1987

Evaluation of professional studies degree programs by graduates 1980-1985

Chairit Photisuvan
Iowa State University

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Evaluation of professional studies degree programs by graduates, 1980–1985

Photisuvan, Chairit, Ph.D.
Iowa State University, 1987
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Evaluation of professional studies degree programs
by graduates 1980-1985

by

Chairit Photisuvan

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education
Major: Education (Adult and Extension Education)

Approved:

In Charge of Major Work

For the Major Department

For the Graduate College

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TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION .............................................. 1
   Department of Professional Studies ......................... 3
   Definitions of Terms ........................................ 4

CHAPTER 2. REVIEW OF LITERATURE ................................. 5
   Definition of Evaluation ..................................... 5
   Major Evaluation Models .................................. 7
   Concept of Decision-Making Evaluation ................. 9
   CIPP Model .................................................. 14
      Emergence of the CIPP model .......................... 14
      An overview of the CIPP model ....................... 16
      Context evaluation ................................ 16
      Input evaluation ....................................... 17
      Process evaluation .................................. 17
      Product evaluation ................................ 18
      An application of CIPP model ....................... 18
   Evaluation Studies Using Alumni and Students ........ 22
   Conclusion .................................................. 29

CHAPTER 3. METHODS OF PROCEDURE .............................. 31
   Purposes of the Study ...................................... 31
   Hypothesis .................................................. 32
   Assumptions ................................................ 32
   Limitations ................................................ 32
   Development of the Questionnaire ..................... 33
   Description of Population ................................ 34
   Data Collection .......................................... 34
   Data Analysis ............................................. 35
   Human Subjects' Rights ................................ 37

CHAPTER 4. FINDINGS AND DISCUSSION .......................... 38
   General Characteristics of Respondents ................. 38
      Age level ............................................... 38
      Highest graduate degree before entering ISU ....... 39
      Highest ISU degree .................................... 40
      Year of graduation .................................... 40
      Degree after ISU graduation .......................... 40
      Area of specialization ................................ 41
      Thesis/creative component requirement ............. 42
      On/off campus ........................................... 42
      Assistantship .......................................... 42
      Certification .......................................... 44
      Classification of employment .......................... 44
      Utilization of gained skills and competencies to job 45
      Recommendation of area of specialization to others 45
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggestions</td>
<td>75</td>
</tr>
<tr>
<td>Counselor Education</td>
<td>76</td>
</tr>
<tr>
<td>Strengths</td>
<td>76</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>76</td>
</tr>
<tr>
<td>Suggestions</td>
<td>76</td>
</tr>
<tr>
<td>Curriculum and Instructional media</td>
<td>77</td>
</tr>
<tr>
<td>Strengths</td>
<td>77</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>77</td>
</tr>
<tr>
<td>Suggestions</td>
<td>77</td>
</tr>
<tr>
<td>Education</td>
<td>77</td>
</tr>
<tr>
<td>Strengths</td>
<td>77</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>77</td>
</tr>
<tr>
<td>Suggestions</td>
<td>77</td>
</tr>
<tr>
<td>Education Administration</td>
<td>78</td>
</tr>
<tr>
<td>Strengths</td>
<td>78</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>78</td>
</tr>
<tr>
<td>Suggestions</td>
<td>78</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>79</td>
</tr>
<tr>
<td>Strengths</td>
<td>79</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>79</td>
</tr>
<tr>
<td>Suggestions</td>
<td>79</td>
</tr>
<tr>
<td>Higher Education</td>
<td>79</td>
</tr>
<tr>
<td>Strengths</td>
<td>79</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>80</td>
</tr>
<tr>
<td>Suggestions</td>
<td>80</td>
</tr>
<tr>
<td>Historical, Philosophical and Comparative Studies in Education</td>
<td>81</td>
</tr>
<tr>
<td>Strengths</td>
<td>81</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>81</td>
</tr>
<tr>
<td>Suggestions</td>
<td>81</td>
</tr>
<tr>
<td>Learning Disabilities (L.D.)</td>
<td>81</td>
</tr>
<tr>
<td>Strengths</td>
<td>81</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>82</td>
</tr>
<tr>
<td>Suggestions</td>
<td>82</td>
</tr>
<tr>
<td>Research and Evaluation</td>
<td>82</td>
</tr>
<tr>
<td>Strengths</td>
<td>82</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>83</td>
</tr>
<tr>
<td>Suggestions</td>
<td>83</td>
</tr>
<tr>
<td>Discussion of Findings</td>
<td>83</td>
</tr>
<tr>
<td>Composition of factors</td>
<td>83</td>
</tr>
<tr>
<td>Influence of demographic variables on graduates</td>
<td>84</td>
</tr>
<tr>
<td>Sex</td>
<td>84</td>
</tr>
<tr>
<td>Highest degree at ISU</td>
<td>85</td>
</tr>
<tr>
<td>Area of specialization</td>
<td>86</td>
</tr>
<tr>
<td>Thesis/creative component requirement</td>
<td>87</td>
</tr>
<tr>
<td>Occupation</td>
<td>89</td>
</tr>
<tr>
<td>CHAPTER 5. SUMMARY AND RECOMMENDATION</td>
<td>91</td>
</tr>
<tr>
<td>Summary</td>
<td>91</td>
</tr>
<tr>
<td>The 10 highest satisfaction statements</td>
<td>95</td>
</tr>
<tr>
<td>TABLE 1.</td>
<td>Age of respondents by number and percent</td>
</tr>
<tr>
<td>TABLE 2.</td>
<td>Highest graduate degree before entering ISU by number and percent</td>
</tr>
<tr>
<td>TABLE 3.</td>
<td>Highest ISU degree by number and percent</td>
</tr>
<tr>
<td>TABLE 4.</td>
<td>Year of graduation by number and percent</td>
</tr>
<tr>
<td>TABLE 5.</td>
<td>Degree after ISU graduation</td>
</tr>
<tr>
<td>TABLE 6.</td>
<td>Area of specialization by number and percent</td>
</tr>
<tr>
<td>TABLE 7.</td>
<td>Thesis, dissertation or creative component completion by number and percent</td>
</tr>
<tr>
<td>TABLE 8.</td>
<td>Course work on/off campus</td>
</tr>
<tr>
<td>TABLE 9.</td>
<td>Assistantships by number and percent</td>
</tr>
<tr>
<td>TABLE 10.</td>
<td>Certification at ISU by number and percent</td>
</tr>
<tr>
<td>TABLE 11.</td>
<td>Classification of employment by number and percent</td>
</tr>
<tr>
<td>TABLE 12.</td>
<td>Utilization of gained skills and competencies to job</td>
</tr>
<tr>
<td>TABLE 13.</td>
<td>Recommendation of area of specialization to others by number and percent</td>
</tr>
<tr>
<td>TABLE 14.</td>
<td>Ethnic-racial group by number and percent</td>
</tr>
<tr>
<td>TABLE 15.</td>
<td>Items and factor loadings related to section</td>
</tr>
<tr>
<td>TABLE 16.</td>
<td>Items and factors loadings related to department</td>
</tr>
<tr>
<td>TABLE 17.</td>
<td>Items and factor loadings related to overall questions about department</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TABLE 18.</td>
<td>T-test of scores from eleven factors in relation to sex</td>
</tr>
<tr>
<td>TABLE 19.</td>
<td>Analysis of variance of scores from eleven factors and highest degree completed and group means</td>
</tr>
<tr>
<td>TABLE 20.</td>
<td>Analysis of variance of scores from eleven factors in relation to the area of specialization and group means</td>
</tr>
<tr>
<td>TABLE 21.</td>
<td>T-test of scores from eleven factors in relation to the thesis/creative component and group means</td>
</tr>
<tr>
<td>TABLE 22.</td>
<td>Analysis of variance of scores from eleven factors in relation to the occupation and group means</td>
</tr>
<tr>
<td>TABLE 23.</td>
<td>Reliabilities, number of items, mean scores, standard deviations, correlations and standardized alpha for the factors</td>
</tr>
<tr>
<td>TABLE 24.</td>
<td>Distribution of highest degree at ISU by sex</td>
</tr>
<tr>
<td>TABLE 25.</td>
<td>Distribution of area of specialization by sex</td>
</tr>
<tr>
<td>TABLE 26.</td>
<td>Distribution of thesis/creative component requirement by sex</td>
</tr>
<tr>
<td>TABLE 27.</td>
<td>Intercorrelation of items: factor 1-graduate program quality in section</td>
</tr>
<tr>
<td>TABLE 28.</td>
<td>Intercorrelation of items: factor 2-course structure in section</td>
</tr>
<tr>
<td>TABLE 29.</td>
<td>Intercorrelation of items: factor 3-communication, sensitivity and enrichment within section</td>
</tr>
<tr>
<td>TABLE 30.</td>
<td>Intercorrelation of items: factor 4-major professor</td>
</tr>
<tr>
<td>TABLE 31.</td>
<td>Intercorrelation of items: couplet 5-section admission</td>
</tr>
<tr>
<td>TABLE 32.</td>
<td>Intercorrelation of items: general</td>
</tr>
</tbody>
</table>
composite 6-curriculum and student evaluation ................. 116

TABLE 33. Intercorrelation of items: factor 7-course structure and materials in department .... 116

TABLE 34. Intercorrelation of items: factor 8-graduate program quality in department ... 116

TABLE 35. Intercorrelation of items: couplet 9-communication in department ............. 117

TABLE 36. Intercorrelation of items: factor 10-program of study committee and procedures .................. 117

TABLE 37. Intercorrelation of items: couplet 11-enrichment activities and career development .............. 117

TABLE 38. Correlation of the factors ..................... 118
CHAPTER 1. INTRODUCTION

To maintain and provide higher-quality academic programs, especially, in a society that is characterized by rapidity of social and cultural change, it is imperative for higher education institutions to evaluate their academic programs (Noel & Parsons, 1973).

In developing an evaluation process, it is necessary to remember the most important purpose of evaluation. This purpose of program evaluation is not to prove but to improve. That is, evaluation should not be only an instrument of accountability but a tool by which to help make programs work better for the people they are intended to serve (Stufflebeam, 1983).

To assess academic program quality, there are four major ways of data collection but the most frequent form of data collection is the program or departmental self-study.

Students and alumni ratings are useful information for departmental self-rating. Opinions and perceptions of students and graduates are unbiased and are valuable sources of information (Startup, 1972; McAlduff, 1975; Centra, 1977). Furthermore, students and graduates are frank and sincere in their assessments. They give praise where praise is due (McAlduff, 1975). Russo, Brown and Rothweiler (1977) believed that:

The act of asking questions of the graduate, drop-
outs, current students and faculty about goals, objectives, education process, and their relationship to each other causes each to pause to contemplate these matters. Specific program strengths and weaknesses are often identified. Curricular revisions have been initiated or expedited as a result of the review process...the follow-up of the graduate has been encouraged and is taking place in some departments for the first time. Questions and recommendations about academic quality and student flow have produced positive program revision (pp. 297-298).

Another study (Clark, Hartnett & Baird, 1976) revealed that the recent alumni have a better perspective about contents, procedures, and requirements of a program than do enrolled students and are more objective than faculty members. Moreover, in the survey of department heads at 134 institutions, Clark (1977) found that nearly 60% considered alumni ratings and opinions to be very important information in departmental use. However, only 40% indicated that evaluation information from alumni was available.

This study was designed to evaluate the graduate program of all sections in the Department of Professional Studies by graduates (alumni) from 1980-85. This study had a companion study of enrolled graduate students which was started in 1985 and completed in 1986 by Subah. Both questionnaires were similar with Subah (1986) adapting from this study.
Department of Professional Studies

The department of Professional Studies consisted of seven sections which included the following area of emphasis:

1. Adult and Extension Education
2. Curriculum and Instructional Media
3. Counselor Education
4. Educational Administration
5. Elementary Education
6. Higher Education
7. Historical, Philosophical and Comparative Studies in Education

Each area of emphasis is designated as a section with its own staff and curriculum except Elementary Education and Learning Disabilities. These two areas are administered primarily by the Department of Elementary Education. Therefore, the two areas are designated as affiliated programs, not considered as sections (Iowa State University, 1982).

The general goals of the Department are as follows (Iowa State University, 1982):

(1) Conduct high quality graduate education programs, both on-campus and off-campus, for students 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).

Definitions of Terms

For the purpose of this study, the following terms were defined:

(1) Evaluation: "the process of ascertaining the decision areas of concerns, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives (Alkin, 1969, p. 2).

(2) Program: "the product resulting from all the programming activities in which the professional educator and learner are involved" (Boyle, 1981, p. 5).
CHAPTER 2. REVIEW OF LITERATURE

The review of literature was designed to look at the evaluation of educational programs by alumni. Since confusion about the definition of evaluation existed and there were many evaluation models, it was necessary to briefly review the definition of evaluation and the major evaluation models to provide appropriate background. The concept of decision-making evaluation and the CIPP Model were examined closely.

This review consisted of the following parts:

1. definition of evaluation.
2. major evaluation models.
3. concept of decision-making evaluation.
4. CIPP model.
5. evaluation studies using alumni and students.

Definition of Evaluation

"Definitions are one of those things that are to live with and hard to live without" (Patton, 1982, p. 33). Patton believes that it is necessary to define terms in order to communicate and "...no single-sentence definition will suffice to fully capture the practice of evaluation" (Patton, 1982, p. 35).

