

Career development quality

The analysis showed that there is a highly significant difference between the mean satisfaction score for males and for females. The hypothesis was rejected ($t = -3.15$, $P < .01$). The mean satisfaction score for males was 3.24 whereas the mean for females was 2.81. The results are show in Table 13. There was no significant difference found in the variance for the two groups ($F\ (N = 94, 74) = 1.18$). The pooled-t formula was used.

Courses outside major section

The hypothesis was rejected ($t = -3.38$, $P < .01$). The results for the analysis seen in Table 13 showed that the

mean satisfaction score for females was 3.48, whereas the mean satisfaction score for males was 3.81. However, there was no significant difference found in the variance (F (N = 91, 70) = 1.10).

Quality of instruction

The hypothesis that there was no significant difference in the level of satisfaction with the quality of instruction between males and females was rejected at the .05 level of significance ($t = -2.88$, $P < .01$). The analysis showed that there was a highly significant difference. The mean satisfaction score for females was 3.64, whereas the mean satisfaction score for males was 3.90. The results are shown in Table 13. There was no significant difference found in the variance of the two groups (F (N = 91, 71) = 1.11). The pooled-t formula was used.

Admission standard

The hypothesis was rejected at the .05 level of significance ($t = -2.04$, $P < .05$). The results of the analysis as shown in Table 13 indicated that the mean satisfaction score for males was 4.15, whereas the mean satisfaction score for females was 3.93. A significant difference was found in the variance of the two groups (F (N = 95, 75) = 1.28).

Due to the homogeneity of the variance, the pooled-t formula was used.

Program of study committee

Table 13 also showed the results of the analysis for satisfaction with program of study committee. As can be seen, the test failed to show that there is a signficant difference between mean satisfaction score for females and the mean score for males ($t = -1.42$, $P < .05$). The mean satisfaction score for females was 3.51, whereas the mean for males was 3.68. There was a significant difference in variance for the two groups (f ($N = 79, 71$) $= 1.15$).

Registration and course availability

The results of the analysis of students' level of satisfaction with registration and course availability is show in Table 13. There is a highly significant difference in the mean satisfaction score between males and females. The hypothesis was rejected at the .05 level of significance ($t = -3.40$, $P < .05$). The mean satisfaction score for females was 3.31, whereas the mean satisfaction score for males was 3.73. However, a significant difference was not found in the variance of the two groups (F ($N = 96, 75$) $=$ 1.41), therefore, the pooled-t formula was used.

Testing Hypotheses 2 and 3

Hypotheses 2 and 3, as stated above, were also tested using the t-test procedure. The test failed to show that there were significant differences between the means. Therefore, the hypotheses were not rejected. However, there was one exception. There was a significant difference in the mean satisfaction score between those students who were on graduate assistantships and those who were not on graduate assistantships ($t = -2.46$, $P < .05$). The mean satisfaction score for students with graduate assistantships was 3.24, whereas the mean satisfaction for those without graduate assistantships was 3.59. A significant difference was not found in the variance of the two groups (F ($N = 47, 123$) $= 1.50$). The pooled-t formula was used. The results of the analysis can be seen in Table 14 and 15, respectively.

One Way Analysis of Variance between Factors and Variables

A single classification analysis of variance procedure was used to test hypotheses 4 through 12. These hypotheses were related to area of specialization, age, types of employment and factors dealing with level of satisfaction with major section in the department (4, 5, 6, 7, 10, 11),

Table 14. Analysis on students' satisfaction by dependent variable and requirement for graduate degree

Variables	Requirement for grad. degree	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Quality of graduate program	Thesis	110	3.97	0.62	0.83	0.405
	Creative Component	55	3.88	0.75		
Quality of courses in major section	Thesis	110	3.74	0.71	-0.55	0.582
	Creative Component	55	3.81	0.60		
Relationship with major professor	Thesis	110	3.95	0.99	1.14	0.256
	Creative Component	55	3.77	0.87		
Enrichment activities	Thesis	109	3.42	0.82	0.38	0.704
	Creative Component	55	3.37	0.70		
Sensitivity to student	Thesis	110	4.01	0.84	-0.94	0.349
	Creative Component	55	4.13	0.68		
Career development quality	Thesis	106	2.91	0.91	-1.55	0.122
	Creative Component	55	3.13	0.86		

Table 14. (Continued)

Variables	Requirement for grad. degree	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Courses outside section	Thesis	103	3.68	0.57	1.50	0.136
	Creative Component	53	3.52	0.75		
Quality of instruction	Thesis	104	3.77	0.58	0.72	0.470
	Creative Component	53	3.70	0.62		
Admission standard	Thesis	109	4.02	0.70	0.04	0.969
	Creative Component	54	4.01	0.62		
Registration/ Course availability	Thesis	109	3.54	0.79	1.17	0.243
	Creative Component	55	3.38	0.89		
Program of study committee	Thesis	95	3.68	0.77	2.08	0.040
	Creative Component	49	3.42	0.65		

Table 15. Analysis on students' satisfaction by dependent variables and graduate assistantship

