# MEASURES OF PROGRAM EFFECTIVENESS IN HOME ECONOMICS EDUCATION UNITS: PRESENT AND PROJECTED

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# MEASURES OF PROGRAM EFFECTIVENESS IN HOME ECONOMICS EDUCATION UNITS: PRESENT AND PROJECTED

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# CHAPTER I

## INTRODUCTION

The future is an extension of the present. According to Kamm (1980), educators have a tremendous opportunity to shape the future. The uniqueness of home economics has much to contribute today and in shaping the future. Contributions, such as the continuing development of quality educational programs at all levels, the recruitment of bright creative educators, and the enhancement of the research base for all subject areas represented in the profession, extend to many of the current challenges to society. These challenges, which include the reaffirmation of family units as significant socially and economically, the accelerating movement toward an information society, increasing capabilities of biotechnology, impacts of economic change, demographic shifts, decentralization of power, and the emphasis on a global vision and a global economy (Hawthorne, 1984), increase the viability of home economics education programs.

Home Economics New Directions II (AHEA, 1975) listed futuristic thinking and planning as a professional priority. Hence, according to Scruggs and Rader (1981), home economics educators of the future need to place high priority on assuming leadership in all areas of home economics education. Examples include the selection of educational objectives, curriculum planning, improvement of instruction, program evaluation and

professional development of faculty. Such planning, however, should be based on the educational and societal needs of the clientele to be served.

Students are the foundation of higher education. They influence the finances, mission, and organization of higher education by their numbers, educational interests, and institutional choices.

Historically, higher education has experienced and anticipated long periods of growth and expansion. Expansion was measured in terms of the pecentage of students participating in higher education, particularly the 18 to 22 age group (Shulman, 1976). However, in recent years, there has been uncertainty with regard to the number and type of students to be served by higher education. The Carnegie Council on Policy Studies in Higher Education (1980) has declared that the most dramatic feature of higher education in the next 20 years is the prospect of declining enrollments. It is estimated that 100 to 400 private colleges may close because of enrollment problems (Behn, 1979; Carnegie Foundation, 1975; Ihlanfeldt, 1980).

The downward shift in enrollment has certainly affected home economics education units. Harper's (1981) study has reported a substantial decline in home economics education enrollment over the past few years. This certainly has implications for student recruitment efforts and flexibility of program offering.

There is also a need to tailor programs to accommodate the new clientele of higher education. The Carnegie Foundation (1975) projected an increase in part-time students, non-degree credit students, students 22 years of age and older, graduate and first professional degree students, women students, and black and other minority students. These new students in higher education are swept into colleges and universities by the rising educational aspirations of the citizenry. For the majority, the motivation for higher learning does

not arise from anticipation of interest in learning, but from the recognition that education is the way to a better life than that of their parents (Cross, 1971). Home economics educators in colleges and universities hold the key to the future of home economics, and are responsible for developing leadership in the field. Each home economics education unit is challenged to develop the best possible educational program to meet the changing needs of society. This involves thoughtful appraisal of programs in order to maintain effectiveness as changes occur. In 1949, a report of the American Home Economics Association (AHEA) suggested that evaluation of home economics programs should involve a study of a department's philosophy and purposes, its concern for students, curriculum and teaching, staff, physical facilities, and administration. Many such studies have been conducted over the years, however, as of yet, no model for determining effectiveness of programs has been formulated nor has a specific set of effectiveness measures been identified. Because each view of program effectiveness is subjective and relative to the particular educational unit, the task of determining program effectiveness has aroused feelings of frustration and complexity in program evaluators.

## Statement of the Problem

Home economics education was from the inception of the home economics profession the key to prevention, as it enacted its mission of service to homes and families. Used generically, the term "home economics education" encompasses nearly all of home economics because most home economists use formal or informal education as the means for helping others learn the knowledge and values of home economics (Anderson, 1984).

As society changes, new skills and expertise are required of individuals. There is a demand for lifelong education. Opportunities for learning must be available at any time in a student's lfie. Scruggs and Rader (1981) agree that although home economics education has been making minimal progress towards lifelong education, some adjustments will still be needed in the future.

Trotter (1975) stated that, although home economics educators cannot know with certainty what the future has in store, our profession brings us certain insights into what educational actions can be taken to prevent future social programs from becoming full-blown crises. These preventive actions suggested by Trotter, must first be undertaken through the home economics education programs offered by colleges and universities. In turn there will be a filtering downwards to programs for the lay public. These programs will impact on the lives of individuals and families as they meet the changes inflicted by society.

It is the task of educators to see that education is so unified with "real life" that it succeeds in improving the quality of lives (Trotter, 1975). Such an important undertaking by home economics education units in higher education deepens the concern for effectiveness of programs being offered. Many questions arise as to what is an effective home economics program, and as yet no model for measuring effectiveness of programs has been formulated. However, in an unpublished study, Hirschlein, Jorgenson, and Brink, as part of their Home Economics Education Futures Study, acquired information from home economics educators within the United States concerning measures contributing to effectiveness of their programs, at the time of the study and in the future.

Therefore the main problem addressed in this study was the lack of specific identified measures for assessing the effectiveness of home economics education units in higher education. Data from the Hirschlein, Jorgenson and Brink survey identified above were analyzed as the means of investigating the problem.

## Purpose and Objectives

This study assessed the extent to which home economics education units in higher education utilized selected measures of program effectiveness at present and the extent to which they planned to use the same measures of effectiveness in the future. The study also examined the relationship of selected measures of program effectiveness to variables related to (1) curriculum, (2) planning strategies, (3) educational delivery systems, (4) financial resources, (5) external relations programs, (6) facilities and equipment, and (7) faculty. A study titled "Home Economics Education Futures Study: Towards the Year 2000" provided the data which established the current measures and projected future measures of program effectiveness. The criterion variables were measures of program effectiveness relevant to home economics education units in higher education.

The following objectives were developed as guides for this study:

1. Determine the similarities between factor structures for the current and projected scales.
2. Assess changes between present and projected utilization of selected effectiveness measures reported by home economics administrators.
3. Analyze the similarity among the measures of effectiveness reported for the five American Vocational Association regions.

4. Analyze relationships of current and projected measures of program effectiveness and variables related to curriculum emphasis, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

## Hypotheses

The following hypotheses were formulated for this study.

1. Factor structures derived from responses to the current scale will be similar to factor structures derived from responses to the projected scale.
2. There is no significant difference between current measures of program effectiveness used and those projected for future utilization.
3. There is no significant difference among measures of program effectiveness utilized in the American Vocational Association regions.
4. There is no significant association between current measures of program effectiveness and current curriculum emphases, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.
5. There is no significant association between projected measures of program effectiveness and projected curriculum emphases, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

## Assumptions and Limitations

The assumptions formulated for this study were as follows.

1. The participating population was an adequate representation of the total population.
2. The home economics educators responded honestly to the questionnaire.
3. The instrument is a valid means of determining measures of program effectiveness used by home economics education units.

This study was limited by the following factors.

1. The population was limited to those home economics education units responding to the survey instrument "Home Economics Education Futures Study: Towards the Year 2000".
2. The data were limited to the information that could be collected by the instrument used.

## Definition of Terms

In clarification of the terminology used in this study, relevant terms were defined as follows:

Correlation -- A measure of association between two variables (Kim & Mueller, 1983).

Effectiveness measures -- Specific measures for assessing the worth and/or success of educational programs.

Factor -- Hypothesized, unmeasured, and underlying variables presumed to be the sources of the observed variables (Kim & Mueller, 1983).

Factor loading -- A general term for a coefficient in a factor pattern or structure matrix (Kim & Mueller, 1984).

Home economics education units -- An academic unit within a college or university which prepares majors in "planning, implementing, and evaluating learning experiences in home economics, suited to the needs and interests of learners and based on decisions made according to educational philosophy and professional beliefs" (Dobry and Williams, 1981, p. 7).

Orthogonal -- Uncorrelated (Kim and Mueller, 1984).

Program effectiveness -- Successful accomplishment of a program's goals and objectives.

Program emphasis -- The focus or main goal of a program.

Scale -- For the purposes of this study, two scales are referenced. The current scale refers to continuum which responses relating to the present time period were recorded; the future scale refers to a continuum on which responses were recorded for a period five years hence.

Varimax -- A method of orthogonal rotation which simplifies the factor structure by maximizing the variance of a column of the pattern matrix (Kim & Mueller, 1983).

## Organization of the Report

This report is organized into five chapters. The present chapter establishes the research problem and states the research purpose, objectives, hypotheses, assumptions and limitations, and definition of terms. Chapter II presents a review of literature which serves as a basis for the study. Chapter III discusses the procedure used in the study. Chapter IV presents the findings of the study based on statistical analysis, and interprets these findings. Chapter V provides the summary and conclusions and makes recommendations for future studies.

# CHAPTER II

## LITERATURE REVIEW

As the demand for accountability in education increased, educators searched for improved means of evaluating their programs. One aspect of accountability is to demonstrate that a program is fulfilling its stated purpose. Many authors agree that evaluation serves three main purposes; (1) to determine strengths and weaknesses of a program, (2) to assist in appraising the effectiveness of a program, and (3) to provide decision-making information necessary for program improvement.

Program evaluation is often greeted with skepticism and apprehension (Fye, 1980). Feelings of frustration and complexity have been expressed by program evaluators in their quest for effectiveness. In the past, lack of evidence in determining impact of some aspects of programs, made effectiveness measurements impossible. Today, the move for accountability and the information flow have contributed to more reliable sources for determining effectiveness of programs. Accreditation self-study has also contributed to this information flow because it requires that an institution, (or unit in specialized accreditation) assess its effectiveness in using its available resources to accomplish its purpose. Accreditation takes into account every aspect of a program.

In her study of "The Effectiveness of High School Programs in Home Economics", Arny (1952) included as factors teachers, administrators,

students, curriculum, facilities, teaching methods, and budgets. Arny found that (1) student achievment increased with a favorable environment and effective teaching methods, and (2) effective teachers had higher student achievement in their classes, liked to teach and work with adolescents, were able to interest students in setting and evaluating goals, and worked together with students for improvement of the environment.

In 1963, Kohrman and Trimpe provided a report of the procedure used in evaluating vocational teacher education programs in Michigan. It was concluded that vocational teacher education generally was meeting the needs of local communities, but follow-up services were needed to be developed. It was also suggested that the research program be expanded. Boosage et al. (1963) used the accomplishments of the Michigan project in a four-year longitudinal evaluation program. The study was conducted to determine strengths and weaknesses of the vocational education program, and to provide information for future program development.

The Ad Hoc Research Committee of the Home Economics Division of the American Vocational Association conducted several effectiveness studies, beginning in 1978 (Anderson, 1984). Meers, Ley and Ray (1981) used the case study method to take a comprehensive look inside seven effective high school home economics programs. Some of the generalizations about effective programs drawn from the study included:

1. Teachers appear to be the key factor in effective programs.

2. The goals of effective programs tend to be comprehensive home economics subject matter related to helping students in everyday life and facilitating learning that is helpful in future family life.

3. Students see teachers of outstanding programs as concerned about them and how they feel.

4. Students in effective programs tend to have extremely positive feelings towards the class environment.

5. Student involvement at all levels, planning in class activities and outside activities, related highly to a successful program.

6. Community involvement enhances, but is not an essential element of successful programs.

7. Resources add to but do not make or break a home economics program.

8. Changes in existing programs are facilitated by a teacher's participation in graduate or inservice programs.

Caputo and Haymore (1981) also used case studies to assess home economics program effectiveness. Babiche (1984) investigated the effectiveness of occupational home economics (HERO programs) in Arizona, using educational outcomes. A closer look at home economics education programs in higher education reveals an urgent need for research measuring effectiveness of programs. This is essential if home economics must meet the needs of this changing society.

## Change

The phenomenon of change in today's society is not new. A study of human beings' development and history reveals that change is essential to their expansion, and greater adaptation to life and the environment. According to Crouse (1984) "change takes place with or without the control and direction of the educational community" (p. 14). Therefore, in investigating and analyzing change in relation to education we must look at and understand social change itself.

The American educational system is described by many authors as a classic institution which is not as responsive as it should be to the needs of a rapidly changing society. The changing environment, according to Christenson (1982), will affect the entire system of higher education. This includes the educational programs, student programs, faculties, and governance and administration of universities and colleges. Hence, planning for and developing a guided process for change is imperative (Kamm, 1980; Swanson, 1983).

Education as a social institution has always been greatly affected by social and technological change, and has attempted to adapt to it. "Mere adaptation", stated Wall (1972), "does not necessarily constitute planned change" (p. 10). Planned change that results in comprehensive program development should be concerned with the effectiveness of the program, the work roles that students assume, and the changing demands of the world of work.

Wall (1972) identified leadership as one of the most important variables in any program designed to produce change. In the field of home economics Scruggs and Rader (1981) identified leadership as a key element in planning for change in the future. Bennis, Beene and Chin (1961) and Gardner (1964) also identified leadership as one of the five underlying propositions of the concept of planning change in higher education.

The concept of actually engineering or planning change is a fairly recent phenomenon in education. Nevertheless, there is a need for planning for change in higher education. Planned change is the generic term defined in the literature as a means of controlling and directing change. Wall (1972) stated that planned change establishes an environment in which change is continuous and self-renewing.

## Changes Occurring in Higher Education

The forces of change are in motion, thereby creating an uncertain future, posing problems and in some cases offering new opportunities. According to Christenson (1982), the changes that will occur in the environment of higher education during the 1980s, cannot be predicted with ease and complete accuracy. It is necessary however, that colleges and universities try to predict the future and plan for it. This entails identification of the forces affecting colleges and universities, speculating on the changes that will occur, and tracing backward from the future to the present the implications of the changes, and finally planning what action is necessary to address the future being hypothesized.

"The pressures faced by higher education are complex and contradictory" (Christenson, 1982, p. 5). On the one hand, society is demanding that colleges and universities take a larger, more diverse role in contemporary American life; and on the other hand, levelling enrollments, the realities of political power, and the relative scarcity of financial and other resources, have seriously restricted the ability of colleges and universities to preserve the best of the past while simultaneously striking out in new directions.

A period of limited growth is projected for higher education extending into the 1990s. Colleges and universities will therefore need to shift their concerns, objectives, and criteria for success from growth to quality. This can be done by anticipating the changes and developing strategies for responding creatively to them. In reference to changes occurring in higher education, Christenson (1982) cited critical areas as environmental changes; economic changes; changes in clientele; changes in the nature of work; and effects of change on faculty, governance and administration.

## Environmental Changes

Beyond the immediate environment of higher education, is the broader social, economic, and cultural setting, which constitutes the source of most of the basic forces affecting the world of higher education (Christenson, 1982). Futurists have identified these major forces and have speculated on the changes that may occur during the next twenty years.

Forces affecting the world of higher education have been identified as follows; worldwide scarcity and rising cost of the basics of food, shelter, and health care; the shifts in population between urban and rural areas; changing lifestyles and values; complexity and unresponsiveness of institutions' government, education, corporations, and labor; the energy crises; the problem of pollution; the advances in technology; and the population explosion in underdeveloped countries. According to Christenson (1982), the potential impact of these environmental factors on colleges and universities is as obvious as it is profound. More specifically, these factors have great impact on the educational programs offered by the field of home economics.

## Economic Changes

The current economic stagnation, especially when coupled with the declining number of student enrollment, has a strong effect on higher education. With the increased competition for limited tax funds, public colleges are encouraged to control costs. Colleges for whom tuition is a major source of revenue face both the declining enrollment of traditional college-age students, and the diminishing capacity of these students to pay for

the rising tuition charges (Nordvall, 1982). Crouse (1984) indicated that decline in these resources has attacked the very heart of the academic establishment. In their study, Hall et al. (1983) found the major source of revenue for home economics education units to be monies related to state and federal appropriations. The tie to this financial source had caused a degree of uncertainty about the financing of programs.

This new era, stated Christenson (1982), has resulted in greater concerns for accountability in higher education. Colleges and universities will have to devise new or better ways of evaluating programs in terms of viability and cost, strengths and weaknesses, and student achievement.

## Change in Clientele

Significant to the functioning of higher education is the number of potential students, the types of students available, and their patterns of attendance at college. The declining enrollment among the 18-22 year old group, empty buildings, and a need for new financial resources, have forced colleges and universities to be more responsive to this country's graying population (O'Donnell, 1980). The fact that Americans are not only living longer but retiring earlier, are developing new life patterns, and are reevaluating use of their time and their lives, has important implications for education in later life. Combs (1981) stressed the need for lifelong education as an integral part of the curriculum in higher education.

The change in the mix of students attending college, along with the decline in enrollment will also have a significant impact on the kinds of student programs needed. Non-traditional students (older students, married students and working students) need different kinds of student activities and

services that will address their needs and problems. Survival of programs will call for sophisticated marketing strategies based on information generated by research studies, concerning potential student markets and strategies for reaching each group (Christenson, 1982).

## Change in the Nature of Work

The nature of work is changing. Work has an effect on the number of people who pursue degrees, the kind of education they want, and their subsequent needs for continuing education (Christenson, 1982). Despite the slow growth in jobs requiring higher education since 1975, futurists predict that by 1990, 22 percent of the labor force will have a college degree. Johansen and Samuel (1977) projected a surplus of college graduates each year by 1985.

The pressures of holding present jobs or moving up, create a demand for career-oriented continuing education. More people are therefore returning to school to take up-to-date advanced specialized work in their field, or, are developing new areas of expertise. The effect on higher education is evident. The percentage of women in the work force has increased from 30 percent to 45 percent from 1950 to 1975, and is expected to increase to 50 percent by 1990. More people, especially women and older people, are interested in part-time and flexi-time work periods. Employers' attitudes toward this type of work arrangement are also changing. Retirement patterns whether early or late are expected to affect the nature of the work force.

## Effects of Change on Faculty

Faculty will also feel the impact of change in higher education. As enrollments decline and resources level off, faculty positions will be threatened. Cartter (1975) projected a decline of an estimated 30,000 positions by 1990. Tenure review processes are likely to become more stringent. Christenson (1982) suggested that part-time appointments are likely to increase because the salaries for them are lower. More rigorous faculty evaluations will force faculty to remain current in their subject area and some may even undertake retraining for second careers in higher education.

## Effects of Change on Governance and Administration

Change will certainly have an effect on the process of governance and administration within colleges and universities. The most obvious problem area will be resource development and management (Christenson, 1982). The functions of planning, budgeting and information flow will also feel the effects. Budgeting however, will be more visible and more closely tied to academic planning. It will also take a longer-run point of view, involve more participants, and be more subject to rigidities and higher-level controls (Lee & Bowen, 1975). Resource constraints will therefore place even greater emphasis on expanding the resource base.

Beyond trying to increase enrollments, public universities will search for more effective ways to present their needs to the legislatures (Christenson, 1982).

A greater number of universities will also learn how to tap the federal government more effectively. Therefore according to Stewart and Harvey (1975), a better understanding of how government works is necessary. Hence the need for administrators to become more involved in public policy.

The skills and qualities desired in administrators will change. Like faculty members, administrators will need development programs to gain the skills needed in this new age (Christenson, 1982). Administrators will also be subject to systematic evaluation.

