Contributions of the curricula of the college of home economics to general education

Bertha Mary Bresina
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CONTRIBUTIONS OF THE CURRICULA OF THE COLLEGE OF HOME ECONOMICS TO GENERAL EDUCATION.

Iowa State University of Science and Technology
Ph.D., 1961
Home Economics

University Microfilms, Inc., Ann Arbor, Michigan
CONTRIBUTIONS OF THE CURRICULA OF THE COLLEGE OF
HOME ECONOMICS TO GENERAL EDUCATION

by

Bertha Mary Bresina

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

Major Subject: Home Economics Education

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

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Signature was redacted for privacy.

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1961
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INTRODUCTION

If one were asked to list some of the leading issues in education today, the one which would undoubtedly be near the top of the list would be the problem of how best to incorporate a general education for all students regardless of the type of education they are receiving. Probably the problem could be stated more clearly in this way, "How can one find a new unity in the undergraduate curriculum in which liberal and vocational interests are both recognized?"

Recent world events have focused attention on the purposes of higher education. In particular, the ever recurring problem concerning the proper balance between education for the specialized functions of an occupation and education for the broader activities of life has been forcibly re­vived. It is the latter part of this problem with which the present study is particularly concerned.

Home economists are concerned with the extent to which the opportu­nities afforded students contribute to the broader activities of life outside their area of specialization. As a field of study, home economics has great potential to meet the challenges of the present generation. It is the purpose of this study to ascertain to what extent these challenges are being met in the institution under consideration.

The Committee on Philosophy and Objectives of Home Economics of the American Home Economics Association presents those responsible for educa­tion in home economics with the following objectives: (3, pp. 8-9)
We believe that the clearest new direction for home economics is to help identify and develop certain fundamental competences that will be effective in personal and family living regardless of the particular circumstances of the individual or family.

As home economists, we can measure the success of our work by the extent to which we contribute to the development by individuals and families of the competences to:

1. establish values which give meaning to personal, family and community living; and select goals appropriate to these values

2. create a home and community environment conducive to the healthy growth and development of all members of the family at all stages of the family cycle

3. achieve good interpersonal relationships within the home and within the community

4. nurture the young and foster their physical, mental and social growth and development

5. make and carry out intelligent decisions regarding the use of personal, family, and community resources

6. establish long-range goals for financial security and work toward their achievement

7. plan consumption of goods and services — including food, clothing, and housing — in ways that will promote values and goals established by the family

8. purchase consumer goods and services appropriate to an over-all consumption plan and wise use of economic resources

9. perform the tasks of maintaining a home in such a way that they will contribute effectively to furthering individual and family goals

10. enrich personal and family life through the arts and humanities and through refreshing and creative use of leisure

11. take an intelligent part in legislative and other social action programs which directly affect the welfare of individuals and families
12. develop mutual understanding and appreciation of differing cultures and ways of life, and co-operate with people of other cultures who are striving to raise levels of living.

The twelve competences parallel the objectives of general education to a striking degree. The extent to which these competences are achieved in each home economics graduate measures the success of home economics teaching in higher education. If home economists really believe this and act accordingly, they have tremendous potential for achieving that unity of purpose in general education which is now being sought for so earnestly by leaders in education.

The greatest of all human concerns in our culture are the goals of individual human freedom and the full and purposeful life. One may feel that the curricular offerings for our students advance each person toward these goals, but feeling is not sufficient. Evidence is needed as a basis for judging the effectiveness of curricula in this respect. Since the courses taught within the College of Home Economics at Iowa State University represent a broad scope of home economics offerings, they were selected for this exploratory study in home economics. Is it not fitting that a study be undertaken to examine the possible parallelism between general education and home economics?
REASONS FOR UNDERTAKING THIS STUDY

Indications of Confusion among Educational Leaders

To the writer, at least, it is inconsistent that in an age when more people are attending schools of higher learning than ever before, that there is extensive confusion and frustration among educational leaders and practitioners. Educational leaders vary considerably in their solutions to present educational problems and the attainment of objectives.

Professional literature in the past decade reiterates ideas like those which will follow. They indicate in no small way the amount of confusion prevalent in higher education. Some educational leaders have expressed strong convictions regarding their particular approaches to educational problems, but it is doubtful how seriously college teachers in general are concerned. What about home economics college faculty members — are they taking any action? How concerned is the individual home economics teacher?

The following excerpts bear implications too typical of the crisis in higher education today to remain unnoted. They certainly do not indicate clarity of purpose or unanimity in thinking, but they do manifest confusion among our educational leaders. It is the recurrence of passages such as those found in McGrath and Russell (39, p. 17) that prompted the present exploratory study.

There are two risks in the present developments. One is that in both liberal arts colleges and professional schools instruction may be concerned with the trivial and the transient rather than with the significant and the permanent. The distinction between a trade school and a college lies
in just this difference of philosophy and of emphasis on controlling ideas rather than on details and techniques. All specialized or technical education offered by colleges, whether they are liberal or professional schools should be of a level and dignity worthy of an institution of higher education . . . . All subjects must be taught in a 'liberating' spirit.

Dressel (9, p. 144) brings into relief another problem when he says:

The problem in higher education is to find a new unity in the undergraduate curriculum in which liberal and vocational interests are both recognized. It would be well, then, if we abandon the idea of general education as a movement or as a type of education completely different from or antithetical to liberal or vocational education. The concept which should replace it is that of an integrated and quality undergraduate educational program. Obviously, this cannot be identical for all, but if liberal education objectives are viewed in terms of characteristics of human behavior rather than in terms of bodies of content, it should be possible to develop principles and statements of necessary qualities of significant educational experience which could be applied in the context of varying bodies of subject matter and yet lead to much the same kind of results. This, at least, is the challenge to which we must address ourselves.

One concept of Mead (32, p. 60), another educator, is that today a totally new kind of teaching is needed, "a teaching of a readiness to use unknown ways to solve unknown problems . . . . to teach our students how to think, when you don't know what method to use, about a problem which is not yet formulated." Even more pertinent than Mead's concern is Day's (6) anxiety with regard to general education in land-grant institutions. He claims the land-grant institutions have the same obligations with respect to general education that other institutions of higher learning have — perhaps no more but surely no less. He states further that parents are anxious over what appears to be happening to their children in that values that have been cherished seem to be in jeopardy. He says, "We have become more and more confused, uncertain, and distrustful."
What more natural than to assert: "Education should be contributing more than it is".

Considerations of concern in putting first things first are expressed by Idzerta (24, p. 147) when he says:

That man's first vocation is to become what he is: a human being, and that higher education ought to reflect this fact; that the fulfillment of our human vocation in college involves a development of the intellectual virtues: understanding, wisdom, science, prudence and art. . . . That the pursuit or development of these virtues includes both formal and material elements: the function of the student is not merely to assimilate knowledge as defined by the school; he must be aware that selection, organization, analysis, synthesis and communication have some significance as well. . . .

... This means that the courses are not merely introductions to or surveys of something or other. It means that those involved with a general education program have to do some things quite unusual for a college faculty; instead of assuming that mastery of a subject matter is the first and last prerequisite for the college teacher, the faculty member interested in general education must ask himself the significance of every element in the course being taught, its relationship to other subjects or areas, and, most radical of all, he pays some attention to the quality of his teaching.

A few years ago Hancher (19) in an address to the Association of Land-grant Colleges and Universities expressed his views in a similar vein when he said that he sustains the assumption that there are some things which every liberally educated man should know, but he feared

... that we have been led into error sometimes by believing that the study of certain subject matter inevitably results in a liberal education. This is a doubtful proposition. It is nearer the truth to say that there is no subject matter, worthy of a place in the curriculum of a modern land-grant college or state university, which cannot be taught, either as a professional specialty or as a liberal subject. . . . We forget that it is possible to become liberally educated by the teaching and study of professional or specialized subjects in a liberal manner.
Another educator who is conscious of the present day confusion and lack of unanimity in education is Fitzpatrick. (15, p. 29) He said that no material of education is in itself essentially liberal or contributes to the cultivated human being and he further stated:

... Vocational material is liberal if its effects on the individual are to enlarge his mind, improve his taste, develop his capacity for reflection — making him a better human being. In this way he will see things in a wider social content and in their deeper social significance.

Varying Connotations in Terminology

As a basis for developing a definition of general education which will be used in this study, the writer believed that it was necessary to review some of the varying concepts and terminology concerning liberal and general education, vocational education, professional education and specialized knowledge.

**Liberal education and general education**

The Education Policies Commission (40, p. 47)

Traditionally, liberal education has been that prompted through a four-year program drawn from the disciplines and subjects roughly grouped as "arts and sciences." General education has involved efforts to draw from the reservoir of riches the materials most worthwhile for the student who can spend only a limited part of his time on general studies. It has sought to concentrate attention on experiences which would have greatest general value for development of the individual and to organize new patterns of courses, often on an interdisciplinary basis. General education recognizes the need for rigorous selection of materials with constant care for their relevance to the student who must in limited time gain those insights and skills which will make him a person of aesthetic sensitivity, social responsibility, scientific understanding and psychological maturity.
Another concept of the differences between these two types of education is that stated in the Report of the President's Commission on Higher Education: (57, p. 49)

General education is not sharply distinguished from liberal education, the two differ mainly in degree not in kind. General education undertakes to redefine liberal education in terms of life's problems as men face them, to give it human direction and social direction, to invest it with content that is directly relevant to the demands of contemporary society. General education is liberal education with its matter and method shifted from its original aristocratic intent to the service of democracy. General education seeks to extend to all men the benefit of an education that liberates.

Liberal education and liberalality

Scheffler of Harvard gave his interpretation of liberal education in a pleasingly lucid manner (51, pp. 29-30)

Light is thrown on the meaning of liberal education by naming some of its opposite illiberalities. It is opposed to a merely occupational education, because such an education narrows the range of choices that remain open. . . . If the meaning of liberal education is to be understood, it must not be identified by labels, or associated exclusively with any part of a university. Liberality is a norm or standard by which to judge educational practices wherever they occur. It will not do, therefore, to say that a professional school is necessarily illiberal merely because its students are acquiring a special form of expertness for which they expect to be paid.

There is no occupational or professional education of which the same may not be said. Education for business is liberal when it enables a businessman to choose business for what it is, so that by understanding its underlying principles and its role in society at large, he may be creative, and not a mere cog in the existing mechanism. Even manual labor partakes of liberalality at the moment when a man chooses to work with his hands; or when it becomes a skilled craft requiring taste and invention; or when it is attended with a sense of cooperation and social utility.

As the professional or vocational school may be liberal, so
the "liberal arts college" may be illiberal, and will be illiberal insofar as it is pervaded with a narrow sectarian bias, or employs methods of mere popular appeal, or reduces study to the level of drudgery and routine, or otherwise fails to create the independent and resourceful mind and exercise the student in the art of choice. All of the studies commonly embraced in its curriculum are capable of satisfying the standard of liberality if they are liberally taught or taught by a liberal teacher; and there is no subject which may not be made illiberal. A study which is liberal at one time may become illiberal at another time.

Vocational education

In deriving a definition of vocational education some educators have dichotomized vocational education and liberal education. Dressel (10), director of Evaluation Services at the Center for the Study of Higher Education introduces his article on "Liberal and Vocational Education" by saying:

Liberal education produces a person of comprehension, of character, and of compassion. Vocational education promotes competency in a calling. Liberal education suggests objectives including broad knowledge and understanding, virtue and human motive. Vocational education supports purposes involving specific knowledge and skills. Liberal education prizes truth. Vocational education emphasizes utility.

If this contrast were true, educational planning of the curricula for each would be comparatively simple for students would choose between education for the good life or education for a good living. If one were to define vocational education as merely utilitarian in purpose and lacking in the objectives attributed to liberal education in the above quotation, then it could be said that vocational education is indeed illiberal, has very little educational value, however valuable socially

*Underlining by present writer for emphasis.*
the skill may be. A concept of an effective vocational education is stated in the following observation of Greene. (18, p. 119)

It is an everlasting pity that so sharp a dichotomy has established itself in our minds between liberal education and vocational training, with the false implication that the former is somehow higher, though useless and the latter useful but somehow crass and demeaning. If these two equally essential preparations for life are thus divorced, a merely liberal education will indeed tend to be useless, and a merely vocational training, crass. What is obviously needed is a truly liberal academic community in which the study of art and typewriting, of philosophy and accounting, of theology and medicine, of pure and applied science are, though admittedly very different, judged to be equally honorable and valuable in their several ways.

Professional education

A paraphrase of McGrath's concept of professional education is (36, p. 61) a form of formal higher education designed with a special curricula to serve the needs of the various professions as medicine, law, theology, teaching, pharmacy, nursing etc. The meaning of "profession" is not entirely clear, and no precise definition is at present possible. The economic, educational, and social factors which influence professional status to the public are complex and interrelated, but the amount and kind of education — both general and technical — required of potential members of a particular occupational group determine its social status are incontestable.

Specialized knowledge

The following concept is adapted from Scheffler's description of specialized knowledge. (51, p. 29) Such knowledge limits the movements of the mind and excludes the alternative interpretations of any subject or
situation which might be made in the light of a broader context. Further it habituates the mind to some specific technique, and closes it to matters in which this technique cannot be employed. Specialization is an important force in the world today, however, for many individuals specialization is finality rather than an avenue to deeper and broader understanding. This need not be the case if our education is adequate.