Variables	Graduate Assistant-ship	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Quality of graduate program	yes	48	3.91	0.60	-0.51	0.609
	no	123	3.97	0.69		
Quality of courses in major section	yes	48	3.64	0.71	-1.66	0.098
	no	123	3.83	0.66		
Relationship with major professor	yes	48	3.93	0.94	0.15	0.878
	no	123	3.90	0.94		
Enrichment activity	yes	48	3.48	0.67	0.61	0.544
	no	122	3.40	0.83		
Sensitivity to student	yes	48	4.03	0.79	-0.25	0.803
	no	123	4.07	0.80		
Career development quality	yes	47	2.88	0.95	-1.05	0.296
	no	120	3.05	0.89		
Admission standard	yes	48	3.99	0.65	-0.48	0.628
	no	121	4.05	0.69		
Quality of instruction	yes	46	3.73	0.55	-0.45	0.653
	no	115	3.77	0.62		

Table 15. (Continued)

Variables	Graduate Assistant-ship	Number	Mean	Standard Deviation	t Value	2-tailed Prob.
Courses outside section	yes	46	3.72	0.50	1.28	0.203
	no	114	3.59	0.68		
Program of study committee	yes	42	3.68	0.74	0.95	0.343
	no	107	3.55	0.73		
Registration/Course availability	yes	47	3.24	0.94	-2.46*	0.020
	no	123	3.59	0.77		

*Significant at .05 level of significance.

courses in the department (8) and overall satisfaction with the department (9, 12). An additional analysis using Scheffé Multiple Range Test was employed to determine where the differences in means occurred, as indicated by the ANOVA.

Testing Hypothesis 4

Hypothesis 4: There is no significant difference in age and the level of satisfaction with the quality of courses in the major section within the department.

Quality of courses

This hypothesis (4) was rejected at the .05 level of significance. Based on the evidence presented in Table 16, satisfaction with quality of courses in the major section differ significantly among the three age groups. The Scheffé Multiple Range Test for difference in means indicated that satisfaction level for those students in the age group of 20-30 (mean = 3.62) and those in the age group of 41-50 and above (mean = 4.03) were different than the satisfaction level for students in the age group of 31-40 (mean = 3.82). As age increased the mean score for level of satisfaction with the courses increased.

Table 16. One way analysis on satisfaction with quality of courses and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	67	3.62	0.57	4.01*	.020
31-40	78	3.82	0.71		
41-50+	27	4.03	0.72		

*Significant at .05 level of significance.

Testing Hypothesis 5

Hypothesis 5: There is no significant difference in age and the level of satisfaction with relationship with major professor.

Relationship with major professor

The hypothesis (5) was rejected at the .01 level of significance. As can be seen in Table 17, there were significant differences in the level of satisfaction with major professor. Analysis from the Scheffé Multiple Range Test revealed that satisfaction levels for those students in the age group of 20-30 (mean = 3.61) were different than the satisfaction level of students in the age group of 31-40 (mean = 4.12). Those students of the age group 31-40 had a higher mean score for level of satisfaction than the younger or older age group indicating a higher level of satisfaction with their major professor.

Table 17. One way analysis on satisfaction with relationship with major professor and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	67	3.61	.93	5.86**	.003
31-40	78	4.12	.92		
41-50+	27	3.99	.85		

**Significant at .01 level of satisfaction.

Testing Hypothesis 6

Hypothesis 6: There is no significant difference in students' age and the level of satisfaction with enrichment activities in the major section.

Enrichment activities in major section

Based on the analysis, hypothesis 6 was rejected at the .01 level of significance. According to the results presented in Table 18, there were significant differences in the satisfaction level among the three age groups. As indicated by the Scheffé Multiple Range Test, satisfaction levels for students in the age range of 31-40 (mean = 3.55) and students in the age range of 41-50 and over (mean = 3.65) were different than those students in the age range of 20-30 (mean = 3.19). A higher mean score for the older age indicated a higher level of satisfaction with the enrichment activities in the major section.

Table 18. One way analysis on satisfaction with enrichment activities in section and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	67	3.19	.78	5.44**	.005
31-40	77	3.55	.71		
41-50+	27	3.65	.88		

**Significant at .01 level of significance.

Testing Hypothesis 7

Hypothesis 7: There is no significant difference in age and the level of satisfaction with faculty sensitivity to students.

Sensitivity to students

The hypothesis (7) was rejected at the .05 level of significance. Based on the evidence presented in Table 19, satisfaction with faculty sensitivity to student in major section was significantly different among the three age groups. The Scheffé Multiple Range Test for differences in mean indicated that satisfaction level for students in the age gorup of 20-30 (mean = 3.92) were different than those in the age group of 41-50 and over (mean = 4.41). The higher level of satisfaction was again evident in the older age group (41-50) in relationship to sensitivity to students in the major section.

Table 19. One way analysis on satisfaction with faculty sensitivity to student and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	67	3.92	.76	3.82*	.023
31-40	78	4.05	.84		
41-50+	27	4.41	.61		

*Significant at .05 level of significance.

Testing Hypothesis 8

Hypothesis 8: There is no significant difference in age and the level of satisfaction with the quality of instruction in the department.

Quality of instruction in the department

This hypothesis (8) was rejected at the .01 level of significance. There were significant differences in the level of satisfaction with the quality of instruction within the department. The results can be seen in Table 20. Results from the Scheffé Multiple Range Test revealed that the ratings of the level of satisfaction with quality of instruction for students in the age group 20-30 (mean = 3.59) were significantly different than ratings of satisfaction of students in the age group of 41-50 and over (mean = 3.96).

As previously noted, a higher level of satisfaction with the quality of instruction is evident for those in the older age group (41-50).