A participative approach to governance is seen as an effective tool in this era of change. Faculty members will be expected to be involved in new kinds of difficult decision-making. Their willingness to devote significant time and energy to this task will need to be developed. Students are also encouraged to be involved in participative governance. They too have a vested interest in what goes on in the institution. According to Christenson (1982), a sense of community interdependence, and joint venture will need to be engendered.

In responding to change, educational programs should be carefully assessed to insure that decisions are warranted, and viable adjustments made. Hence the need for evaluation of educational programs.

## Program Evaluation

Evaluation is much more than the assessment of student performance as was suggested by Tyler (1942). In addition to contributing to the improvement of the teaching/learning process, evaluation data can be effectively employed in assessing the overall effectiveness of educational programs. The primary concern of evaluation, according to Stufflebeam

(1971), is decision-making. Program evaluation contributes to decision-making about the installation, continuation, expansion and effectiveness of educational programs.

The appraisal of the effectiveness of an educational program should be conducted as a continuous process. According to Ahman and Glock (1981) educational evaluation must be a systematic process of determining the effectiveness of educational endeavors in the light of evidence.

A continuing need in this era of accelerated change is thoughtful appraisal of home economics education programs. Only through such appraisal can the strengths of these programs be retained and changes be intelligently made.

According to Spafford (1949), evaluation of home economics programs occur constantly in one form or another. For example, parents evaluate these programs when they select them as a place for their children to study; students evaluate programs when they express their opinions of a teacher or a course; and teachers evaluate programs when they suggest changes in course offerings or course content. However, such evaluations are inadequate in determining effectiveness of a program. Inadequacies often arise due to lack of a common understanding of the purpose of the program, a tendency to base decisions on irrelevant or inadequate evidence, a lack of objectivity, or a failure to consider all aspects of a situation.

Spafford further stated that:

"Evaluation to be sound and of greatest worth should deal with a department in its entirety. Such evaluation involves a study of the department's philosophy and purpose, its concern for students, its curriculum and teaching, its staff, physical facilities, and administration. Sound evaluation has depth as well as breadth." (p. 1)

This study strongly supports the view that a home economics education program should be evaluated in its entirety, and as such, takes into account all possible aspects that contribute to the existence of such programs.

# CHAPTER III

# PROCEDURES

## Introduction

This study was conducted to assess the extent to which home economics education units in higher education, utilized selected measures of program effectiveness at present and the extent to which they planned to use the same measures of effectiveness in the future. The study also examined the relationship of selected measures of program effectiveness to variables related to (1) curriculum, (2) planning strategies, (3) educational delivery systems, (4) financial resources, (5) external relations programs, (6) facilities and equipment, and (7) faculty.

The objectives of this study were (1) to determine the similarities between factor structures for the current and projected scales; (2) to assess the changes in effectiveness measures between the current and projected statements provided by the home economics educators; (3) analyze the similarity among the measures of effectiveness reported for the five American Vocational Association regions; and (4) analyze the current and projected measures of effectiveness as associated with curriculum emphases, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

This chapter describes the type of research, the population and the instrument. Methods used in the statistical analysis of the data are also discussed.

## Design of the Study

This study utilized what is commonly described as descriptive research. Descriptive research is primarily concerned with identifying and clarifying functional relationships among variables (VanDalen, 1979). According to Best (1981), "the descriptive design is concerned with hypothesis formulation and testing the analysis between nonmanipulated variables and the development of generalizations" (p. 24). Isaac and Michael (1981) contend that "Research authorities . . . are not in agreement on what constitutes 'descriptive research' and often broaden the term to include all forms of research except historical and experimental" (p. 46). They further suggest that survey studies are often used in this broad context of descriptive research.

Survey studies, according to Van Dalen (1979),

> "collect detailed descriptions of existing phenomenon with the intent of employing the data to justify current conditions and practices or to make intelligent plans for improving them. Survey studies are used to determine the adequacy of status by comparing it with selected or established standards (p. 286)" .

This study supports Van Dalen's theory of descriptive research. Thus, descriptive survey research was employed to assess the effectiveness of home economics education units in higher education, based on information provided by home economics educators.

## Population

The population of this study consisted of 326 four-year colleges and universities in the United States granting home economics education degrees. A list was obtained from two sources: Home Economics in Institutions Granting Bachelors or Higher Degrees, 1978-1979 (Harper, Custer & Purdy, 1980), and the 1981 National Directory of Vocational Home Economics Teacher Educators (Weis & Pomraning, 1981). Also included were two institutions not represented on the lists but were known to exist. The total population was comprised of 326 home economics education units.

The National Directory of Teacher Educators (Weis & Pomraning, 1981) and the Educational Directory of Colleges and Universities (Broyles & Davis, 1982) provided the addresses for the institutions. Home economics education units were contacted by letter explaining the purpose of the initial research study. One educator per unit was asked to respond to the research instrument. Three weeks later, follow-up procedures were conducted. Two hundred and twenty-two units responded to the questionnaire. Two hundred and eight of the responses were usable.

Using the same data base that was used in this study, Crouse (1984) did a percentage comparison of respondents and nonrespondents by institutional enrollment, regional area, and classification. Enrollment data for the 326 institutions were obtained from The College Blue Book Tabular Data (1983). Enrollment categories were based on categories established by the National Center for Educational Statistics (Dearman & Plisko, 1980). Comparisons indicated that respondents were more likely to represent institutions of 5000 or more, than were nonrespondents.

Institutional classifications were obtained from American Council on Education (1983). The classification categories were public land grant, public other than land grant, and private. Crouse (1984) reported that public and land grant institutions were represented by a greater proportion of the responding population than were the private institutions.

Regional categories utilized in the study were those established by the American Vocational Association. These categories represented areas of the United States according to states within the regions (see Appendix B). Comparisons indicated that the central and western regions were represented to a greater degree than the eastern regions (Crouse, 1984).

## Instrument

The survey instrument titled "Home Economics Education Futures Study: Toward the Year 2000" provided the data utilized in this study. The instrument was developed by Drs. Beulah Hirschlein, Elaine Jorgenson, and Carolyn Brink, a research team associated with the Home Economics Education and Community Services Department at Oklahoma State University. The data were collected in November, 1982.

The survey instrument was designed to identify trends in home economics education in institutions of higher education within the United States, based upon current and projected future goals of these units. Ten broad program goals were selected for the instrument. Selection of the goals was based upon a literature review and the knowledge and experience of the research team as educators and administrators in the field of home economics. The goals were as follows:

1. Develop and maintain curricula relevant to the educational needs of students.

2. Develop and maintain program emphases appropriate to the needs of employers of graduates.

3. Develop strategic plans aimed at maintaining the unit's role as a viable academic program in the institution.

4. Utilize state of the art delivery systems that unit maintain vitality respected by colleagues, students and employers.

5. Develop and implement an evaluation program that utilizes appropriate merasures of unit effectiveness.

6. Develop and maintain financial resources necessary to adequately support the various needs of the unit.

7. Implement an external relations program that enhances unit visibility and assures constituent support.

8. Maintain and utilize facilities and equipment that enhance the home economics education program.

9. Develop and maintain a student recruitment program aimed toward increasing the number of well-qualified students in the program.

10. Employ, develop and retain qualified, productive faculty.

The survey instrument was divided into two parts: (1) goals and descriptors, and (2) demographic information. In Part 1, department heads were asked to respond to the goal and corresponding descriptors in terms of (1) how the unit currently exists, and (2) how the unit will be described in five years. The instrument design utilized two five-point, Likert-type scales to which the participants responded, once for the present and once for the future.

A panel of experts consisting of administrators, educators, and experienced researchers established content validity of the instrument through a comparative assessment with the objectives of the study. The instrument was also examined for clarity by students in a graduate research course in the College of Home Economics at Oklahoma State University.

## Selection of Variables

This researcher utilized data from a prior study on measures of program effectiveness in home economics education units. A copy of the research instrument may be found in Appendix A. For the purposes of this study items related to program effectiveness (Appendix A) were selected as the criterion variable. The 26 items developed by a panel of experts are as follows:

(a) Number of faculty publications produced annually.
(b) Number of student credit hours generated annually.
(c) Total amount of external funds generated annually.
(d) Faculty participation in positions of national leadership.
(e) Faculty participation in college/university committees.
(f) Faculty student-ratio.
(g) Faculty contributions to the development fund.
(h) Faculty involvement in international programs.
(i) Student enrollment trends.
(j) Number of endowed chairs in the department.
(k) Number and size of student scholarships awarded annually.
(l) Number and value of bequests to the department.
(m) Faculty involvement in public service programs.

(n) Departmental rank in overall institutional enrollment.

(o) Faculty research productivity.

(p) Professional status obtained by graduates of the program.

(q) Placement of students in positions related to unit curricula.

(r) Unit rank in relation to other similar units within the institution.

(s) Reports and recommendations of external accrediting agencies.

(t) Unit rank in relation to other similar units at other institutions.

(u) Cost effectiveness of space and equipment utilization.

(v) Results of student evaluation of courses and teachers.

(w) Academic credentials of incoming students.

(x) Unit output consistent with the mission, purpose, and goals of the college/university.

(y) Recognitions and awards earned by students.

(z) Reports and recommendations resulting from self-study and self-evaluation.

These descriptors were developed by a panel of experts. The variates selected for this study were groups of items associated with (1) curriculum emphases, (2) planning strategies, (3) educational delivery systems, (4) financial resources, (5) external relations programs, (6) facilities and equipment, and (7) faculty. The inclusion of items within each group was the decision of the Hirschlein, Jorgenson and Brink research team (see Appendix A).

# Methods

In this study the following statistical procedures were utilized.

## Factor Analysis

Factor analysis is a statistical tool for analyzing scores on a large number of variables, in order to determine whether there are a few identifiable dimensions which can be used in describing many of the variables under analysis (Kim & Mueller, 1983). Factor analysis mathematically treats a collection of intercorrelations in such a way that several underlying traits, or factors, are identified and analyzed. Factor analysis is therefore considered an aid to the study of a table of correlations.

## Assumptions

The basic assumption of factor analysis is that some underlying factors, which are smaller in number than the number of observed variables, are responsible for the covariation among the observed variables (Kim and Mueller, 1984).

Factor analysis also assumes that the observed variables are linear combinations of some underlying factors. This linear system is such that the resulting covariance structure can be identified without error, if the factor loadings are known.

Some of these factors are assumed to be unique to each variable, whereas, others are assumed to be common to two or more variables. The unique factors are then assumed to be orthogonal to each other, hence they do not contribute to the covariation between variables.

## Functions of Factor Analysis

Factor analysis is mainly used in an exploratory or confirmatory capacity, depending on the major objectives of the study. Exploratory factor analysis is mainly used as a means of exploring the underlying factor structure without prior specification of number of factors and their loadings. Confirmatory factor analysis, is factor analysis in which specific expectations concerning the number of factors and their loadings are tested on sample data (Kim & Mueller, 1983). In this study, exploratory factor analysis was utilized.

## Basic Steps in Exploratory Factor Analysis

There are three basic steps in exploratory factor analysis. The initial step involves the preparation of a correlation matrix based on the data collected. According to Kim and Mueller (1984), this data matrix can be of two modes (dimensions): (1) the entity mode, representing the respondents; and (2) the variable mode represented by different columns showing the relationship among variables. In this study the variable mode was utilized.

The second step in exploratory factor analysis is extracting initial factors. The main objective of the extraction step is to determine the minimum number of common factors that would satisfactorily produce the correlations among the observed variables.

The typical approach at this stage is to input the relevant matrix into a factor analysis program, and choose one of the many methods of obtaining the initial solution such as alpha factoring, image analysis, maximum likelihood method, and so on. In this study, the Statistical Analysis System (SAS) procedure FACTOR, used the maximum likelihood method to obtain

an initial solution. The maximum likelihood method finds the most likely population values that would have produced the given correlation matrix.

Initial factors are obtained based on certain restrictions:

1. The number of common factors are fixed.
2. The factors are orthogonal to each other.
3. The first factor accounts for as much variance as possible; the second factor accounts for as much of the residual left unexplained by the first factor; the third factor accounts for much of the residual variance left unexplained by the first two factors, and so on.

The final step in exploratory factor analysis is rotation to a terminal solution. The aim of this procedure is to find simpler and more easily interpretable factors through rotations. To obtain a rotated solution, restriction one (above) is maintained but two and three are removed, in order to obtain readily interpretable results.

There are three different approaches to rotation. They are: (1) graphical rotation, (2) analytical rotation, and (3) factor pattern with direct oblimin. The approach utilized in this study was analytic rotation through SAS, using the principal axis option with an orthogonal (varimax) rotation.

## Student's t Test

One of the most common types of analysis in research involves the comparison of two or more groups with respect to some characteristic. The Student's t test is used to determine whether two means, proportions, or correlation coefficients differ significantly from each other (Borg & Gall, 1979). In this study, the t test was used to determine mean difference between the current and projected measures of program effectiveness.

## Analysis of Variance

The F test, obtained through one way analysis of variance was employed to measure similarities between measures of effectiveness for the five American Vocational Association regions (Hypothesis 3 of this study). One way analysis of variance is an exploratory test designed to detect evidence of differences among a set of group means (Agresti & Agresti, 1979). The one way analysis of variance procedure for testing and equality of means is based on the comparison of the variability of the sample group mean from the overall mean. The underlying assumptions of one way analysis of variance are as follows:

1. The population distribution on the response variable for each of the group is normal.
2. The variance of the distribution is the same for each group.
3. Independent random samples are selected from each group.

## Multiple Regression Analysis

In hypotheses 4 and 5, methods of describing relationships between variables measured at the interval level were studied. Three different but related aspects of such relationships were considered. Firstly, the possibility of an association existing between two variables was investigated by using a test of the hypothesis of statistical independence. The Pearson correlation, which is very commonly used for measuring such association for interval variables, was used in this study. Secondly, the strength of such association among the variables was tested by a t test, and finally, specification of the

form of the relationship among the variables was investigated via the F test obtained from an Analysis of Variance (ANOVA) table for regression.

The regression model rests upon the assumption that a linear relationship exists between the dependent and independent variables (Agresti & Agresti, 1979). It also assumes (1) the selection of an independent random sample, (2) the population from which the sample is drawn is normally distributed, (3) the variance of the errors is constant, and (4) the errors are uncorrelated. The multiple regression model was also used to analyze partial relationships between two variables while controlling the other variables. As a by product, the analysis gives a measure of the performance of the model. This measure is known as the coefficient of determination and often referred to as a measure and not a test. The test for the fit of the model is given by the F statistic.

A summary of the relationships among the research hypotheses, objectives and statistical procedures is presented in Table I.

TABLE I

SUMMARY OF RESEARCH OBJECTIVES, HYPOTHESES AND STATISTICAL PROCEDURES

| Research Hypotheses | Objectives | Statistical Procedure |
|---|---|---|
| $H_1$ Factor structures derived from responses to the current scale will be similar to factor structures derived from the projected scale. | Determine the similarities between factor structures for the current and projected scales | Factor Analysis |
| $H_2$ There is no significant difference between the measures of program effectiveness currently used and those projected for future utilization. | Assess the changes in effectiveness measures between the current and projected statements provided by home economics educators. | Student's t |
| $H_3$ There is no significant difference among measures of effectiveness for regions one, two, three, four, and five. | Analyze the similarities among the measures of effectiveness for the five American Vocational Association regions. | One Way Analysis of Variance |

(table continues)

TABLE I (Continued)

| Research Hypotheses | Objectives | Statistical Procedure |
|---|---|---|
| $H_4$ There is no significant association between current measures of program effectiveness and current curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment and faculty. | Analyze the relationship of current measures of program effectiveness and variables related to current curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment and faculty. | Multiple Regression Analysis<br><br>Pearson r |
| $H_5$ There is no significant association between projected measures of program effectiveness and projected curriculum emphases, planning strategies, delivery systems, external relations programs, facilities and equipment and faculty. | Analyze the relationship of projected measures of program effectiveness and variables related to projected curriculum emphases, planning strategies, delivery systems, financial resources external relations programs, facilities and equipment and faculty. | Multiple Regression Analysis<br><br>Pearson r |

# CHAPTER IV

## FINDINGS AND DISCUSSION

This study was designed to assess the extent to which home economics education units in higher education, utilized selected measures of program effectiveness at present, and the extent to which they planned to use the same measures of effectiveness in the future. The study also examined the relationship of selected measures of program effectiveness to other variables namely 1) curriculum emphasis, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

The hypotheses investigated were as follows:

$H_1$ Factor structures derived from responses to the current scale will be similar to factor structures derived from responses to the projected scale.

$H_2$ There is no significant difference between measures of program effectiveness currently used, and those projected for future utilization.

$H_3$ There is no significant difference between the measures of program effectiveness utilized in the five American Vocational Association Regions.

$H_4$ There is no significant association between current measures of program effectiveness and current 1) curriculum emphasis, 2)

planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

$H_5$ There is no significant association between projected measures of program effectiveness and projected 1) curriculum emphasis, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

This chapter presents the findings of the study in the following order: (1) a description of respondents; (2) results of factor analysis; (3) relationship of current and projected measures of program effectiveness; (4) measures of program effectiveness utilized by American Vocational Association regions; (5) association between current and projected measures of program effectiveness and other variables; and (6) summary.

## Description of Respondents

The population of this study consisted of 326 home economics education units in four-year colleges and universities in the United States. Two hundred and eight respondents representing a 64 percent return provided usable data for analyzing the above hypotheses. Missing data for some of the variables were observed in a few of the questionnaires. However, no steps were taken to address the missing data problem as the techniques employed in the analysis were quite strong enough to overcome the problems caused by a few missing data.

Respondents were asked to indicate the type of institution of higher education with which they were affiliated. These respondents were usually

department chairpersons. The pie chart in Figure 1 indicates that 50 percent of the respondents came from home economics education units in public, other than land grant institutions. Private institutions provided 27 percent of the respondents, and 23 percent of the respondents came from public land grant institutions.

Administrative units to which the home economics education units directly reported are illustrated in Table II. Fifty-one percent of the units reported directly to a home economics administrative unit. Fifteen percent of the responding units reported to an education administrative unit, 11 percent reported to a vocational administrative unit, and 23 percent reported to other administrative units specified by the respondents. These units included agriculture, applied science, behavioral sciences, business, fine arts, and human services.

Respondents were asked to indicate whether there has been a change in the administrative structure of the unit which includes home economics education within the last five years, and whether a change was expected within the next five years. Thirty-two percent of the responding units indicated that a change had taken place in the unit, and 22 percent stated that a change was expected in the next five years.

The bar graph of Figure 2 shows that the majority of the sample offered bachelor degrees. Masters degrees were offered by 51 percent of the respondents, and 11 percent offered doctorate degrees. Table III presents the undergraduate enrollment of home economics education majors for each responding institution. The largest percentage (25%) was in the 26 to 50 range, and the smallest (1%), was in the 301 and above range. The largest percentage for graduate enrollment (45%), was in the 10 or less range, and the smallest (2%), in the 101 and above range (Table IV).