Gephart (1981) defines evaluation in six different ways

1. classificatory: as a problem-solving strategy employed
for establishing the relative or absolute worth of various choices, (2) comparative: comparing evaluation to research, development, management and others, presenting similarities and differences with each, (3) operational: describing how an evaluation is conducted, from identification of decision to conducting evaluation through data collection and analysis to use of information, (4) componential: pointing out that evaluation includes a problem, a situation involving choices, worth of options, a context, a set of values etc. (5) ostensive: giving examples of evaluations, (6) synonym: including words as judgement and appraisal.

Then Gephart concludes that these six definitions are taken together to form his concept of evaluation (Gephart, 1981).

Besides the various ways of approaching the definition of evaluation by Gephart (1981), a review of literature showed that educators defined evaluation several ways and the differences arise largely from differing assumptions about why evaluation is conducted and what uses it serves. Then the different schools of thought have grown up from these definitions.

From the measurement movement in education in the 1920s and 1930s, evaluation was viewed as educational measurement (Thorndike and Hagen, 1969; Stufflebeam, Foley, Gephart, Guba, Hammond, Merriman & Provas, 1971).
There is another school of thought, Patton (1982) calls "The classic approach of Ralph Tyler". Tyler (1949) defines evaluation as the process of determining the extent to which the goals and objectives of a program are being attained.

Pace and Friedlander (1978) presents another school of thought called "educational decision" model which has been associated with the work of Alkin (1969) and Stufflebeam and his associates (1971). This school of thought views evaluation as a process of identifying and collecting information to help decision makers choose among available alternatives.

From literature reviewed, it is clear that there are several ways to approach the definition of evaluation and also there is no consensus of the definition among the educators. However, in general, most approaches are concerned with judgement of worth and merit but they differ in the means they advocate (Pace et al., 1978).

Major Evaluation Models

To understand evaluation, beside examining the various definitions, one should compare the numerous evaluation models with one another. There are many possibilities for comparison but House (1983) proposed "...the most significant comparisons are those among the underlying theoretical assumptions on which the model are based" (p.
45). He points out that evaluation models are based on variations in the assumptions of liberal ideology or the conceptions of liberal democracy.

House (1983, pp. 46-47) classified evaluation models into 8 major models.

1. System analysis. Variables are assumed to be quantifiable, e.g., test scores and differences in programs are related to variations in test scores. The data are often survey data and the outcome measures are related to the programs via correlation analyses.

2. Behavioral objectives. The objectives of a program are identified in terms of specific student performances which can be derived to specific student behaviors and measured by tests, either norm-referenced or criterion-referenced. Ralph Tyler was the originator of this model.

3. Decision making. The evaluations are structured by the decisions to be made. The evaluator is to supply information on these particular decisions. Data collecting methods can be questionnaires, interviews, and surveys. Stufflebeam was the originator.

4. Goal free. This model was developed to respond to the concern about bias in evaluation of Scriven. The evaluators are not informed of the prespecified objectives of the program. Hence the evaluator must search for all outcomes.
5. Art criticism. Educational critics evolve from the traditions of arts and literary criticism. House (1983, p. 46) concluded that a critic is "...one who is attuned by experience and training to judge the important facets of the educational program". Eisner is the leading figure.

6. Accreditation. House (1983) described the procedures as

This is ordinarily done by a team of outside professionals who visit on-site. The local people have previously collected information and studied their program according to a set of external standards. The reviewers commend or disapprove of the local programs" (p. 46).

7. Adversary. This model employs quasi-legal procedures to present the pros and cons of a program. The model ensures the presentation of both sides.

8. Transaction. The educational processes are emphasized. Various informal methods of investigation are used. Stake is the leading figure (House, 1983, pp. 45-47).

Concept of Decision-Making Evaluation

It is widely accepted that evaluation should facilitate decision-making (Stufflebeam, 1983; Dressel, 1978; Alkin, 1969). Alkin (1969) views evaluation as

the process of ascertaining the decision areas of concern, selecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives (p. 2).
This position is consistent with Stufflebeam (1969) who decided that the definition of evaluation, as determining whether objectives had been achieved, is too narrow for educators. Then Stufflebeam (1969) proposed to redefine the evaluation as the process of providing useful information for decision making.

As evaluation is viewed as a basis for decision making, it becomes necessary to examine the type of decisions to be made.

Dressel (1978) points out 4 areas of decisions.

1. Intended ends. This area concerns the alteration and clarification of objectives because some of the objectives may be unachievable within the existing situation.

2. Intended means. Clarification and refinement of processes are concern in this area.

3. Actual ends. Objectives may not be met and undesirable results may occur which need to be remedied or eliminated.

4. Actual means. This area concerns the alterations and adjustments which make the process used different from those intended.

From these four areas of decisions, Dressel (1978) purposes eight:

1. Affirmation of the status quo of the operating
patterns, of the goals, of the staff.

2. Reconsideration and possible redefinition of goals, purposes, objectives, or clients served.

3. Review and alteration of the means of process used.

4. Redefinition or possible reassignment of functions, duties, responsibilities, and pattern of performance.

5. Clarification or alteration of rules, standards and policies.

6. Reallocation of resources including staff and budget.

7. Reassignment of individuals or redefinition of role or alteration of organizational structure.

8. Reconsideration of priorities and ordering of activities (Dressel, 1978, pp. 12-14)

In the decision making approach, evaluation is structured by type of decision to be made. Information, usually from a questionnaire, interview and a survey, for those decisions is supplied by the evaluation. This approach concerns an effectiveness of the program. The major proponents of the decision making evaluation are Stufflebeam and Alkin (House, 1983).

Since the evaluation in this approach is structured by type of decision, the evaluation must be planned in relation
to those decisions. Dressel (1978) believes that it is useful for the evaluator to answer the following series of questions:

(1) what is to be evaluated? (2) why is evaluation being done? (3) what period of time is the evaluation to cover? (4) who determines the goals, purposes, or objectives of the program? (5) who determines the criteria or standards to be used? (6) what criteria or standards to be employed? (7) what are the possible decisions to be taken as a result of the evaluation? (8) what are the steps and procedures to be included in the evaluation? (9) who will make the decisions after completion of the evaluation? (10) who will do the evaluation and how is this person relate to program staff and institutional administration? (11) what conceptions, commitments, or prejudices exist, in either individuals or groups, which may complicate or interfere with an objective appraisal and consequent actions (pp. 14-15).

Dressel (1978) stated that an understanding of types of evaluation is helpful to answer these questions. Four types of evaluation were presented as (1) planning or developmental (2) input (3) process and (4) output.

According to Dressel, planning or developmental evaluation is to determine needs and to devise objectives to meet these needs. Input evaluation is to help make decisions on the utilization of resources to attain the program objectives. Process evaluation provides continuing or periodic feedback for alteration or review of the program planning or program operation. Output evaluation is to assess the attainment of those objectives.
These four types of evaluation proposed by Dressel (1978) are similar to those of Stufflebeam (1983) in the CIPP model which are context, input, process, product. CIPP model will be examined closely in the next sections.

Dressel (1978) found that the terms formative and summative have been widely used to describe type of evaluation. Dressel views summative evaluation as an evaluation that provides a basis for decisions regarding continuation, modification, termination, or replacement of a program while views formative as one providing a basis for formation and reformation of a program. Dressel also stated that planning, input, process and output evaluation can be regarded as both summative and formative. One example of his explanation is about output evaluation. To the extent that it is used for feedback, development of alternatives and improvement, it is formative, while it is summative to the extent that it is used for retaining, modifying, replacing or eliminating a program. From this point of view, Dressel (1978) believes "... summative and formative refer to the nature and finding of a decision than the role of evaluation" (p. 17).
The CIPP model for evaluation was developed in the late 1960s among many models at that time which were oriented to objectives, testing, and experimental design. According to Stufflebeam (1983),

The CIPP approach is based on the view that the most important purpose of evaluation is not to prove but to improve. It is a move against the view that evaluations should be witch hunts or only instruments of accountability (p. 118).

Patton (1978) and Cronbach and Associates (1980) also view evaluation consistently with Stufflebeam. Stufflebeam (1983) suggests the use of CIPP as:

- to promote growth and to help the responsible leadership and staff of an institution systematically to obtain and use feedback so as to excel in meeting important needs, or, at least, to do the best they can with the available resources (p. 118).

For a good understanding of the CIPP model, the development of this model, its overview, and its application will be presented.

Emergence of the CIPP model

Stufflebeam (1983) described the historical background of the CIPP model. Through the attempts to evaluate projects that had been funded through the Elementary and Secondary Education Act of 1965 (ESEA), CIPP was conceptualized. This Act provided billions of dollars to school districts throughout the United States for the
purpose of upgrading the system of elementary and secondary education. Educators were required to evaluate their funded projects. This requirement created a crisis since educators lacked evaluation training and experience. Moreover, there was no evaluation approach that matched the needs of the ESEA. The Ohio State University Evaluation Center was one of several agencies that tried to develop new ways of evaluating education and to provide training in these approaches. Through the work of this center, the CIPP model was first developed.

The center contracted with the Columbus, Ohio Public Schools to evaluate their Elementary and Secondary Education Act projects. The Columbus district sponsored the center to evaluate eight projects. The center staff employed the Tylerian evaluation approach to measure whether, the identified behavioral objectives of each project were met. Stufflebeam (1983) soon found that "... this approach was not adequate for evaluating the Columbus projects" (p. 119) since even after the project had started, the project staff could not agree on what specific objectives should be. Furthermore, "The assumption that educators knew or could easily determine what student behaviors should result from the projects was far from realistic" (p. 119).

Stufflebeam visited the project staff member and observed their activities, he found that
the activities within a given project were not consistently across classrooms, and these activities bore little resemblance to those that had been described in the funding proposal (p. 120).

Therefore he decided that the educators needed a broader definition of evaluation that aimed at managing and improving the programs, then he purposed to redefine evaluation as "...a process of providing useful information for decision making" (p. 120). As a consequence, Stufflebeam decided what types of decisions were needed at that time, then derived appropriate evaluation strategies. Since the projects were implemented and there were concerns on the government's annual funding, Stufflebeam considered there were two major decisions; implementation and recycling and their evaluation; process and product, respectively (Stufflebeam, 1983). After that the context evaluation for planning decisions and input evaluation for structuring decisions were proposed to fill gaps of the program evaluation. So the basic framework of the CIPP model was completed.

An overview of the CIPP model

Each type of evaluation is studied more closely in terms of objectives and methods.

**Context evaluation**

According to Stufflebeam (1983), the main objectives 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 to diagnose problems whose solution would improve the object's well-being. A context evaluation also is aimed at examining whether existing goals and priorities are attuned to the needs of whoever is being served (p. 128).

Stufflebeam recommended using system analysis, survey, document reviews, hearings, interviews, diagnostic tests, and the Delphi technique.

**Input evaluation** The main objectives are to help the clients consider alternatives in the context of their needs and environmental circumstance, to evolve a plan that will work for them and to help clients avoid the wasteful practice of pursuing proposed innovations that predictably would fail or at least waste resources (Stufflebeam, 1983).

Methods used are inventorying and analyzing available human and material resources, solution strategies and procedural design for relevance, feasibility and economy. Another recommended method is the using of advocate teams (Stufflebeam, 1983).

**Process evaluation** In general, process evaluation is an ongoing check on the implementation of a plan. The objectives are to provide feedback to manager and staff about the implementation, to provide guidance for modifying the plan as needed, to assess periodically the extent to which program participants accept and are able to carry out their roles, and to provide an extensive record of the
program that was actually implemented and how it compared to what was intended.

Methods used are monitoring the potential procedural barriers of the activity and remaining alert to unanticipated ones by obtaining specified information for programmed decisions and by continually interacting with and observing the activities of project staff (Stufflebeam, 1983).

Product evaluation Objectives are to collect descriptions and judgements of outcomes, then relate them to objectives, context, input and process information, then interpret their worth and merit.

Recommended methods are (1) defining operationally criteria and measuring outcome criteria (2) collecting judgements of outcomes from stakeholders and (3) performing both qualitative and quantitative analyses (Stufflebeam, 1983).

An application of CIPP model

According to Stufflebeam (1983), The CIPP model was applied in many institutions; for example, the Southwest Regional Educational Laboratory in Austin, Texas; the National Center for Vocational and Technical Education; the U.S. Office of Education; and the school districts in Columbus, Toledo, Cincinnati, Ohio; Dallas, Fort Worth, Houston, and Austin, Texas; and Saginaw, Detroit, and
Lansing, Michigan.

The CIPP model was adapted by Randall (1969) of the Southwest Educational Development Laboratory. Randall's adapted model was called CDPP (context, design, process, and product evaluation). The major objective of his model is to maximize the effectiveness of critical decisions that are made in organization through the timely reporting of relevant information in a useful form to appropriate levels of decision making, in order to optimize planning and development activities (p. 40).

Randall (1969) emphasized that evaluation is the combination of effective decisions based on timely, relevant information. CDPP model focused on four decisions and is designed to yield four kinds of information. Four kinds of evaluation are context, design, process and product evaluation.

The CDPP model is similar to the CIPP model in general. Four decisions that Randall (1969) identified are (1) planning (2) structuring (3) restructuring and (4) recycling. It can be noted that Randall called the third kind of decision "restructuring" which Stufflebeam (1983) called it "implementation". Furthermore, Randall called the evaluation which served the structuring decision, "design" while Stufflebeam called it "input".