The "Rockefeller Report" on Education comments on specialists in this way: (48, p. 11)

The trend toward specialization has created among other things an extraordinary demand for gifted generalists — men with enough intellectual and technical competence to deal with the specialists and enough breadth to play more versatile roles — whether as managers, teachers, interpreters or critics. Such individuals will be drawn increasingly from the ranks of those whose education and experience have included both depth and breadth — who have specialized but have not allowed themselves to become imprisoned in their specialty.
GENERAL EDUCATION MOVEMENT

Issues Leading to Rise of General Education Movement

About the middle of the nineteen thirties the general education movement manifested itself in higher education. Authorities generally agree that the movement began as a reaction against the disunity that was evident among the liberal arts curricula since the beginning of electivism. There was a tendency to produce the specialist rather than the broadly educated individual. A college education gave the student little contact with that core of knowledge which it was believed should be the common possession of all students apart from vocational or specialized work. As a consequence, the student was more or less intellectually segregated from his fellowmen. This condition was detrimental for him, for the college and for society as a whole.

Another factor which was conducive to the acceleration of this movement was the impression that general education also meant universal education, or the education of all those who wish to go to college and have the ability to benefit by it. It came to be identified with education for democracy. Associated with this concept was another implication, namely, that general education was that type of education that was intended for those students for whom the traditional liberal arts curriculum seemed to be too difficult. This last concept won for general education a number of enthusiastic supporters.

The changing technological and social world of America showed up a weakness in higher education which was conducive to the appearance of the
new general education movement. There was much more leisure time, yet the educational system was giving no attention to those things which commanded much of an individual's time — being a member of a family, a citizen, and a leisure-using human being. Some readjustments were needed if education was to meet the emerging needs of its people.

Another factor that influenced the movement and served as a catalyst was World War II. It awakened many educators to a keener sense of their responsibility to society both national and international.

Spirit of the General Education Movement

In 1939 a committee was formed under the auspices of the American Council on Education to initiate the first systematic and cooperative attack upon the myriad problems connected with the development of the general education movement. The final report of this committee was published in 1947 under the title Cooperation in General Education. (2, p. 202) This report seems to be a very important contribution to the general education movement. The committee selected institutions which had experimented with some form of general education and which represented a fairly complete cross section of American higher education. Among the types of institutions represented were: the land-grant college, the independent liberal arts college, the state teachers' college, the municipal university, the Catholic college, the Protestant church-related college, the Negro college, the four-year college for women, the junior college for women and the coeducational junior college.

At the time of the establishment of this committee there were a va-
riety of programs and theories prevalent in the American college. The committee accepted no one existing definition but in the final report the committee listed five features which seemed to be characteristic of the movement at that time. In lieu of a good definition that is acceptable to almost everybody, the present writer is of the opinion that these five characteristics are the most accurate expression available for an understanding of the movement. The following summary of the characteristic features of the general education movement is an adaptation of that in Cooperation in General Education. (2, pp. 202-205)

In recording the characteristics of the general education movement as they appeared to leaders in the field at mid-century, the most evident feature was a reaction to specialization. This specialization was the marked tendency which arose in the latter part of the nineteenth century for institutions of higher learning to greatly extend the range of subjects offered and in so doing introduced slowly but surely an emphasis on specialization. This trend eliminated the breadth and coherence in the curriculum for the college student.

In a recent publication, Are Liberal Arts Colleges Becoming Professional Schools, McGrath and Russell (39, p. 10) describe this specialization feature. They illustrate how the liberal arts colleges all over the country have accepted the functions of professional, technical and vocational education. Perhaps the most dramatic shift in purposes and offerings is to be found in the contrast between preprofessional and professional fields listed in college catalogues issued at the turn of the century and at the present time. The catalogues of 26 liberal arts
colleges were examined for professional and preprofessional curricula offered in 1900 and 1957. In the brief sixty-year period the liberal arts colleges have added strikingly wide range of vocationally oriented programs. In 1900 they offered two preprofessional (law and medicine) and five professional (civil engineering, commerce, commercial law, electricity, teaching) programs. In 1957 these same colleges were offering 12 preprofessional and 42 professional or vocational curricula.

Closely allied to the first characteristic is a second, that of colleges working on programs of general education, attempting to provide a better integration of subject matter in related fields. This led to the development of survey courses and other types of "general" courses which characterize the general education offerings.

The third feature of the general education movement is the increased proportion of subject matter prescribed for all students. After the free elective system was abandoned, even the major-minor plan for the organization of college curricula left a generous amount of choice with the student. Under the plan, the student was expected to select one course from each of the major areas of knowledge. This resulted in a questionable outcome, that of the student possessing a body of knowledge, a very small percentage of which he held in common with other students of the same college. In many institutions the electives constituted as much as 80 percent of the total courses. Due to this diversity of course content, college graduates in America have not possessed any considerable common body of knowledge, or common set of ideals, or common outlook on life. The heterogeneity of intellectual background is partly responsible for the inability
of the present generation to discuss its common problems. There has been an effort on the part of educational leaders to do something about this problem in American higher education. Therefore, as one examines the current general education programs throughout the country, one observes an increasingly large body of common subject matter.

Another feature of the general education movement is its concern with a wider range of objectives. Intellectual development is not sufficient. As the movement has advanced, there has been an apparent concern among educators about the moral, emotional, and aesthetic development of the student.

The fifth characteristic of general education is its concern with the everyday activities of human beings. This is a reaction against the abstract, systematic instruction which, however good it may have been as intellectual exercise, often seemed far removed from the problems and activities of the everyday life of the student. Advocates of general education promote the development of instruction which begins with the immediate problems of life for the student who does not intend to pursue the subject into its upper branches.

These features, as characteristics of the movement, are corroborated by the literature. Practically all will agree that the general education movement is basically a search for some kind of unity which is lacking or found only occasionally in higher education.

Various Concepts of General Education

As was stated in the closing thought of the previous section, the
general education movement has revealed itself principally as a reaction against over-specialization, a quest for unity in higher education and an emphasis on the need for a curriculum suitable for universal education. Proponents of the movement are apparently united in a negative way, at least, in that they are dissatisfied with the status quo of the liberal arts curriculum.

Concepts of individuals

Following is a list of definitions in somewhat sequential arrangement as to time depicting the viewpoints of various leaders. These may cumulatively enlarge on the concept of general education. It will be evident from these representative definitions that the authors differ in no slight manner in their interpretation of general education.

Some definitions emphasize the concept that education must be concerned with the personality as a whole. This seems to have been characteristic of the movement since its incipiency in the middle thirties. Eurich wrote in 1939: (13, p. 3) "At present the scope of general education appears to be all-pervasive, including the development of the whole personality in relation to society."

Jones portrays the same notion in this concept: "It (general education) is education of the individual-as-a-whole in the culture-as-a-whole." (27, p. 119)

A concept which was prevalent in the thirties was an emphasis on life's necessities. Reynold's exemplifies this in: (47, p. 363)

I have defined 'general education' broadly as being those curricular experiences in all areas such as citizenship, homemaking, worthy recreational interests, philosophy of
life, and others which comprise the life-needs of all people regardless of their economic or social status.

Another group of definitions implies that general education is intended as universal education. Charters portrays this to a degree in reference to the common man: (5, p. 58) "General education is concerned with the mastery of those cultural tools which are of most importance for the common man."

MacLean's definition is an exemplification of those where education for adjustment is stressed (29, p. 120). This concept was widely accepted during the middle thirties and forties but in current literature is fading noticeably, probably because it stressed adjustment to rather than control over life situations.

Our concept of general education, is, then, one of a training process designed to make people at home in their complex modern world rather than to give them an analytical, minute, and complete picture of the intricacies of one phase of it; and to give them the chance to make themselves supple and adaptable to change rather than rigidly prepared for a single occupation; to enlarge their vision to see the wholeness of human life instead of leading them deep into microscopy, and to let them acquire a sense of values in the many phases of adult living outside the strictly vocational.

While the meaning and functions of general education tended to move in the direction of the above definition, some programs were based on the assumption that the broad purpose of general education was most effectively attained by concentrating on the intellectual processes whereas most of the concepts already quoted place emphasis on the concurrent development of all phases of the individual's personality — intellectual, social, physical, emotional.
McGrath, one of the pioneers in general education, represents those educators who favor the concept that general education implies the acquisition of knowledge and attainment of abilities. It is more comprehensive in scope. This is evident among McGrath's purposes of general education (37, p. 158)

It must be admitted that general education should provide essential knowledge about the physical world, about the human beings and other animal life which inhabit the globe, and about the methodology employed in the various disciplines to extend this knowledge. But it should also cultivate in students the intellectual processes of logical reasoning, inference, generalization, and reflective thinking. It must also assist students in deriving a set of ethical principles for themselves which will give direction to their lives and provide the basis for a moral evaluation of their behavior and that of their contemporaries.

Concepts of aggregate groups

The definitions listed above represent the movement as envisioned by individual leaders. It is likely to be a more reliable source of information on general education if the findings and aggregate thinking of committees are considered.

In 1937 Eurich wrote in the Thirty-eighth Yearbook of the National Society for the Study of Education: (13, p. 7)

It [general education] is a concern that grows out of (1) a dissatisfaction with higher education as now organized, (2) a reaction against an over-emphasis upon specialization in the colleges, (3) a new body of information regarding the nature of a college and the characteristics of a student body, (4) the current youth problem in society, and (5) a deepened desire to do something that will make education more effective than it has been in the past . . . .

In 1944 McCluskey (33) concluded that general education was reaching
some semblance of focus. He was in accord with Johnson (26) that general education was general from three aspects: (a) that general education regarded the total personality, not merely the intellect; that there was concern with emotions, habits, and attitudes; (b) that general education had significance for everybody not only for the select few who were scholars or who entered the professions; and (c) that general education was concerned with preparation for efficient living regardless of what one's vocation might be.

In 1945 a group of educators organized for the purpose of clarifying objectives of education at the secondary and college levels. This resulted in the Harvard Report on General Education in a Free Society. Its definition is entitled to consideration. The Report says: (21, p. 52)

The term 'general education' is somewhat vague and colorless; it does not mean some airy education in knowledge in general (if there be such knowledge), nor does it mean education for all in the sense of universal education. It is used to indicate that part of a student's whole education which looks first of all to his life as a responsible human being and citizen. . . . Clearly, general education has somewhat the meaning of liberal education, except that by applying to high school as well as college, it envisages immensely greater numbers of students and thus escapes the invidium which rightly or wrongly, attaches to liberal education in the minds of some people. But if one clings to the root meaning of liberal as that which benefits or helps to make men free men, then general and liberal education have identical goals. The one may be thought of as an earlier stage of the other, similar in nature, but less advanced in degree.

In October 1946 the first issue of the Journal of General Education was published. In the opening editorial an attempt was made to answer the question, "What is general education and what are the characteristics of this movement?" According to McGrath, the editor, the general education
movement is: (35, p. 8)

... a reaction against specialism and vocationalism; an effort to integrate the subject matter of related disciplines; an increased prescription of representative subject matter; an attempt to assist the student in seeing the relationship between learning and life and in using his knowledge and skills in daily living; and an effort to reform graduate education for teachers to the end that they may bring to the classroom skills of the master teacher, a broad knowledge of their own and related fields, and a vital interest in the noble task of instructing youth.

In 1952 McConnell, expressing the consensus for the committee on the yearbook of the National Society for the Study of Education, made this observation concerning general education: (34, p. 1)

It is a movement which began as a re-examination of the nature and purposes of liberal education and which is leading toward a revitalization of the liberal arts, and perhaps to a complete reconsideration of the nature of the learning process.

The word "movement" is chosen well for the major common element of the different approaches to general education is to be found in the reaction against overspecialization advocated by the free elective system and the equally serious narrowness of training required in many fields of technical or professional preparation.

The Educational Policies Commission undertook a study in 1957 concerned with a group of basic issues about higher education in which social policy was involved. The committee used this as its definition of general education: (40, p. 46)

... general and liberal education are conceived as enlarged opportunity for mature personal development and for those experiences by which students gain fuller insight into the nature of man and his environment.

At the time of this writing in the early 1960's it can be said that the
The concept "general education" represents an attempt to keep education abreast with other cultural and technological changes. General education is an aspect of college education. As such, in a period of rapid technological change, it is bound to be affected by whatever happens to higher education as a whole.

Definition as used in this study

Eclectic though it be, the definition which the writer will use as her basis in this study is this. General education is that which qualifies young men and women for the common life of their time and their kind. It embraces the fund of knowledge and beliefs and the habits of language and thought which characterize and give stability to our society. It is the consolidating element of our culture. It prepares young men and women for a full and satisfying life in the varying roles of family member, worker, citizen; making them integrated and purposeful human beings. It pays special attention to differences in talent, interest and purpose, and avoids attempting to form all into a single mental and spiritual mold. Seeking to make possible the maximum development of the "whole man" consistent with the general good, it encourages respect for inventive genius and tolerance for variations in opinion, while at the same time it rests on the principle that deviations in thought or in act must be based upon understanding of the purposes, standards and values of society.