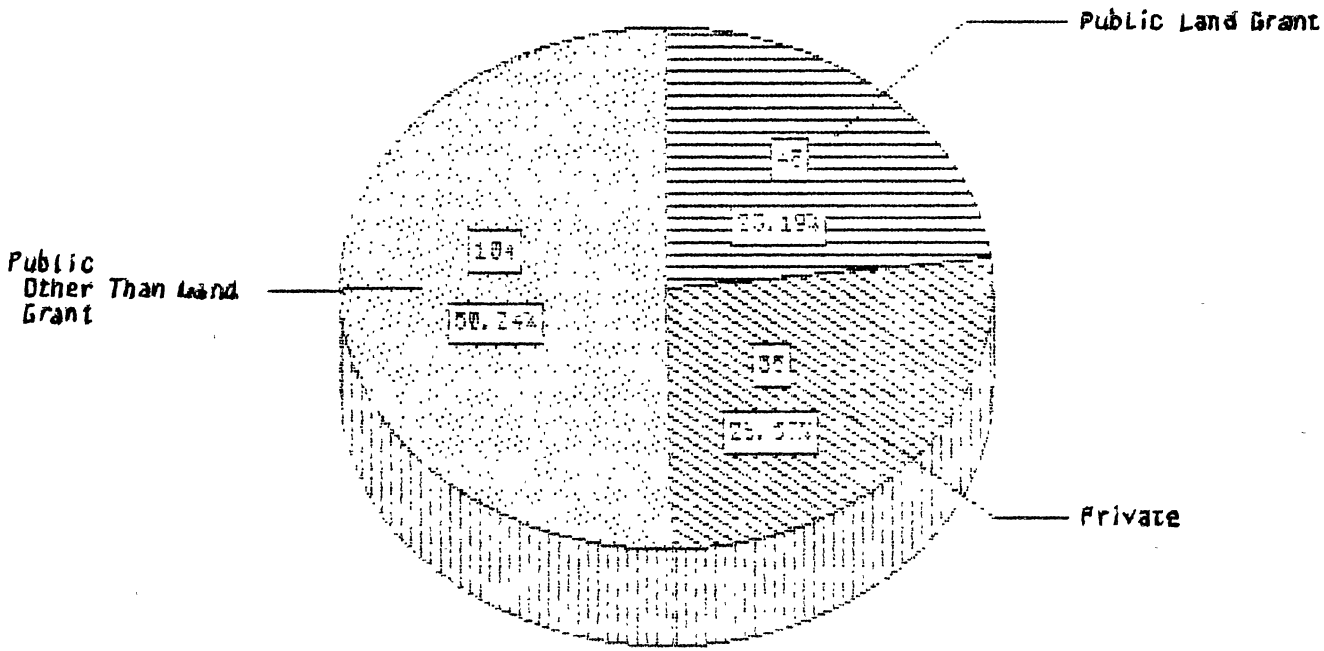


Figure 1. Type of Institution To Which Home Economics Education Units Were Affiliated.

TABLE II

ADMINISTRATIVE UNITS TO WHICH HOME ECONOMICS EDUCATION UNITS REPORTED

| Administrative Units | Frequency | Percent |
|---|---|---|
| Home Economics | 105 | 51 |
| Education | 32 | 15 |
| Vocational | 22 | 11 |
| Other* | 48 | 23 |

N = 207.

*Other administrative units include agriculture, applied science, behavioral sciences, business, fine arts, and human services.

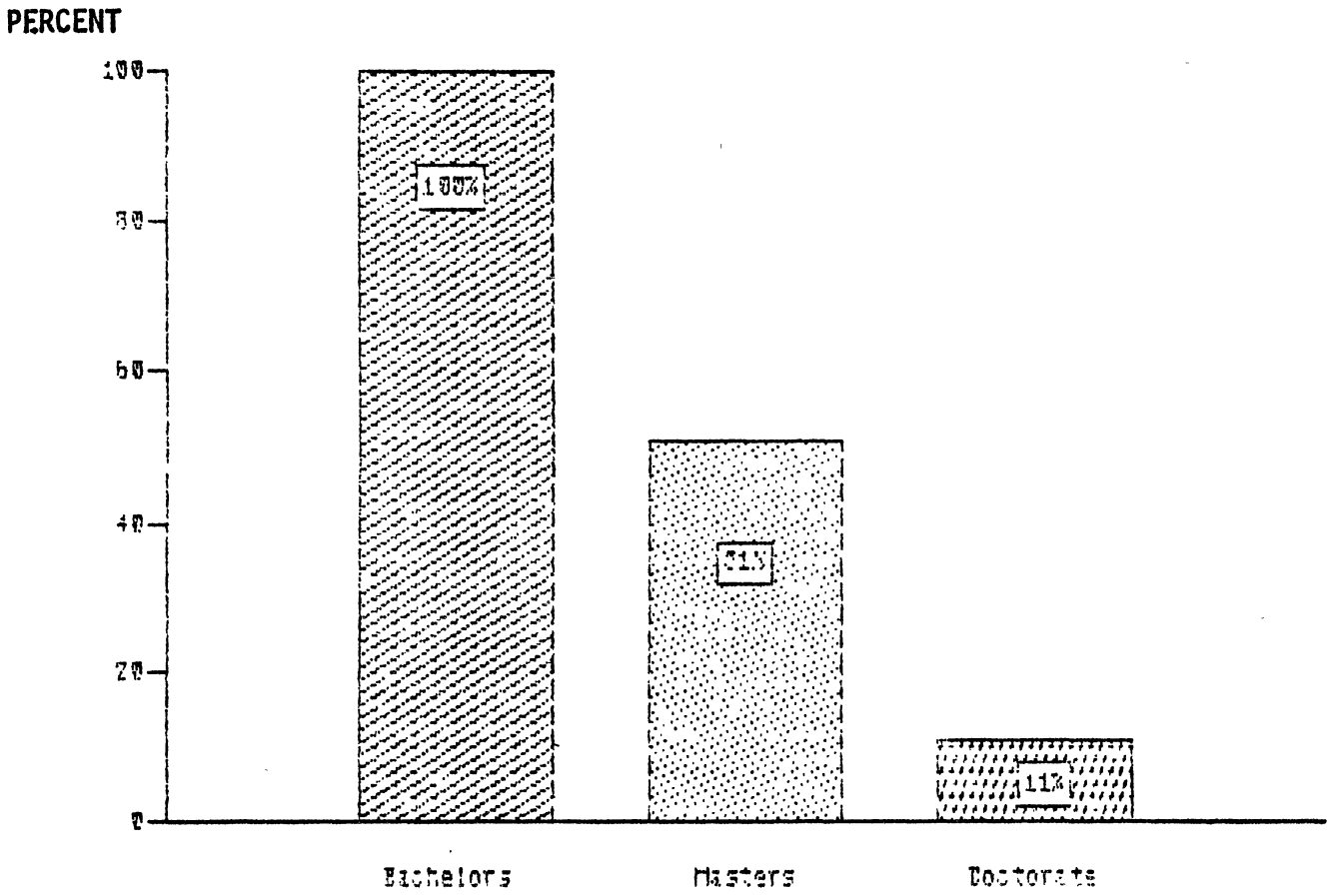


Figure 2. Percentage of Degrees Offered by Home Economics Education Units.

TABLE III

UNDERGRADUATE ENROLLMENT IN
HOME ECONOMICS EDUCATION

| Enrollment | Frequency | Percent |
|---|---|---|
| 15 or less | 48 | 23 |
| 16 - 25 | 45 | 22 |
| 26 - 50 | 52 | 25 |
| 51 - 100 | 46 | 22 |
| 101 - 200 | 11 | 5 |
| 201 - 300 | 3 | 2 |
| 301 or more | 1 | 1 |

N = 206

TABLE IV

GRADUATE ENROLLMENT IN HOME ECONOMICS

| Enrollment | Frequency | Percent |
|---|---|---|
| 10 or less | 52 | 45 |
| 11 - 25 | 34 | 30 |
| 26 - 50 | 15 | 13 |
| 51 - 75 | 5 | 4 |
| 76 - 100 | 5 | 4 |
| 101 - 150 | 2 | 2 |
| 151 - 200 | 2 | 2 |

N = 115

Table V depicts the undergraduate options available to home economics education majors. Ninety-eight percent offered a teacher certification option; 38 percent offered Cooperative Extension, 21 percent offered community service, 13 percent offered communication and journalism, and 19 percent offered other options. Respondents selecting the other options were asked to specify the type of curriculum emphasis offered at their institution. Responses included general home economics, early childhood education, consumer services, business, family studies, nutrition education, and vocational education.

## Results of Factor Analysis

### Rationale

An exploratory factor analysis procedure conducted through SAS, using the principal axis option with an orthogonal (varimax) rotation, was used for the purpose of establishing construct validity of the survey instrument.

Construct Validity, according to Van Dalen (1979), is one of the most important types of validity checks on an instrument. "Construct validity is evaluated . . ., by determining the degree to which certain explanatory concepts or constructs account for performance on the test" (APA, 1966, p. 13). Constructs are very complex concepts which are composed of many interrelated factors. Constructs are also referred to as symbolic maps, where items and their interrelationships represent the structure or process of a measuring device (Bradford & Moreblock, 1957).

TABLE V

UNDERGRADUATE OPTIONS AVAILABLE TO HOME ECONOMICS EDUCATION MAJORS

| Options | Frequency | Percent |
|---|---|---|
| Teacher Certification | 204 | 98 |
| Cooperative Extension | 78 | 38 |
| Community Service | 43 | 21 |
| Communication and Journalism | 27 | 13 |
| Other* | 40 | 19 |

N = 208

*Other includes general home economics, early childhood education, consumer services, business, family studies, nutrition education, and vocational education.

## Exploratory Factor Analysis

The initial step in the factor analysis procedure involved preparation of a correlation matrix based on data from the 26 descriptors for measures of program effectiveness, collected from 208 respondents (Appendix A). According to Kim and Mueller (1984), a correlation matrix can be of two modes (dimensions): 1) the entity mode representing the respondents (a matrix of dimension 208), and 2) the variable mode represented by different columns showing the relationship among variables (a matrix of dimension 26).

The correlation matrix was selected over the covariance matrix for two reasons: (1) Many existing computer programs do not accept the covariance matrix as basic input data, and (2) most examples in the literature are based on correlation matrices. Hence it will be easier for understanding and comparing results with others, obtained from different computing techniques.

### Extracting Initial Factors

The typical approach at this stage is to input the relevant matrix into a factor analysis program and choose one of the many methods of obtaining the initial solution. These initial solutions are obtained based on certain restrictions to find the number of factors that can adequately explain the observed correlation among the observed variables. These restrictions are:

1. The number of common factors are fixed.
2. The factors are orthogonal to each other.
3. The first factor accounts for as much variance as possible; the second factor accounts for as much of the residual variance left unexplained

by the first factor; and the third factor accounts for as much of the residual variance left unexplained by the first two factors, and so on.

Rotation To a Terminal Solution

To obtain a rotated solution, restriction 1 was maintained but 2 and 3 are removed in order to obtain simple and more readily interpretable results. It is necessary to keep in mind that the use of rotation does not improve the degree of fit between the data and the factor structure. The aim of the rotation procedure is to obtain a simple interpretation of the factor structure.

Factor Identification

Factor loadings for each of the items for the different factors were examined, and those items with a value at least .40 (Cattell, 1979), were obtained as explanation for that factor. Any item satisfying this criterion for more than one factor was omitted from further analysis. The orthogonal rotation procedure brought most of the loadings of each variable close to zero so that the variable was highly correlated to only one or two factors. This resulted in an easier interpretation of the sub-dimensions.

The results of the factor analysis for each variable used in the study were as follows.

## Current and Projected Measures of Program Effectiveness

The principal factor method conducted through SAS extracted six factors for the current Measures of Program Effectiveness. Factor loadings

for each of the 26 items were obtained and those with at least .40 were also associated with an indicated factor (see Table VI). Factor one explained 20 percent of the total variance of the 26 items. Factor two explained 17 percent; factor three, 22 percent; factor four, 16 percent; factor five, 15 percent; and factor six, 10 percent.

The items primarily defining these six factors were as follows:

Factor One

Faculty contributions to the development fund

Faculty involvement in international programs

The number of endowed chairs in the department

The number and size of student scholarships awarded annually

The number and value of bequests to the department

Factor Two

Departmental rank in overall institutional enrollment

Professional status obtained by graduates of the program

The placement of students in positions related to unit curricula

Unit rank in relation to similar units within the institution

Unit rank in relation to similar units at other institutions

Academic credentials of incoming students

Recognitions and awards earned by students

Factor Three

The number of faculty publications produced annually

The total amount of external funds generated annually

Faculty participation in positions of national leadership

Faculty research productivity

Factor Four

Reports and recommendations of external accrediting agencies

TABLE VI

ROTATED FACTOR ANALYSIS FOR CURRENT MEASURES OF PROGRAM EFFECTIVENESS

| Item | Factors Rotated Orthogonally | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| The number of endowed chairs in the department. | 0.79[a] | -0.03 | 0.24 | 0.02 | -0.01 | -0.10 |
| Faculty contributions to the development fund. | 0.78 | 0.01 | -0.14 | -0.04 | 0.01 | -0.30 |
| Faculty involvement in international programs. | 0.74 | -0.02 | 0.33 | 0.10 | -0.11 | -0.04 |
| The number and value of bequests to the department. | 0.63 | 0.16 | -0.02 | -0.16 | 0.16 | 0.17 |
| The number and size of student scholarships awarded annually. | 0.51 | 0.13 | -0.07 | -0.07 | 0.22 | 0.20 |
| Unit rank in relation to other units at other institutions. | 0.03 | 0.81 | -0.07 | -0.13 | 0.08 | -0.02 |
| Professional status obtained by graduates of the program. | -0.06 | 0.62 | 0.24 | 0.15 | -0.25 | 0.08 |
| Recognitions and awards earned by students. | 0.17 | 0.55 | -0.29 | 0.32 | -0.06 | 0.05 |
| The placement of students in positions related to unit curricula. | 0.04 | 0.53 | 0.07 | 0.25 | -0.21 | 0.17 |
| Academic credentials of incoming students. | 0.36 | 0.44 | -0.02 | 0.25 | -0.02 | -0.19 |

(table continues)

TABLE VI (Continued)

| Item | Factors Rotated Orthogonally | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Faculty research productivity. | 0.05 | -0.07 | 0.89 | 0.05 | -0.06 | -0.02 |
| The number of faculty publi-cations produced annually. | 0.03 | -0.06 | 0.67 | 0.11 | 0.04 | 0.38 |
| Faculty participation in positionsof national leadership. | 0.03 | -0.06 | 0.67 | 0.11 | 0.04 | 0.38 |
| The total amount of external funds generated annually. | 0.19 | 0.14 | 0.61 | -0.16 | 0.21 | -0.02 |
| Reslts of student evaluation of courses and teachers. | -0.03 | -0.16 | 0.02 | 0.74 | 0.10 | 0.13 |
| Reports and recommendations resulting from self-study and self-evaluation. | -0.02 | 0.11 | 0.05 | 0.71 | 0.06 | -0.01 |
| Unit output consistent with the mission, purpose and goals of the college/university. | -0.03 | 0.11 | -0.14 | 0.71 | 0.04 | 0.11 |
| Reports and recommendations of external accrediting agencies. | -0.24 | 0.32 | 0.34 | 0.41 | 0.15 | -0.29 |
| The number of student credit hours generated annually. | -0.20 | 0.09 | 0.19 | -0.05 | 0.82 | -0.06 |
| The faculty-student ratio. | 0.25 | -0.12 | -0.01 | 0.12 | 0.68 | -0.08 |
| Student enrollment trends. | 0.14 | -0.19 | 0.05 | 0.32 | 0.58 | 0.19 |

(table continues)

TABLE VI (Continued)

| Item | Factors Rotated Orthogonally | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Cost effectiveness of space and equipment utilization [b]. | 0.16 | -0.05 | -0.17 | 0.44 | 0.47 | -0.11 |
| Departmental rank in overall institutional enrollment. | 0.11 | 0.38 | -0.01 | -0.04 | 0.42 | 0.19 |
| Faculty involvement in public service programs. | 0.11 | 0.00 | 0.09 | 0.06 | -0.06 | 0.81 |
| Faculty participation in college/ university committees. | -0.24 | 0.15 | 0.03 | 0.16 | 0.29 | 0.54 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items common to more than one factor.

Results of student evaluation of courses and teachers

Unit output consistent with the mission, purpose, and goals of the college/university

Reports and recommendations resulting from self-study and self-evaluation

Factor Five

The number of student credit hours generated annually

The faculty student ratio

Student enrollment trends

Departmental rank in overall institutional enrollment

Factor Six

Faculty participation in college/university committees

Faculty involvement in public service programs

Only one item (Cost effectiveness of space and equipment utilization), had a commonality with more than one factor.

Five factors were extracted for the projected Measures of Program Effectiveness (see Table VII). The total variance of the 26 items were explained by 20 percent from factor one, 23 percent from factor two, 26 percent from factor three, 16 percent from factor four, and 15 percent from factor five.

Items primarily defining these five factors were as follows:

Factor One

Faculty participation in college/university committees

Faculty involvement in public service programs

The placement of students in positions related to unit curricula

Results of student evaluations of courses and teachers

TABLE VII

ROTATED FACTOR LOADING FOR PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Item | Factors Rotated Orthogonally | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Unit output consistent with the mission, purpose, and goals of the college/university. | 0.81 | -0.05 | -0.03 | 0.05 | -0.04 |
| Results of student evaluation of courses and teachers. | 0.65 | -0.04 | -0.06 | 0.06 | -0.00 |
| Faculty participation in college/ university committees. | 0.65 | -0.00 | 0.07 | -0.19 | 0.30 |
| Faculty involvement in public service programs. | 0.64 | 0.22 | 0.18 | -0.12 | 0.04 |
| Reports and recommendations resulting from self-study and self-evaluation[b]. | 0.55 | -0.16 | -0.07 | 0.44 | -0.01 |
| Recognitions and awards earned by students. | 0.50 | 0.24 | -0.15 | 0.39 | -0.05 |
| The placement of students in positions related to unit curricula. | 0.49 | 0.03 | 0.09 | 0.33 | -0.06 |
| Faculty contributions to the development fund. | 0.09 | 0.82 | -0.08 | -0.12 | 0.04 |
| The number and value of bequests to the department. | 0.06 | 0.79 | -0.01 | 0.13 | 0.12 |

(table continues)

TABLE VII (Continued)

| Item | Factors Rotated Orthogonally | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| The number of endowed chairs in the department. | -0.06 | 0.76 | -0.23 | 0.01 | -0.11 |
| The number and size of student scholarships awarded annually. | 0.01 | 0.72 | -0.05 | 0.16 | 0.09 |
| Faculty involvement in international programs. | 0.06 | 0.64 | 0.45 | 0.03 | -0.17 |
| Faculty research productivity. | -0.08 | -0.05 | 0.90 | 0.10 | -0.09 |
| The number of faculty publications produced annually. | -0.11 | 0.03 | 0.86 | 0.00 | 0.07 |
| Faculty participation in poositions of national leadership. | 0.28 | 0.16 | 0.67 | -0.16 | 0.06 |
| The total amount of external funds generated annually. | -0.02 | 0.23 | 0.65 | 0.02 | 0.20 |
| Professional status obtained by graduates of the program.[b] | 0.20 | -0.21 | 0.47 | 0.52 | -0.07 |
| Unit rank in relation to similar units at other institutions. | -0.02 | 0.23 | 0.65 | 0.02 | 0.19 |
| Unit rank in relation to other similar units within the institution. | 0.03 | 0.19 | -0.05 | 0.71 | -0.01 |
| Reports and recommendations of external accrediting agencies. | 0.30 | -0.27 | 0.19 | 0.44 | 0.13 |

(table continues)

TABLE VII (Continued)

| Item | Factors Rotated Orthogonally | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Academic credentials of incoming students. | 0.25 | 0.21 | -0.10 | 0.42 | 0.03 |
| The number of student credit hours generated annually. | -0.04 | -0.21 | 0.32 | -0.05 | 0.81 |
| Student enrollment trends. | 0.22 | 0.03 | -0.13 | -0.02 | 0.76 |
| The faculty student ratio. | -0.10 | 0.14 | 0.02 | 0.14 | 0.69 |
| Departmental rank in overall institutional enrollment. | 0.02 | 0.21 | -0.03 | 0.28 | 0.53 |
| Cost effectiveness of space and equipment utilization.[b] | 0.17 | 0.13 | -0.07 | 0.22 | 0.36 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Unit output consistent with the mission, purpose, and goals of the college/university

Recognitions and awards earned by students

Reports and recommendations resulting from self-study and self-evaluation

Factor Two

Faculty contributions to the development fund

Faculty involvement in international progress

The number of endowed chairs in the department

The number and size of student scholarships awarded annually

The number and value of bequests to the department

Factor Three

The number of faculty publications produced annually

The total amount of external funds generated annually

Faculty participation in positions of national leadership

Faculty research productivity

Factor Four

Unit rank in relation to other similar units within the institution

Reports and recommendations of external accrediting agencies

Unit rank in relation to similar units at other institutions

Academic credentials of incoming students

Factor Five

The number of student credit hours generated annually

The family student ratio

Student enrollment trends

Departmental rank in overall institutional enrollment

One item (Professional status obtained by graduates of the program), had a commonality with two factors.