Randall (1969) also presented problems of applications of his CDPP model. Since CDPP model is based on the assumption that the most effective decisions are those based
on the best information to the decision makers in the time
that is available. Randall pointed out that in operation
this task posed some serious problems as follows (Randall, 1969):

1. Identifying decisions. Decisions that are faced
are not always easily recognized since an
evaluation system may bring new information in.
It is recommended by Randall (1969) that "...the
system must provide persons who are in contact
with key decision-makers and are continually
alert to decisions that will be faced" (p. 44).
Another problem in identifying decisions is that
decision criteria may change as time passes.
Therefore the evaluation system must provide for
a continual reassessment of criteria that may
affect decisions.

2. Identifying decision-makers. Besides a final
decision-maker, the decision process involves a
complex network of persons who have varying
degrees of influence on the final decision-maker.
Hence the evaluation system "must identify the
key persons involved in any strategic decision
and make arrangement for getting necessary
information to these people" (Randall, 1969, p.
44).
3. Timing of decisions. The best information is no
use if it is not available when decisions based
on that information are made. Randall suggested
that "the system must respond to the time when
critical decisions will be made and yield the
information needed in time for it to be
considered" (p. 44).

4. Identifying relevant information. It is a duty
of the evaluator to make relevant information
understandable for a decision-maker since the
decision-maker who considers which information is
relevant will disregard a sophisticated one in
favor of a more understandable one (Randall,
1969).

5. Reporting in a useful form. Besides a concern
for degree of sophistication of information, it
is recommended by Randall (1969) to be concerned
for the degree of specificity of the information.
In other words, information should be in a useful
form for the decision-maker regarding terminology
and techniques used to present the information.

After all, Randall emphasized the importance of
communication. Besides the written communication,
"...visual and oral cues and face-to-face interaction" are
needed for more understanding (Randall, 1969).
It is obviously seen that Randall (1969) put a lot of effort in applying the CIPP model at an operational level with the emphasis of the two important components of his adapted model; CDPP (decisions and information to serve that decision).

Evaluation Studies Using Alumni and Students

To assess academic program quality, Clark (1983) briefly presented four major forms of data collection: the program or departmental self-study, assessing student learning, assessing faculty scholarship and reputational ratings. There are various methods; checklists, questionnaires, and tests, that might be used in the assessment of educational quality (Dressel, 1978; Stauffer, 1981; Webster, 1981).

According to Clark (1983), the most frequent form of data collection is the program or departmental self-study. Stake (1976) stated that the self-study had a great value of keeping problem-solving responsibility at the site of the problem. The self-study processes help to improve the program and result in the institutions being more effective. Furthermore, self-study can improve openness of communication patterns and trust among staff and heighten effective group functioning to face and solve problems (Kells, 1983).
Centra (1977) summarized six ways to evaluate teaching, one component of an academic program. Six ways were: (1) self-evaluation or self-reports (2) student ratings (3) colleague evaluations (4) alumni rating (5) use of videotaping and (6) assessment of student learning. Only student ratings and alumni ratings will be examined because they related closely to this study.

The image of the academic program can be determined by assessing the perceptions and satisfaction of 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). Opinions and perceptions of students and graduates are unbiased and are valuable sources of information (Startup, 1972; McAlduff, 1975; Centra, 1977). Furthermore, McAlduff believes that "students are frank and sincere in their assessments. They give praise where praise is due" (p. 29). Centra (1977) viewed the use of the student rating that "although the ratings are increasingly being considered in personnel decisions, they have been used primarily to improve instruction" (p. 95). Centra (1977) added that "when student ratings are used to make personnel decisions, the means of collecting and interpreting data become particularly important" (p. 96). Centra illustrated some
examples as

we might expect that students would be more lenient or generous if they were informed that the ratings would be used for tenure, promotion, or salary considerations. Conversely, we might expect students to be more frank and possibly more severe in their ratings and criticisms if they understood that the results would be used for improving the course or the instruction; such information, they might logically assume, could lead to needed changes (pp. 96-97).

However, the study of Centra (1976) showed that the differences in ratings under the circumstances were only slight.

Another source of information is alumni or graduates. There is evidence from two published studies that clearly indicates the substantial agreement between the current students and alumni's rating (Druckers & Remmers, 1951; Centra, 1974). However, "survey of alumni provide useful information for adjusting the curriculum or environment of a college" (Centra, 1977, p. 101). Moreover, Centra also pointed out that alumni views of utility of particular courses or experiences were likely to be of greater benefit than their ratings of the instructional procedures of particular teachers. Centra's opinion is consistent with Clark et al. (1976) who suggested that recent alumni have a better perspective about the contents, procedures, and requirements of a program, than do enrolled students and are more objective than faculty members. According to Clark (1977), the majority of the department heads view alumni
rating and opinions to be "very important" information in departmental review and evaluations for departmental uses.

From the literature review, students and graduates are obviously useful resources for assessing an academic program quality. The following section will be a summary of related evaluation studies using students or graduates.

Wise, Hengstler, and Braskamp (1981) conducted a study investigating the alumni ratings of departmental quality. A total of 4,573 enrolled students of 22 university departments from 6 colleges rated 11 items concerning satisfaction on various aspects of their major department. Two years later, 1,228 alumni from the same departments completed and returned the alumni survey. The results of this study were reported as (1) former students continue to evaluate their major programs along the same dimensions after graduation. Hence, it appears reasonable to make comparisons between groups of enrolled students and alumni. (2) There were significant differences between department means for four items. Alumni were more satisfied with integration of courses, classroom evaluation procedures, and accessibility of instructors than were enrolled students, whereas they were less satisfied with vocational guidance. Wise et al. (1981) believes that "... alumni have a more valid perspective in the quality of vocational guidance in a department than do enrolled students" (p. 76). (3) Only the
variable dealing with helpfulness of major in job highly influences an alumni's attitudes toward major program. Overall, the satisfaction items showed higher correlations with alumni attitudes toward major program and slightly lower correlations with attitudes toward the university.

From 172 enrolled graduate students in the Professional Studies Department at Iowa State University, Subah (1986) identified 12 factors relating to the section and department. These were: quality of graduate program, quality of courses, relationship with major professor, enrichment activities in section, sensitivity to students, career development and admission standards in section. Other factors related to the department were: quality of instruction, course structure, program of study committee, career development, and registration/course availability. Factor reliabilities ranged from .46 to .90.

Significant differences were found between age, sex, area of specialization, and employment and the level of satisfaction of enrolled graduate students.

The objective of an academic program should be relevant to its clients' professional responsibilities to enable them to fully serve their future roles. Noel and Parsons (1973) conducted an evaluation study at the Department of Adult and Community College Education, North Carolina State University to determine the perceptions held by doctoral graduates of
the relevance of the department's learning objective to the graduates in regard to their professional responsibilities. Relevance, in this study, was defined as "... the utility or usefulness of the Department's objectives to the graduates' professional responsibilities" (p. 44). Eighty-four graduates responded to the questionnaire which contained a list of 38 competencies that were considered representative of the Department's objectives. The results indicated that professional responsibilities were associated with the graduates' evaluation of the relevance of the Department's objectives. Teachers or researchers gave the research objective higher ratings of relevance. Program development specialists and administrators emphasized the relevance of an understanding of adult education as a process of social change and the objectives stressing professional skills needed by the practitioner.

Braskamp, Wise, and Hengstler (1979) used undergraduate and graduate students from 38 departments to indicate their degree of satisfaction with their major department at University of Illinois at Urbana-Champaign. These students were asked to respond to a 24-item instrument titled Program Evaluation Survey (PES) which was developed to measure student perception of and satisfaction with the instructional, curricular, advising, and operational phases of the department. The report showed the results as
Two highly correlated factors, General Satisfaction with Major and Satisfaction with Mentorship, were obtained for the two groups of students for 2 successive years. Factor scores did not differ substantially across subgroups of students with differing characteristics on class level, grade point average, sex, field of study, or reason for choosing their major. Fifteen faculty and departmental characteristics were also uncorrelated with factor scores. Student satisfaction appears to represent a unique criterion for assessing departmental quality (p. 494).

In another study (Hearn, 1985) used students to evaluate an academic program, 775 students from 2 universities were asked to evaluate their academic programs. This report showed that, in general, stimulating course work and good teaching were more important than opportunities for faculty-student interaction or perceived faculty knowledgeability. However, there were significant field or gender differences, 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.

Centra (1974) conducted a study to investigate the relationship between student and alumni ratings of instructors. This study found that the student and alumni ratings for 23 teachers were highly correlated (.75). This substantial agreement between current students and alumni (of five years) regarding who have been effective or
ineffective teachers suggests a good deal of persistence in judgements of teachers by students.

From the above literature review, it can be concluded that student and alumni ratings are valid, useful, and important sources of information to be considered in assessing academic program (Wise et al., 1981).

Conclusion

The review of literature was geared to bring a background of evaluation; various approaches to the definition of evaluation and major models. Then a close investigation was given to the concept of decision-making evaluation studies using alumni and students. The overall review could be summarized as follows:

1. The definition of evaluation can be defined several ways according to differing assumptions about why evaluation is conducted and what uses it serves.

2. One of the major models, CIPP is based on the view that the most important purpose is not to prove but to improve programs, and was developed to provide information for making four decisions (planning, structuring, implementation, and recycling).

3. There are various ways to assess academic program
quality but the most frequent use is departmental or program self-study.

4. Students and alumni ratings are useful information for departmental self-study.

5. Recent studies showed that former students continued to evaluate their major programs along the same dimensions after graduation.

6. Alumni ratings of the ability of the faculty and overall excellence of the program correlated highly with ratings of enrolled students.

   However, alumni have a better perspective about contents, procedures, and requirements of a program than do enrolled students and are more objective than faculty members (Clark et al., 1976).
CHAPTER 3. METHODS OF PROCEDURE

This chapter was organized into several sections; purposes of this study, hypothesis, assumptions, limitations, development of the questionnaire, description of population, data collection, data analysis and human subjects' rights.

purposes of the Study

The purposes of this study were to:

1. Identify the degree of satisfaction of the alumni with the graduate degree programs in terms of goals and process.

2. Examine the demographic data including age, sex, occupation, year of graduation, section major, type of degree, graduate degree at another institution, thesis/creative component requirement, and off/on campus degree as factors in satisfaction.

3. Make recommendations for improvement of the sections and department based on the perceptions of alumni.
Hypothesis

There were no significant differences between degree of satisfaction of alumni and age, sex, occupation, year of graduation, section major, highest degree at ISU, and thesis/creative component requirement.

Assumptions

1. A questionnaire from alumni obtained accurate and valid information for evaluating a program.
2. The list of the graduates obtained from the Alumni Development Office was accurate and up-to-date.
3. Graduates responded openly to the questionnaires.
4. All graduates were able to recall experiences in the program.

Limitations

1. Responses were limited to the 1980-1985 graduates of the Professional Studies Department, College of Education.
2. The applicability of the data collected was related to the program in higher education at Iowa State University where it was collected and no inferences were made to any other population.
Development of the Questionnaire

In the preparation for the study a review was made of literature concerning program evaluation in higher education, and also available instruments. The result was a modification from the questionnaire used by Braskamp, Wise, and Hengstler (1979).

The questionnaire consisted of two parts: (1) the personal demographic data, (2) a list of statements concerning the elements (i.e., course structure, content, instruction) of a graduate program. Part two consisted of three sections: (1) statements related to the section major, (2) statements related to the Professional Studies Department outside the major, and (3) statements related to the overall department. Respondents were asked to assign a number on a scale from zero to five, indicating the degree of satisfaction with the graduate program at ISU. Number five indicated that the respondents were highly satisfied with that statement, one indicated highly dissatisfied, three indicated undecided and zero indicated not applicable. Six open-ended items gave respondents the opportunity to list the strengths and weaknesses of their section, the weaknesses and strengths of the courses taken outside their section major but in the Professional Studies Department, and how the department failed to meet their expectations when they entered and their suggestions on changes for the
department in courses, curriculum, procedures, or staffing of the overall program.

The tentative questionnaire was submitted to all of the faculty members of the Professional Studies Department in the Fall of 1985 for additions, corrections, rewording and clarity of statements. A few items were added and reworded. This revised questionnaire was resubmitted to all of the section leaders and the department head to ascertain content validity and to receive more suggestions. According to the suggestions made by the section leaders and the department head, the questionnaire was rearranged and revised.

Description of Population

The population of this study was comprised of graduates of the Professional Studies Department from 1980-1985. The list of names and mailing addresses of these graduates was obtained from the Alumni Development Office.

Data Collection

The questionnaire including self-addressed envelopes were mailed to the graduates by first class mail for the purposes of forwarding to a new address and/or returning to sender in case of incorrect address. To increase the percentage of questionnaires returned, a follow-up letter was sent to encourage response at the end of two weeks and a
second follow-up at the end of four weeks.

Four hundred ninety of the questionnaires were mailed to the graduates. A total of 374 questionnaires were returned. Of this number, 1 questionnaire was returned from abroad after data analysis was done, 3 were returned unanswered, and 5 were returned as "address unknown". This was a 75 percent response rate or 366 usable questionnaires.

Data Analysis

The 366 questionnaires were coded for computation. The information from the questionnaires were entered and data were analyzed at Iowa State University Computation Center. Before computation of the data began, a print-out of data was checked for possible errors. Identified errors were corrected.

SPSSX (Nie, Hull, Jenkins, Steinbrenner & Bent, 1983) was the statistical package used to analyze the data. Alumni demographics included age, sex, graduated degree from another institution before coming and after, year of graduation, type of degree, employment related to degree, thesis/creative component requirement, graduate assistantship, and certification while working on last degree at ISU in the Professional Studies Department. The demographic data were analyzed by frequencies, percentages, and means to describe alumni's characteristics.
Three separate factor analyses on statements of program elements of Part II section I, II, III were computed, every item was included in the factor analysis, except items 69-74 and item 76 which were items with a large number of no responses and "not applicable". Factors were formed by clusters by the following criteria:

1. High loading on that factor (.4 or above).
2. Uniqueness; item should load highly on only one factor (at least .10 differences in loading).
3. Meaning; items should be meaningful for overall content of the factor. Individual items which did not meet these criteria were not used for further analysis.