Varying Approaches to General Education

At the time of this writing there is considerable unity in definition and function of general education and with regard to objectives there is
little divergence in opinions. However, in the programs for the attainment of the goals of general education, there is wider diversity.

From the multitude of programs with which colleges have experimented during the past forty years, one can identify several types. These approaches form part of almost any chronology of the general education movement. In order to comprehend the basic characteristics of the principle approaches, a summary description of each will follow as adapted from Mayhew (30, pp. 63-78); Rattigan (46, pp. 68-130); and Trowbridge (56, pp. 161-169).

**Distributive requirements**

The distributive requirements approach is by far the most common approach in colleges in America today. The regulations usually require a year's course or two in the social sciences, one or two years in the natural sciences, often a course or two in mathematics, very likely some work in foreign language or literature, English composition, physical education and perhaps religion. In some cases specific courses are prescribed but often the student is given a choice among elementary courses offered by the departments in the appropriate field.

Advocates of this approach theorize that since a student is unable to take all of the course offerings of a college, he should at least have some acquaintance with each of the major fields. In sampling these larger divisions of human knowledge it is assumed that the student will learn the characteristic mode of thought in each of these important areas and obtain in the process a general education.

There are serious charges against programs which rely on this approach.
Perhaps one of the more serious limitations is that there are great gaps allowed in the student's education. Usually the student takes an elementary course in physics or chemistry or geology to meet his natural science requirements. He then has some background in one field but he is largely ignorant of the others. Yet today a citizen should have some acquaintance with the general principles basic to most of the sciences if he is to become part of an informed public.

Another charge against programs relying on the distributive system is that introductory courses are usually designed for the few who are going on to major in that field and not for the general student.

Survey courses

This second approach also relies on organization according to disciplines but differs in this way that each course crosses a number of fields. For example, instead of limiting the student to a single course in economics or sociology, the survey course strives to incorporate the essential principles of economics, political science, geography and sociology in a single course. The reasoning behind the survey approach is that by offering three or four broad survey courses there is a probability to cover practically all the basic fields of knowledge. The goal is to provide a rounded view of the world instead of three or four limited departmental views.

There are two types: (a) in the mosaic type each branch of knowledge within a division is taught as a unit; (b) in the integrated type, stress is placed upon basic principles or concepts which are common to all of the sciences or branches of knowledge within a division. The mosaic type
aims at comprehensiveness, while the integrated type aims at coherence. This approach seems to many to have great possibilities for general education.

**Functional subject matter approach**

This approach is a departure from the traditional organization of subject matter. It was a revolt against the liberal arts curriculum which was claimed to be suitable for scholars, but failed to help the average student with his everyday problems. According to the supporters of this approach it is necessary to disregard subject matter lines and to organize content around practical life activities and problems. Concerning this approach Charters says: (5, p. 58)

They [Proponents of functional subject matter approach] point out that the artist who understands and demonstrates the principles of color, line, and balance on canvas does not consistently demonstrate the same understanding in the selection and care of his own clothes or even in the furnishings of his home; that the scholar whose understanding of scientific principles cannot be questioned in the laboratory does not exhibit these same principles and attitudes at the polls on election day. Transfer, they hold, cannot be assumed; it must be taught.

The problem then, in using this approach, is to determine the life needs of the student and the demands of society. When these needs have been determined, a curriculum is built around them. The course content is culled from various fields and organized into courses such as "Problems of Social Adjustment", "Marriage and Family Life", "Vocational Orientation". Since the past few years, this approach is conspicuously absent from general education literature. It gained popularity after World War II but seems to have gradually faded.
Great books courses

This approach aims at cultivating the intellect through the study of "Great Books". This approach has been popularized through such promoters as Hutchins, Adler and Great Books Foundation. The best example of this type is to be found at St. John's College in Annapolis, Maryland. According to their plan at St. John's the liberal arts (skills) can best be learned from those who possess them to an eminent degree, that is, the authors of the great classics of our Western tradition. Those who place their confidence in this approach, believe that the student in studying and discussing the contents of approximately one hundred great books, will be subjected to a rigorous intellectual discipline and in the process acquire a general education.

Problem solving courses

Even though it has been in existence since the early days of the movement, this approach seems to be replacing the functional subject matter approach and has some avid followers. It is based on the principle that students learn best when given a practical problem from contemporary life to analyze and resolve. An example is a human relations course at Harvard University whereby certain problems of man's experience are posed in graphic detail after which the student must read widely to find the data and generalizations to be applied in the solution of these problems. Ultimately the student is expected to weigh alternative solutions and arrive at one that he will espouse and defend. In this approach the problem is tackled differently than in the "Great Books" courses approach. Here it is assumed that if one is to learn how to solve problems he must do so by at-
tackling independently and decisively the pressing issues at hand rather than by digesting what ancient philosophers had to say about them.

Advocates of this problem solving approach contend that their students are highly motivated because of the practicality and relevance of the problems under consideration. There is little assurance, according to critics, that the student will sample the many aspects of knowledge in systematic and well rounded fashion. Others have charged that this approach tends to make the student self-centered in his interests rather than an objective observer of life.

**Great issues approach**

This approach has some things in common with those already described, however, they differ in spirit and purpose. It is sometimes called the "big ideas" approach. In the social sciences, the purpose is to deal not only with manifest social problems but more particularly with the issues which lead to such problems. The courses deal with the effort of the individual personality to find meaning and satisfaction in the larger social group. The chief purpose is to assist the student to perceive the underlying realities and dynamics of the social process.

These great issues courses are akin to the instrumentalist approach of the problem solving courses in that they are centered around significant problems but here the purpose is more to "illuminate" a problem rather than solve it.

Because the problems are significant and relevant to common every day experiences, advocates of this type of approach claim that it is a good vehicle for motivating student interest.
Mayhew makes some pertinent comments concerning all of these various approaches to general education: (30, pp. 76-77)

... each has considerable merit. The kind of offering adopted will depend on the field involved and the purposes defined by the faculty. ... Courses related to problems of personal adjustment, such as preparation for marriage or the psychology of human relations, are usually organized around the problems or great issues plan. But whatever the field or the approach devised, general education courses have much in common. They all represent a break from the traditional organization and presentation of subject matter, developing material along lines deemed particularly useful to the student rather than faithful to the discipline. All are concerned with problems of value and ultimate purpose. They insist that the student recognize the importance of values in the formation of judgment and ponder those most appropriate for his own life...

All of the courses place emphasis upon good teaching...
It is a common testimony in colleges where a general education program (of whatever kind) has been worked out, that the entire intellectual life of the campus takes on a new tone and the work in upper level courses is enriched.

There is no conclusive evidence from research or from the subjective appraisal of current practices to justify the acceptance of one plan of general education over another. The more clearly the functions of general education are defined the greater is the likelihood that satisfactory plans of organization and administration will emerge.

Criteria of Effective Programs

Within the past year, (1960-61) there has been an attempt by leaders in general education who have been long active in the field to describe practices and programs which in their judgment have been effective. The

*All underlining in this quote by present writer for emphasis
initiative for a publication (31), came from the National Committee on General Education, which is one of the two committees of the Association for Higher Education of the National Education Association. Eight pioneers in general education synthesized the widely accepted features of general education and described programs and practices which in their judgment have proven effective. They developed criteria for effective programs in general education. These criteria are worth reviewing since they portray a 1960 concept of an effective program, practice or course in general education. The following criteria are adapted from Mayhew: (30, pp. 16—24)

1. Does the program or practice affect a substantial portion of the entire student body? . . .
2. Does the practice, program or course realistically contribute to broadening students' views of human life? . . .
3. Does the program, course, or practice have identifiable aims or objectives which can be stated in terms of human behavior? . . .
4. Does the program, practice, or course realistically recognize prior experiences of students? . . .
5. Does the program, practice, or course make explicit the mechanisms for achieving integration? . . .
6. Is the program or practice based on a holistic conception of human personality? . . .
7. Does the program, course, or practice view as primary its own intrinsic goals? . . .
8. Is the program, practice, or course as well staffed and financed as other comparable parts of the institution? . . .
9. Does the teaching in the program or course reflect attention to sound scholarship, probing deeply enough into a subject to bring about significant changes in people's beliefs and a demand for students actively to practice the skills which are being taught? . . .
10. Does the program or practice make use of what is known of individual differences among human beings? . . .
11. Does the program, course, or practice provide for regular evaluation and accept the need for periodic change? . . .
REPORT OF RESEARCH

In attempting to classify the voluminous literature on general education one finds that the proponents of this movement have theorized about definitions, ends, and means. Practitioners too, have published course descriptions and program suggestions which give accounts of the results as envisioned by them but unsupported by data. Books, articles, and speeches bearing on such aspects of general education are to be found in abundance but reports on research and accumulated evidence which might give sufficient grounds for all the commendations directed to general education courses, programs and practices are rare.

In this chapter the writer has limited her review to reporting research only, such research which supports the findings of this present study or allied to it in some manner. She used research that dealt with (a) the selection and identification of objectives for general education; (b) variations of progress made by students in attainment of objectives of general education; (c) the interrelatedness of the objectives of home economics and general education; (d) the role of home economics for home and family living as a part of general education.

One such study was the Cooperative Study of Evaluation in General Education under the sponsorship of the American Council on Education. (11) This study was of particular concern because of the similarity to the present study in some purposes and methods used.

Cooperative Study of Evaluation in General Education

This study (11) was undertaken with the objective of discovery and with
the hope that the results would be useful to teachers, especially those in general education. It was made under the guidance of the committee on Measurement and Evaluation, which was the committee appointed by the Council to give continuing study to evaluation and testing needs and problems in higher education. The Cooperative Study was made possible by the assistance of the Carnegie Corporation of New York and by annual contributions from the participating institutions.

It was originally hoped that the Study, initiated in the spring of 1950, would cover a five-year period embracing (a) two years to study objectives, to develop evaluation procedures, and to plan a research design, (b) two years to follow groups of freshmen from the beginning of their first year to the beginning of their third year, (c) a final year to make statistical analyses of results, to investigate implications, and to prepare the final report. This time allotment was modified whereby stages one and two were assigned to a three-year period of active endeavor and a final six months was employed for stage three. Although this reduced length resulted in inability to carry out the two year follow-through of freshmen, the actual nature of the project as it developed made this omission relatively unimportant.

To determine interest in a cooperative evaluation venture, a mail survey of forty-four colleges was conducted. The survey involved three questions: the need for such a project, willingness to participate in it, and willingness to contribute to it. From the favorable responses, a group of nineteen colleges was selected and invited to send two representatives each to an initial meeting held at Pittsburgh in December, 1949. Those in at-
The list of objectives for general education as recommended in the Report of the President's Commission on Higher Education (57, pp. 50-56) was checked. The following six objectives were the ones with the highest frequency.

1. "To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and nation" (Committee on Social Science Objectives)

2. "To understand the common phenomena in one's physical environment, to apply habits of scientific thought to both personal and civic problems, and to appreciate the implications of scientific discoveries for human welfare" (Committee on Science Objectives)

3. "To understand the ideas of others and to express one's own effectively" (Committee on Communications Objectives)

4. "To attain a satisfactory emotional and social adjustment" (Committee on Attitudes, Values, and Personal Adjustment)

5. "To understand and enjoy literature, art, music and other cultural activities as expressions of personal and social experience, and to participate to some extent in some form of creative activity" (Committee on Humanities Objectives)

6. "To acquire and use the skills and habits involved in critical and constructive thinking" (Committee on Critical Thinking)

The group divided into six committees each of which was free to determine just what it wanted to do, nevertheless, each assumed responsibility for one of the six objectives.

Each of the nineteen colleges was asked to decide with which of the six objectives or areas it wished to be involved. The decision was based on the interest and availability of staff members, on the stage of development of the various courses, and the financial burden imposed by travel and other expenses attendant upon participation in committee meetings.
General plan of operation

The actual operations of the Study involved four distinct types of activity on the part of the intercollege committee members: committee meetings during the school year, summer workshops, individual and subcommittee activities, and local campus activity. Each of these phases of activity contributed heavily, although somewhat differently, to the program. At all stages of the Study the cooperating colleges had complete autonomy, not only in the committees selected, but also as to the extent to which they contributed to any phase of the work of a committee. For example, the Communications Committee was concerned with all the communication skills, but on some campuses speech is not included in the freshman course. In such cases no contribution could readily be made and none was expected.

Rationale of the study

Most of the participants were neophytes in evaluation and were concerned with achieving an understanding of the nature of evaluation and the possible purposes which the process might serve. The following purposes of evaluative activity were identified in the early committee planning before dividing into the six committees: (11, p. 19)

1. Clarification and possible redefinition of the objectives of general education.
2. Development of more adequate and reliable means of measurement.
3. Appraisal of the development of students.
4. Adaptation of courses and programs to the individual student.
6. Improvement of instruction.

Interpretation of the objectives of general education might seem to be an inappropriate purpose to associate with evaluation, since evaluation
is presumed to begin with a previously determined set of objectives. However, such an objective as "attainment of a satisfactory emotional adjustment" is so unspecific that as one undertakes to define it and to evaluate student attainments in regard to it, the very attempt brings greater insight into the objective and modifies some of the preconceptions about it.