## Current and Projected Curriculum Emphasis

Five factors were extracted for the current Curriculum Emphases (see Table VIII). The total variance of the 20 items in the current curriculum emphases was explained by 23 percent from factor one, 21 percent from factor two, 23 percent from factor three, 18 percent from factor four, and 15 percent from factor five.

The items primarily defining these five factors were as follows:

Factor One

Preparation for leadership

Negotiation and conflict management skills

Alternative futures

Experiential learning

Computer technology

Factor Two

Program planning and evaluation skills

Group theory and group skills

Creative utilization of existing and emerging media

Factor Three

Lifelong education

Problem solving skills

Leadership development

Factor Four

Accommodating the unique career goals of individual students

Adult education

TABLE VIII

ROTATED FACTOR LOADINGS FOR CURRENT CURRICULUM EMPHASES

| Item | Factors Rotated Orthogonally | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Computer technology. | 0.63[a] | 0.05 | -0.22 | 0.15 | -0.18 |
| Preparation for leadership in public policy formation. | 0.62 | -0.09 | 0.32 | 0.15 | 0.21 |
| Negotiation and conflict management skills. | 0.61 | 0.03 | 0.09 | 0.16 | -0.02 |
| Experiential learning. | 0.60 | 0.20 | -0.07 | -0.19 | 0.12 |
| Alternative futures. | 0.58 | 0.00 | 0.17 | 0.14 | 0.11 |
| Creative utilization of community resources.[b] | 0.41 | 0.41 | 0.09 | -0.15 | 0.20 |
| Group theory and group skills. | 0.02 | 0.72 | -0.25 | -0.03 | -0.17 |
| Creative utilization of existing and emerging media. | 0.02 | 0.72 | -0.25 | -0.20 | 0.05 |
| Program planning and evaluation skills. | -0.02 | 0.65 | 0.06 | 0.26 | 0.02 |
| Public relations skills.[b] | 0.42 | 0.51 | 0.05 | -0.02 | -0.12 |
| Problem solving skills. | 0.03 | 0.05 | 0.72 | -0.08 | 0.22 |

(table continues)

TABLE VIII (Continued)

| Item | Factors Rotated Orthogonally | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Leadership development. | 0.33 | -0.04 | 0.70 | -0.02 | -0.06 |
| Life-long education. | -0.11 | -0.06 | 0.69 | 0.23 | 0.07 |
| Professional standards and ethics.[b] | 0.04 | 0.48 | 0.55 | -0.10 | -0.01 |
| Special education.[b] | 0.03 | 0.48 | 0.54 | -0.01 | -0.01 |
| Accommodating the unique career goals of individual students. | 0.11 | -0.07 | 0.09 | 0.67 | 0.11 |
| Adult education. | 0.22 | 0.06 | 0.05 | 0.61 | -0.06 |
| Interdisciplinary courses. | 0.15 | -0.08 | 0.04 | -0.02 | 0.84 |
| The integrated nature of home economics as a field.[b] | -0.23 | 0.27 | 0.44 | 0.05 | 0.42 |
| Competency based education. | 0.09 | -0.09 | 0.21 | 0.13 | 0.41 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items common to more than one factor.

Special education

Factor Five

Interdisciplinary courses

Competency based education

Four items (Creative utilization of community resources; Public relations skills; Professional standards and ethics; and Experiential learning), had a commonality with more than one factor.

Four factors were extracted for the projected Curriculum Emphases (see Table IX). The total variance of the 20 items was explained by 31 percent from factor one, 29 percent from factor two, 20 percent from factor three, and 18 percent from factor four.

The items prelimarily defining these four factors were as follows:

Factor One

Lifelong education

Accommodating the unique career goals of individual students

Problem solving skills

Leadership development

Negotiation and conflict management skills

Professional standards and ethics

Factor Two

Experiential learning

Group theory and group skills

Creative utilization of existing and emerging media

Public relations skills

Computer technology

Factor Three

The integrated nature of home economics as a field

# TABLE IX

## ROTATED FACTOR LOADINGS FOR PROJECTED CURRICULUM EMPHASES

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Life-long education. | 0.85[a] | -0.07 | -0.05 | -0.09 |
| Problem solving skills. | 0.73 | -0.16 | 0.22 | 0.00 |
| Professional standards. | 0.66 | 0.16 | -0.13 | 0.11 |
| Leadership development. | 0.63 | 0.06 | 0.10 | 0.11 |
| Accommodating of unique career goals of individual students. | 0.63 | -0.00 | 0.29 | -0.16 |
| Negotiation and conflict management skills. | 0.41 | 0.30 | -0.10 | 0.21 |
| Alternative futures. | 0.36 | 0.28 | 0.26 | 0.01 |
| Creative utilization of existing and emerging media. | 0.01 | 0.82 | -0.11 | 0.06 |
| Computer technology. | -0.10 | 0.75 | 0.28 | -0.35 |
| Experiential learning. | -0.27 | 0.57 | 0.15 | 0.38 |
| Group theory and group skills. | -0.27 | 0.57 | 0.15 | 0.38 |
| Public relations skills. | 0.26 | 0.46 | 0.17 | 0.05 |
| Program planning and evaluation skills.[b] | 0.37 | 0.39 | 0.05 | 0.08 |

(table continues)

TABLE IX (Continued)

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Preparation for leadership in public policy formation. | 0.23 | 0.37 | 0.18 | 0.09 |
| Special education. | -0.00 | 0.08 | 0.74 | 0.18 |
| Adult education. | 0.15 | -0.14 | 0.70 | 0.07 |
| The integrated nature of home economics as a field. | 0.12 | 0.13 | 0.55 | 0.36 |
| Interdisciplinary courses. | -0.14 | -0.13 | 0.26 | 0.76 |
| Competency based education. | 0.12 | 0.32 | -0.16 | 0.53 |
| Creative utilization of community resources. | 0.24 | 0.31 | 0.88 | 0.39 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Adult education

Special education

Factor Four

Interdisciplinary courses

Competency based education

Three of the items (Preparation for leadership; Program planning, and Alternative futures) did not load at or above the .40 level.

## Current and Projected Planning Strategies

One factor was extracted for current Planning Strategies. All of the items were included in this factor (see Table X).

Factor One

A strategy that protects the discipline from subject matter raids conducted by other departments

Participation in the development of public policy relating to allocation of resources for higher education

Participation in university wide decision making relating to internal allocation and/or reallocation of resources

Employment of a department head or chairman with a strong appreciation for the history and philosophy of home economics education

Employment of a departmental leader skills in campus politics

The development of a strong support base among graduates

An active recruitment program aimed at attracting high quality students to the department

TABLE X

ROTATED FACTOR LOADINGS FOR CURRENT PLANNING STRATEGIES

| Item | Factor Rotated Orthogonally |
|---|---|
| A strategy that protects the discipline from subject matter raids conducted by other departments. | 0.63 |
| Participation in the development of public policy relating to allocation of resources for higher education. | 0.71 |
| Participation in university-wide decision making relating to internal allocation and/or reallocation of resources. | 0.70 |
| Employment of a department head or chairman with strong appreciation for the history and philosophy of home economics education. | 0.53 |
| Employment of a departmental leader skilled in campus politics. | 0.70 |
| The development of a strong support base among graduates. | 0.65 |
| An active recruitment program aimed at attracting high quality students to the department. | 0.63 |

[a]Loadings equal to or greater than .40 are underlined.

Two factors were extracted for the projected Planning Strategy emphases (see Table XI). Factor one explained 51 percent of the total variance of the seven items, and factor two explained 49 percent.

Items primarily defining these two factors were as follows:

Factor One

Employment of a department head or chairman with a strong appreciation for the history and philosophy of home economics education

Employment of a departmental leader skilled in campus politics

Factor Two

A strategy that protects the discipline from subject matter raids conducted by other departments

Participation in the development of public policy relating to allocation of resources for higher education

Participation in university wide decision making relating to internal allocation and/or reallocation of resources

Two of the items (The development of a strong support base among graduates; and An active recruitment program aimed at attracting high quality students to the department) had a commonality with more than one factor.

## Current and Projected Educational Delivery Systems

Four factors were extracted for current Delivery Systems (see Table XII). The total variance of the 14 items was explained by 32 percent from factor one, 25 percent from factor two, 23 percent from factor three, and 21 percent from factor four.

TABLE XI

ROTATED FACTOR LOADINGS FOR PROJECTED PLANNING STRATEGIES

| Item | Factor Rotated Orthogonally 1 | 2 |
|---|---|---|
| Employment of a departmental leader skilled in campus politics. | 0.78[a] | 0.24 |
| Employment of a department head or chairman with a strong appreciation for the history and philosophy of home economics education. | 0.75 | 0.31 |
| The development of a strong support base among graduates.[b] | 0.79 | 0.41 |
| An active recruitment program aimed at attracting high quality students to the department.[b] | 0.71 | 0.43 |
| Participation in university-wide decision making relating to internal allocation and/or reallocation of resources. | 0.32 | 0.83 |
| Participation in the development of public policy relating to allocation of resources for higher education. | 0.33 | 0.82 |
| A strategy that protects the discipline from subject matter raids conducted by other departments. | 0.38 | 0.71 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items common to more than one factor.

TABLE XII

ROTATED FACTOR LOADINGS FOR CURRENT EDUCATIONAL DELIVERY SYSTEMS

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Use of personal computers for completing course requirements. | 0.74 | 0.07 | -0.07 | -0.10 |
| Use of computer assisted instruction. | 0.73 | -0.24 | 0.03 | 0.09 |
| Access university libraries via personal computers. | 0.68 | 0.05 | 0.03 | 0.10 |
| Use of industrial computer, programming skills for meeting course requirements. | 0.65 | 0.07 | 0.13 | 0.01 |
| Credit available through validation of life experiences. | -0.04 | 0.65 | -0.14 | -0.00 |
| Utilization of cable tv for departmental course offerings. | 0.05 | 0.52 | 0.26 | -0.02 |
| Open entry, open exit enrollment options. | -0.02 | 0.52 | -0.14 | 0.14 |
| Use of interactive satelite television as an instructional medium. | 0.31 | 0.34 | 0.17 | -0.01 |
| A variety of workshops, seminars offered in off campus locations. | -0.03 | -0.22 | 0.87 | 0.06 |
| Utilization of long distance telephone student-teacher conferences/consultations. | 0.04 | -0.05 | 0.76 | -0.07 |

(table continues)

TABLE XII (Continued)

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Utilization of distance learning for the completion of required course work.[b] | -0.12 | 0.45 | 0.48 | 0.04 |
| Telelectures involving professors and guests in distance locations.[b] | 0.34 | 0.19 | 0.36 | 0.06 |
| Use of audio cassettes for independent study. | 0.01 | 0.67 | -0.10 | 0.94 |
| Use of video disks and/or video cassettes for independent study. | 0.04 | 0.05 | 0.19 | 0.73 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Items primarily defining these four factors were as follows:

Factor One

Use of computer assisted instruction

Use of personal computers for completing course requirements

Access university libraries via personal computers

Use of individual computer programming skills for meeting course requirements

Factor Two

Use of interactive satellite television as instructional medium

Credit available through validation of life experiences

Utilization of cable tv for departmental course offerings

Open entry, open exit enrollment options

Factor Three

Utilization of long distance telephone for student-teacher conferences/consultations

A variety of workshops, seminars offered in off campus locations

Factor Four

Use of video disks and/or video cassettes for independent study

Use of audio cassettes for independent study

Two of the items (Utilization of distance learning for the completion of required coursework; and Access university libraries via personal computers), were common to more than one factor.

Three factors were extracted for projected Delivery Systems (see Table XIII). The total variance of the 14 items was explained by 43 percent from factor one, 29 percent from factor two, and 29 percent from factor three.

The items primarily defining these three factors were as follows:

TABLE XIII

ROTATED FACTOR LOADINGS FOR PROJECTED EDUCATIONAL DELIVERY SYSTEMS

| Item | Factors Rotated Orthogonally 1 | 2 | 3 |
|---|---|---|---|
| Telelectures involving professors and guests in distant locations. | 0.87[a] | 0.02 | -0.05 |
| Use of interactive satelite television as instructional medium. | 0.84 | 0.03 | -0.01 |
| Utilization of cable tv for departmental course offerings. | 0.74 | 0.12 | 0.03 |
| Utilization of distant learning for the completion of required course work. | 0.65 | 0.07 | 0.17 |
| Open entry, open exit enrollment options. | 0.46 | -0.09 | 0.32 |
| Use of individual computer programming skills for meeting course requirements. | 0.01 | 0.81 | 0.07 |
| Use of personal computers for completing course requirements. | 0.16 | 0.79 | -0.10 |
| Use of computer assisted instruction. | -0.10 | 0.75 | 0.12 |
| Access university libraries via personal computers.[b] | 0.46 | 0.53 | -0.09 |
| Use of radio cassettes for independent study. | -0.21 | 0.19 | 0.85 |

(table continues)

TABLE XIII (Continued)

| Item | Factors Rotated Orthogonally 1 | 2 | 3 |
|---|---|---|---|
| Use of video disks and/or video-cassettes for independent study. | 0.08 | 0.14 | <u>0.75</u> |
| Credit available through validation of life experiences. | 0.33 | -0.23 | <u>0.57</u> |
| Utilization of long distance telephone for student-teacher conferences/ consultations.[b] | <u>0.47</u> | -0.03 | <u>0.47</u> |
| Variety of workshops, seminars offered in off campus locations.[c] | 0.37 | -0.04 | 0.38 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items common to more than one factor.
[c]Items that did not load at or above .40.

Factor One

Use of interactive satellite television as an instructional medium

Telelectures involving professors and guests in distant locations

Utilization of distance learning for the completion of required course work

Utilization of cable tv for departmental course offerings

Factor Two

Use of computer assisted instruction

Use of personal computers for completing course requirements

Use of individual computer programming skills for meeting course requirements

Factor Three

Credit available through validation of life experience

Use of video disks and/or video cassettes for independent study

Use of audio cassettes for independent study

Two of the items (Access university libraries via personal computers; and Utilization of long distance telephone for student-teacher conferences/ consultations) were common to more than one factor.

Factor Two

Use of computer assisted instruction

Use of personal computers for completing course requirements

Use of individual computer programming skills for meeting course requirements

Factor Three

Credit available through validation of life experience

Use of video disks and/or video cassettes for independent study

Use of audio cassettes for independent study

Two of the items (Access university libraries via personal computers; and Utilization of long distance telephone for student-teacher conferences/ consultations) were common to more than one factor.

## Current and Projected Financial Resources

Three factors were extracted for current Financial Resources (see Table XIV). The total variance of the 13 items in this emphasis was explained by 46 percent from factor one, 27 percent from factor two, and 27 percent from factor three.

The items primarily defining these three factors were as follows:

Factor One

Federal contracts and grants

Federal flow-through revenues

Allocations from state departments of vocational and technical education

Legislative appropriations especially earmarked for programs related to home economics education

Allocations from the Agricultural Experiment Station

Factor Two

Grants from private foundations

Bequests from alumni

Contracts with business and industry

Factor Three

Gifts or financial contributions from faculty

Special fund raising campaigns initiated at the unit level

Two of the items (State higher education appropriations; and Gifts and contributions from alumni and friends), were common to more than one factor.

TABLE XIV

ROTATED FACTOR LOADINGS FOR CURRENT FINANCIAL RESOURCES

| Item | Factors Rotated Orthogonally 1 | 2 | 3 |
|---|---|---|---|
| Allocation from state departments of vocational and technical education. | 0.85 | -0.17 | 0.00 |
| Legislative appropriations especially earmarked for programs related to home economics education. | 0.77 | -0.03 | 0.11 |
| Federal flow-through revenues. | 0.77 | 0.04 | 0.09 |
| State higher education appropriations. | 0.73 | 0.07 | 0.09 |
| Federal contracts and grants. | 0.71 | 0.22 | 0.01 |
| Allocations from the Agricultural Experiment Station. | 0.45 | 0.01 | 0.39 |
| Grants from private foundations. | 0.10 | 0.89 | 0.05 |
| Bequests from alumni. | -0.07 | 0.85 | -0.00 |
| Fees collected form students. | -0.07 | 0.77 | -0.14 |
| Contracts with business and industry. | 0.19 | 0.55 | 0.11 |
| Special fund raising campaigns initiated at the unit level. | 0.06 | -0.14 | 0.87 |

(table continues)

TABLE XIV (Continued)

| Item | Factors Rotated Orthogonally | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Gifts or financial contributions from faculty. | -0.10 | 0.12 | 0.79 |
| Gifts and contributions from alumni and friends.[b] | -0.02 | 0.42 | 0.52 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items common to more than one factor.

Two factors were extracted for projected Financial Resources (see Table XV). The total variance of the 13 items was explained by 51 percent from factor one, and 49 percent from factor two.

The items primarily defining these two factors were as follows:

Factor One

State higher education appropriations

Federal contracts and grants

Federal flow-through revenues

Allocations from state departments of vocational and technical education

Legislative appropriations especially earmarked for programs related to home economics education

Allocations from the Agricultural Experiment Station

Factor Two

Grants from private foundations

Fees collected from students

Bequests from alumni

Contracts with business and industry

Gifts or financial contributions from faculty

Gifts and contributions from alumni and friends

Special fund raising campaigns initiated at the unit level

None of the items were common to more than one factor.

## Current and Projected External Relations Program

Four factors were extracted from current External Relations Program (see Table XVI). The total variance of the 17 items was explained by 35 percent from factor one, 24 percent from factor two, 20 percent from factor three, and 19 percent from factor four.