The reliabilities of the factors were computed to determine internal consistency of each factor. Each factor was correlated with every other factor. Correlation coefficients were used to indicate the independence among the factors. T-tests and analysis of variance: single classification were used to determine the influence of the demographic variables upon the factors. For those which had significant differences, the multiple ranges test; Scheffé was used to identify the differences within the group of variables at the 0.05 level of significance.
Human Subjects' Rights

The questionnaire used in this study was reviewed by the Iowa State University Committee on the Use of Human Subjects in Research and was approved that the right and welfare of the human subjects were protected, that confidentiality of data was assured, and that informed consent was obtained by appropriate procedures.
CHAPTER 4. FINDINGS AND DISCUSSION

General Characteristics of Respondents

The respondents were asked to provide information on their characteristics including age, sex, occupation, year of graduation, type of degree, graduate degree at another institution, employment related to the last degree, thesis/creative component requirement, on/off campus degree. This information served as background data for interpreting other data and to make this study as meaningful as possible. The characteristics presented are from 366 of the 490 graduates of the Professional Studies Department from 1980-1985. The number and percentage of the graduates represented in each category are presented.

Age level

Age levels are divided into 4 categories, as shown in Table 1, from 20 years of age to over 50 years of age. Respondents were represented in every age category. The largest percentage (49.2%) of the respondents were 31 through 40 years of age. The next largest percentage (23.8%, 18.9%) were in the 20 through 30 year and the 41-50 year age groups respectively. Seventy-three percent of the respondents were in the age span of 20 through 40 years (see Table 1).
TABLE 1. Age of respondents by number and percent

<table>
<thead>
<tr>
<th>Age grouping</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30</td>
<td>87</td>
<td>23.8</td>
</tr>
<tr>
<td>31-40</td>
<td>180</td>
<td>49.2</td>
</tr>
<tr>
<td>41-50</td>
<td>69</td>
<td>18.9</td>
</tr>
<tr>
<td>over 50</td>
<td>30</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Highest graduate degree before entering ISU

In Table 2, the largest percentage (79.2%) of the respondents had no other graduate degree before entering their programs at ISU. The next largest percentage (11.2%) had an M.S. degree (see Table 2).

TABLE 2. Highest graduate degree before entering ISU by number and percent

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Ed.</td>
<td>13</td>
<td>3.6</td>
</tr>
<tr>
<td>M.S.</td>
<td>41</td>
<td>11.2</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>4.9</td>
</tr>
<tr>
<td>No Other</td>
<td>290</td>
<td>79.2</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>
**Highest ISU degree**

Table 3 showed that the largest percentage (68.6%) of the respondents had M.S. as the highest ISU degree. The next largest percentage (23.0%) had a Ph.D. degree (see Table 3).

**TABLE 3. Highest ISU degree by number and percent**

<table>
<thead>
<tr>
<th>Highest ISU degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Ed.</td>
<td>29</td>
<td>7.9</td>
</tr>
<tr>
<td>M.S.</td>
<td>251</td>
<td>68.6</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>84</td>
<td>23.0</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Year of graduation**

The percentages of the distribution of the respondents over the 6 years of 1980 through 1985 were fairly equal. The largest percentage (19.1%) of the respondents graduated in the year 1981. The next largest percentage (18.9%) graduated in 1980 (see Table 4).

**Degree after ISU graduation**

In Table 5, 97.8% of the respondents had no other graduate degree after ISU graduation (see Table 5).
TABLE 4. Year of graduation by number and percent

<table>
<thead>
<tr>
<th>Year of Graduation</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>69</td>
<td>18.9</td>
</tr>
<tr>
<td>1981</td>
<td>70</td>
<td>19.1</td>
</tr>
<tr>
<td>1982</td>
<td>64</td>
<td>17.5</td>
</tr>
<tr>
<td>1983</td>
<td>56</td>
<td>15.3</td>
</tr>
<tr>
<td>1984</td>
<td>67</td>
<td>18.3</td>
</tr>
<tr>
<td>1985</td>
<td>37</td>
<td>10.1</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

TABLE 5. Degree after ISU graduation

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>No Other</td>
<td>358</td>
<td>97.8</td>
</tr>
<tr>
<td>No Response</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Area of specialization

The largest percentage (24.3%) of the respondents were in Higher Education. The next largest percentage (19.7%) were in Education Administration. Counselor Education and Learning Disabilities were the two areas of specialization that were fairly even in number of respondents (15% and 15.8% consecutively, see Table 6).
TABLE 6. Area of specialization by number and percent

<table>
<thead>
<tr>
<th>Area of Specialization</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>8</td>
<td>2.2</td>
</tr>
<tr>
<td>Adult and Extension Education</td>
<td>24</td>
<td>6.6</td>
</tr>
<tr>
<td>Curriculum and Instructional Media</td>
<td>28</td>
<td>7.7</td>
</tr>
<tr>
<td>Educational Administration</td>
<td>72</td>
<td>19.7</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>19</td>
<td>5.2</td>
</tr>
<tr>
<td>Counselor Education</td>
<td>55</td>
<td>15.0</td>
</tr>
<tr>
<td>Higher Education</td>
<td>89</td>
<td>24.3</td>
</tr>
<tr>
<td>History, Philosophy and Comparative Education</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>58</td>
<td>15.8</td>
</tr>
<tr>
<td>Research and Evaluation</td>
<td>8</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Thesis/creative component requirement**

To meet the requirements for the last graduate degree the respondents earned while majoring in the Professional Studies Department, 66.4% completed a thesis or dissertation (see Table 7).

**On/off campus**

Over 90% of the respondents completed over 50% of their ISU course work for their last degree on campus (Table 8).

**Assistantship**

Over half (68.3%) of the respondents were not on any assistantship and 21.3% were on research and some administrative, resident hall assistantships (Table 9)
TABLE 7. Thesis, dissertation or creative component completion by number and percent

<table>
<thead>
<tr>
<th>Completion</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis, dissertation</td>
<td>122</td>
<td>33.3</td>
</tr>
<tr>
<td>Creative component</td>
<td>243</td>
<td>66.4</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

TABLE 8. Course work on/off campus

<table>
<thead>
<tr>
<th>On/off</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>On campus</td>
<td>334</td>
<td>91.3</td>
</tr>
<tr>
<td>Off campus</td>
<td>31</td>
<td>8.5</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

TABLE 9. Assistantships by number and percent

<table>
<thead>
<tr>
<th>Assistantships</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching assistantship</td>
<td>37</td>
<td>10.1</td>
</tr>
<tr>
<td>Research assistantship and other</td>
<td>78</td>
<td>21.3</td>
</tr>
<tr>
<td>No assistantship</td>
<td>250</td>
<td>68.3</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Certification

Almost half (48.4%) of the respondents received certification (i.e., superintendent, principal, guidance counselor, instructional media specialist, and learning disabilities specialist) while working on their last degree at ISU in Professional Studies (Table 10).

<table>
<thead>
<tr>
<th>Certification</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>177</td>
<td>48.4</td>
</tr>
<tr>
<td>No</td>
<td>188</td>
<td>51.4</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Classification of employment

In Table 11 the largest percentage (43.7%) of the respondents were employed by local school districts. The next largest percentage (20.5%) were in a 4-year college. Due to the low number in some categories, the "Federal Government" and the "State Government" categories were combined to form the "Federal-State Government" and the "Industry-Business" and the "Self-employed" were combined to form the "Industry/Business/Self-Employed" (Table 11).
TABLE 11. Classification of employment by number and percent

<table>
<thead>
<tr>
<th>Classification of Employment</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal/State Government</td>
<td>29</td>
<td>7.9</td>
</tr>
<tr>
<td>Industry/Business/Self-Employed</td>
<td>31</td>
<td>8.4</td>
</tr>
<tr>
<td>4-Year College</td>
<td>75</td>
<td>20.5</td>
</tr>
<tr>
<td>2-Year/Community College</td>
<td>19</td>
<td>5.2</td>
</tr>
<tr>
<td>Local School District</td>
<td>160</td>
<td>43.7</td>
</tr>
<tr>
<td>Other</td>
<td>49</td>
<td>13.4</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Utilization of gained skills and competencies to job

In the respondents' present job, 51.6% utilized a great deal of the skills and competencies gained from the last degree received from ISU, 35% somewhat, 8.2% very little, and 1.1% not at all (Table 12).

Recommendation of area of specialization to others

Almost half (49.2%) of the respondents would recommend "a great deal" their area of specialization in Professional Studies at ISU to other Students. Thirty-eight percent would recommend it "somewhat" (Table 13).

Ethnic-racial group

The largest percentage (90.2) of the respondents were white/Caucasian while 5.7% were black American (Table 14).
### TABLE 12. Utilization of gained skills and competencies to job

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal</td>
<td>189</td>
<td>51.6</td>
</tr>
<tr>
<td>Somewhat</td>
<td>128</td>
<td>35.0</td>
</tr>
<tr>
<td>Very little</td>
<td>30</td>
<td>8.2</td>
</tr>
<tr>
<td>Not at all</td>
<td>12</td>
<td>3.3</td>
</tr>
<tr>
<td>Not applicable</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### TABLE 13. Recommendation of area of specialization to others by number and percent

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal</td>
<td>180</td>
<td>49.2</td>
</tr>
<tr>
<td>Somewhat</td>
<td>141</td>
<td>38.5</td>
</tr>
<tr>
<td>Very little</td>
<td>36</td>
<td>9.8</td>
</tr>
<tr>
<td>Not at all</td>
<td>7</td>
<td>1.9</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>366</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Summary of demographic data**

Review of the demographic data revealed: 49.2% of the 366 respondents were 31-40 years of age, 65.0% of the respondents were female, had no other graduate degree before entering their program at ISU (79.2%), had M.S. as the highest degree at ISU (68.6%), graduated in 1981 (19.1%),
TABLE 14. Ethnic-racial group by number and percent

<table>
<thead>
<tr>
<th>Ethnic-Racial Group</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Alumni</td>
<td>11</td>
<td>3.0</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>330</td>
<td>90.2</td>
</tr>
<tr>
<td>Hispanic American</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Black/Afro American</td>
<td>21</td>
<td>5.7</td>
</tr>
<tr>
<td>Native Indian American</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

had no other graduate degree after ISU graduation (97.8%), had Higher Education as their area of specialization (24.3%), completed the creative component to meet their requirements of degree (66.4%), completed the majority of course work on campus (91.3%), were not on assistantships (68.3%), did not received certification while working on ISU degree (51.4%), and were employed by local school districts (43.7%).

**Highest and Lowest Program Satisfaction Statements**

The respondents were asked to rate each of the 55 statements on elements of the program of their area of specialization, other courses outside their area of specialization and the Professional Studies Department on the scale 0 to 5 in terms of satisfaction (0-not applicable,
1-highly dissatisfied, 3-undecided, and 5-highly satisfied). The ten highest and lowest mean score statements were as shown below. Nine out of ten of the ten highest were the statements related to their section major.

**Ten highest satisfaction statements**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of classes in section</td>
<td>4.43</td>
</tr>
<tr>
<td>Relationship between student and major professor</td>
<td>4.18</td>
</tr>
<tr>
<td>Availability of major professor to student</td>
<td>4.14</td>
</tr>
<tr>
<td>Overall treatment as a student in section</td>
<td>4.14</td>
</tr>
<tr>
<td>Opportunity to communicate with faculty and student in section</td>
<td>4.13</td>
</tr>
<tr>
<td>Length of time require to complete the program in section</td>
<td>4.13</td>
</tr>
<tr>
<td>Admissions procedures in section</td>
<td>4.06</td>
</tr>
<tr>
<td>Admission standards in section</td>
<td>4.01</td>
</tr>
<tr>
<td>Procedures used for registration (overall)</td>
<td>3.99</td>
</tr>
<tr>
<td>The extent to which student regarded his/her graduate program as worthwhile in section</td>
<td>3.98</td>
</tr>
</tbody>
</table>

**Ten lowest satisfaction statements**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>The quality of career development assistance in the department</td>
<td>2.84</td>
</tr>
</tbody>
</table>
The quality of career development assistance in section 2.91

Departmental attention to providing with credentials for obtaining employment after graduation 2.94

The availability of enrichment activities in the department offered in addition to regular classes 2.96

The availability of enrichment activities offered by section in addition to regular classes 3.03

Orientation of students to the section 3.07

Usefulness of the program of study committee 3.37

Contact with faculty outside the classroom in the department 3.46

The variety of course offerings taken in the department but outside section 3.49

The extent to which a sound theoretical framework was developed for the additional courses taken in the department 3.51

Factor Analysis

Responses to the 55 statements (items 18-45, 48-59, and 62-76) on the questionnaires were analyzed using factor analysis. The analysis used the extraction technique of PA2
and Varimax rotation from the SPSSX package (Nie et al., 1983). Criteria used to consider factor loading were as follows:

1. high loading on that factor (.4 or above).
2. uniqueness: item should load highly on only one factor (at least .10 difference in loading).
3. meaning: items should be meaningful for overall content of the factor.