The second of these purposes is really only a step in evaluation or a means to that end, but it is particularly relevant to general education because it is with respect to objectives descriptive of behavioral outcomes other than knowledge that the most difficult measurement problems arise.

The third purpose — appraisal of the development of students — is one often talked about in education but seldom dealt with adequately. The question of how and how much students change as a result of their educational experiences, requires an extensive program of pre-and post-testing over a period of time such as one, two, four, or more years. Such appraisals of progress are difficult because they involve very careful experimental designs if extraneous factors are to be so controlled that conclusions can be drawn. The other three purposes are not as closely related to the present study as the three just mentioned.

Early in the Study the Director suggested a series of twenty questions to be faced in entering into an evaluation of general education. Several of these are quoted to give the reader an idea of the nature of these questions: (11, pp. 21-22)

Question 1. What does this objective mean in terms of definite and concrete action, feeling, or behavior on the part of the individual? Faced with a group of individuals of un-
known educational background, what would distinguish between those who have and those who have not attained the objective?

Question 2. At exactly what point, or to what elements, in the problem or situation is the described behavior applicable?

Question 20. What is the optimum growth which may be expected for various kinds of students with regard to this objective?

These questions are interpreted in detail by Dressel. (8, pp. 97-122) They were not used point by point in the deliberations of any of the committees nor were they intended to be so used. The scope of the questions does fairly reflect the many issues to be faced in the careful study of an objective. They indicate also that evaluation and instruction can very profitably be thought of as inseparable.

It would require too much detail to summarize the procedures of all six committees but it might be of benefit to see in brief how one of the committees functioned.

Intercollege committee on social science objectives

After considering a number of objectives frequently claimed for general education courses in social science, the Intercollege Committee on Social Science Objectives selected critical thinking for its area of particular inquiry. The meaning of critical thinking in social science was specified in a List of Abilities. These abilities are listed below in outline form without the explanation which followed each in the original Study.

(11, pp. 38-39)

The Critical Abilities

1. To identify central issues
2. To recognize underlying assumptions
3. To evaluate evidence of authority
   a) To recognize stereotypes and cliches
   b) To recognize bias and emotional factors in a presentation
   c) To distinguish between verifiable and unverifiable data
   d) To distinguish between relevant and nonrelevant
   e) To distinguish between essential and incidental
   f) To recognize the adequacy of data
   g) To determine whether facts support a generalization
   h) To check consistency

4. To draw warranted conclusions

The list, developed by the Committee, gained considerable validity from two quarters. Besides the Social Science, three other committees decided independently to work on objectives involving the concept of critical thinking. Each one proceeded quite independently; yet the respective final lists were markedly parallel. Another source of validity for the list of specifics rests with their relevance to actual, observable human behavior. After completing the list, members of the committee were asked to find evidence of demonstration or lack of demonstration of these abilities on the part of students, and to prepare test items requiring demonstration of each one of the abilities or complexes of them.

After the members of the committee were convinced of the validity of their conception of critical thinking on social science and had tried out on students various kinds of appraisal techniques, an objective-type Test of Critical Thinking in Social Science was developed, revised, and printed. This test was administered to a sample of entering freshmen at a number of participating colleges, and to these same students or to comparable groups at the end of the freshman year and at the end of the sophomore year. The
changes in test scores over these time intervals were studied with a view to determining their magnitude and the factors associated with them.

In general, it was found that students gained in ability to think critically in social science over a period of a year, although the size of these gains varied widely, depending on the institution that the students attended. Attempts to teach critical thinking in social science by making minor changes in particular courses did not appear to result in greater growth than was found in courses not making overt attempts to teach this skill. Attempts to relate growth in critical thinking ability to course organization or to specific teachers suggested that both of these were highly important, although the research could not identify specific factors which seemed to be operative.

The intercollege committee members were in accord among themselves that explicit attention to critical thinking can result in a much richer, more varied approach to teaching, with the possibility of infinitely greater student growth. However, they did not state this as a definite conclusion.

**Reliability and validity**

In preparing the final form of the Test of Critical Thinking in Social Science, studies of reliability, and the validity of the test instrument were carried out. The test had proved adequately reliable for purposes of group measurement of college freshmen and sophomores. Depending on the size of the group tested and the technique used to estimate the reliability, coefficients centered about the .80 magnitude. In view of the length of the test and the nature of the trait it purports to measure, such statistics were considered satisfactory.
Item analysis, by which the difficulty and the discriminative characteristics of test items are estimated, yielded highly satisfactory results. Those items which did not discriminate were discarded.

The validity of the test rested primarily on the judgments of the committee, but a number of other techniques were used to confirm this judgment. These included comparisons of the test scores with (a) those of other appropriate instruments; (b) course grades; (c) outside estimates of student possession of the relevant skills; and (d) student demonstration of critical thinking by other means. The unequivocal conclusion of all of these when combined with expert estimate of the test's potentialities was that the test measured a complex of traits which could be legitimately described as critical thinking in the social sciences.

One-year gains on critical thinking in social sciences

The investigators collected data which indicated how students from the different colleges gained over a year's time with respect to critical thinking ability. The students from each institution were classified according to their pre-test performance. From the classification of the data as it appeared in the original work, it was apparent that, in general, students who scored low on the pre-test recorded the most significant gains on the post-test. Whether this phenomenon only illustrated the familiar regression toward the mean which seems to pervade all testing, or whether it had more fundamental significance, is a debatable point.

The authors felt that there was some justification for the belief that some portion of the larger gains of the lower-scoring students reflected the orientation of most general education courses in social science.
Designed as most such courses are, to provide a common educational experience for larger and larger numbers of students, they may be taught at a level most effective for the less well prepared students. However, any interpretation of these results must also recognize that larger gains for initially high-scoring students are made less probable by the smaller number of items available to them for demonstration of improvement.

While using different techniques of teaching for the same course but with different classes did not seem to be particularly effective as determiners of scores on the Test of Critical Thinking in Social Science, who the instructor was did seem to be important.

**Contributions of combined six committees**

The statistical evidence on gains suggests that (a) students do make some progress in regard to general education goals; (b) the amount of progress is apparently dependent on the nature of the educational experience provided and varies in ways which correspond reasonably well to identifiable elements in that experience. To obtain further insight into the variation in gains, it was of interest to see whether certain schools consistently registered the larger gains on all tests or whether there was a tendency for different types of institutions to show differing patterns of gain on the various tests. If a few institutions tended to make the largest gains on all tests, then the characteristics of these institutions as compared with a similar group making the smaller gains became of interest in an attempt to explain their apparent effectiveness.

In compiling the gains made by colleges (making allowance for the ability level of the students involved), four institutions were found con-
sistently to rank one, two, or three in the size of gain made. These four colleges superficially, at least, had little in common. One was a large publicly supported state institution; three were privately supported liberal arts colleges. Two were co-educational; one was a college for women, and the other a college for men. Three were selective to various degrees on admissions; the state institution required standing in the upper fifty percent of the high school graduating class. It would be easy to elaborate on differences among these four institutions, but the really crucial question was whether they had anything in common which differentiated them from another group of four colleges registering low gains on the tests. Four such low-gain institutions were found. The contrasting characteristics of the two groups of colleges appear in the following double column arrangement. (11, p. 246) The characteristics listed here were the more obvious ones. The authors state that more subtle ones may have escaped their observation.

<table>
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<tr>
<th>Characteristics of Institutions with Large Gains</th>
<th>Characteristics of Institutions with Small Gains</th>
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<tbody>
<tr>
<td>1. Most students reside on campus.</td>
<td>1. Large percentage of students commute.</td>
</tr>
<tr>
<td>2. Admission involves more than high school graduation.</td>
<td>2. High school graduation sufficient for admission.</td>
</tr>
<tr>
<td>3. A core program of general education.</td>
<td>3. No set program required of all students, possibly one or two common courses.</td>
</tr>
<tr>
<td>4. Program of exemption or credit by examination.</td>
<td>4. No exemption or credit program by examination.</td>
</tr>
</tbody>
</table>
5. Staff of general education courses strongly general education oriented.

5. Staff of general education courses oriented to specialized offerings and teach a general education course as a sideline.

6. Broadly conceived evaluation activity a continuing part of the program.

6. Little evaluation other than regular examinations made by individual teachers.

7. General education experiences not confined to courses.

7. General education experiences largely limited to that provided by general education courses.

8. General education courses not waived for major in related field.

8. General education courses commonly not taken by one majoring in related field.

9. Strong administrative interest and active coordination of general education as a unit.

9. General education is provided through largely independent, uncoordinated courses.

The preceding characterizations must be viewed with caution, but to the extent that the data and judgments are valid, it appeared that general education, if successful in its objectives, cannot be left to chance either in the courses offered and the teachers offering them, nor can it be regarded as something achievable entirely from a program of formal instruction.

The Study made no attempt to deal with all objectives of general education. Among the six objectives upon which their concentration centered, there was nothing pertaining to home and family living, to health and to selection of a vocation. They meet this criticism by saying that "the objectives must be judged only after a careful study of the interpretations placed upon these objectives." They use as an example to justify this reasoning (11, p. 264)

... the concern of the Science Committee with the reading of current scientific articles and the associated abilities.
involving scientific method and attitude may obviously be applied to materials dealing with health, selection of a mate, child care, and the like.

And further they say concerning this same subject: (11, p. 265)

... such materials [on home and family living etc.] were represented in the original collection from which the test selections were drawn, and their absence or near absence from the final product simply reflects lack of emphasis on such matter in current science courses.

This seems to be in essence a "shrug of the shoulders" with regard to these aspects of living for every citizen. Why were they eliminated from the final product? If there is no deliberate planning to incorporate these topics into the curriculum, then it may be assumed that they will receive only incidental treatment or passing comment. It is extremely doubtful whether anyone would place confidence in such uncertainty, particularly since we now believe that transfer of learning is not as automatic as has previously been thought.

After relieving the science committee of direct responsibility for these aspects of living, the following comment is made: (11, p. 265)

... the 'content' axis of the Critical Thinking Committee includes problems involving self, others, society, values, and ethical standards. Marriage and vocational choice problems, among others, were considered as entirely appropriate situations for the application of critical thinking. Certainly the problems and statements employed by the Attitudes Committee impinged upon all areas of living.

The writer realizes that the behaviors and the range of situations of the objectives actually investigated, included or might readily have included much of what is involved in objectives dealing with home and family living but, unless learning experiences are consciously incorporated, it is doubtful whether much is accomplished in the area under question.
Syracuse University Self-Survey

This self-survey of Syracuse University, like the present study, is an indication that neither university is satisfied with the status quo. Each is willing to look at itself objectively. In both studies student and faculty opinions were utilized with regard to general education objectives.

Dressel, (7) offers a series of reports on evaluation practices in general education institutions of higher learning. The selection of schools and authors reporting was based on the acquaintance of the editor with the programs and the individuals, but to a greater extent, on the fact that much had been and is being done in relation to evaluation in these particular colleges. Most of the authors were full or part-time evaluators or researchers, a fact indicative of the importance attached to evaluation in the institutions. If the selection of colleges appeared over-weighted in the direction of larger institutions, it was only because these institutions more commonly had research or evaluation offices and programs. Although each contributor was given a tentative outline to be followed, each was allowed much freedom in reporting his story. The reason that the writer selected Syracuse University self-survey (7, pp. 1-26) to report on in preference to the other twelve was that it described practices helpful in the initiatory stages of a general education program, and because one of the four methods of approach used to study objectives was similar in some respects to the present study.

The faculty of Syracuse University undertook to study general education in their institution with the attitude that only as we know the consequences of what we do, can we have a firm basis for improving our programs.
It is one of the roles of educational research and evaluation to provide increasingly systematic and valid data of the results of education.

Because there was no widely accepted definition of general education either within the committee or in the University at large, one of the first projects undertaken by the committee was designed to discover what objectives were held by the faculty and the students and what objectives were exemplified in the course offerings and requirements. Four approaches were used to study the problem systematically; (a) examine objectives from the catalogues; (b) review objectives inferred from students' programs in the professional schools; (c) study the objectives of courses, and (d) make comparative ratings of general education objectives by faculty, students, and alumni.

In the first approach the academic deans were requested to submit whatever lists or descriptions of the objectives of their college that were available. Most of the deans referred to objectives stated in their respective catalogues. Analysis by the committee led to the following conclusions concerning these objectives: (7, p. 4)

1. Most of the schools and colleges have stated objectives for their program. Primary emphasis is upon preparation for the respective professions. This is true also in the college of Liberal Arts where the emphasis points toward preparation for areas of major specialization.

2. Aims for general education are mentioned in most instances with the assumption that these are to be met through courses taken in Liberal Arts.

3. The aims of the Liberal Arts College, while stressing broad general and cultural education, are stated in non-specific terms. The emphasis is on the acquisition of knowledge and skills in the established
subject fields of the College with the assumption apparent that this in itself constitutes the requirements of a general education for life and living today. *

4. No set of comprehensive contemporary objectives of general education for the University as a whole exists . . .

In the second approach, objectives inferred from students' programs in the professional schools, the committee took a sampling of graduates of the preceding year in the various technical and professional colleges. The programs of approximately thirty graduates in each of eight schools of the University — all four-year professional programs — were tabulated. The schools included were Engineering, Business Administration, Art, Music, Forestry, Home Economics and Speech. In summary, the tabulation showed that the typical graduate from these eight schools left the University having taken, outside his major field, one course in one of the sciences (many left with none at all), two courses in social sciences (most frequently psychology) and work in the humanities which seldom went beyond freshman English and English Literature.