TABLE XV

ROTATED FACTOR LOADINGS FOR PROJECTED FINANCIAL RESOURCES

| Item | Factor Rotated Orthogonally 1 | 2 |
|---|---|---|
| Allocations from state departments of vocational and technical education. | 0.86[a] | -0.09 |
| State higher education appropriations. | 0.81 | -0.23 |
| Legislative appropriations especially earmarked for programs related to home economics education. | 0.83 | 0.03 |
| Federal flow-through revenues. | 0.81 | 0.06 |
| Federal contracts and grants. | 0.78 | 0.18 |
| Allocations from the Agricultural Experiment Station. | 0.40 | 0.29 |
| Gifts and contributions from alumni and friends. | -0.01 | 0.86 |
| Special fund raising campaigns initiated at the unit level. | -0.07 | 0.79 |
| Gifts or financial contributions from faculty. | -0.09 | 0.77 |
| Bequests from alumni. | 0.05 | 0.75 |
| Grants from private foundations. | 0.18 | 0.62 |

(table continues)

TABLE XV (Continued)

| Item | Factor Rotated Orthogonally 1 | 2 |
|---|---|---|
| Fees collected from students. | -0.08 | 0.54 |
| Contracts with business and industry. | 0.35 | 0.49 |

[a]Loadings equal to or greater than .40 are underlined.

TABLE XVI

ROTATED FACTOR LOADINGS FOR CURRENT EXTERNAL RELATIONS PROGRAMS

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Faculty participation as volunteers in community organizations. | 0.82 | 0.21 | -0.16 | -0.17 |
| Faculty involvement as trainers and consultants for nonprofit family and community service organizations. | 0.79 | 0.14 | -0.12 | -0.00 |
| Faculty involvement in continuing education programs for employees of business and industry. | 0.77 | -0.06 | 0.13 | -0.02 |
| Faculty involvement in evaluation research for nonprofit organizations. | 0.61 | -0.15 | 0.30 | 0.10 |
| Faculty service as curriculum consultants for other departments in the institution. | 0.56 | -0.09 | 0.22 | 0.25 |
| Faculty service on policy boards for community, district and state programs. | 0.41 | 0.25 | -0.01 | 0.22 |
| Emphasis on educating top level institutional administrators in the value of home economics education. | -0.11 | 0.82 | 0.19 | -0.15 |
| Emphasis on the total institution's understanding of the goals of home economics education. | 0.05 | 0.67 | 0.23 | -0.13 |

(table continues)

TABLE XVI (Continued)

| Item | Factors Rotated Orthogonally 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Faculty participation in external professional meetings. | 0.08 | 0.61 | -0.21 | 0.29 |
| Close professional contacts with other helping professions. | 0.25 | 0.58 | 0.04 | -0.01 |
| Faculty service on university-wide committees.[b] | 0.06 | 0.58 | -0.17 | 0.40 |
| Strategies which interpret home economics education to a wide variety of publics. | 0.15 | 0.47 | 0.30 | 0.09 |
| A viable network for coordination and recruitment with feeder colleges and secondary programs. | -0.13 | 0.27 | 0.78 | 0.06 |
| Utilization of an advisory committee. | -0.02 | -0.08 | 0.68 | 0.13 |
| A viable network for coordination and recruitment with youth organizations such as 4-H and FHA. | 0.22 | 0.07 | 0.65 | -0.09 |
| Faculty involvement in national leadership of professional organizations. | -0.01 | -0.09 | 0.19 | 0.78 |
| Faculty participation as consultants in public schools. | 0.02 | 0.10 | 0.01 | 0.78 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Items primarily defining these four factors were as follows:

Factor One

Faculty involvement as trainers and consultants for nonprofit family and community service organizations

Faculty service as curriculum consultants for other departments in the institution

Faculty involvement in evaluation research for nonprofit organizations

Faculty service on policy boards for community, district and state programs

Faculty participation as volunteers in community organizations

Faculty involvement in continuing education programs for employees of business and industry

Factor Two

Faculty participation in external professional meetings

Faculty service on university-wide committees

Emphasis on the total institution's understanding of the goals of home economics education

Emphasis on educating top level institutional administrators in the value of home economics education

Close professional contacts with other helping professions

Strategies which interpret home economics education to a wide variety of publics

Faculty service on policy boards for community, district and state programs

Factor Three

Utilization of an advisory committee

A viable network for coordination and recruitment with feeder colleges and secondary programs

A viable network for coordination and recruitment with youth organizations such as 4-H and FHA

Factor Four

Faculty involvement in national leadership of professional organizations

Faculty participation as consultants in public schools

Each of the items loaded on only one factor.

Four factors were extracted for projected External Relations Programs (see Table XVII). The total variance explained by factor one was 28 percent, factor two 27 percent, factor three 23 percent, and factor four 22 percent.

Items primarily defining these four factors were as follows:

Factor One

Emphasis on the total institution's understanding of the goals of home economics education

Emphasis on educating top level institutional administrators in the value of home economics education

Close professional contacts with other helping professions

Strategies which interpret home economics education to a wide variety of publics

Faculty participation as volunteers in community organizations

Factor Two

Faculty involvement as trainers and consultants for nonprofit family and community service organizations

Faculty service as curriculum consultants for other departments in the institution

Faculty involvement in evaluation research for nonprofit organizations

TABLE XVII

ROTATED FACTOR LOADINGS FOR PROJECTED EXTERNAL RELATIONS PROGRAMS

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Emphasis on the total institution's understanding of the goals of home economics education. | 0.84 | 0.16 | -0.13 | -0.04 |
| Faculty participation as volunteers in community organizations. | 0.82 | 0.17 | -0.05 | -0.10 |
| Emphasis on educating top level institutional administrators in the value of home eocnomics education. | 0.78 | -0.15 | 0.04 | 0.15 |
| Strategies which interpret home economics education to a wide variety of publics. | 0.58 | 0.07 | 0.19 | 0.15 |
| Close professional contacts with other helping professionals. | 0.45 | 0.09 | 0.39 | -0.07 |
| Faculty involvement as trainers and consultants for nonprofit family and community service organizations. | 0.02 | 0.90 | -0.06 | -0.08 |
| Faculty service as curriculum consultants for other departments in the institution. | 0.07 | 0.82 | 0.11 | -0.00 |
| Faculty involvement in evaluation research for nonprofit organizations. | 0.09 | 0.72 | -0.04 | 0.16 |

(table continues)

TABLE XVII (Continued)

| Item | Factors Rotated Orthogonally 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Faculty involvement in continuing education programs for employees of business and industry. | 0.22 | 0.43 | 0.16 | 0.19 |
| Faculty involvement in national leadership of professional organizations. | -0.18 | 0.28 | 0.76 | -0.05 |
| Faculty participation in external professional meetings. | 0.28 | -0.16 | 0.76 | -0.05 |
| Faculty participation as consultants in public schools. | -0.16 | 0.18 | 0.73 | 0.09 |
| Faculty service on university-wide committees. | 0.28 | -0.27 | 0.63 | 0.11 |
| Faculty service on policy boards for community, district and state programs.[b] | 0.34 | 0.19 | 0.39 | 0.01 |
| Utilization of an advisory committee. | 0.06 | -0.07 | -0.14 | 0.91 |
| A viable network for coordination and recruitment with feeder colleges and secondary programs. | -0.01 | 0.08 | 0.07 | 0.76 |
| A viable network for coordination and recruitment with youth organizations such as 4-H and FHA. | -0.06 | 0.10 | 0.13 | 0.74 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Faculty involvement in continuing education programs for employees of business and industry

Factor Three

Faculty participation in external professional meetings

Faculty service on university-wide committees

Faculty involvement in national leadership of professional organizations

Faculty participation as consultants in public schools

Factor Four

Utilization of an advisory committee

A viable network for coordination and recruitment with feeder colleges and secondary programs

A viable network for coordination and recruitment with youth organizations such as 4-H and FHA

One item (Faculty service on policy boards for community, district and state programs), did not load any of the factors at or above the .40 level.

## Current and Projected Facilities and Equipment

Identical factors were extracted for current and projected Facilities and Equipment (see Tables XVIII and XIX). Items defining the identical factors were as follows:

Access to up-to-date equipment and technology

Alternatives to purchasing equipment such as rental, free loan and shared ownership

Adequate budgets for upkeep of equipment

Long-range plans for equipment, maintenance and replacement

Utilization of off campus educational facilities

TABLE XVIII

ROTATED FACTOR LOADINGS FOR CURRENT FACILITIES AND EQUIPMENT

| Item | Factor Rotated Orthogonally |
|---|---|
| Access to up-to-date equipment and technology. | 0.71 |
| Alternatives to purchasing equipment such as rentals, free loan and shared ownership. | 0.48 |
| Adequate budgets for upkeep of equipment. | 0.80 |
| Long-range plans for equipment maintenance and replacement. | 0.75 |
| Utilization of off campus educational facilities. | 0.58 |
| Access to adequate library resources. | 0.71 |

[a]Loadings equal to or greater than .40 are underlined.

TABLE XIX

ROTATED FACTOR LOADINGS FOR PROJECTED FACILITIES AND EQUIPMENT

| Item | Factor Rotated Orthogonally |
|---|---|
| Adequate budgets for upkeep of equipment. | 0.83 |
| Long-range plans for equipment maintenance and replacement. | 0.80 |
| Access to up-to-date equipment and technology. | 0.77 |
| Access to adequate library resources. | 0.69 |
| Utilization of off campus educational facilities. | 0.64 |
| Alternatives to purchasing equipment such as rental, free loan and shared ownership. | 0.60 |

[a]Loadings equal to or greater than .40 are underlined.

Access to adequate library resources

All of the items loaded at .40 or above on the derived factors.

## Current and Projected Faculty

Three factors were extracted for current Faculty (see Table XX). The total variance of the 18 items in current Faculty was explained by 40 percent from factor one, 33 percent from factor two, and 25 percent from factor three.

The items primarily defining these four factors were as follows:

Factor One

Emphasis on the instructor role of facilitator resource person and consultant

Development of faculty skills in advisement and counseling

Development of faculty expertise in management of self, family time and other resources

Development of faculty expertise in working with adult learners

An effort to assure that a majority of the faculty have academic credentials in home economics education

Emphasis on faculty expertise in research

Development of faculty expertise in research and writing skills for publication

Factor Two

Emphasis on computer literacy of faculty

The inclusion of a yearly publication as a criterion for graduate faculty membership

Employing only faculty who possess a doctoral degree

TABLE XX

ROTATED FACTOR LOADINGS FOR CURRENT FACULTY

| Item | Factors Rotated Orthogonally 1 | 2 | 3 |
|---|---|---|---|
| Emphasis on the instructor role of facilitator, research person and consultant. | 0.69[a] | -0.09 | 0.10 |
| Development of faculty skills in advisement and counseling. | 0.68 | -0.07 | 0.03 |
| Development of faculty expertise in management of self, family time and other resources. | 0.64 | 0.05 | 0.02 |
| Development of faculty expertise in working with adult learners. | 0.61 | -0.24 | 0.20 |
| An effort to assure that a majority of the faculty have academic credentials in home economics education. | 0.49 | 0.10 | -0.11 |
| Emphasis on faculty expertise in research. | 0.45 | 0.20 | 0.04 |
| Development of faculty expertise in research and writing skills for publication. | 0.45 | 0.00 | 0.06 |
| Emphasis on computer literacy of faculty. | -0.15 | 0.67 | 0.05 |
| The inclusion of a yearly publication as a criterion for graduate faculty membership. | 0.04 | 0.62 | 0.31 |

(table continues)

TABLE XX (Continued)

| Item | Factors Rotated Orthogonally 1 | 2 | 3 |
|---|---|---|---|
| Employing only faculty who possess a doctoral degree. | -0.04 | 0.60 | 0.07 |
| Employment of faculty who are proficient in a second languate. | 0.01 | 0.59 | 0.05 |
| Recruitment of faculty with backgrounds and expertise in areas other than teaching and education. | 0.15 | 0.58 | -0.14 |
| Emphasis on faculty expertise in public policy development. | 0.01 | 0.45 | -0.02 |
| Emphasis on positive faculty morale. | -0.04 | 0.20 | 0.62 |
| Opportunities for faculty release time to study, travel and attend professional meetings. | 0.01 | 0.11 | 0.61 |
| Emphasis on inservice training for faculty members. | 0.09 | 0.18 | 0.60 |
| Utilization of adjunct faculty who do do not have doctoral degrees. | 0.00 | -0.08 | 0.60 |
| Utilization of part-time faculty. | -0.14 | -0.02 | 0.44 |

[a]Loadings equal to or greater than .40 are underlined.

Employment of faculty who are proficient in a second language

Recruitment of faculty with backgrounds and expertise in areas other than teaching and education

Emphasis on faculty expertise in public policy development

Factor Three

Emphasis on positive faculty morale

Opportunities for faculty release time to study, travel and attend professional meetings

Emphasis on in-service training for faculty members

Utilization of adjunct faculty who do not have doctoral degrees

Utilization of part-time faculty

Four factors were extracted for projected Faculty (see Table XXI). Factor one explained 30 percent of the total variance of the 18 items. Factor two explained 25 percent of the variance, factor three 22 percent and factor four 20 percent.

Items primarily defining these four factors were as follows:

Factor One

Emphasis on the instructor role of facilitator, resource person and consultant

Development of faculty skills in advisement and counseling

Development of faculty expertise in working with adult learners

Development of faculty expertise in management of self, family time and other resources

An effort to assure that a majority of the faculty have academic credentials in home economics education

Emphasis on computer literacy of faculty

TABLE XXI

ROTATED FACTOR LOADINGS FOR PROJECTED FACULTY

| Item | Factors Rotated Orthogonally | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Emphasis on the instructor role of facilitator, resource person and consultant. | 0.79 | -0.10 | 0.11 | -0.11 |
| Development of faculty skills in advisement and counseling. | 0.78 | -0.07 | 0.03 | 0.09 |
| Development of faculty expertise in working with adult learners. | 0.73 | 0.05 | 0.17 | 0.11 |
| Development of faculty expertise in management of self, family time and other resources. | 0.70 | -0.25 | 0.23 | -0.01 |
| An effort to assure that a majority of the faculty have academic credentials in home economics education. | 0.56 | 0.11 | -0.13 | -0.36 |
| Emphasis on computer literacy of faculty. | 0.51 | 0.32 | 0.05 | -0.00 |
| Emphasis on faculty expertise in research. | 0.00 | 0.86 | -0.07 | 0.01 |
| The inclusion of a yearly publication as a criterion for graduate faculty membership. | -0.17 | 0.72 | 0.05 | -0.05 |

(table continues)

TABLE XXI (Continued)

| Item | Factors Rotated Orthogonally 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Development of faculty expertise in research and writing skills for publication. | 0.04 | 0.67 | 0.35 | -0.06 |
| Employing only faculty who possess a doctoral degree. | -0.05 | 0.65 | 0.08 | -0.30 |
| Emphasis on faculty expertise in public policy development.[b] | 0.52 | 0.52 | -0.17 | 0.20 |
| Employment of faculty who are proficient in a second language.[b] | 0.05 | 0.46 | -0.01 | 0.44 |
| Emphasis on positive faculty morale. | 0.23 | -0.08 | -0.03 | 0.77 |
| Opportunities for faculty release time to study, travel and attend professional meetings.[b] | 0.01 | 0.12 | 0.70 | 0.05 |
| Emphasis on in-service training for faculty members. | 0.11 | 0.19 | 0.67 | 0.10 |
| Utilization of adjunct faculty who do not have doctoral degrees. | 0.04 | -0.07 | -0.03 | 0.78 |
| Utilization of part-time faculty. | 0.00 | -0.09 | 0.77 | 0.02 |
| Recruitment of faculty with back-grounds and expertise in areas other than teaching and education.[b] | -0.16 | -0.03 | 0.49 | 0.46 |

[a]Loadings equal to or greater than .40 are underlined.
[b]Items that did not load at or above .40.

Factor Two

Emphasis on faculty expertise in research

The inclusion of a yearly publication as a criterion for graduate faculty membership

Development of faculty expertise in research and writing skills for publication

Employment only of faculty who pososess doctoral degrees

Factor Three

Opportunities for faculty release time to study, travel and attend professional meetings

Emphasis on inservice training for faculty members

Factor Four

Emphasis on positive faculty morale

Utilization of adjunct faculty who do not have doctoral degrees

Utilization of part-time faculty

Three of the items (Emphasis on faculty expertise in public policy development; Employment of faculty who are proficient in a second language; and recruitment of faculty with backgrounds and expertise in areas other than teaching and education) did not load at or above the .40.

## Factor Structure Comparisons

The results of the exploratory factor analysis were further examined to 1) identify similarities among the current and projected factors, and 2) identify major dimensions as represented by the items.

A comparison of the factors for the current and projected time periods is presented in the following sections.

## Measures of Program Effectiveness

The items representing Measures of Program Effectiveness did not load on the factor structures in the exact configuration for both the current and projected time periods. Table XXII shows a comparison of the current and projected factor structures. Two of the factors for both the current and projected measures of program effectiveness were identical. The other factors reflected a consistency in the current structures which would indicate the certainty respondents felt about the current measures of program effectiveness being utilized. In the projected structures some of the items loaded for the factors in a different pattern. They were, however, still based on a related idea as respondents visualized new possibilities for measuring program effectivenes in the future. One item (Cost effectiveness of space and equipment utilization) did not load on any of the projected factors.

Five major dimensions for Measures of Program Effectiveness were identified. Dimensions were derived from the factor structures. In cases where there were an uneven number of factors for either the current or projected scales, some factors were combined to reflect the main idea of the items included. The dimensions were further named according to the common concept represented by the items included. These five dimensions were as follows.

External and Faculty Support for Programs

The number of endowed chairs in the department

Faculty contributions to the development fund

Faculty involvement in international programs

The number and value of bequests to the department

The number and size of student scholarships awarded annually

TABLE XXII

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Item | Current Factors 1 | 2 | 3 | 4 | 5 | 6 | Projected Factors 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| The number of endowed chairs in the department. | X | | | | | | X | | | | |
| Faculty contributions to the development fund. | X | | | | | | X | | | | |
| Faculty involvement in international programs. | X | | | | | | X | | | | |
| The number and value of bequests to the department. | X | | | | | | X | | | | |
| The number and size of student scholarships awarded annually. | X | | | | | | X | | | | |
| Unit rank in relation to other units at other institutions. | | X | | | | | | | X | | |
| Professional status obtained by graduates of the program. | | X | | | | | | | | X | |
| Recognitions and awards earned by students. | | X | | | | | | | X | X | |
| The placement of students in positions related to unit curricula. | | X | | | | | | X | | | |
| Academic credentials of incoming students. | | X | | | | | | X | | | |

(table continues)

TABLE XXII (Continued)

| Item | Current Factors 1 | 2 | 3 | 4 | 5 | 6 | Projected Factors 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Faculty research productivity. | X | | | | | | | | | X | |
| The number of faculty publications produced annually. | | X | | | | | | | X | | |
| Faculty participation in positionsof national leadership. | | X | | | | | | | X | | |
| The total amount of external funds generated annually. | | X | | | | | | | X | | |
| Results of student evaluation of courses and teachers. | | X | | | | | | | X | | |
| Reports and recommendations resulting from self-study and self-evaluation. | | | X | | | | X | | | | |
| Unit output consistent with the mission, purpose and goals of the college/university. | | | X | | | | X | | | | |
| Reports and recommendations of external accrediting agencies. | | | X | | | | | | | X | |
| The number of student credit hours generated annually. | | | | X | | | | | | | X |
| The faculty-student ratio. | | | | X | | | | | | | X |
| Student enrollment trends. | | | | X | | | | | | | X |

(table continues)

TABLE XXII (Continued)

| Item | Current Factors 1 | 2 | 3 | 4 | 5 | 6 | Projected Factors 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cost effectiveness of space and equipment utilization . | | | | X | X | | | | | | [a] |
| Departmental rank in overall institutional enrollment. | | | | X | | | | | | | X |
| Faculty involvement in public service programs. | | | | | X | | X | | | | |
| Faculty participation in college/ university committees. | | | | | X | | X | | | | |

[a]Items that did not load on any factor.