Four factors, one couplet, and one general composite were formed from items 18-45 and two factors, one couplet from items 48-59, and one factor and one couplet from items 62-76 (Tables 15, 16, 17). Totally seven factors, one general composite, and three couplets emerged from 39 of the 55 statements and were named according to the apparent content of statements. Names assigned to the factors, general composite and couplets were:

1. graduate program quality in section.
2. course structure in section.
3. communication, sensitivity and enrichment within section.
4. major professor.
5. section admissions.
6. curriculum and student evaluation.
7. course structuring and materials in department.
8. graduate program quality in department.
9. communication in the department
10. program of study committee and procedures.
11. enrichment activities and career development.

Intercorrelation of all items in each factor can be found in Appendix B. There were 9 individual items which did not meet the criteria to be included in any of the above factors. Nine individual items were 26, 41, 45, 49, 53, 57, 62, 63 and 68. Therefore they were treated as individual items which were not used in further analysis. Furthermore, items 69-74 and 76 had only a few responses and were not included in the analysis.

Factor 1—graduate program quality in section

There were 5 statements that were judged to be representative of Factor 1. Overall quality of instruction in section, instructors' ability to teach, and overall satisfaction with graduate program in section was best characterized by the title graduate program quality in section. The 5 statements had factor loadings from 0.59 to 0.73. The reliability for this factor was 0.92. Items in the factors were identified by item numbers assigned in the questionnaire and factor loadings were given after each item.

Statements in factor 1

28 Overall quality of instruction in section .73
TABLE 15. Items and factor loadings related to section

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Couplet 5</th>
<th>Composite 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>.73²</td>
<td>.27</td>
<td>.25</td>
<td>.21</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.70²</td>
<td>.32</td>
<td>.28</td>
<td>.19</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>.70²</td>
<td>.33</td>
<td>.29</td>
<td>.23</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>.69²</td>
<td>.37</td>
<td>.27</td>
<td>.19</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>.59²</td>
<td>.46</td>
<td>.09</td>
<td>.17</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>.34</td>
<td>.78²</td>
<td>.09</td>
<td>.12</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>.24</td>
<td>.68²</td>
<td>.16</td>
<td>.08</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.35</td>
<td>.59²</td>
<td>.22</td>
<td>.94</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>.16</td>
<td>.53²</td>
<td>.19</td>
<td>.10</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>.16</td>
<td>.31</td>
<td>.60²</td>
<td>.20</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>.12</td>
<td>.04</td>
<td>.59²</td>
<td>.27</td>
<td>-.04</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>.39</td>
<td>.20</td>
<td>.57²</td>
<td>.25</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>.14</td>
<td>.03</td>
<td>.54²</td>
<td>.06</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>.23</td>
<td>.18</td>
<td>.49²</td>
<td>.10</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>.12</td>
<td>.32</td>
<td>.49²</td>
<td>.01</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.09</td>
<td>.28</td>
<td>.43</td>
<td>.27</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.19</td>
<td>.14</td>
<td>.18</td>
<td>.82²</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>.15</td>
<td>.09</td>
<td>.22</td>
<td>.77²</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>.27</td>
<td>.19</td>
<td>.26</td>
<td>.77²</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>.12</td>
<td>.16</td>
<td>.00</td>
<td>.06</td>
<td>.92²</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>.07</td>
<td>.07</td>
<td>.12</td>
<td>.08</td>
<td>.68²</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>.36</td>
<td>.39</td>
<td>.19</td>
<td>.21</td>
<td>.24</td>
<td>-3</td>
</tr>
<tr>
<td>32</td>
<td>.43</td>
<td>.45</td>
<td>.19</td>
<td>.09</td>
<td>.25</td>
<td>-3</td>
</tr>
<tr>
<td>33</td>
<td>.30</td>
<td>.35</td>
<td>.30</td>
<td>.11</td>
<td>.23</td>
<td>-3</td>
</tr>
<tr>
<td>44</td>
<td>.52</td>
<td>.10</td>
<td>.54</td>
<td>.35</td>
<td>.08</td>
<td>-3</td>
</tr>
</tbody>
</table>

¹Factor titles indicated as follow: (1) graduate program quality in section (2) course structure in section (3) communication, sensitivity and enrichment within section (4) major professor (5) section admission (6) curriculum and student evaluation.

²Indicates on which factors the items load.

³A composite of items which do not uniquely load on a factor.
**TABLE 16.** Items and factors loadings related to department

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Couplet 1</th>
<th>Couplet 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>0.62</td>
<td>0.12</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.58</td>
<td>0.10</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>0.58</td>
<td>0.17</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>0.40</td>
<td>0.23</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.28</td>
<td>0.70</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>0.12</td>
<td>0.61</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>0.13</td>
<td>0.59</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>0.13</td>
<td>0.14</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>0.12</td>
<td>0.07</td>
<td>0.74</td>
<td></td>
</tr>
</tbody>
</table>

1Factors' titles indicated as follows: (7) course structure and materials in department (8) graduate program quality in department (9) communication in department.

2Indicates on which factors the items load.

**TABLE 17.** Items and factor loadings related to overall questions about department

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Couplet 1</th>
<th>Couplet 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>0.92</td>
<td></td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>0.59</td>
<td></td>
<td>0.09</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>0.40</td>
<td></td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>0.08</td>
<td></td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>0.24</td>
<td></td>
<td>0.50</td>
<td></td>
</tr>
</tbody>
</table>

1Factors' titles indicated as follows: (10) program of study committee and procedures (11) enrichment activities and career development.

2Indicates on which factors the items load.
30 Instructors' ability to teach in section .70
43 Overall satisfaction with graduate program in section .70
42 Extent regarded graduate program as worthwhile in section .69
21 Extent to which you were challenged by course work in section .59

**Factor 2-course structure in section**

The four statements in this factor focus on the course structure and its relevance to their job. Factor loading of the four statements were between .53 and .78. The reliability for this factor was .83.

**Statements in factor 2**

22 Extent section provided a well-integrated set of courses .78
23 Variety of different course offerings in section .68
25 Relevance of course work in section to job in that area .59
24 Amount of structure in the graduate program of section .53

**Factor 3-communication, sensitivity and enrichment within section**
The 7 statements in this factor focus on communication and sensitivity of instructors and students and enrichment activities. The factor loadings of the 7 statements were between .43 and .60. The reliability of this factor was .81.

**Statements in factor 3**

37 Quality of career development assistance in section .60
36 Contact with faculty outside classroom in section .59
27 Communication with faculty and students regarding student needs, concerns, suggestions .57
29 Instructors' sensitivity to people of different racial and ethnic backgrounds .54
20 Orientation of students to section .49
34 Availability of enrichment activities in section .49
35 Balance between writing and course work in section .43

**Factor 4-major professor**

There were 3 statements represented in this factor. The 3 statements focused on the major professor. The factor loadings of the 3 statements were between .77 and .82. The
reliability for this factor was .89.

**Statements in factor 4**

40 Relationship between you and your major professor .82
39 Availability of major professor to student .77
38 Quality of academic advising from advisor .77

**Couplet 5—section admission**

There were 2 statements represented in this couplet. The 2 statements focused on the admission standards and procedures. The factor loadings for these 2 statements were .68 and .92. The reliability for this couplet was .80.

**Statements in couplet 5**

18 Admission standards in section .92
19 Admission procedures in section .68

**General composite 6—curriculum and student evaluation**

The 4 statements in this general composite focused on the theoretical framework developed in the section and the evaluation procedures used in course work. These four statements were not uniquely loading on a factor, however, they highly correlated with each other. It was decided to add them together. This general composite may represent 1 or 2 of the previous factors (see Table 15).
Statements in general composite 6  This composite included the following statements:

31 Extent a sound theoretical framework was developed in the section
32 Usefulness of texts and instructional materials to help you learn in section
33 Evaluation procedures used in course work in section
44 Overall treatment as student in section

Factor 7-course structure and materials in department

The 4 statements in this factor focused on course structure and materials used in instruction outside the section but in Department. The factor loadings of the 4 statements were between .40 and .62. The reliability for this factor was .70.

Statements in factor 7

51 Variety of course offerings in department but outside your section  .62
50 Number of courses required outside section  .58
52 Extent a sound theoretical framework was developed for the additional courses taken in the department  .58
56 Usefulness of texts and other instructional materials in helping you to learn the course work in your section  .40
Factor 8-graduate program quality in department

The 3 statements in this factor focused on quality of graduate program and ability of instructors. The factor loadings of the 3 statements were between .59 and .70. The reliability for this factor was .78.

**Statements in factor 8**

48 Extent to which challenged by course work outside section .70

55 Quality of instruction in additional courses taken in Professional Studies .61

54 Instructor's ability to teach in courses outside section .59

Couplet 9-communication in the department

The 2 statements focused on the communication between faculty and student needs, concerns, suggestions. The factor loadings were .74 and .81. The reliability for this couplet was .78.

**Statements in couplet 9**

58 Communication with faculty and students within classroom regarding student needs and suggestions in the department but outside your section .81

59 Contact with faculty outside the classroom in the department .74
Factor 10-program of study committee and procedures

There were 3 statements in this factor. The statements focused on the usefulness and the appropriateness of the size of the program of study committee and the satisfaction with the final oral examination. The factor loadings of the 3 statements were between .40 and .92. The reliability for this factor was .75.

Statement in factor 10

66 Usefulness of the program of study committee .92
67 Appropriateness of the size of the program of study committee .59
75 Overall satisfaction with the way in which the final oral examination was conducted .40

Couplet 11-enrichment activities and career development

The 2 statements in this couplet focused on the availability of enrichment activities in department and quality of career development assistance. The factor loadings of the 2 statements were .56 and .70. The reliability for this couplet was .63.

Statements in couplet 11

64 Availability of enrichment activities in departments offered in additional to regular classes (seminars, colloquia, social events, etc.) .70
65 The quality of career development assistance .56
Influence of Demographic Data on Factors

The relationship between factors scores and the following variables were studied: age, sex, occupation, year of graduation, area of specialization, highest degree at ISU and thesis/creative component requirement. An analysis of variance: single classification and t-test were calculated to determine the relationship between the variables and factors. The variables which had significant differences are discussed. These variables were sex, highest degree completed while in Professional Studies at ISU, area of specialization, thesis/creative component requirement and occupation. In addition, the variable of age was discussed which was not significant.

Influence of sex on the factors

There were seven factors found to have significant differences with sex. The seven factors were:

- graduate program quality in section
- course structure in section
- communication, sensitivity and enrichment within section
- major professor
- curriculum and student evaluation
- program of study committee and procedures (see Table 18).
TABLE 18. T-test of scores from eleven factors in relation to sex

<table>
<thead>
<tr>
<th>Factor</th>
<th># of Cases</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>T. Value</th>
<th>2-tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>273</td>
<td>128</td>
<td>3.73</td>
<td>0.87</td>
<td>0.66</td>
</tr>
<tr>
<td>2</td>
<td>237</td>
<td>128</td>
<td>3.64</td>
<td>0.78</td>
<td>0.66</td>
</tr>
<tr>
<td>3</td>
<td>237</td>
<td>128</td>
<td>3.52</td>
<td>0.66</td>
<td>0.60</td>
</tr>
<tr>
<td>4</td>
<td>236</td>
<td>126</td>
<td>3.97</td>
<td>1.03</td>
<td>0.87</td>
</tr>
<tr>
<td>5</td>
<td>237</td>
<td>128</td>
<td>3.80</td>
<td>0.64</td>
<td>0.58</td>
</tr>
<tr>
<td>6</td>
<td>237</td>
<td>126</td>
<td>4.04</td>
<td>0.67</td>
<td>0.58</td>
</tr>
<tr>
<td>7</td>
<td>233</td>
<td>127</td>
<td>3.62</td>
<td>0.58</td>
<td>0.60</td>
</tr>
<tr>
<td>8</td>
<td>233</td>
<td>127</td>
<td>3.83</td>
<td>0.61</td>
<td>0.58</td>
</tr>
<tr>
<td>9</td>
<td>228</td>
<td>126</td>
<td>3.72</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>10</td>
<td>236</td>
<td>128</td>
<td>3.73</td>
<td>0.71</td>
<td>0.71</td>
</tr>
<tr>
<td>11</td>
<td>227</td>
<td>124</td>
<td>2.98</td>
<td>0.89</td>
<td>0.89</td>
</tr>
</tbody>
</table>

1(1) graduate program quality in section. (2) course structure in section. (3) communication, sensitivity and enrichment within section. (4) major professor. (5) section admission. (6) curriculum and student evaluation. (7) course structure and materials in department. (8) graduate program quality in department. (9) communication in department. (10) program of study committee and procedures. (11) enrichment activities and career development.

2Group indicated as follows: (1) female, (2) male.

*Significant at .05.

**Significant at .01.

Examination of the group means for factor 1-graduate program quality in section, revealed that males had a higher mean score (4.07), compared with females (3.73). The same was true with the other 6 factors, factor 2-course structure in section, males 3.88 and females 3.64; factor
3-communication, sensitivity and enrichment within section, males 3.80 and females 3.52; factor 4-major professor, males 4.25 and females 3.97; factor 6-curriculum and student evaluation, males 3.99 and females 3.84; factor 10-program study committee and procedures, males 3.92 and females 3.73; factor 11-enrichment activities and career development, males 3.35 and females 2.98. From this finding, it may be said that males were more satisfied with the program than females based on the mean scores of satisfaction.

Influence of the highest degree completed while in the Professional Studies Department on the factors

Six factors were found to have significant difference regarding the highest degree completed while in the Professional Studies Department. The six factors were:

- graduation program quality in section
- course structure in section
- communication, sensitivity and enrichment within section
- major professor
- curriculum and student evaluation
- program of study committee and procedures (see Table 19).