Another approach, the third, was an attempt to ascertain the objectives of each course offered in the University. Accordingly, faculty members responded to a form entitled "Report of Courses" for each course they were currently teaching. One section of this report was a check list of sixteen objectives, with space provided for adding two others. The instructor was requested to check all the objectives in the list which he regarded as "definite aims" of his course. He was then asked to check the three "most important" aims and to rank them in first, second and third

* Underlining by present writer for emphasis
order. In response to this questionnaire, the faculty submitted 1,562 individual course reports. Different sections of the same basic course (such as English) were counted separately if they were taught by different instructors; but counted as one course if the same instructor taught all sections.

Members of the committee classified the objectives in order to estimate the relative emphasis given to general versus specialized goals by the instructors of individual courses. Six objectives were considered as emphasizing mainly general goals, six as mainly specialized goals, and the remainder as not being readily classifiable into either category.

The fourth and last method used to study the problem of analysis of objectives was that of obtaining opinions from faculty, students and alumni. Alumni opinions were obtained in a different study but are discussed here to enrich the comparisons of similarity and difference. The opinions reported are those of 690 faculty members, 550 students about equally divided between sophomores and seniors and drawn at random from Liberal Arts, Engineering, Business, Fine Arts, and Home Economics, and 2,500 alumni. The same check-list of 18 objectives was presented to all three groups, with slight modifications in the directions for each group as appropriate. Each group rated the importance of each objective. The student and alumni groups also rated the extent to which they believed their college experience helped (or was helping) in attaining each objective. The faculty, however, was asked to report the extent of responsibility which their area of instruction assumed for helping students attain each of the objectives.

The 18 objectives which were used in this study were the following:
From a classification which the author included, it is quite evident that a majority of all three groups rated each one of the 18 objectives as important. It was also evident that a majority of alumni and students believed that their college experience had helped them, or was helping them, make some progress toward each of the objectives. There were, however, relatively few objectives toward which a majority of students or alumni attributed "much" help from their college experiences. The data indicated that for nearly a third of the objectives a majority of the faculty said that helping students toward the attainment of them was outside their area of responsibility.

The over-all similarity of the various rank orders was in fact, very great. Among the ratings of importance of the objective, the rank order of faculty judgments correlated .81 with the rank order of students' judgments, and .84 with the rank of alumni judgments. Students and alumni correlated .91 in the rank order of importance in which they regarded the objectives. Among the ratings of faculty responsibility and student and alumni ratings of helpfulness of their college experience, the rank order of faculty responsibility assumed for the objectives correlated .72 with the rank order of students' opinions of progress made, and .72 with alumni opinions. Stu-
dent opinions of progress made toward the objectives correlated .84 with
the rank order of alumni opinions regarding progress. And finally there
was substantial agreement (.72) between the order of importance which
faculty attached to the objectives and the order of the magnitude of
responsibility which they assumed for helping students attain them.
Students' judgments of the importance of the objectives also correlated
.72 with their judgment of progress made toward them.

The major differences in judgments between faculty and students about
the importance of these objectives, as shown by large discrepancies in the
rank ordering, come at two places. Students attach much greater importance
than the faculty to preparation for satisfactory family and marital adjust­
ment; and faculty attach much more importance than the students do to
effective participation as a citizen. The investigators believed that this
is probably related to the wide discrepancy between the high importance
which students attached to marriage and the family and the low degree of
help which they believe college has given them relative to this objective.
There were also major differences between the rank order of faculty respon­
sibility and the rank order of students' progress on these objectives: ef­
fective writing (faculty high, students low), social competence (students
high, faculty low), and understanding science (faculty high, students low).

General Electric Company Survey of College Graduates

A study which portrays similar educational concerns as the present
one was undertaken by the Consultant of Educational Research at the Gen­
eral Electric Company. It was an attempt to have all college graduates in
the work force of General Electric evaluate their higher education. This study is quoted (17), because it bears an assumption that prompted the present study, that a general education is considered necessary not only by leaders in education but also by those involved, gainfully employed college graduates, who are now adult citizens in America. Another reason for quoting this study is that one of its areas of concern dealt with abilities involved in the effective use of the varied symbols of communication which is included in the goals in the present study.

Methods used

Questionnaires were sent to 24,000 college graduates in the General Electric Company using the following questions: (17, p. 3)

1. What areas of college study have contributed most to your present position of responsibility with the General Electric Company?

2. What areas of college study have contributed least to your present position of responsibility with the General Electric Company?

3. Recognizing the value of a satisfying and rewarding use of leisure time, what areas of college study have contributed most to your leisure-time activity?

4. What specific areas of study or courses would you recommend most highly to a young high-school graduate entering college who aspires to a position of business responsibility?

5. Do college extra-curricular activities aid an individual in developing himself for a business career? If so, what type of activity lends itself best to such development?

6. When thinking of the benefits received from the college experience, are you most impressed by values arising from teaching personalities or from the subject matter of courses studied?

7. What types of financial support are recommended for students of today who desire college training, yet find themselves without sufficient family resources to finance such training?
8. Is college training worthwhile and necessary in the light of today's business operations?

9. If you were starting life again, would you attend the same college and take the same program of study?

Upon the return of as many completed forms as could reasonably be anticipated (approximately 60.4 percent of the total college-graduate personnel) the returns were divided into two groups, those who had attended engineering schools and those who were graduates of non-engineering curricula. The non-engineering group was further divided. The first division was made according to the type of undergraduate college degree (i.e., Bachelor of Arts, Bachelor of Science, Degrees in Business Administration, and Degrees in Education). The second division was made according to the type of position with the Company (i.e., whether now engaged in technical or non-technical work). For the purposes of the study, each reported position was assessed as "technical" if the work was related to the direct application of science or engineering to the business process. Otherwise the person was listed as a non-technical employee.

A similar procedure was employed for the engineering group, which was divided into four major categories, according to degrees: Electrical Engineering, Chemical Engineering, Mechanical Engineering, and Other Engineering Degrees.

As the questionnaires were returned, they were arranged according to a preliminary classification, by college degrees in engineering and non-engineering categories. Each group was tabulated separately and the replies were analyzed.

The questionnaires were originally designed for machine tabulation.
However, a pilot sampling of the responses showed that accurate tabulation required interpretation of a highly personal nature. Consequently, analysis of both groups was predominantly a hand operation, with all comments and remarks noted and considered in the light of their application to specific questions. Thus, speed in computation was necessarily sacrificed for increased penetration into the interpretation of the meaning of the respondents. This seemed essential in the light of the interest in the study which had been expressed by educators who had known that it was in progress.

**Group studied**

All employees holding degrees from accredited colleges and universities as of October 1, 1955 were queried. The representativeness of the group is shown by the fact that the responses came from managerial, professional, scientific, secretarial, and clerical employees. Less than five percent of the total responses came from women. The present writer wonders about the forty percent who did not respond. How different were they from those who responded? It seems that if a random sample had been used with an attempt to secure more complete returns the results would have been more reliable.

A grand total of 14,147 (60.4 percent) was returned. This number included 6,429 (45.4 percent) from non-engineering graduates, and 7,157 (50.6 percent) were from engineering graduates. There were 561 (4.0 percent) which were incomplete or defective for analytic purposes, leaving 13,586 as a working total.

**Summary of findings**

As was stated at the outset of this report, this study was undertaken
in the hope that, from the testimony of college-graduate employees of this company, some relationship could be derived between the respondents' academic and extra-curricular college careers and their subsequent success and satisfaction in their jobs and leisure activities.

Four subject areas in the college curriculum were considered to be extremely valuable, regardless of the academic background or type of employment of the respondent, in contributing to career success. English communication — both written and oral — was reported high on the list. Non-engineering respondents placed this subject area first, while engineers rated it second only to Mathematics, which is also a communication tool. Other subject areas reported as important for career success by both groups of respondents included Physics, Economics, and Mathematics.

The least valuable subject areas, judged from a career standpoint alone, were felt to be History, Foreign Language, miscellaneous sciences (Biology, Botany, Geology) and certain social sciences (principally Government and Economics). Engineers often reported certain engineering courses as "least valuable", particularly if such courses were not in line with interests and occupations. It should be borne in mind that these subject areas were reported as least valuable from the career standpoint only, there being no indication of their over-all value to the educated man.

This last qualification is brought home even more dramatically by the fact that some of these same courses ranked among the most important from the standpoint of value in leisure time. Both engineers and non-engineers reported English Literature as the most valuable course from the leisure time point of view. Other courses noted by both groups as valuable in this
respect included History, Science and Engineering, Economics, Physics, Mathematics, and Philosophy. As might be expected, the liberal-arts graduates tended to indicate a greater breadth of "value courses" in the non-science areas.

Except for differences in ranking as to importance, survey respondents indicated that a good collegiate program for business management training should include basic work in English, Science and Engineering, Mathematics, Economics, and General Business. The investigators said that all of this can be interpreted as a strong vote of confidence for a broad general education. In general, the respondents seemed to value the broad background for personal and career development, with specialization, if essential, occurring at the graduate level.

The prime purpose of undergraduate college education, according to many respondents, is not the acquisition of specialized information and operational techniques. Rather, it was volunteered time and time again that the power to think and to analyze a wide range of problems successfully is the true goal of college education. Even if some consideration is given to the technical aspects of education, failure to produce an individual with these abilities is in essence a failure of the college program itself. The "whole man" concept seems quite strong in the thoughts of this group of employees.

The ability to get along well with others was also a factor that respondents believed should be stressed in the college curriculum. Those courses that aid the individual in the better understanding of his or her associates were given much importance, because of the complicated interconnection in the lives of all of us. In the same vein, there was emphasis
upon the theory that college should develop within the individual a desire
to associate himself with religious, social, community, and service drives
to aid in the improvement of living conditions for his fellow man.

Interrelatedness of Home Economics and General Education

Pullen (45), in 1953 undertook to show the interrelatedness of the ob­
jectives of home economics and general education at the secondary school
level. Objectives of general education and home economics from sources
judged by the writer to be reliable were studied and compared to determine
the interrelatedness. As a result of the comparison of summarized objec­
tives from both fields, she arrived at the following generalizations:
(45, p. v)

1. Objectives of both home economics and general education
   are concerned with:
   a) The personal growth and development of the pupil
   b) The relationships of the pupil in his family,
      among peers, in the school and in the community
   c) The use of personal and material resources
   d) The development of the responsibilities of citizen­
      ship.

2. Objectives of general education and home economics are
directed toward the development of certain competences
in the pupil.

3. A contribution may be made to the achievement of objec­
tives of general education in problem-solving situations
planned for the development of focal objectives in home
economics.

It is only the first step of her study with which the present study is
related. For this part of the study Pullen reviewed and summarized state­
ments of the broad objectives of general education and of home economics
objectives from sources considered by her to be educationally significant.
Then the elements of the home economics objectives that are common to the objectives of general education were identified.

Pullen proceeded with her study in a convincing manner in that she used as a basis for the selection of her objectives in general education the concepts of some groups of leaders representing thinking on a national scale regarding general education at the time of her writing. These were: (a) The Harvard Committee Report (21), (b) Evaluation Committee of the Eight-Year Study (53), (c) The Educational Policies Commission. (12)

The investigator, after listing the classifications of the first two groups, was attracted by the identification of objectives as classified by the Educational Policies Commission. The four groups of objectives thus identified were: (45, p. 15)

- The Objectives of Self Realization
- The Objectives of Human Relationship
- The Objectives of Economic Efficiency
- The Objectives of Civic Responsibility

The relationship of the concepts of general education as interpreted by Pullen from three sources referred to above is summarized as follows:

(45, p. 16)

1. General objectives of education are not unique to any one field of learning.
2. Educational experiences are focused on the developing child with all subject matter areas contributing.
3. Educational objectives can be interpreted in terms of the behaviors which the school, home, and community seek to bring about in the student.
4. Since the human being is a unified, complex organism, behaviors cannot be considered in isolation but are related.
5. Educational objectives are concerned with helping contribute to personal, social and civic development of the individual through experiences planned in each subject matter area.
6. The specific elements of behavior which all education
seeks to change are incorporated in the four groups of objectives identified by the Educational Policies Commission.

To support her philosophy in home economics Pullen leaned heavily on writings of Spafford (54), Amidon (4), and a publication of the United States, Department of Education, *Homemaking Education in Secondary Schools* (14).