Faculty Productivity

- Faculty research productivity
- The number of faculty publications produced annually
- Faculty participation in positions of national leadership
- The total participation in positions of national leadership
- The total amount of external funds generated annually

Quality of Students and Graduates

- Unit rank in relation to other similar units within the institution
- Unit rank in relation to similar units at other institutions
- Professional status obtained by graduates of the program
- Recognitions and awards earned by students
- The placement of students in positions related to unit curricula
- Academic credentials of incoming students

Enrollment Based Descriptors

- The number of students credit hours generated annually
- Student enrollment trends
- The faculty student ratio
- Departmental rank in overall institutional enrollment

Self Study and External Evaluation

- Results of student evaluation of courses and teachers
- Reports and recommendations of external accrediting agencies
- Faculty involvement in public service programs
- Faculty participation in college/university committees

## Curriculum Emphases

Items representing Curriculum Emphases did not load on the factors in

the exact configuration for the current and projected structures. As seen in Table XXIII the composition of the factors vary from the current period to the projected future. In other words, respondents were not consistent in the way they perceived the items on the current and future scales. It is evident that respondents anticipate changes in the Curriculum Emphases in the projected future. Three items (Preparation for leadership in public policy formation, Alternative futures, and Program planning and evaluation skills) did not load on any of the projected factors.

Four major dimensions were named according to the common concept represented. These dimensions were as follows:

Leadership and Professional Development

- Lifelong education
- Accommodating the unique career goals of individual students
- Problem solving skills
- Leadership development
- Negotiation and conflict management skills
- Professional standards and ethics

Application of Learning Theories

- The integrated nature of home economics as a field
- Adult education
- Special education

Nature of the Curriculum

- Interdisciplinary courses
- Competency based education

Program Planning and Implementation Skills

- Program planning and evaluation

TABLE XXIII

FACTOR STRUCTURE COMPARISON FOR THE CURRENT AND PROJECTED CURRICULUM EMPHASES

| Item | Current Factors 1 | 2 | 3 | 4 | 5 | Projected Factors 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|
| Computer technology. | X | | | | | | X | | |
| Preparation for leadership in public policy formation. | X | | | | | | | | a |
| Negotiation and conflict management skills. | X | | | | | X | | | |
| Experiential learning. | X | | | | | | X | | |
| Alternative futures. | X | | | | | | | | a |
| Creative utilization of community resources. | X | X | | | | | | X | |
| Group theory and group skills. | | X | | | | | X | | |
| Creative utilization of existing and emerging media. | | X | | | | | X | | |
| Program planning and evaluation skills. | | X | | | | | | | a |
| Public relations skills. | X | X | | | | | X | | |
| Problem solving skills. | | | X | | | X | | | |

(table continues)

TABLE XXIII (Continued)

| Item | Current Factors 1 | 2 | 3 | 4 | 5 | Projected Factors 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|
| Leadership development. | | | X | | | X | | | |
| Life-long education. | | | X | | | X | | | |
| Professional standards and ethics. | | X | X | | | | | X | |
| Special education. | | X | X | | | | | X | |
| Accommodating the unique career goals of individual students. | | | | X | | X | | | |
| Adult education. | | | | X | | | | X | |
| Interdisciplinary courses. | | | | | X | | | | X |
| The integrated nature of home economics as a field. | X | | | | X | | | X | |
| Competency based education. | | | | | X | | | | X |

[a]Items that did not load on any factor.

Group theory and group skills

Creative utilization of existing and emerging media

Public relations skills

## Planning Strategies

Table XXIV shows the factor structure comparisons for current and projected Planning Strategies. One factor was generated for the current scale, whereas two factors were generated for the projected scale. These factors had a very similar configuration. Due to the similarity in the common concept of all the items only one dimension was identified and named Strategic Planning.

## Educational Delivery Systems

Four factors were generated for the current time period and three were factors generated for the projected time period (see Table XXV). Only one factor on the current scale was identical to a factor on the projected scale. Other factors on the current scale were very similar in composition to the remaining factors for the projected scale. The awareness of the significant contributions to educational delivery systems made by the computer, and the knowledge that computer technology is on the increase may account for the consistent responses. One item (A variety of workshops, seminars offered in off campus locations) did not load any of the projected factors.

Three major dimensions were identified for Educational Delivery Systems. They were as follows:

Computer Applications

Telelectures involving professors and guests in distant locations

TABLE XXIV

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED PLANNING STRATEGIES

| Item | Current Factor | Projected Factors | |
|---|---|---|---|
| | 1 | 1 | 2 |
| A strategy that protects the discipline from subject matter raids conducted by other departments. | X | | X |
| Participation in the development of public policy relating to allocation of resources for higher education. | X | | X |
| Participation in university-wide decision making relating to internal allocation and/or reallocation of resources. | X | | X |
| Employment of a department head or chairman with strong appreciation for the history and philosophy of home economics education. | X | X | |
| Employment of a departmental leader skilled in campus politics. | X | X | |
| The development of a strong support base among graduates. | X | X | X |
| An active recruitment program aimed at attracting high quality students to the department. | X | X | X |

TABLE XXV

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED EDUCATIONAL DELIVERY SYSTEMS

| Item | Current Factors 1 | 2 | 3 | 4 | Projected Factors 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| Use of personal computers for completing course requirements. | X | | | | | X | |
| Use of computer assisted instruction. | X | | | | | X | |
| Access university libraries via personal computers. | X | | | | X | X | |
| Use of individual computer programming skills for meeting course requirements. | X | | | | | X | |
| Credit available through validation of life experiences. | | X | | | | | X |
| Utilization of cable tv for departmental course offerings. | | X | | | X | | |
| Open entry, open exit enrollment options. | | X | | | X | | |
| Use of interactive satelite television as an instructional medium. | | | | | X | | |
| A variety of workshops, seminars offered in off campus locations. | | | X | | | | a |
| Utilization of long distance telephone student-teacher conferences/consultations. | | | X | | X | | X |

(table continues)

TABLE XXV (Continued)

| Item | Current Factors 1 | 2 | 3 | 4 | Projected Factors 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| Utilization of distance learning for the completion of required course work. | X | X | | | X | | |
| Telelectures involving professors and guests in distance locations. | | | | | X | | |
| Use of audio cassettes for independent study. | | | X | | | | X |
| Use of video disks and/or video cassettes for independent study. | | | X | | | | X |

[a]Items that did not load on any factor.

Use of computer assisted instruction

Access university libraries via personal computers

Use of personal computers for completing course requirements

Use of individual computer programming skills for meeting course requirements

Variety of Instructional Methods

Use of audio cassettes for independent study

Use of video disks and/or video cassettes for independent study

Utilization of long distance telephone for student-teacher conferences/consultations

A variety of workshops, seminars offered in off campus locations

Credit available through validation of life experiences

Utilization of distance learning (correspondence or home study) for the completion of required course work

Advanced Technology

Use of intereactive satellite television as an instructional medium

Utilization of cable tv for departmental course offerings

Open entry, open exit enrollment options

## Financial Resources

The items representing Financial Resources loaded similarly on the current and projected factor structures. In fact, one factor was identical to both the current and projected structures. The current structure had two remaining factors which corresponded to the one remaining factor of the projected structure (see Table XXVI).

Two major dimensions were identified for Financial Resources. They were as follows:

TABLE XXVI

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED FINANCIAL RESOURCES

| Item | Current Factors | | | Projected Factors | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 |
| Allocation from state departments of vocational and technical education. | X | | | X | |
| Legislative appropriations especially earmarked for programs related to home economics education. | X | | | X | |
| Federal flow-through revenues. | X | | | X | |
| State higher education appropriations. | X | | | X | |
| Federal contracts and grants. | X | | | X | |
| Allocations from the Agricultural Experiment Station. | X | | | X | |
| Grants from private foundations. | | X | | | X |
| Bequests from alumni. | | X | | | X |
| Fees collected form students. | | X | | | X |
| Contracts with business and industry. | | X | | | X |
| Special fund raising campaigns initiated at the unit level. | | | X | | X |
| Gifts or financial contributions from faculty. | | | X | | X |
| Gifts and contributions from alumni and friends. | | X | X | | X |

Public Sector Funding

State higher education appropriations

Federal contracts and grants

Federal flow-through revenues

Allocations from state departments of vocational and technical education

Legislative appropriations especially earmarked for programs related to home economics education

Allocations from the Agricultural Experiment Station

Private Sector Funding

Gifts or financial contributions from faculty

Special fund raising campaigns initiated at the unit level

Gifts and contributions from alumni and friends

Grants from private foundations

Fees collected from students

Bequests from alumni

Contacts with business and industry

In their study, Hall et al. (1983) found that the major source of revenue for home economics education units was monies related to state and federal appropriations (sources designated in the dimensions Public Sector Funding). However, due to recent uncertainty about financing of programs, many colleges and universities are expected to seek funds from private foundations, gifts and contributions from alumni and friends, business and industry, and in many cases fund raising ventures. The respondents in this study anticipated this shift in financial resources for the projected future.

## External Relations Programs

Four factors were generated for both the current and projected scales of External Relations Programs. One factor was identical fore both current and projected scales. The remaining factors had very similar configuration (see Table XXVII).

Four dimensions were further identified and named according to the common concept relating the items. The dimensions were as follows:

External Networking

- Utilization of an advisory committee
- A viable network for coordination and recruitment with feeder colleges and secondary programs
- A viable network for coordination and recruitment with feeder colleges and secondary programs

Interpretation of Mission and Goals

- Emphasis on the total institution's understanding of the goals of home economics education
- Emphasis on educating top level institutional administrators in the values of home economics education
- Close professional contacts with other helping professions
- Strategies which interpret home economics education to a wide variety of publics

Faculty Consulting and Volunteering

- Faculty involvement as trainers and consultants for nonprofit family and community service organizations
- Faculty service as curriculum consultants for other departments in the institution

TABLE XXVII

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED EXTERNAL RELATIONS PROGRAMS

| Item | Current Factors 1 | 2 | 3 | 4 | Projected Factors 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|---|---|---|
| Faculty participation as volunteers in community organizations. | X | | | | X | | | | |
| Faculty involvement as trainers and consultants for nonprofit family and community service. | X | | | | | X | | | |
| Family involvement in continuing education programs for employees of business and industry. | X | | | | | X | | | |
| Faculty involvement in evaluation research for nonprofit organizations. | X | | | | | X | | | |
| Faculty service as curriculum consultants for other departments in the institution. | X | | | | | X | | | |
| Faculty service on policy boards for community, district and state programs. | X | | | | | | | | a |
| Emphasis on educating top level institutional administrators in the value of home economics education. | | X | | | X | | | | |
| Emphasis on the total institution's understanding of the goals of home economics education. | | X | | | X | | | | |

(table continues)

TABLE XXVII (Continued)

| Item | Current Factors 1 | 2 | 3 | 4 | Projected Factors 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|
| Faculty participation in external professional meetings. | | X | | | | | X | |
| Close professional contacts with other helping professions. | | X | | | | X | | |
| Faculty service on university-wide committees. | | X | X | | | | X | |
| Strategies which interpret home economics education to a wide variety of publics. | | X | | | | X | | |
| A viable network for coordination and recruitment with feeder colleges and secondary programs. | | | X | | | | | X |
| Utilization of an advisory committee. | | | X | | | | | X |
| A viable network for coordination and recruitment with youth organizations such as 4-H and FHA. | | | X | | | | | X |
| Faculty involvement in national leadership of professional organizations. | | | | X | | | X | |
| Faculty participation as consultants in public schools. | | | | X | | | X | |

[a]Items that did not load on any factor.

Faculty service on policy boards for community, district and state programs

Faculty participation as volunteers in community organizations

Faculty involvement in continuing education programs for employees of business and industry

Traditional Faculty Services

Faculty participation in external professional meetings

Faculty service on university-wide committees

Faculty participation as consultants in public school

## Facilities and Equipment

The current and projected factor structures were identical for the Facilities and Equipment section of the instrument (see Table XXVIII). One major dimension incorporating all the items was identified. Respondents anticipated that similar emphasis would be placed on this dimension both currently and in the projected future.

## Faculty

The factor structures derived from responses for the current scale relating to the Faculty section of the instrument were very similar to those generated for the projected future. However, none of the factors were identical. As shown in Table XXIX there were identifiable patterns in the two factor structures. Respondents in this study seemed to express a consistent conceptualization of the constructs relating to Faculty.

According to Cartter (1975), faculty will feel the impact of change in higher education as their positions become threatened due to declining

TABLE XXVIII

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED FACILITIES AND EQUIPMENT

| Item | Current Factor 1 | Projected Factor 1 |
|---|---|---|
| Access to up-to-date equipment and technology. | X | X |
| Alternatives to purchasing equipment such as rentals, free loan and shared ownership. | X | X |
| Adequate budgets for upkeep of equipment. | X | X |
| Long-range plans for equipment maintenance and replacement. | X | X |
| Utilization of off campus educational facilities. | X | X |
| Access to adequate library resources. | X | X |

TABLE XXIX

FACTOR STRUCTURE COMPARISON FOR CURRENT AND PROJECTED FACULTY

| Item | Current Factors 1 | 2 | 3 | Projected Factors 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| Emphasis on the instructor role of facilitator, research person and consultant. | X | | | X | | | |
| Development of faculty skills in advisement and counseling. | X | | | X | | | |
| Development of faculty expertise in management of self, family time and other resources. | X | | | X | | | |
| Development of faculty expertise in working with adult learners. | X | | | X | | | |
| An effort to assure that a majority of the faculty have academic credentials in home economics education. | X | | | X | | | |
| Emphasis on faculty expertise in research. | X | | | | X | | |
| Development of faculty expertise in research and writing skills for publication. | X | | | | X | | |
| Emphasis on computer literacy of faculty. | | X | | X | | | |
| The inclusion of a yearly publication as a criterion for graduate faculty membership. | | X | | | X | | |

(table continues)

TABLE XXIX (Continued)

| Item | Current Factors 1 | 2 | 3 | Projected Factors 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| Employing only faculty who possess a doctoral degree. | X | | | | X | | |
| Employment of faculty who are proficient in a second language. | X | | | | X | | X |
| Recruitment of faculty with backgrounds and expertise in areas other than teaching and education. | X | | | | | | X |
| Emphasis on faculty expertise in public policy development. | X | | | X | X | | |
| Emphasis on positive faculty morale. | | X | | | | X | |
| Opportunities for faculty release time to study, travel and attend professional meetings. | | X | | | | X | |
| Emphasis on inservice training for faculty members. | | X | | | | X | |
| Utilization of adjunct faculty who do not have doctoral degrees. | | X | | | | | X |
| Utilization of part-time faculty. | | X | | | | | X |

enrollments, and the levelling off of resources. Cartter also indicated that tenure review processes were likely to become more stringent, and more rigorous faculty evaluation will therefore force faculty to remain current in their subject area.

Three major dimensions were identified from the items representing faculty. These dimensions were as follows:

Faculty Role Fulfillment

- Emphasis on the instructor role of facilitator, resource person and consultant
- Development of faculty skills in advisement and counseling
- Development of faculty expertise in working with adult learners
- Development of faculty expertise in the management of self, family time and other resources
- An effort to assure that a majority of the faculty have academic credentials in home economics education

Faculty Academic Credentials

- Recruitment of faculty with backgrounds and expertise in areas other than teaching and education
- Development of faculty expertise in research and writing skills for publication
- Employing only faculty who possess a doctoral degree
- The inclusion of a yearly publication as a criterion for graduate faculty membership
- Emphasis on faculty expertise in research
- Emphasis on faculty expertise in public policy development
- Employment of faculty who are proficient in a second language
- Emphasis on computer literacy of faculty

Faculty Development

Emphasis on positive faculty morale

Opportunities for faculty release time to study, travel and attend professional meetings

Emphasis on in-service training for faculty members

## Summary of the Results Relating to Construct Validity of the Instrument

Exploratory factor analysis was conducted to establish construct validity of the survey instrument. Results of the analysis substantiates the rationale of construct validity. All of the original items were retained in the groupings identified by the research team.

Statistical investigation through factor analysis has therefore shown that the Hirschlein, Jorgenson and Brink research team did a thorough job of constructing the survey instrument. The items were appropriately assigned by concepts and no changes in the design of the instrument were suggested.

Further examination of the items revealed the major dimensions contained within each of the sections on the survey instrument, thus contributing to the conceptualization of the components being investigated. These dimensions were named according to the main concept that related the items.

Finally, the factors were examined to identify similarities between the current and projected time periods. Results of the examination indicated that factors associated with current and projected responses were very similar. The similarities among the factor structures from the current time to the

projected future supports hypothesis 1 of the study. Hypothesis 1 was therefore not rejected.

The results of the validation process (construct validity) and the further examination of the meanings of the constructs found supported the use of the unfactored instrument (original questionnaire) for the purpose of testing the research hypotheses.

## Relationship of Current and Projected Measures of Program Effectiveness

The relationship of current and projected utilization of measures of program effectiveness is tested in this section. The formulated hypothesis was as follows:

$H_2$ There is no significant difference between measures of program effectiveness currently used and those projected for future utilization.

Two variables were used to test this hypothesis 2. The independent variable which is dichotomous with categories (a) present response to measures of program effectiveness, and (b) future response to measures of program effectiveness. 2. The dependent variable 'the mean effectiveness score', which is a continuous variable. The mean effectiveness score was obtained by averaging the scores from items 1 to 26 which related to current and projected measures of program effectiveness. For each of the 26 items a score ranging from 1 (strongly disagree) to 5 (strongly agree) on an interval scale was recorded. Hence, the dependent variable was restricted in the range 1 to 5, indicating that for any questionnaire the mean effectiveness score was

one only if all 26 items were scored as 1, and 5 only if all 26 items were scored as 5.

The statistical procedure utilized in this hypothesis was a Paired t test. Information on the independent variable was obtained for each category per questionnaire. The 208 questionnaires were obtained randomly and the observations were independent. The effectiveness scores obtained were assumed to be normally distributed. Table XXX provides a summary statistic based on a paired t test. The mean score difference for the present and future measures of program effectiveness is -0.3894. Thereby indicating that an increase in program effectiveness is expected in the future. The paired t value is -14.81 and the observed significance level is .0001. The results indicate that there is a significant difference between current and projected measures of effectiveness. Hypothesis 2 was therefore rejected.

## Measures of Program Effectiveness Utilized by American Vocational Association Regions

This section discussed the similarities in utilization of measures of program effectiveness by the American Vocational Association regions. The corresponding hypothesis was as follows:

$H_3$ There is no similarity between measures of program effectiveness utilized in the five American Vocational Association regions.