Table 20. One way analysis on satisfaction with quality of instruction and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	64	3.59	.58	4.75**	.009
31-40	73	3.83	.60		
41-50+	25	3.96	.53		

**Significant at .01 level of significance.

Testing Hypothesis 9

Hypothesis 9: There is no significant difference in age and the level of satisfaction with registration procedures and course availability in the department.

Registration procedures and course availability in the department

On the basis of the analysis, this hypothesis (9) was rejected at the .01 level of significance. As can be seen in Table 21, there were significant differences in the level of satisfaction with registration procedures and course availability in the department among the three age groups.

The results from the Scheffé Multiple Range Test revealed that satisfaction levels for students in the age group of 31-50 and over (mean = 3.91) were significantly different from the satisfaction level of those in the age group of 20-30 (mean = 3.26). A higher mean score for the age group 41-50 indicated that this group was experiencing a higher level of satisfaction than those in the younger age group with registration procedures and course availability.

Table 21. One way analysis on satisfaction with registration and course availability and age

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
20-30	67	3.26	.85	6.68**	.001
31-40	77	3.56	.77		
41-50+	27	3.91	.76		

**Significant at .01 level of significance.

Testing Hypothesis 10

Hypothesis 10: There is no significant difference in students' area of employment and the level of satisfaction with the quality of career development in the students' major section.

Career development quality in the major section

The hypothesis (10) was rejected at the .05 level of significance. As can be seen in Table 22, there were significant differences in the level of satisfaction with career development quality in the students' major section. Analysis from the Scheffé Multiple Range Test showed that satisfaction level for those employed with industry-business (mean 2.96) was different than the satisfaction level of those employed with local school districts (mean = 3.47). The career development quality seems to provide a higher level of satisfaction as indicated by the mean score for those from local school districts than for any other group.

Table 22. One way analysis on classification of employment and satisfaction with career development quality

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
State Government	22	3.09	.84	3.06*	.030
Industry-Business	42	2.96	.98		
Two Year College	56	3.08	.71		
Local School District	43	3.47	.75		

*Significant at .05 level of significance.

Testing Hypothesis 11

Hypothesis 11: There is no significant difference in student area of specialization and the level of satisfaction with the quality of graduate program in the major section.

Quality of graduate program in major section

The hypothesis (11) was rejected at the .05 level of significance. As can be seen in Table 23, there were significant differences in the level of satisfaction among students in the various majors. Analysis from the Scheffé

Table 23. One way analysis on quality of graduate program and area of specialization

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
Education	9	3.95	.40	2.86*	.011
Adult & Extension Education	19	3.95	.69		
Curriculum & Instructional Media	26	3.61	.51		
Educational Administration	33	4.22	.58		
Elementary Education	13	3.74	.96		
Counselor Education	26	3.82	.73		
Higher Education	46	3.07	.62		

*Significant at .05 level of significance.

Multiple Range Test showed that satisfaction level for those students majoring in Educational Administration (mean = 4.22) were different than the satisfaction level for those majoring in Higher Education (mean = 3.07). As shown by the higher mean score for Educational Administration, that group rated the program higher than any other area of specialization.

Testing Hypothesis 12

Hypothesis 12: There is no significant difference in the students' area of specialization and the students' satisfaction with career development quality in section.

Career development in department

The hypothesis (12) was rejected at the .01 level of significance. As shown in Table 24, there were significant differences in the level of satisfaction with career development quality among students in the different areas of specialization. Analysis from the Scheffé Multiple Range Test revealed that the satisfaction level of those students in Higher Education (mean = 3.31) were different than the satisfaction level of students in Adult and Extension Education (mean = 2.50). Students in Adult and Extension Education had the lowest level of satisfaction

with career development quality of any other group based on the mean score.

Table 24. One way analysis on career development and area of specialization

Variables	Number	Mean	Standard Deviation	F Value	F Prob.
Education	9	2.67	.66	4.00**	.001
Adult & Extension Education	18	2.50	1.04		
Curriculum & Instructional Media	25	3.14	.86		
Educational Administration	33	3.48	.77		
Elementary Education	13	3.31	.83		
Counselor Education	26	3.07	.76		
Higher Education	46	3.31	.68		

**Significant at .01 level of significance.

Discussion of Findings

Quality of graduate program

In this study, it was found that male students were more satisfied with the quality of the graduate program in their major section than were the female students. Age was also a significant factor in the study. Older students had higher satisfaction levels with the quality

of graduate program in their section than the younger students. One possible explanation might be that the older students come prepared to take courses geared toward their career goals, whereas younger students might come for exploratory reasons and may take courses mainly to meet their degree requirements and so may be less satisfied. Older students might tend to have a maturity level that helps them make wiser decisions in their field of endeavor. Older students could bring a background of experience and practical application to their graduate programs and have perhaps had broader testing of ideas in their field.

With regards to students in the different majors, students in educational administration had higher mean scores for satisfaction with quality of the graduate program in their section than any other area of specialization. This implies that students in educational administration were more satisfied with the quality of their graduate program than other sections were. It should be pointed out that educational administration was made up of a larger percentage of students that were older and were men (see Tables 25 and 26 in Appendix D).

In general, requirements of graduate degree, such as thesis or creative component, were not a major factor in

determining the level of satisfaction of students in the department. In other words, whether a student decided to write a thesis or a creative component was not important in whether he/she was satisfied with the program. This was also true for whether or not a student was on an assistantship.