Examination of the group means for factor 1-graduate program quality in section revealed that the Ph.D. group had a high group mean (4.14) when compared with the M.S. group
TABLE 19. Analysis of variance of scores from eleven factors and highest degree completed and group means

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
<th>Group Mean</th>
<th>F. value</th>
<th>F. prob</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Highest degree</td>
<td>3.29 3.74 4.14</td>
<td>7.68**</td>
<td>.0005</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>3.80 3.63 4.00</td>
<td>8.24**</td>
<td>.0003</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>3.62 3.55 3.83</td>
<td>5.66**</td>
<td>.0038</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>4.26 3.92 4.44</td>
<td>9.68**</td>
<td>.0001</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>4.16 4.01 4.10</td>
<td>1.17</td>
<td>.3105</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>3.89 3.82 4.10</td>
<td>6.12**</td>
<td>.0024</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>3.65 3.61 3.73</td>
<td>1.41</td>
<td>.2462</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>3.83 3.86 3.82</td>
<td>.14</td>
<td>.8724</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>3.79 3.72 3.78</td>
<td>.25</td>
<td>.7776</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>3.63 3.71 4.09</td>
<td>10.19**</td>
<td>.0000</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>3.07 3.08 3.21</td>
<td>.66</td>
<td>.5178</td>
</tr>
</tbody>
</table>

1See Table 18 for titles of factors.

2Group indicated as follows: (1) M.Ed., (2) M.S. and (3) Ph.D.

**Significant at .01.

which was the lowest group mean score (3.74), even though
the M.Ed. group mean score was at the middle (3.92). The
difference between the Ph.D. group and the M.S. group mean
scores probably was the cause of the significant difference.
The same was true for the factor 2-course structure in
section (Ph.D. 4.00, M.Ed. 3.88, M.S. 3.63) and factor
3-Communication, sensitivity and enrichment within section
(Ph.D. 3.83, M.Ed. 3.62, M.S. 3.55). For factor
6-curriculum and student evaluation, the mean scores of the
M.S. group were close (M.Ed. 3.89, M.S. 3.82), however the mean scores of the Ph.D. group (4.10) was high when compared to mean scores for M.Ed. or M.S. A similar pattern was found for factor 10-program of study committee and procedures except the M.Ed. group mean score was the lowest one. In general, for all the factors found significant, the Ph.D. group had the highest mean score for satisfaction.

Influence of the area of specialization on the factors

There were seven factors found to have significant differences with the area of specialization. The seven factors were:

- graduate program quality in section.
- course structure in section.
- communication, sensitivity and enrichment within section.
- major professor.
- curriculum and student evaluation.
- program of study committee and procedures.
- enrichment activity and career development (see Table 20).

Examination of the group means, for factor 1-graduate program quality in section revealed that group 4-Educational Administration mean score was the highest (4.23) and the second of the highest was group 7-Higher Education (4.14). The lowest mean score was group 5-Elementary Education.
<table>
<thead>
<tr>
<th>Factor ( ^1 )</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.08</td>
<td>3.81</td>
<td>3.85</td>
<td>4.23</td>
<td>3.29</td>
<td>3.58</td>
</tr>
<tr>
<td>2</td>
<td>4.06</td>
<td>3.52</td>
<td>3.38</td>
<td>4.08</td>
<td>3.32</td>
<td>3.50</td>
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<tr>
<td>3</td>
<td>3.65</td>
<td>3.68</td>
<td>3.54</td>
<td>3.76</td>
<td>3.34</td>
<td>3.41</td>
</tr>
<tr>
<td>4</td>
<td>3.38</td>
<td>4.07</td>
<td>4.12</td>
<td>4.26</td>
<td>3.65</td>
<td>3.80</td>
</tr>
<tr>
<td>5</td>
<td>3.88</td>
<td>4.10</td>
<td>3.88</td>
<td>4.06</td>
<td>3.95</td>
<td>4.01</td>
</tr>
<tr>
<td>6</td>
<td>3.88</td>
<td>3.92</td>
<td>3.78</td>
<td>4.10</td>
<td>3.66</td>
<td>3.66</td>
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<tr>
<td>7</td>
<td>3.41</td>
<td>3.71</td>
<td>3.70</td>
<td>3.96</td>
<td>3.91</td>
<td>3.85</td>
</tr>
<tr>
<td>8</td>
<td>3.75</td>
<td>3.74</td>
<td>3.40</td>
<td>3.65</td>
<td>3.62</td>
<td>3.57</td>
</tr>
<tr>
<td>9</td>
<td>3.81</td>
<td>3.74</td>
<td>3.80</td>
<td>3.76</td>
<td>3.66</td>
<td>3.64</td>
</tr>
<tr>
<td>10</td>
<td>3.19</td>
<td>3.82</td>
<td>3.74</td>
<td>3.90</td>
<td>3.67</td>
<td>3.67</td>
</tr>
<tr>
<td>11</td>
<td>3.00</td>
<td>3.78</td>
<td>3.09</td>
<td>3.43</td>
<td>2.74</td>
<td>2.91</td>
</tr>
</tbody>
</table>

\(^1\) See Table 18 for the titles of factors.


**Significant at .01.**
<table>
<thead>
<tr>
<th>Group mean</th>
<th>F. value</th>
<th>F. Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14</td>
<td>8.17**</td>
<td>.0000</td>
</tr>
<tr>
<td>3.99</td>
<td>7.02**</td>
<td>.0000</td>
</tr>
<tr>
<td>3.89</td>
<td>4.68**</td>
<td>.0000</td>
</tr>
<tr>
<td>4.43</td>
<td>4.14**</td>
<td>.0000</td>
</tr>
<tr>
<td>4.13</td>
<td>0.72**</td>
<td>.6864</td>
</tr>
<tr>
<td>4.08</td>
<td>3.92**</td>
<td>.0001</td>
</tr>
<tr>
<td>3.74</td>
<td>0.94</td>
<td>.4895</td>
</tr>
<tr>
<td>3.89</td>
<td>1.02</td>
<td>.4252</td>
</tr>
<tr>
<td>3.79</td>
<td>0.43</td>
<td>.9765</td>
</tr>
<tr>
<td>3.92</td>
<td>2.52**</td>
<td>.0083</td>
</tr>
<tr>
<td>3.35</td>
<td>3.52**</td>
<td>.0003</td>
</tr>
</tbody>
</table>
(3.29) and the second and the third of the lowest were group 9-Learning Disabilities (3.35) and group 6-Counselor Education (3.58). The difference between the highest and the lowest scores caused the significant difference.

For factor 2-course structure in section, the first and second highest mean scores were group 4-Educational Administration (4.08) and group 1-Education (4.06). The first and second lowest were group 8-History, Philosophy and Comparative Education (3.32) and group 5-Elementary Education (3.32).

For factor 3-communication, sensitivity and enrichment within section, the two highest mean scores were group 7-Higher Education (3.89) and group 4-Educational Administration (3.76). The two lowest were group 5-Elementary Education (3.34) and group 9-Learning Disabilities (3.34).

For factor 4-major professor, group 7-Higher Education (4.43) and group 8-History, Philosophy and Comparative Education were the two highest mean scores. Group 1-Education (3.38) and group 5-Elementary Education (3.65) were the two lowest mean scores.

Factor 6-curriculum and student evaluation, the highest mean score was group 4-Educational Administration (4.10) and the lowest was group 5-Elementary Education (3.66), group 6-Counselor Education (3.66) and group 9-Learning Disabilities (3.34).
Disabilities (3.66).

Factor 10—program of study committee and procedures, the highest mean score was group 8—History, Philosophy and Comparative Education (4.40). The second highest was group 10—Research and Evaluation (4.21). The lowest was group 1—Education (3.19).

For factor 11—enrichment activities and career development, group 2—Adult and Extension Education (3.78) was the highest mean score. The lowest was group 8—History, Philosophy and Comparative Education.

Influence of the thesis/creative component requirement on the factors

There were five factors found to have significant differences with the thesis/creative component requirement. The five factors were:

- graduate program quality in section.
- communication, sensitivity and enrichment within section.
- major professor.
- curriculum and student evaluation.
- program of study committee and procedures (see Table 21).

Examination of the group means for factor 1—graduate program quality in section revealed that group 1—requirement of thesis or dissertation (4.05) was higher than group
TABLE 21. T-test of scores from eleven factors in relation to the thesis/creative component and group means

<table>
<thead>
<tr>
<th>Factor^1</th>
<th># of Cases^2</th>
<th>mean^2</th>
<th>Standard deviation</th>
<th>T. Value</th>
<th>2-tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2</td>
<td>1 2</td>
<td></td>
<td>1 2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>122 243</td>
<td>4.05 3.75</td>
<td>0.73 0.86</td>
<td>3.41**</td>
<td>.001</td>
</tr>
<tr>
<td>2</td>
<td>122 243</td>
<td>3.81 3.69</td>
<td>0.74 0.75</td>
<td>1.46</td>
<td>.144</td>
</tr>
<tr>
<td>3</td>
<td>122 243</td>
<td>3.76 3.55</td>
<td>0.63 0.65</td>
<td>2.88**</td>
<td>.004</td>
</tr>
<tr>
<td>4</td>
<td>120 242</td>
<td>4.34 3.93</td>
<td>0.89 1.00</td>
<td>3.88**</td>
<td>.000</td>
</tr>
<tr>
<td>5</td>
<td>122 242</td>
<td>4.07 4.03</td>
<td>0.60 0.04</td>
<td>0.66</td>
<td>.512</td>
</tr>
<tr>
<td>6</td>
<td>121 242</td>
<td>4.02 3.82</td>
<td>0.60 0.65</td>
<td>2.84**</td>
<td>.005</td>
</tr>
<tr>
<td>7</td>
<td>121 239</td>
<td>3.70 3.61</td>
<td>0.59 0.58</td>
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<td>.185</td>
</tr>
<tr>
<td>8</td>
<td>121 239</td>
<td>3.80 3.87</td>
<td>0.70 0.54</td>
<td>-0.91</td>
<td>.364</td>
</tr>
<tr>
<td>9</td>
<td>120 235</td>
<td>3.76 3.73</td>
<td>0.80 0.71</td>
<td>0.42</td>
<td>.675</td>
</tr>
<tr>
<td>10</td>
<td>122 242</td>
<td>3.99 3.70</td>
<td>0.68 0.71</td>
<td>3.81**</td>
<td>.000</td>
</tr>
<tr>
<td>11</td>
<td>120 231</td>
<td>3.11 3.10</td>
<td>0.93 0.89</td>
<td>0.13</td>
<td>.899</td>
</tr>
</tbody>
</table>

\^1See Table 18 for titles of factors.

\^2Group indicated as follows: (1) Thesis or dissertation, (2) Creative component.

**Significant at .01.

2-creative component (3.75). The same was true for factor 3-communication, sensitivity and enrichment within section (Group 1. 3.76, Group 2. 3.55), factor 4-major professor (Group 1. 4.34, Group 2. 3.93), factor 6-curriculum and student evaluation (Group 1. 4.02, Group 2. 3.82), factor 10-program of study committee and procedures (Group 1. 3.99, Group 2. 3.70). In general, the group writing theses or dissertations have higher mean scores for every factor than those with creative components.
Influence of occupation on the factors

There were six factors found to have significant differences with occupation. Six factors were:

- graduate program quality in section.
- course structure in section.
- communication, sensitivity and enrichment within section.
- major professor.
- curriculum and student evaluation.
- program of study committee and procedures (see Table 22).

Examination of the group means, for factor 1-graduate program quality in section revealed that the highest mean score was group 4-2-year and community college (4.31) and the lowest was group 5-Local school district (3.70). For factor 2-course structure in section, group 4-2-year and community college (4.03) was the highest mean score and group 6-Others (3.57) was the lowest.

For factor 3-communication, sensitivity and enrichment within section, the highest mean score was group 3-4-year college (3.83) and group 4-2-year and community college (3.83). The lowest was group 6-Others (3.46).

For factor 4-major professor, the highest mean score was group 3-4-year college (4.38). The lowest was group 5-Local school district.
TABLE 22. Analysis of variance of scores from eleven factors in relation to the occupation and group means

<table>
<thead>
<tr>
<th>Factor^</th>
<th>Group mean</th>
<th>F. value</th>
<th>F. prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3.98</td>
<td>3.99</td>
<td>4.02</td>
</tr>
<tr>
<td>2</td>
<td>3.85</td>
<td>3.65</td>
<td>3.92</td>
</tr>
<tr>
<td>3</td>
<td>3.72</td>
<td>3.63</td>
<td>3.83</td>
</tr>
<tr>
<td>4</td>
<td>4.12</td>
<td>4.31</td>
<td>4.38</td>
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</tr>
<tr>
<td>9</td>
<td>3.80</td>
<td>3.71</td>
<td>3.75</td>
</tr>
<tr>
<td>10</td>
<td>3.95</td>
<td>3.74</td>
<td>4.00</td>
</tr>
<tr>
<td>11</td>
<td>3.14</td>
<td>2.82</td>
<td>3.31</td>
</tr>
</tbody>
</table>

^ See Table 18 for the titles of the factors.

^2 Group indicated as follows: (1) Federal and state government, (2) Industry, business and self-employed, (3) 4-year college, (4) 2-year and community college, (5) Local school district, and (6) Others.

* Significant at .05.

** Significant at .01.
For factor 6-curriculum and student evaluation, the highest mean score was group 4-2-year and community college (4.28). The lowest was group 5-Local school district (3.78).

For factor 10-program of study committee and procedures, group 3- 4-year college (4.00) and group 4-2-year and community college (4.00) were the highest mean scores and the lowest was group 5-Local school district (3.68).