The dependent variable, 'measure of program effectiveness', is a continuous variable restricted to the range 1 (strongly disagree) to 5 (strongly agree). The independent variable, 'regions', is a discrete variable with five categories. They are (1) Northeast, (2) Southeast, (3) North-central, (4) Southwest, and (5) Northwest. See Appendix B for a list of

TABLE XXX

SUMMARY STATISTICS OF CURRENT MINUS PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Variable | Mean | Standard Error | Paired t | OSL |
|---|---|---|---|---|
| Current – projected | -0.3894 | 0.0263 | -14.81 | .0001 |

N = 208

states in each region. The effectiveness scores for all regions were assumed to be the same. In these data, such assumptions are required for one way analysis of variance test to be valid.

The sample size used in this analysis was 188, due to missing values from some of the regions. The sample sizes per region as depicted in Table XXXI are different. Region 1 had the largest sample size of 50, and Region 2 had the smallest sample size of 27. The mean effectiveness scores of the five regions were very similar, as shown in Table XXXI. As observed in the Analysis of Variance (ANOVA) Table XXXII, the observed significance level was very large (0.8505) suggesting a strong similarity among regions regarding measures of program effectiveness. The overall standard error was 0.5289. The results attest to the fact that the location of the home economics education units had no measurable impact upon measures of program effectiveness being utilized. Hypothesis 3 was therefore rejected.

## Association Between Current and Projected Measures of Program Effectiveness and Other Variables

Hypotheses 4 and 5 tested the significance of the association between current and projected measures of program effectiveness, and the current and projected status of the seven other variables. The formulated hypotheses were as follows:

$H_4$ There is no significant association between current measures of program effectiveness and descriptors currently related to curriculum emphases, planning strategies, delivery systems,

TABLE XXXI

COMPARISON OF MEAN EFFECTIVENESS ACCORDING TO REGION

| Region | Size | Percent | Mean Effective Scores |
|---|---|---|---|
| 1. Northeast | 50 | 27 | 3.3842 |
| 2. Southeast | 27 | 14 | 3.2836 |
| 3. Northcentral | 33 | 18 | 3.4147 |
| 4. Southwest | 43 | 23 | 3.3648 |
| 5. Northwest | 35 | 18 | 3.3074 |

N = 188

TABLE XXXII

ANALYSIS OF VARIANCE PERTAINING TO HYPOTHESIS TWO

| Source | df | ss | MS | F | OSL |
|---|---|---|---|---|---|
| Regions | 4 | 0.3808 | .0952 | 0.34 | .8505 |
| Error | 183 | 51.1896 | 0.2797 | | |
| Corr Total | 187 | 51.5705 | | | |

N = 188

financial resources, external relations programs, facilities and equipment, and faculty.

$H_5$ There is no significant association betwen projected measures of program effectiveness and projected descriptors related to curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

The dependent variable, 'mean measures of program effectivenes', in hypotheses 4 and 5 was formed from the mean of the 26 items related to Goal 5 responses (see questionnaire, Appendix A). This variable is continuous and measured on the scale 1 (strongly disagree) to 5 (strongly agree). The independent variables current curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty, are also continuous on the range 1 to 5. The usable sample for this analysis was 201. The effectiveness score was assumed to be normally distributed. Any measurement error incurred was assumed to be unrelated from questionnaire to questionnaire with the variance being constant. To investigate the relationship between measures of program effectiveness and the other variables Multiple Regression Analysis was therefore used. In using such an analysis, it is the desire, though not always the achievement, that the independent variables be uncorrelated among themselves. It is also desired that the dependent variables be highly correlated with the independent variables.

Table XXXIII gives the current and projected Pearson r correlation coefficient values for measures of program effectiveness with the other variables. All the correlations were positive and significant at the .0001 level. All the projected correlations except for planning strategies, were

TABLE XXXIII

PEARSON R CORRELATION COEFFICIENTS FOR CURRENT AND PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Variates | Pearson r | |
|---|---|---|
| | Current | Projected |
| Curriculum emphasis with measures of program effectiveness. | .46* | .49* |
| Planning strategies with measures of program effectiveness. | .62* | .59* |
| Delivery systems with measures of program effectiveness. | .52* | .56* |
| Financial resources with measures of program effectiveness. | .56* | .57* |
| External relations programs with measures of program effectiveness. | .61* | .69* |
| Facilities and equipment with measures of program effectiveness. | .43* | .59* |
| Faculty with measures of program effectiveness. | .53* | .57* |

*Significant at the .0001 alpha level.

higher than the current correlations. The variable currently having the highest correlation with measures of program effectiveness was planning strategies, with facilities and equipment having the lowest correlation. Furthermore, in the projected future, external relations program had the highest correlation, and curriculum emphasis the lowest.

Analysis of Hypothesis 4

In this analysis, as depicted in the correlation matrix (Table XXXIV), the independent variables were significantly correlated with the dependent variable at the .0001 level. The matrix also shows that the independent variables were highly correlated among themselves. This undesirable occurence of correlation among the independent variables can result in an inflated $R^2$, and sometimes lead to incorrect conclusions.

Such problems associated with an inflated $R^2$ can be minimized by individual examination of the contribution of each independent variable to the variation of the mean effective score. The SAS General Linear Model (GLM) procedure (version 1983) was used to conduct the Multiple Regression Analysis to determine the effects of more than on independent variable on the dependent variable, 'measures of program effectiveness'. The summarized data for the Multiple Regression Analysis are given in Table XXXV. The table shows that the overall F test value (32.84) had a very small observed significance level. This indicates a high dependence of measures of program effectiveness on the 7 variables together. However, the proportion of variation in effectiveness explained by the 7 variables was 0.5436, is somewhat small value of $R^2$ considering the degree of significance. Individual t test values were examined to check the contribution made by

# TABLE XXXIV

## CORRELATION MATRIX OF CURRENT MEASURES OF PROGRAM EFFECTIVENESS AND INDEPENDENT VARIABLES

| | Program Effectiveness | Curriculum Emphasis | Planning Strategies | Delivery Systems | Financial Resources | External Relations Programs | Facilities and Equipment | Faculty |
|---|---|---|---|---|---|---|---|---|
| Program Effectiveness | 1.00 | 0.46 | 0.62 | 0.52 | 0.56 | 0.61 | 0.43 | 0.53 |
| Curriculum Emphasis | 0.46 | 1.00 | 0.51 | 0.42 | 0.32 | 0.53 | 0.52 | 0.50 |
| Planning Strategies | 0.62 | 0.51 | 1.00 | 0.45 | 0.45 | 0.63 | 0.44 | 0.51 |
| Delivery Systems | 0.52 | 0.42 | 0.45 | 1.00 | 0.60 | 0.51 | 0.42 | 0.60 |
| Financial Resources | 0.56 | 0.32 | 0.45 | 0.60 | 1.00 | 0.54 | 0.34 | 0.54 |
| External Relations | 0.61 | 0.53 | 0.63 | 0.51 | 0.54 | 1.00 | 0.47 | 0.65 |
| Facilities and Equipment | 0.43 | 0.52 | 0.44 | 0.42 | 0.34 | 0.47 | 1.00 | 0.46 |
| Faculty | 0.53 | 0.50 | 0.51 | 0.60 | 0.54 | 0.65 | 0.46 | 1.00 |

TABLE XXXV

REGRESSION ANALYSIS OF THE EFFECTS OF THE INDEPENDENT VARIABLES ON CURRENT MEASURES OF PROGRAM EFFECTIVENESS

| Source | df | SS | MS | F | $R^2$ | OSL |
|---|---|---|---|---|---|---|
| Regression | 7 | 28.0241 | 4.0034 | 32.84 | 0.5436 | .0001 |
| Error | 193 | 23.5315 | 0.1219 | | | |
| Corr Total | 200 | 51.5556 | | | | |

each independent variable in the model. Table XXXVI gives a summary of these t tests and their significance levels. The observed significance levels indicated that the contribution from current Curriculum Emphasis (0.7713), Facilities and Equipment (0.6996), and Faculty (0.4557), were minimal. Such high t values indicate that these variables made an insignificant contribution to measures of program effectiveness. Such results suggested a reduced model omitting the latter three independent variables. Table XXXVII shows the coefficients of determination for the two models representing current measures of program effectiveness. There was little change in the proportion of the data explained by the model (R square = 5402). Such results further attested to the small contribution made by the three variables omitted. Nevertheless, because significant association was found between current measures of program effectiveness and the variables related to curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty, hypothesis 4 was rejected.

Analysis of Hypothesis 5

The correlation matrix relating to projected measures of program effectiveness once again shows that the independent variables are highly correlated to the dependent variable (Table XXXVIII). Also shown in the matrix is the high correlation of the independent variables among themselves. Again the significance level .0001 was found for each of the intercorrelations. Table XXXIX illustrates the summarized data for the multiple regression analysis. The overall F test value (33.98) had a very small observed significance level. Once again the indication of a high

TABLE XXXVI

SUMMARY OF T TESTS AND OBSERVED SIGNIFICANCE LEVELS (OSL) FOR INDEPENDENT VARIABLES RELATING TO CURRENT MEASURES OF PROGRAM EFFECTIVENSS

| Variables | OSL | t |
|---|---|---|
| Curriculum emphasis | .7713 | 0.29 |
| Planning strategies | .0001 | 4.94 |
| Delivery systems | .0228 | 2.29 |
| Financial resources | .0020 | 3.13 |
| External relations programs | .0345 | 2.13 |
| Facilities and equipment | .6996 | 0.39 |
| Faculty | .4557 | 0.75 |

TABLE XXXVII

COEFFICIENTS OF DETERMINATION FOR MODELS REPRESENTING CURRENT MEASURES OF PROGRAM EFFECTIVENESS

| Model | Variables | $R^2$ |
|---|---|---|
| One | Curriculum emphasis, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty | 0.5436* |
| Two | Planning strategies, delivery systems, financial resources, external relations, programs | 0.5402* |

*Significant at the .0001 alpha level.

# TABLE XXXVIII

## CORRELATION MATRIX OF PROJECTED MEASURES OF PROGRAM EFFECTIVENESS AND INDEPENDENT VARIABLES

| | Program Effectiveness | Curriculum Emphasis | Planning Strategies | Delivery Systems | Financial Resources | External Relations Programs | Facilities and Equipment | Faculty |
|---|---|---|---|---|---|---|---|---|
| Program Effectiveness | 1.00 | 0.49 | 0.59 | 0.56 | 0.57 | 0.67 | 0.59 | 0.57 |
| Curriculum Emphasis | 0.49 | 1.00 | 0.48 | 0.49 | 0.28 | 0.59 | 0.60 | 0.51 |
| Planning Strategies | 0.59 | 0.48 | 1.00 | 0.43 | 0.40 | 0.59 | 0.52 | 0.46 |
| Delivery Systems | 0.57 | 0.49 | 0.43 | 1.00 | 0.50 | 0.60 | 0.59 | 0.54 |
| Financial Resources | 0.57 | 0.28 | 0.40 | 0.50 | 1.00 | 0.65 | 0.49 | 0.57 |
| External Relations | 0.67 | 0.59 | 0.58 | 0.60 | 0.65 | 1.00 | 0.68 | 0.71 |
| Facilities and Equipment | 0.59 | 0.60 | 0.52 | 0.59 | 0.49 | 0.68 | 1.00 | 0.60 |
| Faculty | 0.57 | 0.51 | 0.46 | 0.54 | 0.57 | 0.71 | 0.60 | 1.00 |

TABLE XXXIX

REGRESSION ANALYSIS OF THE EFFECTS OF THE INDEPENDENT VARIABLES ON PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Source | df | SS | MS | F | $R^2$ | OSL |
|---|---|---|---|---|---|---|
| Regression | 7 | 32.4655 | 4.6379 | 33.98 | 0.5546 | .0001 |
| Error | 191 | 26.0663 | 0.1365 | | | |
| Corr Total | 198 | 28.5318 | | | | |

dependence of the independent variables on each other. The proportion of variation in measures of program effectiveness was also small (0.5547) considering the degree of significance. Individual t tests were here again examined to check the contribution made by each variable (Table XXXX). The same three variables, Curriculum Emphases (0.6211), Facilities and Equipment (0.3055), and Faculty (0.2740), were omitted from the model due to minimal contribution. Table XXXXI shows the coefficients of determination for the two models representing projected measures of program effectiveness, once again there was little change in $R^2$ (0.5437). The results of the analysis for hypotheses 4 and 5 therefore indicated that there was a significant association between the independent and dependent variables. The results also indicated that for both the current and the projected future, curriculum emphasis, facilities and equipment, and faculty, contribute minimally to the measures of program effectiveness being utilized. Consequently, hypothesis 5 was also rejected.

## Summary

The purpose of this study was to assess the extent to which home economics education units in higher education utilized selected measures of program effectiveness at present and the extent to which they planned to use the same measures in the future. The study also examined the relationship of selected measures of program effectiveness to variables related to 1) curriculum emphases, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

TABLE XXXX

SUMMARY OF t TESTS AND OBSERVED SIGNIFICANCE LEVELS (OSL) FOR INDEPENDENT VARIABLES RELATING TO PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Variables | t | OSL |
|---|---|---|
| Curriculum emphasis | .6211 | 0.50 |
| Planning strategies | .0001 | 4.36 |
| Delivery systems | .0380 | 2.09 |
| Financial resources | .0054 | 2.82 |
| External relations programs | .0354 | 2.12 |
| Facilities and equipment | .3055 | 1.03 |
| Faculty | .2740 | 1.10 |

TABLE XXXXI

COEFFICIENTS OF DETERMINATION FOR MODELS REPRESENTING PROJECTED MEASURES OF PROGRAM EFFECTIVENESS

| Model | Variables | $R^2$ |
|---|---|---|
| One | Curriculum emphasis, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty | 0.5547* |
| Two | Planning strategies, delivery systems, financial resources, external relations programs | 0.5437* |

*Significant at the .0001 alpha level.

The data utilized in this study were collected from an instrument titled "Home Economics Future Study: Towards the Year 2000". The instrument was developed by a research team associated with the Home Economics Education and Community Services Department of Oklahoma State University.

Construct validity of the survey instrument was established through factor analysis. All of the items were retained in the instrument and the generated data were used in the statistical analysis of the research hypotheses.

A paired t test was used to determine the relationship between the current and projected measures of program effectiveness. Results indicated that there was a significant difference between current and projected measures of program effectiveness.

Analysis of variance to test similarities in measures of program effectiveness utilized by the American Vocational Association regions resulted in a strong similarity among the regions.

Regression Analysis and Pearson correlation were used to examine the association between current and projected measures of program effectiveness and the seven variables. Results indicated that for both the current and projected there was minimal association between the variables and measures of program effectiveness. The results of the study are presented in Table XXXXII. Conclusions and recommendations based on these results are presented in Chapter V.

TABLE XXXXII

SUMMARY OF CONCLUSIONS REGARDING HYPOTHESES

| Research Hypotheses | Statistical Procedure | Results |
|---|---|---|
| $H_1$ Factor structures derived from responses to the current scale will be similar to factor structures derived from the projected scale. | Factor Analysis | Not Rejected |
| $H_2$ There is no significant difference between the measures of program effectiveness currently used and those projected for future utilization. | Student's t | Rejected |
| $H_3$ There is no significant difference among measures of effectiveness for regions one, two, three, four, and five. | One Way Analysis of Variance | Rejected |

(table continues)

TABLE I (Continued)

| Research Hypotheses | Statistical Procedure | Results |
|---|---|---|
| $H_4$ There is no significant association between current measures of program effectiveness and current curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment and faculty. | Multiple Regression Analysis<br><br>Pearson r | Rejected |
| $H_5$ There is no significant association between projected measures of program effectiveness and projected curriculum emphases, planning strategies, delivery systems, external relations programs, facilities and equipment and faculty. | Multiple Regression Analysis<br><br>Pearson r | Rejected |

# CHAPTER V

# SUMMARY AND RECOMMENDATIONS

This chapter summarizes the study. Information is provided about the problem, objectives, hypotheses, sample, instrument, statistical analysis, and results and conclusions.

## Statement of the Problem

The problem addressed in this study was to assess the extent to which home economics education units in higher education, utilized selected measures of program effectiveness at present, and the extent to which they planned to use these same measures of effectiveness in the future. The study also examined the relationship of selected measures of program effectiveness to variables related to 1) curriculum emphasis, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

## Objectives

The specific objectives of the study were:

1. Determine the similarities between factor structures for the current and projected scales.

2. Assess changes between present and projected utilization of selected effectiveness measures reported by home economics administrators.
3. Analyze the similarity among the measures of program effectiveness reported for the five American Vocational Association regions.
4. Analyze relationships of current and projected measures of program effectiveness and variables related to curriculum emphasis, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

## Hypotheses

Five null hypotheses were tested in this study.

$H_1$ Factor structures derived from responses to the current scale will be similar to factor structures derived from responses to the projected scale.

$H_2$ There is no significant difference between measures of program effectiveness currently used, and those projected for future utilization.

$H_3$ There is no significant difference among measures of program effectiveness utilized in the five American Vocational Association regions.

$H_4$ There is no significant association between current measures of program effectiveness and current 1) curriculum emphases, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

$H_5$ There is no significant association between projected measures of program effectiveness and projected 1) curriculum emphases, 2) planning strategies, 3) educational delivery systems, 4) financial resources, 5) external relations programs, 6) facilities and equipment, and 7) faculty.

Table XXXXII summarizes the decisions made pertaining to each hypothesis. Chapter IV also provides explanations and fuller discussion of the findings and conclusions.

## Research Design

This study employed a descriptive survey research design to assess the measures of effectiveness utilized by home economics education units in higher education, based on information provided by home economics educators. Program effectiveness was the criterion variable. Curriculum emphasis, planning strategies, educational delivery systems, financial resources, external relations programs, facilities and equipment, and faculty were the variates.

## Population

The population of this study consisted of 326 four-year colleges and universities in the United States granting home economics education degrees. A usable sample of 208 was obtained, comprising a 64 percent response rate.

## Instrument

The data utilized in this study were collected from an instrument titled "Home Economics Education Futures Study: Towards the Year 2000". This instrument was developed by Drs. Hirschlein, Jorgenson and Brink, a research team associated with the Home Economics Education and Community Services Department of Oklahoma State University.

The instrument was designed to identify trends in home economics education in institutions of higher education within the United States, based upon current and projected future goals of these units.

Content validity of the instrument was established by a panel of experts commissioned by the research team. The instrument was also examined for clarity by students in a graduate research course in the College of Home Economics at Oklahoma State University. Construct validity for the portions of the instrument used in this study was established through a factor analysis procedure. Reliability was established by another researcher (Crouse, 1984) who reported that the internal consistency and the stability of the total instrument were determined to be above a coefficient value of .70.

## Data Collection

The data were collected in November, 1982 by the research team in the department of Home Economics Education and Community Services at Oklahoma State University.

## Procedures

Exploratory factor analysis was used as a means of exploring the underlying factor structure to determine construct validity of the instrument (hypothesis 1). The factor analysis procedure was conducted through the Statistical Analysis Systems (SAS), using the principal axis option with an orthogonal (varimax) rotation.

The Student's t test was used to determine mean difference between the current and projected measures of program effectiveness, as indicated in hypothesis 2 of the study.