Quality of courses

Older students were more satisfied with the courses than were the younger students. It was also evident that male students were more satisfied with courses in their major section than were female students.

Relationship with major professor

Those students of the age group 31-40 had a higehr mean score for level of satisfaction than the younger or older age groups, implying a higher level of satisfaction with their major professors.

Male students also had a higher level of satisfaction with their major professor than the female students. Evidence regarding sex differences in the weighting of various factors causing satisfaction is rare. While research has shown that sex may have effects on satisfaction levels, it has not addressed in much detail the process

that may lie behind such differences. Earlier research by Hearn (1978) found women somewhat more attuned than men to faculty/student interaction and other aspects of academic social climate in their satisfaction patterns. This earlier research was in line with a variety of literature on sex differences in schooling effects (McDill & Rigsby, 1973; Weidman, 1979; Phelan, 1979; Pascarella, 1980; Hearn, 1985). The researchers cited above reported that women did indeed generally place strong emphasis on factors relating to social support. Hearn (1985), in his findings of general differences in satisfaction criteria, reports that, compared with college men, college women's outcomes are somewhat more strongly affected by certain aspects of faculty contact. Hearn (1985) suggests that the major contribution to gender studies from his present study may be the findings' suggestion that opportunities for such contact may be especially important to women. From the findings of other researchers cited and from this study, it may be concluded that the optimal condition for satisfaction may differ by sex.

Enrichment activities

A higher mean score for the older age group (41-50) indicated a higher level of satisfaction with the enrichment

activities in the major section. As previously noted, male students also had a higher level of satisfaction with the enrichment activities in their major sections.

Sensitivity to students

The higher level of satisfaction was generally seen in the ratings of older students and in male students. The age group (41-50) had a higher level of satisfaction in relation to sensitivity to students in the major section, and the male students also rated higher.

With regards to quality of instruction in the department and registration procedures and course availability in the department, a higher mean score for the age group (41-50) indicated that this group was experiencing a higher level of satisfaction in these areas than those in the younger age group.

Career development

The study showed that a higher level of satisfaction for career development quality, as indicated by the mean score, was strong for local school districts more than for any other professional group. Students in educational administration also showed a higher level of satisfaction with career development quality than students in other

majors. If the department wishes to broaden the scope of its program and to work toward greater satisfaction of other professional groups, then it may want to consider offering a broader selection of courses and more assistance with career development (see Appendix B for student comments).

Student suggestions

The students were asked to suggest changes for the department in courses, curriculum, procedures, or staffing of the overall program. These are some of the comments from the students (see Appendix A, question 78).

-more full-time staff needed

-have less dependence on part-time faculty

-more women faculty needed

-department head needed for adult and extension education

-students need orientation into their sections and the department as a whole

-increase course availability in order to have more selections

-have more courses directly related to community college education

-have more course offerings in the summer

-have more sections of required courses

-provide reading room for graduate students, or inform them if there is one available

-sponsor seminars on current issues in higher education

-more input from P.O.S. committee.

CHAPTER 5. SUMMARY AND RECOMMENDATION

The purpose of this study was to evaluate the graduate program in the department of professional studies by collecting data from students enrolled in the spring of 1986. Students responded to a questionnaire about their level of satisfaction with the curriculum, advising, and operational aspects of their major section in the department and made recommendations for improvement.

The research methodology for the study was survey research. The program evaluation instrument, adapted by Beavers and Photisuvan (1985) for alumni from Braskamp, Wise and Hengstler (1981) was revised and some wording changed on some items while other items were deleted. The revised questionnaire was used for the study. The questionnaire consisted of two parts: background and demographic information and items related to satisfaction with the graduate program. Part two consisted of three sections: items related to students' level of satisfaction with major program, courses taken in the department which were part of the students' program of study, and overall satisfaction with the professional studies department. The satisfaction items contained a 5-point scale ranging from 5, highly satisfied, to 1, highly dissatisfied.

The population for this study was limited to masters and doctoral students enrolled for spring semester of 1986. A total of 205 students from the respective major areas participated in the survey. This was 52% of the 397 students who were enrolled and seeking a degree spring semester. Of the 205 questionnaires returned, 172 were completed and fully usable. Thus, 172 subjects provided data for this study.

Data from the questionnaires were analyzed as follows: frequency counts, percentages, factor analysis, reliability of factors, correlation of factors with independent variables, and intercorrelation of factors. In testing of the hypotheses, one way analysis of variance and t-tests were used to find differences among the variables.

A factor analysis was completed on items in part two of the questionnaire: 1) level of satisfaction with major program in the section, 2) level of satisfaction with courses taken in department which are part of students' program of study, and 3) overall satisfaction with the department of professional studies.

The 28 items concerned with satisfaction with section in the department converged into five factors and two couplets and were named: quality of graduate program, quality of courses, relationship with major professor,

enrichment activities in section, sensitivity to students, career development, and admission standard. Twelve items related to satisfaction with courses in the department extracted two factors: quality of instruction, and course structure. Seven items concerned with overall satisfaction with the department converged into one factor and two couplets: program of study committee, career development, and registration/course availability.

Reliability of factors and couplets for satisfaction with section in the department ranged from .61 to .88; .69 to .90 for factors related to courses in the department, and from .46 to .79 for one factor and couplets related to overall satisfaction with the department.