In general, Local school district group had the lowest mean scores for satisfaction and 2-year and community college and 4-year college had the highest mean scores for satisfaction.

Influence of age on the factors

Age was not found to be significant but older alumni were more satisfied than younger alumni. This finding was similar to Subah (1986) but her differences were significant.

Factor Reliability

The mean, standard deviation, number of items for factors and the mean, minimum and maximum of inter-item correlation, reliability (alpha), standardized alpha were shown in Table 23. Factor 3-communication, sensitivity and enrichment within section had the highest mean score (25.66)
for factors, and factor 11-enrichment activity and career development had the lowest mean score (6.51) for the factors. Factor 4-major professor had the highest inter-item correlation score (.73) and factor 3-communication, sensitivity, and enrichment within section and factor 7-course structure and materials in department had the lowest inter-item correlation score (.37). The range of reliability (alpha) was .63 to .92.

Summary of Strengths, Weaknesses and Suggestions by Respondents to Their Section Major

The following summary of open ended questions represents a response of one third to one half of the alumni. In some cases such as Historical, Philosophical, and Comparative Studies only five total respondents were in the population and Research and Evaluation had eight in the population, as well as, Education. In Curriculum and Instructional Media only two people responded to the open ended questions. The criteria for selection of the strengths, weakness, and suggestions were those mentioned most often and the variation in responses listed was related to the number of alumni responding.
TABLE 23. Reliabilities, number of items, mean scores, standard deviation, correlations and standardized alpha for the factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>No. of items</th>
<th>Std. Mean</th>
<th>Std. dev.</th>
<th>Inter-item correlation</th>
<th>Reliability</th>
<th>Standardized mean</th>
<th>max. (alpha)</th>
<th>alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>19.48</td>
<td>4.14</td>
<td>.70</td>
<td>.61</td>
<td>.87</td>
<td>.92</td>
<td>.92</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>15.14</td>
<td>2.93</td>
<td>.54</td>
<td>.46</td>
<td>.66</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>25.66</td>
<td>4.70</td>
<td>.37</td>
<td>.27</td>
<td>.51</td>
<td>.81</td>
<td>.81</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>12.25</td>
<td>2.96</td>
<td>.73</td>
<td>.70</td>
<td>.79</td>
<td>.89</td>
<td>.89</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>8.15</td>
<td>1.24</td>
<td>.67</td>
<td>.67</td>
<td>.67</td>
<td>.80</td>
<td>.80</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>15.70</td>
<td>2.54</td>
<td>.53</td>
<td>.40</td>
<td>.51</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>14.48</td>
<td>2.37</td>
<td>.37</td>
<td>.29</td>
<td>.47</td>
<td>.70</td>
<td>.70</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>11.56</td>
<td>1.79</td>
<td>.54</td>
<td>.47</td>
<td>.67</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>7.48</td>
<td>1.48</td>
<td>.65</td>
<td>.65</td>
<td>.65</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>12.10</td>
<td>1.98</td>
<td>.50</td>
<td>.38</td>
<td>.67</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>6.51</td>
<td>1.89</td>
<td>.46</td>
<td>.46</td>
<td>.46</td>
<td>.63</td>
<td>.63</td>
</tr>
</tbody>
</table>

1See Table 18 for the titles of the factors.
Adult and Extension Education

Strengths

• Flexibility of programs; courses outside concentration were accepted.
• Student/professor relationship; supporting, challenging and helping.
• Small class size.
• Good classes schedule, especially for working students.
• Using learner-centered concept for learning-teaching process.

Weaknesses

• Limited number of faculty members.
• Courses being dropped because of low participation.
• Limited courses offered.
• Need more practical application to real world and how the degree and its usefulness relates to the job market.
• Program not geared to "training and development", too "land grant cooperative education oriented.

Suggestions

• More application of skills.
• Greater variety of courses for those who already have a masters.
• More faculty needed.
• Increase the number of courses for summer session.

**Counselor Education**

**Strengths**

• Individual encouragement and guidance by most professors.
• Broad theoretical base.
• Small class size.
• Good teaching counseling techniques.
• Extension staff in Cedar Rapids.

**Weaknesses**

• Lack of preparation for certificates (e.g., no human relation).
• Too theoretical.
• Lack of practical information and experience in counseling.
• Lack of classroom guidance emphasis.

**Suggestions**

• Better coordination of practicum, more sites for practicum.
• Greater variety of course selection beyond required.
• More exposure to other professionals in field.
• Bring in national reputation person.
• Additional attention to obtaining certification.
• Get professor back into a school situation where
students are going to work.

Curriculum and Instructional media

Strength
• Availability of facilities.

Weakness
• Weak curriculum.

Suggestion
• More staff for computer section.

Education

Strengths
• Practical application.
• Relevance of subject.
• Small class size.
• Availability of professors, advisors.
• Many courses offered off-campus.

Weaknesses
• Overloaded professors, advisors.
• Too many presentations by students.
• Some of the initial courses were out-dated and the materials was the same for years.

Suggestions
• Update some courses.
• Make registration easier for out-of-town students.
• Focus on career development.
Education Administration

Strengths

• Small class size.
• Relevance of coursework.
• Relationship between students and professor/major professor.
• Practical, applicable materials.
• Variety of outside coursework.

Weaknesses

• Not enough practicing.
• Not enough orientation of students to section major.
• Not enough finance courses.
• Too much bookwork--not enough meaningful application.
• Lack of women faculty members and role models.

Suggestions

• Actively seek women/minority candidates for vacant faculty positions.
• Hire full-time instructor for finance, facilities courses.
• Offer more variety of courses.
• Reduce obvious conflict between the different departments.
• Encourage student input and suggestions in all
course evaluations.

**Elementary Education**

**Strengths**
- Evening classes offered.
- Availability of all professors.
- Courses content.

**Weaknesses**
- Not enough field experiences (e.g., school visitations).
- Too much theory, not enough applicability of coursework in field experiences.
- Courses not well organized (repetitive).
- Outdated materials.

**Suggestions**
- Incorporate a direct field experiences into courses.
- Update the materials.
- Organize courses offerings.

**Higher Education**

**Strengths**
- Faculty/student relationship.
- Relevance of courses.
- Knowledgable faculty.
- Assistant to off-campus students.
• Small class size.
• Availability of related assistantship.
• Diverse background of faculty.
• Flexibility of program.
• Marketable program.
• Practical application of classes and practicums.

Weaknesses
• Overloaded professors and advisors.
• Not enough career development assistance to students.
• Lack of minority faculty.
• Need more emphasis on national and international scene.
• No women faculty.
• Lack of campus/university orientation.
• Need more seminars and workshops.

Suggestions
• Orientation program for new graduate students.
• More instructors.
• More diversity in faculty (women, blacks).
• More field experience.
• More Higher Education courses offered through TELENET.
Historical, Philosophical and Comparative Studies in Education

Strengths
- Caring, learned professors.
- Seriousness of program.
- Small class size.

Weaknesses
- Not a wide variety of courses offered.
- Few Ph.D. candidates.
- The M.S. is an excellent general program but needs the Ph.D. to provide for career opportunities in the field.
- Need more instructors available.

Suggestion
- Allow flexibility on designing degree program.

Learning Disabilities (L.D.)

Strengths
- Accessibility of classes (i.e., night, off-campus).
- Quality of instructors (knowledgeable, helpful, encouraging).
- Assistantship program.
- Relevance of courses.
- Class size.
Weaknesses

- Inadequate practicum.
- Some instructors not as up-to-date on changes in L.D.
- Not enough choices of courses for students who already had the background courses in undergraduate program.
- Too much emphasis on student presentation and therefore, too little teaching by professors.
- Lack of secondary level information in teaching L.D.

Suggestions

- Add lab school.
- More outside speakers on campus.
- Need more professors who have had more actual teaching experience in the field of L.D.
- Make the courses applicable to classroom.

Research and Evaluation

Strengths

- Program flexibility.
- Small class size.
- Good faculty.
- Courses offered at a good time of day.
Weaknesses

- Need more courses on practical evaluation design for school finance.
- Lack of courses on advanced measurement.

Suggestions

- Offering more courses in measurement, research methodology and applications of evaluation models.
- More emphasis on teaching.
- More emphasis in consultative skills.
- More courses in institutional research.

Discussion of Findings

Composition of factors

Four factors, one couplet, and a general composite of graduates' satisfaction were extracted from questions related to section major, two factors and one couplet from questions related to Department, and one factor and one couplet from questions related to overall satisfaction with the Department or a total of eleven factors. Subah (1986), using a revised questionnaire of this study to evaluate the Department of Professional Studies Program by enrolled graduate students, obtained five factors and two couplets from questions related to Section, two factors from questions related to the Department, and two factors from questions related to the overall department or a total of...
eleven factors. Moreover, the structures of the factors from both studies were similar.

Influence of demographic variables on graduates

Age, sex, occupation, year of graduation, area of specialization, thesis/creative component requirement and highest degree were demographic variables examined to see if there was an influence on degree of satisfaction. In this study, it was hypothesized that there was no difference between degree of satisfaction of alumni and age, sex, occupation, year of graduation, area of specialization, highest degree at ISU, and thesis/creative component requirement.

It was found that there were significant differences among five variables: sex, highest degree at ISU, area of specialization, thesis/creative component requirement, present employment and degree of satisfaction of alumni. Thus, the hypothesis was rejected for these variables and accepted for age and year of graduation.

The following sections contain the discussions of the significant differences under each variable.

Sex Males were found to have higher satisfaction than females on graduate program quality in section, course structure in section, communication-sensitivity-enrichment within section, major professor, curriculum and student evaluation, program of study committee and procedures, and
enrichment activity and career development.

This finding is consistent with the study by Subah (1986). Subah found that male graduate students were more satisfied with the quality of graduate program, quality of courses, relationship with major professor, enrichment activities, sensitivity to students. Subah (1986) concluded that "the optimal condition for satisfaction may differ by sex" (p. 109). Moreover, from an earlier study by Hearn (1978) it was found that females were more attuned than males to faculty and student interaction and also aspects of academic social climate in their satisfaction. Lately, Hearn (1985) also found female students satisfaction criteria were more strongly affected than male students by certain aspects of faculty contact. From earlier studies, it can be said that sex may have an influence over the degree of satisfaction of the alumni.

**Highest degree at ISU** In this study, it was found that alumni who held a Ph.D. were more satisfied than M.S. alumni with program quality in section, course structure in section, communication-sensitivity-enrichment within section, major professor, curriculum and student evaluation and program of study committee. The factors for which alumni who had a Ph.D. were more satisfied with were the same for male over female except enrichment activities and career development. Furthermore, the Ph.D. alumni contained
a larger percentage of males (males 57.8%, females 42.2%) but the M.S. alumni had a higher percentage of females (females 72.1%, males 27.9% see, Table 24). Therefore, it maybe said that the distribution of sex in the categories of highest degree at ISU contributes to the degree of satisfaction of alumni.

TABLE 24. Distribution of highest degree at ISU by sex

<table>
<thead>
<tr>
<th>Highest Degree</th>
<th>Female No.</th>
<th>Female %</th>
<th>Male No.</th>
<th>Male %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Ed.</td>
<td>20</td>
<td>69.0</td>
<td>9</td>
<td>31.0</td>
<td>29</td>
<td>8.0</td>
</tr>
<tr>
<td>M.S.</td>
<td>181</td>
<td>72.1</td>
<td>70</td>
<td>27.9</td>
<td>251</td>
<td>69.1</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>35</td>
<td>42.2</td>
<td>48</td>
<td>57.8</td>
<td>83</td>
<td>22.9</td>
</tr>
<tr>
<td>Total</td>
<td>236</td>
<td>65.0</td>
<td>127</td>
<td>35.0</td>
<td>363</td>
<td>100.0</td>
</tr>
<tr>
<td>Chi-square</td>
<td>24.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Significance = 0.00</td>
</tr>
</tbody>
</table>

Area of specialization Educational Administration was found to have the highest mean score of satisfaction on the graduate program quality in section, course structure in section and curriculum and student evaluation. Higher Education was second. This finding may be partially explained as the Educational Administration consisted of more males than females (see Table 25).

This finding is not consistent with Subah (1986) who found that Educational Administration was the highest mean
score and Higher Education was the lowest mean score for quality of graduate program in the section major. Braskamp et al. (1979) found that factors scores did not substantially differ across the different fields of study.