In summarizing the objectives found in the literature on general education and home economics, Pullen presented them in parallel columns to show the similarity between the two statements which she believed points up the interrelatedness of objectives from the two fields. To further point up the interrelatedness of the objectives, they are classified under the four broad objectives of general education as outlined by the Educational Policies Commission. A comparative summary of objectives of general education and home economics follows: (45, pp. 32-34)

<table>
<thead>
<tr>
<th>Objectives Contributing to Self-Realization</th>
<th>General Education</th>
<th>Home Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking rationally, expressing thoughts clearly, reading and listening with understanding</td>
<td></td>
<td>Expressing oneself orally and making contributions as a group member in solving problems of home life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using sound bases for making choices suited to personal and family needs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acquiring knowledge and using it to interpret facts related to personal and home problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using the methods of science in solving every day problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using methods of science in solving problems of living — health, food, clothing, housing, child development</td>
</tr>
<tr>
<td>General Education</td>
<td>Home Economics</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Forming a set of values that are possible of realization and using them as a guide to behavior</td>
<td>Achieving a set of values and arriving at a philosophy of life satisfying to one-self and society</td>
<td></td>
</tr>
<tr>
<td>Using mental resources for leisure time activities, balancing these activities that yield satisfaction to the individual with those that are socially useful</td>
<td>Discovering one's own needs, interests and capacities and using home life activities as a means for creative expression and personality development</td>
<td></td>
</tr>
<tr>
<td>Exercising responsible self direction</td>
<td>Sharing family responsibilities</td>
<td></td>
</tr>
<tr>
<td>Acquiring interests and appreciations of an esthetic nature</td>
<td>Developing an appreciation of beauty which already exists in the environment and interest in making homes, clothes and food more attractive.</td>
<td></td>
</tr>
<tr>
<td>Using and protecting one's body effectively</td>
<td>Improving health through the understanding of what constitutes good health and acquiring practices which contribute to it</td>
<td></td>
</tr>
<tr>
<td>Adjusting to changes with personal satisfaction</td>
<td>Understanding adjustments required at each age level of family members</td>
<td></td>
</tr>
<tr>
<td>Mastering satisfying and socially acceptable patterns of emotional expression</td>
<td>Understanding self and others</td>
<td></td>
</tr>
</tbody>
</table>

**Objectives Contributing to Human Relationships**

<table>
<thead>
<tr>
<th>General Education</th>
<th>Home Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing effective social and working relationships with others in the home, the community, the nation, the world</td>
<td>Developing and maintaining satisfying personal and family relationships</td>
</tr>
<tr>
<td>Sensing implications of social situations, understanding their effect on successful living, and developing attitudes that are basically democratic</td>
<td>Establishing wholesome attitudes toward other people through satisfying experiences with them and their families</td>
</tr>
</tbody>
</table>
Objectives Contributing to Economic Efficiency

<table>
<thead>
<tr>
<th>General Education</th>
<th>Home Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing and using goods and services intelligently, understanding both the values received by the consumer and the economic consequences of his own acts</td>
<td>Making more efficient use of resources through intelligent selection and purchase of goods and services for the home</td>
</tr>
</tbody>
</table>

(Occupational Aspects)

Selecting and preparing for an occupation in line with the ability and interests of the individual and in light of its value to society

Assuming responsibility for managing the varied activities of the home and in performing tasks in keeping with one's maturity

Achieving vocational competence through the medium of home economics

Objectives Contributing to Civic Responsibility

Understanding the rights and duties of the citizen of a democratic society and using intellectual skills in performing the obligations of a member of the community and a citizen of the state and nation

Becoming better citizens through understanding and assuming responsibilities and privileges as members of the family and of the community

Role of Home Economics in Education for Home and Family Living As a Part of the General Education of Students

Jensen (25), was concerned with education for home and family living as a part of the general education of college students and the role of home economics in it. The study was pursued in six selected land-grant colleges by means of interviews between the author and educational leaders. It was based upon the assumptions that (a) one responsibility of colleges is to
provide all students with opportunities for academic experiences and leadership which will aid them in living a full, satisfying life, (b) college students should receive preparation for home and family living as part of their general education.

It was the firm belief of Jensen that home economics has the potentialities for becoming a primary force because of the unique contribution it has to make to general education.

The propositions that served as a basis for her investigation were:

(3, pp. 9-10)

1. Educational leaders are coming to consider education for home and family living a vital part of the general education of land-grant college students.

2. Many educational leaders feel that home economics units have a definite responsibility for providing a part of the education for home and family living which should be available to land-grant college students.

3. Home economics leaders in the land-grant colleges have made headway and are encouraging interdisciplinary cooperation in providing education for home and family living available to all students.

The investigator decided that an intensive study of a small group of land-grant universities would be more significant than an extensive study of 69 land-grant institutions.

She formulated a guide consisting of eight questions. These questions were concerned with the issues underlying the study and were intended to serve as a point of departure for interviews. Five of her questions were directly related to the present study. They follow: (25, p. 29)

1. What is your personal philosophy concerning the role of home economics in regard to education for home and family living as a part of the general education available to all land-grant college students?
2. What are the present offerings of this particular land-grant college home economics unit available to any student which you consider a contribution to education for home and family living as a part of the student's general education?

6. What are the future plans concerning the contribution of home economics to education for home and family living as a part of general education within your institution?

7. What would you consider an ideal condition concerning the contribution of home economics to education for home and family living as a part of the general education available to all land-grant college students?

8. What are the difficulties involved in achieving this ideal? And what are some of the possibilities for overcoming these difficulties?

The study was made in an attempt to ascertain as far as possible the feelings, philosophies and attitudes back of what was specifically stated by the educators interviewed concerning the role of home economics in general education. It was thought in reporting these interviews that the attitudes of the educators might be of more importance than specific statements which they had made. It was hoped that a trend in attitudes and expectations for future developments might emerge from this material to clarify the role of home economics in home and family life education for college students. The interviews were too few in number to reveal significant agreement or disagreement with any particular point. Jensen says that it was impossible to distinguish between personal philosophies and opinions of what an ideal situation would be. In analyzing her findings Jensen was aware that a major implication was that of teacher preparation. More emphasis should be placed upon the education of college teachers of home economics, whether their interests point toward specialized vocational
teaching, administrative positions, or teaching in general education. Without an adequate faculty home economics cannot hope to make its most effective contributions to home and family life education as a part of the general education of college students.
INTRODUCTION TO PRESENT STUDY

Purpose of the Study

This study developed out of a concern for the contributions of home economics toward achieving the commonly accepted goals of general education. The study has been confined to home economics as it is represented in a large land-grant College of Home Economics encompassing a broad scope of home economics in eight departments representing sixteen major professional sequences, thirteen of which are included in this study.

The purpose of the study was fourfold: (a) to determine to what extent the major curricular offerings of the College of Home Economics at Iowa State University contribute to the general education of the student; (b) to determine, whether some major sequences in home economics make more significant contributions to general education than others; (c) to determine the extent of agreement between teachers and students in perceiving the same objectives of general education; (d) to determine whether there are differences in the contributions to general education among the professional sequences in those departments offering more than one major sequence.

Hypotheses to Be Tested in This Study

1. Both core and professional courses in the College of Home Economics make contributions to objectives of general education as defined in this study.

2. There is no difference in the extent of the contributions of the core courses and professional courses in home economics to general education.
3. There is no difference among the various major sequences in home economics in contributing to general education.

4. There is no difference in perception of the same goals of general education for a course between the instructors of courses and the students.

Data needed to test these hypotheses were: (a) a list of the objectives of general education as prepared for this study; (b) a list of the home economics core courses (Appendix A) required of all students in the College of Home Economics (Related science and physical education majors are exceptions to this but they are not included in this study); (c) a complete list of the required professional courses within home economics for each major sequence included in this study (The major sequences included in this study are: Applied Art, Child Development, Dietetics, Experimental Foods, Community Nutrition, Foods and Nutrition, Home Economics Education, Home Management, Household Equipment, Institution Management, Restaurant Management, School Food Service, Textiles and Clothing, and Textiles and Clothing Merchandising); (d) information from an instructor of each of the 78 courses as to what she does in her courses to provide learning experiences so that students will make progress toward the goals of general education as outlined for this study (These data will need to be in the form of quantitative values.); (e) opinion responses in form of Check List (Appendix D) from the students enrolled in each of the 78 courses concerning the progress made in each of the 65 goals.

Selection of Objectives

It is reasonable to assume that the major criterion of teaching effectiveness of the college teacher is to be found in the extent to which her
students achieve the objectives set for the courses which she teaches. If this assumption is correct, then it was necessary for the purpose of this study that the general education objectives be selected with discrimination.

If general education aims to make observable changes in people, then the teacher must fully realize what is being attempted, that is, in her attempt to move a student from one stage of development to another, she must know what that "next stage of development" encompasses. She must ask herself what concrete action, attitudes, feelings are expected of the student? If she were confronted with students of unknown educational background, how would she differentiate between those who have, and those who have not acquired the behavior? In order to achieve observable changes, it is assumed that the behavior aimed at, be explicit, that it be somewhat circumscribed or delimited so that purposeful attention could be centered to those experiences most likely to achieve the behavior which was sought.

It was assumed that the home economics teachers cooperating in the present study already had a statement of objectives for the courses involved in the present population of courses. In fact, it was highly probable that the instructor's objectives incorporated a number of the same objectives as were included in the list of general education sub-goals, since the statement of objectives for the core curriculum of the College of Home Economics was highly consistent with the goals of general education as they appear in this study.

However, because she was unfamiliar with the objectives as she was asked to consider them for this study and because she had nothing to do with formulating them, she was not supported with the background thinking
concerning them. Consequently, she was at a disadvantage. To overcome this hindrance, it was essential that the objectives be stated for the teacher from an operational viewpoint both concrete and precise.

The investigator believes that if an objective is worthy of attainment and educators believe it implies behaviors that future citizens should possess, then it merits a conscious effort on the part of the teacher to incorporate learning experiences to promote its accomplishment. Therefore, dependence on incidental teaching, or teaching by inference or as an opportunity presents itself is not effective teaching. She does not mean to imply that incidental teaching cannot be effective, but to depend on incidental teaching for objectives that merit inclusion among the course objectives — this suggests inefficiency. The investigator further believes that the objectives for a course should not be too inclusive, that is, have few objectives and make them comprehensive enough that the behaviors and the range of situations might readily include many aspects of living. This is indefinite and lacks precision. It is too broad in scope. This may account for much of the current difficulty teachers have with effective evaluation. In this study, therefore, the goals of general education were deliberately formulated to be more concrete.

It would, no doubt, be rewarding and reinforce already effective practices if the teachers could have some tangible evidence that they are contributing to a particular goal or goals. This evidence would be difficult indeed to secure if the objectives were comprehensive in scope for it is when the objectives are all-inclusive in nature that teachers are unable to find directives or guidance. To overcome this difficulty then, it may
be assumed that a limited number of general statements might guide the whole program and for each course more specific ones which could point out not only their general relationship to the main objectives but also their exact contribution to them.

Consequently, in order to have a representative list of objectives for the purposes of this study, it was necessary to formulate a list to which it was assumed a number of leaders of general education would give endorsement. The objectives were assembled from as many reliable sources as available to the investigator. Among the more influential of these sources were the works of leaders in general education like Dressel (7, pp. 97-122), Havighurst (22, pp. 71-95), Johnson (26, pp. 19-32), Mayhew (30), McGrath et al. (38), Pace (43, pp. 1-28), Stickler (55, pp. 68-69), Van Ek (58, pp. 335-336), Wynne (60, pp. 31-55). Other references which represented the composite contribution of a group were: A Report of the President's Commission (57, pp. 50-58), A Design for General Education of the American Council on Education (1, pp. 31-50), and the Report of the Harvard Committee (21). These sources describe university programs which meet the criteria set up by Mayhew (30) and the objectives as listed by some leaders in general education.

The objectives of general education as set forth in the report of the President's Commission (57), are similar to those given in A Design for General Education (1) and are the ones most frequently used and referred to in the literature. Following is the statement as it appears in the report of the President's Commission (57, pp. 50-58).

The purposes of general education should be understood in terms of performance, of behavior, not in
It is the task of general education to provide the kinds of learning and experience that will enable the student to attain certain basic outcomes, among them the following:

1. To develop for the regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.

2. To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and Nation.

3. To recognize the interdependence of the different peoples of the world and one's personal responsibility for fostering international understanding and peace.

4. To understand the common phenomena of one's physical environment, to apply habits of scientific thought to both personal and civic problems, and to appreciate the implications of scientific discoveries for human welfare.

5. To understand the ideas of others and to express one's own effectively.

6. To attain a satisfactory emotional and social adjustment.

7. To maintain and improve his own health and to cooperate actively and intelligently in solving community health problems.

8. To understand and enjoy literature, art, music, and other cultural activities as expressions of personal and social experience and to participate to some extent in some form of creative activity.

9. To acquire the knowledge and attitudes basic to a satisfying family life.

10. To choose a socially useful and personally satisfying vocation that will permit one to use to the full his particular interests and abilities.

11. To acquire and use the skills and habits involved in critical and constructive thinking.
After comparing objectives from these various sources, the ten objectives which appeared to be those to which common assent might be given were used as the main goals for the present study. However, for the purposes of this study and for reasons stated above, sub-goals or more specific aspects of behavior were formulated. Sources for these sub-goals were many and diverse. In selecting the sub-goals an attempt was made to include those which, when attained, would indicate an aspect of the main goal.