The demographic data suggested the majority (65.4%) of 172 respondents were females. The majority (45.3%) of the sample were 31 to 40 years of age. Among the total sample, 52.3% had no other graduate degree while 47.7% had completed M.S. or M.Ed. degrees at another institution. Among all the sections represented the the sample, higher education had the highest representation (27%) and educational administration had the next highest representation (19%). Of the total sample, 28% had graduate assistanships, while 72% had no graduate assistantships. The frequencies on the items of employment classification indicated the

majority (34%) were employed in a two-year college position. Others were business and industry (26%), local school districts (27%), and state government (14%).

When hypotheses for the present study were tested, results indicated:

1. There were significant realtionships between age and the following satisfaction factors and couplets: quality of graduate program, quality of courses, relationship with major professor, enrichment activities, sensitivity to students, career development quality in section, quality of instruction, program of study committee and registration/course availability. Older students were generally more satisfied with the program in their section and with programs in the department as a whole.
2. There were significant relationships between sex and the following satisfaction factors and couplets: quality of courses, relationship with major professor, enrichment activities, sensitivity to students, career development, admission standard, quality of instruction, and registration/course availability. Male students tended to have higher satisfaction level with their programs and with the department than the female students.

3. There were significant relationships between graduate assistantships or not and registration procedures and course availability. Since other significant relationships did not occur for those having graduate assistantships, this variable was not a significant determinant of students' satisfaction with programs in the section or the department as a whole.
4. There was no significant correlation found between job skills and any of the factors related to major section in the department, courses in the department and overall satisfaction with the department. Utilizing the skills (job skills) gained from the last graduate degree in the students' present job was not a major factor in the students' satisfaction with the graduate program in the major section or with the department.
5. Negative significant correlations were found between whether a student would recommend his/her area of specialization and the five factors related to major section in the department, two factors related to courses in the department and one factor in the overall satisfaction with the department. Generally, those students who were satisfied with their major section and with the department tended to recommend their area of specialization highly.

6. Using the variable area of specialization and the quality of graduate program in the one way analysis of variance, the Scheffé multiple range test resulted in significant differences. Majors in educational administration had the highest mean satisfaction score with graduate program than the other groups. For types of employment and satisfaction with career development quality in the program, students employed in local school districts had the highest mean scores. A significant difference was found using the Scheffe test.

Recommendations for the Department of Professional Studies:

1. An effort should be made to increase interaction between faculty and students, e.g., seminar or group discussion involving graduate students and faculty at least once a semester. A significant proportion of the programming should be on questions and concerns of students in terms of needs, goals, development, special problems, etc.
2. An effort should be made by the department to have orientation sessions for new students each year, e.g., RISE, IRC, and computer laboratories. This might provide for the greater satisfaction among the younger age group.

3. An effort should be made to increase career development activities for all major sections and the department as a whole.
4. An effort should be made for employing more staff, particularly full-time staff members and women.
5. Increase the scope of courses offered and add more sections of required courses.
6. Broaden the scope of the department to increase the satisfaction of community college, business and industry, and state government employees.

Recommendation for further research:

1. Each section should take the necessary steps to institute an ongoing evaluation of its program(s) as it related to later career needs of its students.
2. This study has been concerned only with enrolled students in the programs. The department should consider undertaking a study of those who were admitted to the graduate program but for some reasons did not complete the degree (dropouts). An investigation into why these students did not continue to the completion of the program should give further insights into the graduate program needs.
3. There should be an investigation of the levels of priority students place on various satisfaction factors

(e.g., advisement, faculty availability, knowledge-ability of instructors, etc.).

4. An indepth study should be conducted on graduate students' opinions of the advisement function.
5. This study should be replicated in 5-10 years. Data collection procedures should include distribution of questionnaires by mail or administered during the class period to insure a higher percentage of returns.

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APPENDIX A

IOWA STATE
UNIVERSITY

College of Education
Professional Studies
N243 Quadrangle
Ames, Iowa 50011
Telephone 515-294-4143

Dear Professional Studies Student:

The Department of Professional Studies would like your help in evaluating the graduate programs in the department. You have been selected to participate in this evaluation because you are an M.S. and/or Ph.D. student spring semester, 1986.

The questionnaire will take you less than 30 minutes to complete and we hope that you take time to help us with this effort. We will use the results of this study to provide input into program revisions.

The objectives set forth for this study are:

1. To identify your degree of satisfaction with your program of study.

2. To examine basic personal data to identify students from the various sections and their present or past employment.

3. To make recommendations for the improvement of the program.

Thank you for participating in the study. Please return your questionnaire in the envelope and place in the box at your next class session. If you would like a summary of the study, you may indicate that on your form or write a separate letter. If the Department can more effectively serve you in your work, please advise us.

Sincerely,

Larry H. Ebbers
Professor and Chair
Professional Studies

Richard D. Warren
Director
Research Institute for Studies in Education

Enclosures

College of Education

Professional Studies Department

Part I

General Information

Directions: Please read each of the following questions carefully before responding. For each question, place a circle around the response that is correct for you.