**Thesis/creative component requirement**  It was found that alumni who wrote a thesis/dissertation were more satisfied than one who wrote a creative component with the graduate program quality in section, communication-sensitivity-enrichment within section, major professor, curriculum and student evaluation and program of study committee and procedure. It is noticeable that all factors above are similar to the factors that male alumni were more satisfied than females were. It is interesting when attention is paid to the distribution of sex in these categories. The thesis/dissertation writing category is composed of a higher percentage of male (male 52.9%) but the creative component writing category is composed of higher percentage of female alumni (female 73.7%, see Table 26). Besides the distribution of sex, there is another possible interpretation of this finding. Alumni who wrote thesis or dissertations had a chance to utilize what they had learned from their program and what they had gotten from the enrichment activities provided by their major section. In writing a thesis and/or a dissertation, alumni spent a lot of time communicating to and consulting with their program
TABLE 25. Distribution of area of specialization by sex

<table>
<thead>
<tr>
<th>Area of specialization</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Education</td>
<td>6</td>
<td>75.0</td>
<td>2</td>
</tr>
<tr>
<td>Adult &amp; Extension Education</td>
<td>15</td>
<td>62.5</td>
<td>9</td>
</tr>
<tr>
<td>Curriculum &amp; Instructional Education</td>
<td>16</td>
<td>51.1</td>
<td>12</td>
</tr>
<tr>
<td>Educational Administration</td>
<td>25</td>
<td>34.7</td>
<td>46</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>17</td>
<td>89.5</td>
<td>2</td>
</tr>
<tr>
<td>Counselor Education</td>
<td>41</td>
<td>74.5</td>
<td>14</td>
</tr>
<tr>
<td>Higher Education</td>
<td>57</td>
<td>64.0</td>
<td>32</td>
</tr>
<tr>
<td>Historical, Philosophical and Comparative Education</td>
<td>3</td>
<td>60.0</td>
<td>2</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>54</td>
<td>93.1</td>
<td>4</td>
</tr>
<tr>
<td>Research and Evaluation</td>
<td>3</td>
<td>37.5</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>237</td>
<td>64.8</td>
<td>128</td>
</tr>
</tbody>
</table>

Chi-square = 62.78  Significance = 0.0
of study committee, especially their major professor. In general, when writing a creative component less help is needed and less time from a program of study committee. Therefore, it is believed that the more chances one has to deal with, to communicate to, and to consult with their program of study committee, the higher level of satisfaction they tend to have.

TABLE 26. Distribution of thesis/creative component requirement by sex

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Female No.</th>
<th>Female %</th>
<th>Male No.</th>
<th>Male %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis/Dissertation</td>
<td>57</td>
<td>47.1</td>
<td>64</td>
<td>52.9</td>
<td>121</td>
<td>33.2</td>
</tr>
<tr>
<td>Creative Component</td>
<td>179</td>
<td>73.7</td>
<td>64</td>
<td>26.3</td>
<td>234</td>
<td>66.6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>100.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Chi-square = 25.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance = 0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Occupation**

Alumni working at 2-year and community colleges were found to have highest mean score of satisfaction on the graduate program quality in section, course structure in section, communication-sensitivity-enrichment within section, curriculum and student evaluation. This finding means that alumni working at 2-year and community colleges are satisfied with the above
factors than any employment categories.

In interpretation of these findings, one should note that the significant differences in degree and area of specialization are related to differences in sex.
CHAPTER 5. SUMMARY AND RECOMMENDATION

Summary

The purpose of this study was to identify the degree of satisfaction of alumni with the graduate degree program regarding curriculum, procedures and staffing in the department of Professional Studies. The 1980-1985 alumni of the department of Professional Studies responded to a modification of the questionnaire used by Braskamp, Wise, and Hengstler (1979).

The questionnaire consisted of two parts; (1) background and demographic information (2) a list of statements concerning the elements (i.e., course structure, content, instructions) of graduate program. Part two consisted of three sections; (1) statements related to the section major (2) statements related to the Professional Studies department outside the major and (3) statements related to the overall department. Respondents were asked to assign a number on a scale from zero to five, indicating the degree of satisfaction with the graduate program at ISU. Number five indicated that the respondents were highly satisfied with that statement, one indicated highly dissatisfied, three indicated undecided, and zero indicated not applicable. Six open-ended items were given for listing strengths, weaknesses, and suggestions to the program.
The population of this study was the alumni of the Professional Studies department from 1980-1985. Four hundred and ninety of the questionnaires were mailed to the alumni. Of the 374 questionnaires returned, 366 questionnaires were useable. This was a 75 percent response rate.

The data from the questionnaires were analyzed by frequencies, percentages, means, factor analysis, correlations, and reliabilities. T-test and analysis of variance: single classification were used to determine the influence of the independent variables upon the factors. The multiple ranges test: Scheffé was used to identify the differences within the group of variables.

Twenty-five items related to the section major formed four factors, one couplet, and one general composite, namely; (1) graduate program quality in section, (2) course structure in section, (3) communication-sensitivity-enrichment within section, (4) major professor, (5) section admissions, and (6) curriculum and student evaluation. Nine items related to the department formed two factors and one couplet, namely; (1) course structure and materials in department, (2) graduate program quality in department, and (3) communication in department. Five items related to the overall department formed one factor and one couplet, namely; (1) program of study committee and procedures
(2) enrichment activities and career development.

The reliability of factors and couplet related to the section major ranged from .75 to .92 and .70 to .79 for those related to the department and .63 to .75 for those related to the overall department. As a whole, the reliability ranged from .63 to .92.

The characteristics of the respondents were: 49.2% of the 366 respondents were 31-40 years of age, 65.0% were female, had no other graduate degree before entering their program at ISU (79.2%), had M.S. as the highest degree at ISU (68.6%), had no other degree graduate after ISU graduation (97.8%), graduated from Higher Education section (24.3%), completed the creative component to meet the requirement of degree (66.4%), completed the majority of course work on campus (91.3%). were not on assistantship (68.3%), did not receive certification while working on ISU degree (51.4%), and were employed by local school districts (43.7%).

In this study, it was hypothesized that there were no significant differences between degree of satisfaction of alumni and age, sex, occupation, year of graduation, area of specialization, highest degree at ISU, thesis/creative component requirement. It was found that there were significant differences between degree of satisfaction and sex, highest degree at ISU, area of specialization,
thesis/creative component requirement, occupation. Therefore, the hypothesis was rejected for these variables and accepted for age and year of graduation.

The significant differences found were as follows:

- **Sex:** males had a higher satisfaction than females on (1) graduate program quality in section (2) course structure in section (3) communication-sensitivity-enrichment within section (4) major professor (5) curriculum and student evaluation (6) program of study committee and procedures and (7) enrichment activity and career development.

- **Highest degree at ISU:** Ph.D. alumni were more satisfied than M.S. alumni with (1) graduate program quality in section (2) course structure in section (3) communication-sensitivity-enrichment within section (4) major professor (5) curriculum and student evaluation and (6) program of study committee and procedures.

- **Area of specialization:** Educational Administration students were found to have higher satisfaction than other sections on (1) graduate program quality in section (2) course structure in section and (3) curriculum and student evaluation.

- **Thesis/creative component requirement:** alumni who wrote a thesis or dissertation had higher
satisfaction on (1) graduate program quality in section (2) communication-sensitivity-enrichment within section (3) major professor (4) curriculum and student evaluation and (5) program of study committee and procedures.

• Employment: alumni employed by 2-year and community colleges had higher satisfaction on (1) graduate program quality in section (2) course structure in section (3) communication-sensitivity-enrichment within section and (4) curriculum and student evaluation.

The 10 highest satisfaction statements

1. Size of class in section.
2. Relationship between students and their major professors.
3. Availability of major professor to student.
4. Overall treatment as a student in section.
5. Opportunity to communicate with faculty and students in section.
6. Length of time required to complete the program in section.
7. Admission procedures in section.
8. Admission standards in section.
9. Procedures used for registration (overall).
10. The extent to which students regarded their graduate program as worthwhile in section.

The 10 lowest satisfaction statements

1. The quality of career development assistance in the department.
2. The quality of career development assistance in the section.
3. Departmental attention to providing students with credentials for obtaining employment after graduation.
4. The availability of enrichment activities in the department offered in addition to regular classes.
5. The availability of enrichment activities offered by section in addition to regular classes.
6. Orientation of students to section.
7. Usefulness of the program of study committee.
8. Contact with faculty outside the classroom in the department.
9. The variety of course offerings taking in the department but outside section.
10. The extent to which a sound theoretical framework was developed for the additional courses taken in the department.
Recommendations

Recommendations for the Department of Professional Studies

1. Orientation of students to the section major should be made available to new students at the beginning of each semester.

2. Enrichment activities in addition to regular classes such as seminars, colloquia, or social events should be offered more often by the section majors.

3. Various kinds of career development assistance should be made available to students.

4. Departmental attention to providing students with credentials for obtaining employment after graduation should be emphasized and increased.

5. Develop more course offerings in additional areas by every section. This would provide opportunity for both student inside and outside the section to have more choice in courses to meet their needs.

6. Faculty should strive to assist students in gaining more satisfaction with a creative component experience.

7. Personal needs of female students need to be addressed by faculty in order to satisfy their
needs in a graduate experience especially at the Masters level.

Recommendations for further research

1. The follow-up study should be conducted in the next five years to investigate any improvement of each section major and of the department as a whole.

2. To have in-depth information for each section major, each section should conduct a study on their particular program. An in-depth study on particular program could provide a clear direction for program improvement.

3. There is one question used in this study that respondents hesitated to answer (What is the name and an address of your employer?). The respondents preferred to be anonymous so they could give honest comments. Therefore, it is recommended that this question be eliminated in future studies.
REFERENCES


APPENDIX A. QUESTIONNAIRE
Dear Alum:

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 earned your M.S. and/or Ph.D. some time during the period of 1981-85.

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 graduates from the various sections and their eventual employment.
3. To make recommendations for the improvement of the program.

Thank you for participating in the study. Please return your questionnaire in the enclosed stamped envelope. 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 ______
   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. Since completing a graduate degree in the Professional Studies Department at ISU, have 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 was your area of specialization within the Professional Studies Department of the College of Education in your last 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 the last graduate degree you earned at ISU while majoring in the Professional Studies Department, which of the following was completed?
   a. Thesis or dissertation
   b. Creative Component
   c. Other (identify) ____________________________

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

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

11. Did you receive certification (i.e., superintendent, principal, guidance counselor, instructional media specialist, and learning disability specialist) while working on your last 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. What is the name and address of your employer?

   Name ____________________________

   Address ____________________________

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

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 alumni circle a only.)
   a. International alumni
   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 you earned while you received a graduate degree. 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 Undecided Dissatis- Highly Not
satisfied fied dissatis- applicable fied

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 were 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.
31. The extent to which a sound theoretical framework was 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 regarded 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 were the strengths of your section?
   a.
   b.
   c.

47. What were the weaknesses of your section?
   a.
   b.
   c.
Section II: Questions related to other courses taken in the Professional Studies Department which were a part of your program of study.

28. The extent to which you were challenged by the course work.

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

30. The number of courses required outside the section.

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

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

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

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

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

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

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

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

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

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

41. What were the weaknesses of the courses taken outside your section but in the Professional Studies Department?
   a.
   b.
   c.
Section III: Overall questions about the Professional Studies Department.

- Procedures used for registration.
- Availability of courses in the summer school.
- The availability of enrichment activities in the department offered in addition to regular classes (seminars, colloquia, social events, etc.).
- The quality of career development assistance.
- Usefulness of the program of study committee.
- Appropriateness of the size of the program of study committee.
- The departmental support staff (secretaries, etc.) who deal directly with students.
- Support services available from R.I.S.E.
- Support services available from I.R.C.
- Support services available from Microcomputer Laboratory.
- Financial support available within the department.
- Overall satisfaction with preliminary written exams as a learning experience (Ph.D. only).
- Overall satisfaction with preliminary orals as a learning experience (Ph.D. only).
- Overall satisfaction with the way in which the final oral examination was conducted.
- Departmental attention to providing students with credentials for obtaining employment after graduation.

How did the department fail to meet expectations you had when you entered? (write in)
  a.
  b.
  c.

What changes would you suggest for the department in courses, curriculum, procedures, or staffing of the overall program? (write in)
  a.
  b.
  c.
November 20, 1985

Dear Alum:

A short time ago you received a questionnaire from us asking you to evaluate the Professional Studies Department at Iowa State University. If you have already returned the questionnaire, please disregard this letter.

It is extremely important that we include your reaction in this study. After the questionnaires are returned it is hoped that recommendations for improvement of the department can be implemented. Unless we secure a large percentage of returns, it will be difficult to determine how reliable and valid the study is.

We look forward to your cooperation. If by chance you do not have the questionnaire, please drop us a card and we will send you a copy.

Sincerely,

Larry H. Ebbers, Professor and Chair
Professional Studies Department

Richard D. Warren, Distinguished Professor and Director, RISE
We don't mean to bug you ...

but time is passing.

Dear Professional Studies Graduate:

Approximately one month ago you were sent a questionnaire to have you evaluate your graduate program at Iowa State University in the College of Education. We are writing to remind you to fill yours out if you have not already done so. There is no need to identify yourself as we are only interested in your response and your degree of satisfaction with your graduate program at I.S.U.

Your input is important in order to make this study worthwhile. The more input we obtain, the more worthwhile our evaluation of the graduate program will be. We would appreciate your completing the questionnaire at your earliest convenience and returning it to us.

If you have not received your questionnaire please call 515-294-1234 or 515-294-6444. Dr. Beavers will send you another questionnaire as he is conducting the study. Again, thank you for your cooperation.

Sincerely,

Larry H. Ebbers
Professor and Chair
Professional Studies

Richard D. Warren
Director
Research Institute for Studies in Education
### TABLE 27. Intercorrelation of items: factor 1-graduate program quality in section

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### TABLE 28. Intercorrelation of items: factor 2-course structure in section

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TABLE 29. Intercorrelation of items: factor 3-communication, sensitivity and enrichment within section

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TABLE 30. Intercorrelation of items: factor 4-major professor

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TABLE 31. Intercorrelation of items: couplet 5-section admission

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TABLE 32. Intercorrelation of items: general composite 6-curriculum and student evaluation

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TABLE 33. Intercorrelation of items: factor 7-course structure and materials in department

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TABLE 34. Intercorrelation of items: factor 8-graduate program quality in department

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### TABLE 35. Intercorrelation of items: couplet 9-communication in department

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### TABLE 36. Intercorrelation of items: factor 10-program of study committee and procedures

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### TABLE 37. Intercorrelation of items: couplet 11-enrichment activities and career development

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All significant at .10.