For locating the sub-goals dealing with integration, philosophy of life, motivations, democratic ideals, social environment, critical thinking, intellectual and personality growth, the following general sources were used: the authors contributing to the *Fifty-first Yearbook of the National Society for Study of Education* (16), *A Design for General Education of the American Council on Education* Studies (1), *Educational Policies Commission* (40) (41). For the behaviors related to student interests, social sensitivity, social values, social problems, objectivity, self-evaluation, personal adjustment, the following sources were used: Smith and Tyler (53) Russell (49). For creative self-expression and development of potential as an individual the sources used were: Hook (23, pp. 139-160), Phenix (44), Ryle (50, pp. 92-109) and Wilson (59, pp. 108-126); for integration of subject matter and principles, Pace (42, pp. 69-83), Mayhew (31, pp. 218-248); for objectives related to communication skills, cognitive abilities, attitudes toward self, others, society and attitudes toward scientific thought, Dressel and Mayhew (11); for community interest and citizenship Jones (28, pp. 191-192), Seay (52, pp. 172-175); for decision-making, Hare
Before final approval of the list of objectives, revision consisted principally in changing "educational verbiage" to terminology which would carry approximately the same connotations for all subject-area teachers. The list was reduced from seventy-five sub-goals to sixty-five by either incorporating with an already existing sub-goal or eliminating entirely because of apparent repetition. There was some shifting of sub-goals from one main goal to another.

Following is the final form of the objectives as used for the present study and approved by a jury of five specialists in education and psychology.

**Objectives of General Education as Used in the Present Study**

**GOAL ONE** To develop one's own potential as an individual

1. Accepts responsibility for one's own decisions and actions.
2. Recognizes the roles that may be expected of one and develops the abilities required of each role.
3. Recognizes one's own abilities.
4. Understands the factors that influence one's physical development.
5. Understands the factors that influence one's social and emotional development.
6. Recognizes one's own intellectual abilities and accepts one's potentials.
7. Makes resourceful adaptations to existing conditions.
8. Broadens interests.
9. Evaluates one's own progress objectively.
10. Solves personal problems intelligently.
11. Develops an ability to express oneself creatively.

**GOAL TWO** To be aware of and to know how to participate as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, Nation

1. Develops a sense of responsibility for community well being.
2. Recognizes problems which society needs to solve.
3. Develops an ability to evaluate solutions suggested or attempted regarding social problems.
4. Develops an ability to cooperate with others in the solution of social problems.
5. Keeps abreast of social movements and recognizes one's influence on society.
6. Keeps informed on major political movements and recognizes one's influence on family, community, state and nation.
7. Develops an ability to evaluate consumer information.
8. Recognizes the effects of industrial progress on social well-being.
9. Appreciates the necessity for laws.
10. Develops an ability to judge the adequacy of community facilities (health, educational, recreational).
11. Develops an ability to use community facilities effectively.

**GOAL THREE** To understand the ideas of others and to express one's own effectively

1. Understands the ideas of others (written and spoken).
2. Expresses one's ideas effectively (written and spoken).
3. Assumes and defends intelligently a position on important issues.

**GOAL FOUR** To recognize the interdependence of the different peoples of the world and one's personal responsibility for fostering international understanding and peace.

1. Recognizes the interdependence of a) cultural groups b) nations c) races.
2. Is sensitive to problems of under developed countries.

**GOAL FIVE** To acquire and use the skills and habits involved in critical thinking.

1. Learns independently of supervision.
2. Enjoys living in a changing world.
3. Recognizes the importance of research.
4. Enjoys discovering solutions to problems.
5. Learns how to use research findings.
6. Reaches decisions after a period of objective consideration of issues involved.
7. Recognizes when information is reliable.
8. Organizes facts and concepts into generalizations (principles).
11. Transfers what one has learned from other courses and non-class experiences.

**GOAL SIX** To maintain and improve one's own health and to cooperate actively and intelligently in solving community health problems.
1. Recognizes and applies the principles of good physical health.
2. Recognizes and applies the principles of good mental health.
3. Develops an ability to evaluate and solve problems of community health.

**GOAL SEVEN** To appreciate the contributions of the humanities for an understanding of the world in which one lives

1. Recognizes the contributions of the following areas in the humanities to an understanding of the world in which one lives
   - literature
   - history
   - art
   - languages
   - music
   - philosophy

**GOAL EIGHT** To acquire the knowledge and attitudes basic to a satisfying family life.

1. Knows the functions of a family in a democratic society.
2. Realizes the importance of democratic family relationships.
3. Recognizes the satisfactions and/or responsibilities of a homemaker.
4. Realizes the effect of the family on growth and development
   - a) socially
   - b) emotionally
   - c) mentally
5. Knows the effect of the family on learning.

**GOAL NINE** To choose a socially useful and personally satisfying vocation that will permit one to use to the full one's particular interests and abilities

1. Attains a socially useful and personally satisfying vocation.
2. Recognizes homemaking as a vocation that will permit one to use one's particular interests and abilities.
3. Understands the basis for deciding when a career and homemaking should be combined.

**GOAL TEN** To clarify one's own philosophy

1. Develops an attitude of objectivity.
2. Accepts and applies scientific principles.
3. Realizes the importance of each individual developing one's own personality.
4. Develops one's own system of values.
5. Recognizes consequences of one's present system of values.
6. Accepts the importance of ethical values.
7. Accepts the importance of being sensitive to other people's problems.
8. Makes progress toward the development of social leadership.
9. Makes progress toward the development of civic leadership.
10. Desires to contribute to the welfare of society.
11. Assumes responsibility to initiate change when a situation should be changed.
12. Plans for long range goals.
13. Develops one's ability to use one's resources to achieve goals.
14. Accepts human behavior which may be affected by such differences as:
   a) family  f) cultural background
   b) race  g) geographic location
   c) nationality  h) generation
   d) religious beliefs  i) individual capacities
   e) economic status  j) physical differences
15. Values contributions of other individuals.

Regarding objectives, there were several basic assumptions: (a) that the subject matter of home economics is directed toward learning which results in the achievement of the competences by those whom home economists teach; (b) that there existed a statement of objectives in the College of Home Economics consistent with the goals of general education and the competences as outlined by the Committee on Philosophy and Objectives (2); (c) that all teachers are working toward some goals whether they are aware of them or not; (d) that the teachers in this study were predominantly educated as specialists with no specific education in preparation as general education teachers; (e) that after a course has been taught students form opinions about the profit they derived from it; (f) that recall related to progress achieved toward certain objectives within the course is more reliable the less time that elapses between close of course and time of expected recall; (g) that no one teacher or course can contribute to all the objectives as listed in this study.
METHOD OF PROCEDURE

Development of the Interview Schedule

An interview schedule was developed, an adaptation of which appears in Appendix C. It was entitled "Inventory of Learning Experiences in the Core Courses and Professional Courses of Home Economics at Iowa State University-College of Home Economics As They Relate to the Aims and Purposes of General Education". Acquiring an inventory of learning experiences as they related to the sixty-five general education sub-goals, was the essential purpose for the interview schedule. In the original plan for collecting the data, consideration was given to requesting division objectives, department objectives, course objectives and outlines as had been done in the Syracuse University Self-Survey which was reported in a previous chapter. Assuming that this method of collecting the data might be found wanting in the precision that was hoped for in the present study, the plan was discarded. Another reason for eliminating the plan just referred to was that the objectives thus acquired would be taken on face value. There would be no assurance that the statements of objectives (regardless of their source) were not just lists which were formulated as an academic exercise and rarely again referred to.

A method was, therefore, devised whereby the above limitations would be avoided to some extent. Information was needed in response to the following question on each of the sixty-five sub-goals, "What is actually being done in this course so that the student will make progress toward a certain goal?" "Actually being done" was interpreted as any experiences
which were provided pertinent to the attainment of the sub-goal under consideration. This could include work done during class periods, instructor's lectures, discussions, specialists invited to class as guest speakers, outside reading (assigned and independent) audio-visual materials or any number of experiences the teacher may have used to attain her purposes. It was assumed that the data collected in response to this question would depict what is really being done with regard to the sub-goal under consideration. Judgments on the teachers were made on this basis. Students made judgments on each sub-goal over an entire course.

The final form of the interview schedule (Appendix C) resembled a questionnaire in form but was used by the investigator as a guide for an interview with the teachers of each of the 78 courses in the study. The teacher was asked three questions regarding each sub-goal. For example, on the sub-goal, "develops an attitude of objectivity" the three questions were:

1. Is it important that a student in the College of Home Economics develop an attitude of objectivity? Yes No
2. Do you accept responsibility for this goal in your course? Yes No
3. If your answer is yes, what do you do so that students will make progress toward this goal?

The purpose for asking the first question was to poll the attitude of the entire home economics faculty regarding each objective of general education for all home economics students. When responding to the second question the teacher was assured that no one course was expected to at-
tain all the goals of general education and that some courses lend themselves to encompassing more goals than others. The instructor should not feel uncomfortable about omitting a sub-goal if it was not appropriate for her course. Responses to this question were used in the interpretation of findings to discover the goals for which no responsibility was taken in home economics.

The third question was responded to only if the instructor gave an affirmative response to question two. In addition to the three questions, the respondent was asked to check the approximate amount of time that was allotted to each sub-goal.

The interviews were conducted and all student check lists were distributed during the winter and spring quarters of the same academic year. Those courses which are offered in autumn quarter only, do not appear in the study. These included one or two courses in each of the major sequences. Even though this omission may not have made a difference in the over-all results, nevertheless, this could have affected the results within a major sequence. This is a limitation of the present study. It would have been possible to contact the teachers of these courses and obtain the data concerning them. It also would have been possible to reach the students who had taken the courses and ask them to respond to the check list, but since it was assumed that recall becomes less reliable as more time elapses, it was believed better not to contact those students and consequently, delete those courses from the study. Another limitation was realized as a result of collecting all the data in the two quarters. In a few cases where the same courses are taught during three quarters, there is
a semblance of homogeneous grouping. This may have resulted in having a

group of less gifted students respond within a certain department. Since

it is believed that the more gifted realize the goals of a course more

effectively than the less gifted, this too could have affected the corre­

lation in perception of the goals between teachers and students within

these specific courses.

Pilot Study

A pilot study was made in order to try out the interview schedule as
to (a) time used to respond to it (b) clarity of instructions (c) redun­
dancy or (d) ambiguity. Five teachers who were not in the sample for the
actual study were used as respondents for the pilot study. As a result of

this trial run, the interview schedule was revised in several ways. All

of the respondents said it was very time consuming to do justice to all

the goals. In checking responses it was observed that by the time the

respondents got to the sixth main goal the fatigue factor was evident by

the increased frequency of no responses and less detail. The interview
schedule was shortened somewhat by combining some of the sub-goals. The

fatigue factor was taken into consideration by rotating the sub-goals in

all seventy-eight schedules. Eight schedules began with goal ten, the

next eight with goal nine and so on through all the goals.

In several places terminology was changed in the final form. The word

"principles" was placed in parenthesis next to "generalizations". "Repudi­

ation of discrimination upon family, race, religion etc." was changed to

"Accept human behavior which may be affected by such differences as family,
race, religion etc.". A third revision, as suggested by the pilot study, was to have the main goals within the respondent's view during the time she was responding to questions on sub-goals. This was accomplished by asking the instructors to remove the blue divider pages which preceded each group of sub-goals. The main goals appeared on these divider pages. (Appendix C)

Development of Student Check List

A student check list was prepared entitled "Check List for Estimating Progress Toward Certain Goals of a General Education", (Appendix D) For each sub-goal the student was asked to check the estimated amount of progress she made during the course under consideration. Many students responded several times to the check list because most undergraduate students taking the 78 courses were included except where there were several sections of the same course. The 1500 check lists were distributed to the students no sooner than two weeks before the close of the course. The instructor could use her judgment as to whether to use a class period for responding or to let students respond outside of class. If the schedules were completed outside of class, then the instructor was asked to give special instructions in cautioning students to respond independently. They were to be distributed one day and returned the second day following.

While giving directions, the investigator assured the instructors that the function of the check list was to collect the data necessary in determining to what extent teachers and students perceive the goals of general education the same way. Mention is made here of this because there was fear evidenced by some teachers that the check list would be a personal
threat in that it might reveal course or personal inadequacies which might later be used against them. After the function of the check list was explained, no teacher refused to use them.

There were several assumptions basic to the use of the student check list: (a) that student opinion may reveal in part what is going on inside student minds, (b) that something worth knowing may be gleaned from student check lists, or questionnaires, if they are anonymously answered, and if the students have not been led by various factors to falsify their feelings and beliefs, (c) that knowing student opinions or impressions can play a greater or lesser role in decisions which instructors make in course organization or classroom practices, (d) that the impressions and beliefs the students have may or may not be justified, but they are important data that can help the instructor in planning for a course to know what these impressions and beliefs are.

Meeting with Department Heads

After the completion of the interview schedule and the student check lists, it was necessary to speak with the heads of departments and ask for their cooperation and support. An appointment was made with each department head at which time the interview schedule and the student check list were discussed. It was decided at this meeting whether the investigator meet the staff of the department at the regular monthly meeting to explain the purposes and procedures of this study and what part they, the staff, had in it, or whether she meet the instructors individually.

At this meeting with the department head it was further decided how
the teacher would be selected to represent those courses which were taught by a number of instructors. These courses usually were the required core courses. Wherever there were three, four or five instructors for a course, one member acts as coordinator for the year. On the assumption that the coordinator would be most familiar with the expectations of the course, the department head selected her unless she was already burdened with the responsibility of responding to the interview schedule for one of her professional courses. In this case a random sample of all full time instructors was taken using a table of random numbers. If a graduate assistant was one of the instructors, she was automatically eliminated.