Example: What is your marital status?
a. Single
b. Married

1. What is your age group?
   a. 20-30
   b. 31-40
   c. 41-50
   d. Over 50

2. What is your sex?
   a. Female
   b. Male

3. Before completing a graduate degree in the Professional Studies Department, did you complete a graduate degree at another institution?
   a. M.Ed.
   b. M.S.
   c. Ph.D.
   d. Ed.D.
   e. Other degree _____ (specify)
   f. No other graduate degree

4. When did you receive your last graduate degree from ISU in the Professional Studies Department?
   a. 1980
   b. 1981
   c. 1982
   d. 1983
   e. 1984
   f. 1985

5. What is the highest graduate degree you have completed while in the Professional Studies Department at ISU?
   a. M.Ed.
   b. M.S.
   c. Ph.D.

6. Before starting your present graduate degree in the Professional Studies Department at ISU, had you completed a degree at another institution? If so, what degree?
   a. M.Ed.
   b. M.S.
   c. Ph.D.
   d. Ed.D.
   e. Other degree _____ (specify)
   f. No other graduate degree

7. What is your area of specialization within the Professional Studies Department of the College of Education in your present graduate degree at ISU?
   a. Education
   b. Adult and Extension Education
   c. Curriculum and Instructional Media
   d. Educational Administration
   e. Elementary Education
   f. Counselor Education
   g. Higher Education
   h. History, Philosophy and Comparative Education
   i. Learning Disabilities
   j. Research and Evaluation
   k. Other (name) _____

8. To meet the requirements for your present graduate degree at ISU while majoring in the Professional Studies Department, which of the following will you complete?
   a. Thesis or dissertation
   b. Creative Component
   c. Other (identify) _____

9. Where is the majority (over 50%) of the ISU course work for your degree
   a. On campus
   b. Off campus

10. Are you on a graduate assistantship?
    a. Yes, teaching assistantship
    b. Yes, research assistantship
    c. No assistantship

11. Will you receive certification (i.e., superintendent, principal, guidance counselor, instructional media specialist, and learning disability specialist) while working on your present graduate degree at ISU in Professional Studies?
    a. Yes
    b. No

12. How would you classify your employment?
    a. Federal Government
    b. State Government
    c. Industry/Business
    d. 4-year college
    e. 2-year/community college
    f. Local school district
    g. Self-employed
    h. Other (specify) _____

13. What is the title of your present position? _____

14. Are you now employed?
    a. Yes
    b. No

15. In your present job to what extent do you utilize the skills and competencies gained from the last graduate degree you received at ISU?
    a. A great deal
    b. Somewhat
    c. Very little
    d. Not at all
    e. No job

16. To what extent would you recommend your area of specialization in Professional Studies at ISU to other students?
    a. A great deal
    b. Somewhat
    c. Very little
    d. Not at all

17. To which ethnic/racial group do you belong? (International student circle a only.)
    a. International student
    b. White/caucasian
    c. Asian American
    d. Hispanic American
    e. Black/Afro-American
    f. Native Indian American
    g. Other (please specify) _____

Part II

Directions: The purpose of this section of the questionnaire is to provide a way for you to evaluate the professional studies program. Respond to each statement in terms of your satisfaction with the graduate program at ISU by listing one number in front of each question. Use the following scale:

Scale:	5	4	3	2	1	0
	Highly satisfied	Satisfied	Undecided	Dissatisfied	Highly dissatisfied	Not applicable

Section I: Questions related to your section (i.e., adult education), curriculum and instructional media, higher education, etc.). If you were in learning disabilities, please respond to that area as a section.

_____18. Admissions standards in your section.

_____19. Admissions procedures in your section.

_____20. Orientation of students to the section.

_____21. The extent to which you are challenged by the course work in your section.

_____22. The extent to which your section provided a well-integrated set of courses.

_____23. The variety of different course offerings in your section.

_____24. The amount of structure (required courses) in the graduate program of your section.

_____25. The relevance of the course work in your section toward a job in that area.

_____26. Size of classes in your section.

_____27. Opportunity to communicate with faculty and students within the classroom, regarding student needs, concerns and suggestions in your section.

_____28. The overall quality of instruction in your section.

_____29. Instructors' sensitivity to people of different racial and ethnic backgrounds.

_____30. Instructors' ability to teach in your section.

Scale:	5	4	3	2	1	0
	Highly satisfied	Satisfied	Undecided	Dissatis-fied	Highly dissatis-fied	Not applicable

_____31. The extent to which a sound theoretical framework is developed in your section.

_____32. The usefulness of the texts and other instructional materials in helping you to learn the course work in your section.

_____33. Evaluation procedures used in the course work in your section (i.e., percent of grade based on tests, papers, discussion, etc.).

_____34. The availability of enrichment activities offered by your section in addition to regular classes (i.e., seminars, colloquia, social events, etc.).

_____35. The balance between attention to writing (i.e., dissertation, thesis, or creative component) and course work in your section.

_____36. Contact with faculty outside the classroom in your section.

_____37. The quality of career development assistance in your section.

_____38. The quality of academic advising from your advisor.

_____39. Availability of major professor to student.

_____40. Relationship between you and your major professor.

_____41. Length of time required to complete the program in your section.

_____42. The extent to which you regard your graduate program as worthwhile in your section.

_____43. Overall satisfaction with your graduate program in your section.

_____44. Overall treatment as a student in your section.

_____45. The quality of the students in your area of specialization.

46. What are the strengths of your section?
    a.
    b.
    c.

47. What are the weaknesses of your section?
    a.
    b.
    c.

Scale:	5	4	3	2	1	0
	Highly satisfied	Satisfied	Undecided	Dissatis-fied	Highly dissatis-fied	Not applicable

Section II: Questions related to other courses taken in the Professional Studies Department which are a part of your program of study.