The F test, obtained through one way analysis of variance was employed to measure similarities between measures of effectiveness utilized by the five American Vocational Association regions, as expressed in hypothesis 3 of the study.

Pearson correlation, the F test and Multiple Regression Analysis were used to analyze relationships between the criterion variable and the variates, as expressed in hypotheses 4 and 5 of the study.

## Results and Conclusions

Given the design of this study, analysis of the data has indicated that:

1. The factor analysis procedure established construct validity of the survey instrument. The items included in the instrument were appropriately assigned to the selected goals and represented the main idea of that goal.

2. The factor structures for the current measures of program effectiveness were similar to the factor structures for projected measures of program effectiveness.

3. The mean score difference from the current to the future suggested that respondents anticipate greater emphasis to be placed on measures of program effectiveness in the future.

4. A strong similarity was found among the five American Vocational Association regions regarding the measures of program effectiveness being utilized.

5. Pearson r coefficients for the current and projected measures of program effectiveness were positive and significant at the .0001 level. The projected correlations were higher than the current except for planning strategies, which was identified as the variable currently having the highest correlation. The variable, external relations programs, had the highest correlation for the projected future, whereas, curriculum emphasis had the lowest. These results indicate that the selected variables are expected to contribute more in the projected future to the measures of program effectiveness being utilized.

6. Significant association was found to be present between measures of program effectiveness and variables related to curriculum emphases, planning strategies, delivery systems, financial resources, external relations programs, facilities and equipment, and faculty.

A complete explanation of procedures and results are reported in chapter four of this study.

## Recommendations

This study assessed the current and projected utilization of selected measures of program effectiveness by home economics education units in

higher education. This section of the report presents recommendations for further study.

The original study conducted by Hirschlein, Jorgenson and Brink from which this study was extracted, provides one benchmark for studying trends and analyzing future goals of home economics education units in higher education. More studies of this kind including follow up studies are recommended. Such studies could identify emerging trends, assess changes, and determine future needs of home economics education programs, thereby, contributing to decision-making regarding program offerings.

Further investigation could concentrate on the relationships found to be significant in this study. Each relationship could be examined in greater detail to determine degree of association, and possible cause and effect between the factors.

Results of studies on measures of program effectiveness can be used in several ways to enhance program evaluation in home economics education units in higher education. Results of the current study, the study by Crouse (1984) and the original study by Hirschlein, Jorgenson and Brink (unpublished) can be used in the following ways: 1) as a basis for faculty and administrator development seminars on program evaluation, 2) as a tool in departmental strategic planning, 3) as an aid in revising accreditation standards, and 4) as a basis for further research and theory development. This and further studies in this area can contribute to the scarce literature on measures of program effectiveness. Eventually, the term, program effectiveness, can have an operational definition and more importantly a valid and reliable model for measuring program effectiveness can be developed. A particular need is research that will help establish criteria for determining when appropriate levels of effectiveness have been reached.

The researcher recommends that faculty and graduate students at institutions throughout the country participate in research related to program effectiveness in order to contribute to a broader knowledge base. Further, the American Home Economics Association (AHEA) should have input in the study and then assist in the dissemination of results.

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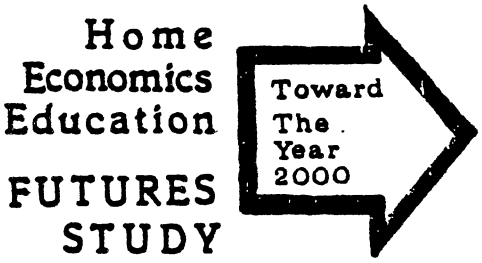
# APPENDIXES

# APPENDIX A

# SURVEY INSTRUMENT

No. _____




Challenges Toward the Year 2000
Home Economics Education Futures Study

Part I. GOALS AND DESCRIPTORS OF HOME ECONOMICS EDUCATION PROGRAMS

Directions: In this questionnaire you are asked to consider ten goals commonly associated with home economics education units in higher education. Each goal is accompanied by a number of related items called "descriptors." Please respond to each goal and each descriptor in two different ways. First indicate the extent to which you agree that the goal or descriptor accurately describes your unit at the present time. Second indicate the extent to which you agree that the goal or descriptor will accurately describe your unit in five years. Based on what you know today, try to be as realistic as you can in describing your current situation and what you expect your unit to be like in five years. For all items, please respond with your total home economics education program (undergraduate and graduate) in mind. Indicate your responses to the items by circling the appropriate number in the scale.

Positions on the five point scale are as follows:

1 = "STRONGLY DISAGREE" that the item accurately describes the home economics education unit

2 = "DISAGREE" that the item accurately describes the home economics education unit

3 = "UNDECIDED" whether the unit accurately describes the home economics education unit

4 = "AGREE" that the item accurately describes the home economics education unit

5 = "STRONGLY AGREE" that the item accurately describes the home economics education unit

(over)

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| GOAL 1: Develop and maintain curricula relevant to the educational needs of students. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 1. Curricula includes/will include a strong emphasis on: | | | | | | | | | | |
| a. life-long education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. accommodating the unique career goals of individual students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. interdisciplinary courses | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. problem solving skills | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. the integrated nature of home economics as a field | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. adult education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. special education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. leadership development | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. preparation for leadership in public policy formation | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. competency based education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. negotiation and conflict management skills | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. creative utilization of community resources | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. program planning and evaluation skills | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| n. alternative futures | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| o. experiential learning, e.g. volunteer work and internships | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| p. professional standards and ethics | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| q. group theory and group skills | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| r. creative utilization of existing and emerging media | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| s. public relations skills | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| t. computer technology | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

Home Economics Education FUTURES STUDY

Toward the Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| GOAL 2: Develop and maintain program emphases appropriate to the needs of employers of graduates. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 2. Curricula includes/will include a strong emphasis on: | | | | | | | | | | |
| a. preparation for employment in family and community services | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. preparation for employment in human resource development | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. preparation for elementary school teaching | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. preparation for secondary school teaching | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. preparation for college or university teaching | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. preparation for community or junior college teaching | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. preparing students to fill education related positions in business and industry | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. preparing students for employment as managers of volunteer programs | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. preparation of students for administrative roles | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. preparation of teachers for area vocational-technical schools | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. the preparation of managers for non profit organizations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. preparation of students to work with disadvantaged and handicapped persons | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. preparation for international service | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| n. preparation of researchers | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| o. preparation of consumer and homemaking teachers | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(over)

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| DESCRIPTORS RELATED TO GOAL 2, continued: | | | | | | | | | | |
| p. preparation of teachers for home economics related occupations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| q. preparation of students for careers in consulting | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| r. preparation of students for employment in communications | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| GOAL 3: Develop strategic plans aimed at maintaining the unit's role as a viable academic program in the institution. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 3. Strategic planning for the unit includes/will include: | | | | | | | | | | |
| a. a strategy that protects the discipline from subject matter raids conducted by other departments | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. participation in the development of public policy relating to allocation of resources for higher education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. participation in university-wide decision making relating to internal allocation and/or reallocation of resources | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. employment of a department head or chairman with a strong appreciation for the history and philosophy of home economics education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. employment of a departmental leader skilled in campus politics | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. the development of a strong support base among graduates | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. an active recruitment program aimed at attracting high quality students to the department | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

5

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| GOAL 4: Utilize state of the art delivery systems that maintain unit vitality respected by colleagues, students and employers. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 4. Delivery systems include/will include: | | | | | | | | | | |
| a. use of interactive satelite television as an instructional medium | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. telelectures involving professors and guests in distant locations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. use of computer assisted instruction | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. use of personal computers for completing course requirements | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. use of individual computer programming skills for meeting course requirements | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. utilization of distance learning (correspondence or home study) for the completion of required course work | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. access university libraries via personal computers | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. utilization of long distance telephone for student-teacher conferences/consultations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. credit available through validation of life experiences | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. use of video disks and/or video cassettes for independent study | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. use of audio cassettes for independent study | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. utilization of cable tv for departmental course offerings | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. a variety of workshops, seminars offered in off campus locations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(over)

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT — Describes our unit as it now exists | | | | | FUTURE — Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| DESCRIPTORS RELATED TO GOAL 4, continued: | | | | | | | | | | |
| n. open entry, open exit enrollment options | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| GOAL 5: Develop and implement an evaluation program that utilizes appropriate measures of unit effectiveness | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 5. Measures of program effectiveness include/will include: | | | | | | | | | | |
| a. the number of faculty publications produced annually | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. the number of student credit hours generated annually | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. the total amount of external funds generated annually | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. faculty participation in positions of national leadership | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. faculty participation in college/university committees | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. the faculty-student ratio | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. faculty contributions to the development fund | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. faculty involvement in international programs | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. student enrollment trends | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. the number of endowed chairs in the department | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. the number and size of student scholarships awarded annually | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. the number and value of bequests to the department | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. faculty involvement in public service programs | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| n. departmental rank in overall institutional enrollment | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| DESCRIPTORS RELATED TO GOAL 5, continued: | | | | | | | | | | |
| o. faculty research productivity | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| p. professional status obtained by graduates of the program | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| q. the placement of students in positions related to unit curricula | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| r. unit rank in relation to other similar units within the institution | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| s. reports and recommendations of external accrediting agencies | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| t. unit rank in relation to similar units at other institutions | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| u. cost effectiveness of space and equipment utilization | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| v. results of student evaluation of courses and teachers | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| w. academic credentials of incoming students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| x. unit output consistent with the mission purpose, and goals of the college/university | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| y. recognitions and awards earned by students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| z. reports and recommendations resulting from self-study and self-evaluation | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| GOAL 6: Develop and maintain financial resources necessary to adequately support the various needs of the unit | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 6. Financial resources available to the unit include/will include: | | | | | | | | | | |
| a. grants from private foundations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(over)

Home Economics Education FUTURES STUDY — Toward The Year 2000

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| b. fees collected from students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. bequests from alumni | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. contracts with business and industry | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. state higher education appropriations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. federal contracts and grants | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. federal flow-through revenues | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. allocations from state departments of vocational and technical education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. legislative appropriations especially earmarked for programs related to home economics education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. allocations from the Agricultural Experiment Station | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. gifts or financial contributions from faculty | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. gifts and contributions from alumni and friends | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. special fund raising campaigns initiated at the unit level | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| GOAL 7: Implement an external relations program that enhances unit visibility and assures constituent support. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 7. The external relations program includes/will include: | | | | | | | | | | |
| a. utilization of an advisory committee | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. a viable network for coordination and recruitment with feeder colleges and secondary programs | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. a viable network for coordination and recruitment with youth organizations such as 4-H and FHA | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

Home Economics Education FUTURES STUDY

Toward the Year 2000

| DESCRIPTORS RELATED TO GOAL 7, continued: | PRESENT<br>Describes our unit as it now exists | | | | | FUTURE<br>Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| d. faculty participation in external professional meetings | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. faculty service on university-wide committees | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. faculty involvement in national leadership of professional organizations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. faculty participation as consultants in public schools | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. faculty involvement as trainers and consultants for nonprofit family and community service organizations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. faculty service as curriculum consultants for other departments in the institution | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. faculty involvement in evaluation research for nonprofit organizations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. emphasis on the total institution's understanding of the goals of home economics education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. emphasis on educating top level institutional administrators in the value of home economics education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. close professional contacts with other helping professions | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| n. strategies which interpret home economics education to a wide variety of publics | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| o. faculty service on policy boards for community, district and state programs | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| p. faculty participation as volunteers in community organizations | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| q. faculty involvement in continuing education programs for employees of business and industry | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(over)

Home Economics Education FUTURES STUDY

| | PRESENT: Describes our unit as it now exists | | | | | FUTURE: Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| GOAL 8: Maintain and utilize facilities and equipment that enhance the home economics education program. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 8. The management of facilities and equipment includes/will include: | | | | | | | | | | |
| a. access to up-to-date equipment and technology | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. alternatives to purchasing equipment such as rental, free loan and shared ownership | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. adequate budgets for upkeep of equipment | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. long-range plans for equipment, maintenance and replacement | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. utilization of off campus educational facilities | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| f. access to adequate library resources | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| GOAL 9: Develop and maintain a student recruitment program aimed toward increasing the number of well-qualified students in the program. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 9. Student recruitment efforts include/will include: | | | | | | | | | | |
| a. recruitment of part-time students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. recruitment of older students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. recruitment of minority students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. emphasis on enrollment of male students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. service to international students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

Home Economics Education FUTURES STUDY

| | PRESENT<br>Describes the unit as it now exists | | | | | FUTURE<br>Describes what the unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| DESCRIPTORS RELATED TO GOAL 9, continued: | | | | | | | | | | |
| f. increased emphasis on undergraduate students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. increased emphasis on graduate students | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. development or revision of student screening process for acceptance into the program | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. emphasis on quality of students rather than quantity of students enrolled | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. recruitment of students for graduate programs immediately upon completion of bachelors degree | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. emphasis on student enrollments in options other than teacher certification | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **GOAL 10: Employ, develop and retain qualified, productive faculty.** | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| DESCRIPTORS RELATED TO GOAL 10. The faculty personnel program includes/will include: | | | | | | | | | | |
| a. emphasis on positive faculty morale | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. recruitment of faculty with backgrounds and expertise in areas other than teaching and education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| c. development of faculty expertise in research and writing skills for publication | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| d. opportunities for faculty release time to study, travel and attend professional meetings | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| e. emphasis on in-service training for faculty members | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(over)

Home Economics Education FUTURES STUDY

Toward The Year 2000

| DESCRIPTORS RELATED TO GOAL 10, continued: | PRESENT<br>Describes our unit as it now exists | | | | | FUTURE<br>Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SD | D | U | A | SA | SD | D | U | A | SA |
| f. employing only faculty who possess a doctoral degree | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| g. the inclusion of a yearly publication as a criterion for graduate faculty membership | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| h. utilization of adjunct faculty who do not have doctoral degrees | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| i. utilization of part-time faculty | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| j. emphasis on faculty expertise in research | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| k. emphasis on faculty expertise in public policy development | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| l. employment of faculty who are proficient in a second language | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| m. emphasis on computer literacy of faculty | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| n. development of faculty skills in advisement and counseling | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| o. development of faculty expertise in working with adult learners | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| p. emphasis on the instructor role of facilitator, resource person and consultant | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| q. development of faculty expertise in the management of self, family time and other resources | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| r. an effort to assure that a majority of the faculty have academic credentials in home economics education | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

(continued on next page)

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| Please write in other goals or descriptors which you believe are important to your unit. Indicate your responses to the items by circling the appropriate number in the scale. | PRESENT<br>Describes our unit as it now exists | | | | | FUTURE<br>Describes what our unit will be like in five years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GOALS OR DESCRIPTORS | SD | D | U | A | SA | SD | D | U | A | SA |
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

Part II. DEMOGRAPHIC INFORMATION

Directions: Please respond to the following statements and questions about yourself, your institution, and the home economics education unit at your institution

1. Which classification best describes your institution (check one)?

   ___ public land grant

   ___ public, other than land grant

   ___ private

   ___ other, please specify _____

   _____

2. What is the official name of the home economics education unit at your institution?

   _____

   _____

   _____

3. Has there been a change in the name of the home economics education unit at your institution within the last five years?

   ___yes ___no

4. Do you expect any change in the name of the home economics education unit at your institution within the next five years?

   ___yes ___no

   If "yes", please explain _____

   _____

5. What is the administrative unit to which the home economics education unit directly reports?

   ___ Home Economics

   ___ Vocational/occupational/technical education

   ___ Education

   ___ Other, please specify _____

   _____

(over)

6. Has there been a change in the administrative structure of the unit which includes home economics education at your institution within the last five years?

___ yes ___ no

7. Do you expect a change in the administrative structure of the unit which includes home economics education at your institution within the next five years?

___ yes ___ no

If "yes", please explain _____

_____

8. What degrees are offered through the home economics education unit at your institution?

___ Bachelors
___ Masters
___ Doctorate
___ Other, please specify _____

_____

9. What is the approximate student enrollment (undergraduate and graduate) at your institution for Fall, 1982?

_____

10. What is the approximate number of home economics education majors enrolled in the undergraduate program at your institution as of Fall, 1982?

___ 15 or less
___ 16-25
___ 26-50
___ 51-100
___ 101-200
___ 201-300
___ 301-500
___ 501-700
___ 701-900
___ Over 900

11. What are the undergraduate options, majors or areas of emphasis available to the home economics education majors at your institution (check all that apply)

___ Teacher certification
___ Communications and journalism
___ Cooperative extension
___ Community services
___ Other, please specify _____

_____

12. What is the approximate number of home economics education majors enrolled in the graduate program at your institution as of Fall, 1982

___ Not Applicable
___ Less than 10
___ 11-25
___ 26-50
___ 51-75
___ 76-100
___ 101-150
___ 151-200
___ Over 200

13. List (if applicable) the three most common program options (or majors) selected by home economics education graduate students at your institution.

Master's Level

_____

_____

_____

Doctoral Level

_____

_____

_____

14. What is your current title? (Check all that apply.)

___ Coordinator
___ Chairperson or chairman
___ Director
___ Head
___ Faculty member
___ Other, please specify _____

_____

15. What is the highest degree you have earned?

___ Doctorate
___ Masters
___ Bachelors
___ Other, please specify _____

_____

16. What is the specialty area of your highest degree?

_____

Thank you for participating in this study.

# APPENDIX B

# AMERICAN VOCATIONAL ASSOCIATION REGIONS

States Within American Vocational

Vocational Regions

| | | |
|---|---|---|
| Region One | | |
| Connecticut | Michigan | Pennsylvania |
| Delaware | New Hampshire | Rhode Island |
| Maine | New Jersey | Vermont |
| Maryland | New York | West Virginia |
| Massachusetts | Ohio | Washington D.C. |
| Region Two | | |
| Alabama | Kentucky | Tennessee |
| Florida | North Carolina | Virginia |
| Georgia | South Carolina | |
| Region Three | | |
| Illinois | Iowa | Missouri |
| Indiana | Minnesota | Wisconsin |
| Region Four | | |
| Arkansas | Mississippi | Texas |
| Louisiana | Oklahoma | |
| Region Five | | |
| Alaska | Idaho | Oregon |
| Arizona | Kansas | South Dakota |
| California | Montana | Utah |
| Colorado | Nebraska | Washington |
| Hawaii | Nevada | Wyoming |
| | North Dakota | |

# VITA

Patricia Mills Wilson

Candidate for the Degree of

Doctor of Philosophy

Thesis: MEASURES OF PROGRAM EFFECTIVENESS IN HOME ECONOMICS EDUCATION UNITS: PRESENT AND PROJECTED

Major Field: Home Economics -- Home Economics Education and Administration

Biographical:

Personal Data: Born in Port-of-Spain, Trinidad, January, 1956; the daughter of Gledwyn A. and Pauline E. Mills.

Education: Graduated from St. Francois Girls' High School, Belmont, Trinidad, in June 1973; received Bachelor of Science degree in Home Economics Education from Iowa State University in 1981; received Master of Education degree in Home Economics Education in 1982; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in December, 1985.

Professional Experience: Elementary school teacher, Maraval, Trinidad, 1975-78; Adult Education teacher, Port-of-Spain, Trinidad, 1976-1978; Administrative Assistant, Iowa State University, 1982-1983; Research Associate, Oklahoma State University, 1983-1985.

Professional Organizations: American Home Economics Association and Omicron Nu.