_____48. The extent to which you are challenged by the course work.

_____49. The extent to which the courses provided you with a well-integrated program.

_____50. The number of courses required outside the section.

_____51. The variety of course offerings taken in the department but outside your section.

_____52. The extent to which a sound theoretical framework is developed for the additional courses taken in the department.

_____53. Size of classes outside your section but in the department.

_____54. Instructors' ability to teach in courses outside your section but in the department.

_____55. The overall quality of instruction in additional courses taken in professional studies.

_____56. The usefulness of the texts and other instructional materials in helping you to learn the course work in your section.

_____57. Evaluation procedures used in the course work in the courses outside your section (i.e., percent of grade based on tests, papers, discussion, etc.).

_____58. Opportunity to communicate with faculty and students within the classroom regarding student needs, concerns, and suggestions in the department but outside your section.

_____59. Contact with faculty outside the classroom in the department.

60. What are the strengths of the courses taken outside your section but in the Professional Studies Department?
a.
b.
c.

61. What are the weaknesses of the courses taken outside your section but in the Professional Studies Department?
a.
b.
c.

Scale:	5	4	3	2	1	0
	Highly satisfied	Satisfied	Undecided	Dissatisfied	Highly dissatisfied	Not applicable

Section III: Overall questions about the Professional Studies Department.

_____62. Procedures used for registration.

_____63. Availability of courses in the summer school.

_____64. The availability of enrichment activities in the department offered in addition to regular classes (seminars, colloquia, social events, etc.).

_____65. The quality of career development assistance.

_____66. Usefulness of the program of study committee.

_____67. Appropriateness of the size of the program of study committee.

_____68. The departmental support staff (secretaries, etc.) who deal directly with students.

_____69. Support services available from R.I.S.E.

_____70. Support services available from I.R.C.

_____71. Support services available from Microcomputer Laboratory.

_____72. Financial support available within the department.

_____73. Overall satisfaction with preliminary writtens as a learning experience (Ph.D. only).

_____ 74. Overall satisfaction with preliminary orals as a learning experience (Ph.D. only).

_____75. Overall satisfaction with the way in which the final oral examination was conducted.

_____ 76. Departmental attention to providing students with credentials for obtaining employment after graduation.

77. How has the department failed to meet expectations you had when you entered? (write in)
a.
b.
c.

78. What changes would you suggest for the department in courses, curriculum, procedures, or staffing of the overall program? (write in)
a.
b.
c.

APPENDIX B

STUDENT COMMENTS ON STRENGTHS AND WEAKNESSES OF MAJOR SECTIONS

(Questions 46-47)

Higher Education strengths:

-research funds for computer time

-flexibility in developing a program to meet needs and interests

-competent instructors teaching the courses

-good interpersonal relationships

-balance of theory and application

-offering evening courses

-materials learned not only applicable in education but in all areas of dealing with people as a whole

-student-teacher contact

-students are generally older in higher education

-excellent research seminars

-support from major professor

Higher Education weaknesses:

-full-time faculty are very good but part-time faculty are hurting the program

-no courses on leadership in higher education

-not enough course variety

-no orientation

-too many two hour courses

-not enough faculty (overload)

-some courses not offered every semester

-community college issues not included in all higher education courses

-some professors do not respect established class times but continue class well after its scheduled dismissal time

Counselor Education strengths:

-some good quality professors

-theoretical framework

-enthusiasm and availability of faculty

-variety of program offerings

-balance of lecture, seminar, and laboratory experience

Counselor Education weaknesses:

-not enough good professors to choose from

-good professors are often too busy and/or involved to give enough personal attention

-difficult to take all required courses in summer

-poor class offerings in summer school

-contact with other faculty

-career assistance

-relative lack of student interaction and involvement with the section related to largely evening schedule and part-time students

Elementary Education strengths:

-caring faculty

-shared enthusiasm

-advising, willingness to help or offer materials

Elementary Education weaknesses:

-instructors overlap instructional materials, right hand doesn't know what the left hand is doing

-major professor is assigned; little careeer development assistance

-a lot of "Mickey Mouse" requirements
Anyone who has been teaching in the field does not need to take the majority of the classes required. They are a waste of time. Knowledge of those subjects should already have been gained through job experience.

Learning Disabilities strengths:

-teaching staff

-flexibility of program

Learning Disabilities weaknesses:

-changing requirements too often

-communication to students about required courses

-DPI-ISU communication on requirements (LD)

-graduate student left alone on their own to find out what goes on in the department, especially those new to ISU and off-campus students

Research and Evaluation strengths:

-research oriented

-professional

-small enough to care personally

-caring people

-adequate facilities, knowledgeable faculty

-staff very accommodating

-average of this field according to the most recent listing of program requirements

Research and Evaluation weaknesses:

-no section get together to create feeling of unity (Pot Luck)

-lack of integration of research findings and practice

-no place the students can discuss or study after class

Curriculum and Instructional Media strengths:

-faculty, environment, and students

-contact and interaction with faculty

-variety of projects to work on

-good quality seminars

-knowledgeable and involved faculty

-excellent support from Dean

-excellent instructional technology faculty

-applicability, relevance, necessity

-computer equipment

-excellent instruction

Curriculum and Instructional Media weaknesses:

-depth of study--so much to cover, just skimming the top

-poorly qualified instructors in curriculum last two years

-few curriculum courses offered

-no orientation received as new person

-no interim professor assigned before major professor decided

-limited number of advanced courses in instructional technology

-program could be a lot stronger in foundations of instructional technology

-need to do more career assessment and shape courses to lab potential

-job placement possibilities

Adult and Extension Education strengths:

-helpfulness of staff

-understanding for commuter student

-open communication between faculty and students

-good teaching

-night classes

-helpful and courteous secretary

-class size

-diversity of students

-subject matter

-positive/encouraging faculty--always willing to listen

Adult and Extension Education weaknesses:

-inadequate space

-lack of encouragement to belong to professional organizations, attend professional events or conventions

-outdated tests

-understaffed

-no choices of major professor

-inadequate and inconsistent staffing

-not all classes are offered when scheduled

-too much dwelling on extension, agriculture and home economics

-not enough faculty, two part-time only

-lack of variety

Educational Administration strengths:

-genuine concern for the success of students

-quality of professional instruction

-accessibility of professors

-professors willingness to help students

-small classes

-interesting and relevant courses

-friendly and congenial atmosphere

-resources and help available

-professors are current--know K-12 education

-highly trained professors

Educational Administration weaknesses:

-drastic differences in expectation and abilities of instructors

-structure of classes--not enough opportunity for free exchange of ideas

-need more direction from major professor

-course availability

-not enough consideration to the application of courses (around small school districts)

-finance

-business management

-availability of professor for program-related discourse

APPENDIX C

FACTOR/COUPLET CATEGORIES

Factors/Couplets Related to the Section in the Department

Factor 1. Quality of graduate program

- Satisfaction with graduate program
- Graduate program worthwhile
- Instructor's ability to teach
- Quality of instruction
- Communicate with faculty and student in class
- Relevance of course work toward job
- Usefulness of instructional material

Factor 2. Quality of courses

- Variety of different course offerings
- Well integrated set of courses
- Sound theoretical framework
- Quality of student in area of specialization
- Challenged by course work
- Structure in graduate program

Factor 3. Relationship with major professor

- Availability of major professor
- Quality of advising
- Relationship between you and major professor

Factor 4. Enrichment activities in section

Size of classes

Attention to writing and course work

Availability of enrichment activities

Contact with faculty outside of class

Factor 5. Sensitivity to students

Overall treatment as student

Instructor's sensitivity to different race

Length of time required to complete program

Evaluation procedures

Couplet 1. Career development quality

Quality of career development

Orientation to section

Couplet 2. Admission standard

Admission standards in section

Admission procedures

Couplets/Factors Related to Courses in the Department

Factor 1. Quality of instruction

Classes outside section

Challenged by course work

Overall quality of instruction

Well integrated program

Usefulness of instructional materials

Evaluation procedures in courses outside section

Sound theoretical framework

Contact with faculty outside class in department

Communicate with faculty and student within classroom

Factor 2. Course structure in section

Number of courses required

Course offering outside section

Size of classes outside section

Factor/Couplets Related to Overall Satisfaction with the Department of Professional Studies

Factor 1. Program of study committee

Appropriateness of program of study committee size

Usefulness of program of study

Support staff

Couplet 1. Career development

Career development assistance

Availability of enrichment activities

Couplet 2. Registration/course availability

Procedures for registration

Availability of courses in summer

APPENDIX D

Table 25. Distribution of area of specialization by age group

	20-30 Number (PCT)	31-40 Number (PCT)	41-50 Number (PCT)	Total Number (PCT)
Education	1 (1.5)	8 (10.3)	0 (0.0)	9 (5.2)
Adult and Extension Education	4 (6.0)	13 (16.7)	2 (7.4)	19 (11.0)
Curriculum and Instructional Media	18 (26.9)	6 (7.7)	2 (7.4)	26 (15.1)
Educational Administration	6 (9.0)	19 (24.4)	8 (29.6)	33 (19.2)
Elementary Education	7 (10.4)	5 (6.4)	1 (3.7)	13 (7.6)
Counselor Education	14 (20.9)	10 (12.8)	2 (7.4)	26 (15.1)
Higher Education	17 (25.4)	17 (21.2)	12 (44.4)	46 (26.7)
Total	67 (39.0)	78 (45.3)	27 (15.7)	172 (100.0)
Chi-Square = 35.53**	Significance = 0.00			

Table 26. Distribution of area of specialization by sex

Area of Specialization	Female Number (PCT)	Male Number (PCT)	Total Number (PCT)
Education	3 (3.1)	6 (8.0)	9 (5.2)
Adult and Extension Education	10 (10.3)	9 (12.0)	19 (11.0)
Curriculum and Instructional Media	17 (17.5)	9 (12.0-)	26 (15.1)
Educational Administration	9 (27.3)	24 (32.0)	33 (19.2)
Elementary Education	11 (11.3)	2 (2.7)	13 (7.6)
Counselor Education	20 (20.6)	6 (8.0)	26 (15.1)
Higher Education	27 (27.8)	19 (25.3)	46 (26.7)
Total	97 (56.4)	75 (43.6)	172 (100.0)

Chi-Square = 23.06** Significance = 0.00