The Interview

The interview schedule (Appendix C) was interpreted to some instructors at staff meetings and to other instructors individually. Even though the instructions for responding were included, the investigator explained how it might be easier to approach the task of responding. It was the consensus of the instructors that four weeks was ample time to allow for completing the schedule. They were urged to keep in mind only the one course under consideration, that is, "What do you do so that students will make progress (_________name of sub-goal_________) in this course (________name of course________)." At this initial meeting, which rarely exceeded thirty minutes, a tentative appointment was made with each teacher relative to the interview at which the completed schedule would be discussed. In most cases this was about four weeks from the initial interview.
The interview was not held to predetermined questions but was directed by the problems the teacher had in responding to some of the sub-goals in relation to the course under consideration and it was further guided by the questions the interviewer had regarding some of the responses that needed clarification or amplification.

In several cases the teachers asked to keep the schedule for several more days because they wished to revise their responses after the interview was conducted.

Development of Criteria for Judging Quality of Learning Experiences

After the 78 completed interview schedules were assembled, it was necessary to develop criteria for judging the quality of the learning experiences as recorded by the instructors. Each teacher's response was to be assigned a quantitative value according to the quality attributed to it.

Since it was the responsibility of the investigator to judge the quality of the learning experiences as to their value in contributing to general education, it was assumed that her judgments should be in close accord with a jury of experienced educators. The jury consisted of three members of the Home Economics Education faculty: a curriculum specialist, an evaluation specialist, and a research specialist.

After revision, the criteria formulated for judging the quality of the learning experiences were the following:
Criteria for Judging Quality of Learning Experiences

A rating of 3 indicates that the learning experiences make a general contribution:

1. if the learning experiences are broad enough in scope, not only to include the specific area or aspect with which this course is concerned, but requires application of learning to other areas or aspects of living.

2. if the instructor indicates the use of a generalized method of approaching situations implied in the goal even though the learning experiences are limited to her area of specialization.

3. if the learning experience is of quality to rate 3 according to standards 1 and 2 above, the time allotment should not affect the rating unless 1 or 2 in the time allotment (Appendix C) is checked, when the rating drops to 1.

4. if the quality of work expected of the students rates a 3 but is planned to be accomplished outside of class time and for this reason no time allotment is checked, then this should not influence the rating quality.

5. if the title of the course indicates the substance of a goal and an instructor states, "This is the function of this entire course."

6. if the reply refers to earlier responses and would fit equally well for this response.

7. if the reply refers to earlier sub-goals and it can be judged from accumulated information that it is done.

8. if responses similar to the following are used: "This objective permeates the entire course." "This goal is stressed throughout the course." (In these cases a discussion with the instructor clarified the quality of the contribution.).

*General contribution here signifies that the response indicates contributions broad enough in scope not only to include the specific area or aspect with which this course is concerned but relates it to the other areas or aspects of living.
A rating of 2 indicates

1. that the learning experiences contribute to limited aspects of the goal.

2. that the learning experiences are pertinent only to a single area of specialization.

3. that the time checked by the instructor is specific (3 or above in time allotment) unless students are expected to accomplish the experience outside of class time. If 2 is checked then the rating drops to 1.

A rating of 1 indicates

1. that there is a small general contribution to the sub-goal, at least one would seriously hesitate to say that it makes no contribution.

2. that the instructor states that she treats this sub-goal by inference only or incidentally.

3. that the instructor does not expressly state that she teaches this by inference but checked 2 in time allotment.

A rating of 0 indicates

1. that there was no evidence of experiences planned to meet any part of this goal.

2. that the response was not pertinent to the goal under consideration.

3. that there was no response.

4. that there was no responsibility assumed for the sub-goal.

The procedure used to establish consistency and reliability in judgment on the part of the investigator was this. The jury and the investigator each assessed values according to the criteria above to the learning experiences of three complete interview schedules. After this a meeting was held at which time it was decided to sharpen the criteria to some extent because the teachers used meaningful terminology which was not
provided for in the criteria. This seemed to cause the variance in judgments that was not anticipated. An interview schedule from another course was used for assessing values by the jury and investigator. In each of the 65 sub-goals the correlation between the jury judgments and those of the investigator were found. The mean of jury judgments with investigator judgments resulted in a correlation of .93. This was considered adequate enough for the investigator to proceed independently in assessing values to the learning experiences as recorded by the teachers.

Below are some samples of teachers' comments which were assigned a value of "3" according to the criteria.

Sub-goal: Develop her own system of values

I discuss the role of values and goals in the management process, need for individuality in choosing what is most important in living. Write a paper on "My Goals and Values". Make plans for use of time, energy and money after definition of personal goals. I have a conference with each student on this paper.

Sub-goal: Makes resourceful adaptations to existing conditions

I attempt to do this first by emphasizing how seldom there is an exact answer to what we do in the area of feeding the family and how the conditions within a family are constantly changing. Students are given opportunities to plan class activity to take into account outside conditions or a synthetic case. I attempt to develop alternative-mindedness and to encourage changing plans when improvement could result.

Sub-goal: Accepts and applies scientific principles

This is perhaps the most vital goal which I must accomplish in this course. The students must accept and apply the principles from physics and chemistry especially with lighting, electricity and refrigeration. The whole course is based on the application of scientific principles in use and care of household appliances. I also emphasize application of art principles in selection.
Sub-goal: Responsibility for her own decisions and actions

We discuss in detail what responsibility means in school and business. Members of the class use the enclosed outline as basis for discussion. Instructor refers to this throughout the course.

Sub-goal: Organizes facts and concepts into generalizations (principles)

Independent facts are accumulated until a sufficient number justifies organizing into generalization — the dangers of generalizing without adequate and reliable factual information is also stressed. We start with a principle for each concept and attempt to develop skill in the application of that principle — example principle: It is desirable for a child to become independent in dressing himself. Application of principle: garment design with fasteners easy to reach and easy to master.

Sub-goal: Expresses her ideas effectively

This course is conducted primarily on a discussion basis. I give freedom and opportunity for students to voice opinions. We share written work as when a student writes a poem for children, or a story, I ask that they read it in class and then discuss its qualities. These poems and stories must measure up to certain criteria before considered effective. Students evaluate self and experiences as story telling.

Assessment of Values to Student Responses

There were 1500 student check lists (Appendix D) distributed to the students of the 78 courses and 1490 or 99 percent were returned. All returns were usable for the study.

Each check list required the respondent to place 65 checks which appeared in one of any of four columns headed "Much" "Some" "None" "Not Sure" depending on what progress the student felt she made toward each goal in the course under consideration. A check in the "Much" column was as-
signed a value of 2. A check in the "Some" column was assigned a value of 1. A check in either "None" or "Not Sure" was assessed a 0.

The class median was then computed for each course.
FINDINGS AND DISCUSSION

Locating the Clusters

Supported by the assumption that the ten main goals of general education, as selected for this study, would elicit rather common assent from the leaders in general education, the investigator then proceeded to consider each goal individually and break it down into various sub-goals which represented aspects of the main goal. The complete list appears on pp. 69-72. The organization of the sub-goals was executed on the basis of reason and common sense, the investigator attempting, in this breakdown, to consign more specificity to the inclusiveness of the main goals.

As the study progressed, there was a strong intimation that the sub-goals might re-arrange themselves into natural clusters if there were a relationship among them of which no one was, at the time, aware.

If clusters were apparent, the data could be treated more conveniently as groups of sub-goals rather than as individual sub-goals. Therefore, it was decided to reduce the data to manageable form by combining into clusters the sub-goals that intercorrelate highly among themselves. The first approach to locate the clusters was to determine the intercorrelations among ratings of the 65 goals* by students and teachers. A 130 x 130 correlation matrix was set up. On this matrix the odd-numbered rows and columns represent the 65 goals as scored by groups of students in the 78 courses; the even numbered rows and columns represent the 65 goals as

* Future reference to sub-goals, will be termed "goals".
scored by teachers of these same courses. To facilitate inspection the correlations of .30 and higher, those below .30, and negative correlations were recorded in different colors.

By inspection it was seen that correlations among many goals based on scores by students were consistently higher than those based on scores by teachers. As an aid to examination of the data by inspection, it was decided to separate the matrix of intercorrelations into two 65 x 65 matrices, one based on scores of students and one on scores of teachers. The two smaller matrices were then used separately for locating clusters. See Appendix E.

Because teachers tended to discriminate among the goals more than students as indicated by the intercorrelation among goals, the matrix developed from scores of teachers was used for locating clusters. In certain sections of the matrix correlations tended to be higher than .30. These sections were examined first. It appeared this was a good starting point for identification of those goals that seemed to be related. Taken from this teacher/teacher matrix of correlations, Fig. 1 is the segment representing intercorrelations among goals 50 through 65 according to the original arrangement.

By inspection goals 55 through 64 seemed to be highly enough correlated to remain intact as a cluster. Then on examining this same highly correlated group of goals as they appeared in the original list of sub-goals under main goal ten, it seemed reasonable to keep this group in a cluster. Letter names were arbitrarily associated with a cluster as it was isolated from the group. This one under consideration was identified as cluster M.
Fig. 1. Cluster M from complete matrix which appears in Appendix E "Intercorrelation of Teacher Ratings of Goals by Clusters."
It will be noticed in Fig. 1 that goal 65 with the two negative correlations did not seem to belong with this group. In fact, goal 65 and goals 8, 11, 14, 18, 41, 42, 49, 50 did not seem to belong to any of the clusters, therefore, were treated individually. In addition to cluster M, there were two other groupings which remained very much like the original organization under main goals. The other two groups were those goals from one through six and those concerned with critical thinking, goals 31 through 36. At this stage the ten original main goals were no longer the bases for groupings, since the clusters were substituting for that arrangement.

Another method used for locating clusters was to record on a large sheet all of the goals that were not included in the previous clusters. Then, by inspection of the concepts included in these goals it was decided which goals might logically be related. After this, the matrix was examined to see if any of these did correlate highly. Trial and error and surmises were also used. The process was detailed but it seemed the only plausible method to use and required subjective judgment.

In the final selection six clusters were identified. Instead of referring to the clusters by letter names, an attempt was made to label them according to an underlying theme that seemed to pervade the cluster. Therefore, the name to which the clusters will frequently be referred, appears next to the cluster letter. Each goal of the cluster still retains the number it held in the original organization. Reliability estimates for the clusters were obtained by using the Spearman-Brown prophecy formula. The goals included in each cluster are:
Cluster J (Individual maturity) The average correlation (r) within this cluster is .253; the reliability, .753.

1. Accepts responsibility for one's own decisions and actions.
2. Recognizes the roles that may be expected of one and develops the abilities of each role.
3. Recognizes one's own abilities.
4. Understands the factors that influence one's physical development.
5. Understands the factors that influence one's social and emotional development.
6. Recognizes one's own intellectual abilities and accepts one's potentials.
9. Evaluates one's own progress objectively.
28. Learns independently of supervision.
48. Attains a socially useful and personally satisfying vocation.

Cluster K (Social sensitivity [personal-community] ) The average correlation within this cluster is .379; the reliability, .880.

7. Makes resourceful adaptations to existing conditions.
10. Solves personal problems intelligently.
12. Develops a sense of responsibility for community well-being.
13. Recognizes problems which society needs to solve.
15. Develops an ability to cooperate with others in the solution of social problems.
20. Appreciates the necessity for laws.
21. Develops an ability to judge the adequacy of community facilities (health, educational, recreational).
22. Develops an ability to use community facilities effectively.
23. Understands the ideas of others (written and spoken).
24. Expresses one's own ideas effectively (written and spoken).
25. Assumes and defends intelligently a position on important issues.
30. Recognizes the importance of research.

Cluster 0 (Social sensitivity [national-international] ) The average correlation within this cluster is .371; the reliability, .690.

17. Keeps informed on major political movements and recognizes their influence on family, community, state and nation.
19. Recognizes the effects of industrial progress on social well-being.
26. Recognizes the interdependence of (a) cultural groups (b) nations (c) races.
27. Is sensitive to problems of underdeveloped countries.
29. Enjoys living in a changing world.
Cluster L (Cognitive ability) The average correlation within this cluster is .390; the reliability, .855.

31. Enjoys discovering solutions to problems.
32. Learns how to use research findings.
33. Reaches decisions after a period of objective consideration of issues involved.
34. Recognizes when information is reliable.
35. Organizes facts and concepts into generalizations (principles).
36. Applies generalizations (principles).
37. Recognizes new problems in light of evaluation and appraisal of experiences.
38. Transfers what one has learned from other courses and non-class experiences.
39. Recognizes and applies the principles of good physical health.
40. Recognizes and applies the principles of good mental health.
41. Knows the functions of a family in a democratic society.
42. Accepts and applies scientific principles.

Cluster P (Mental health) The average correlation within this cluster is .316; the reliability, .764.

44. Realizes the importance of democratic family relationships.
45. Recognizes the satisfactions and/or responsibilities of a homemaker.
46. Realizes the effect of the family on growth and development (a) socially (b) emotionally (c) mentally.
47. Knows the effect of the family on learning.
48. Develops an attitude of objectivity.
49. Realizes the importance of each individual developing one's own personality.
50. Develops one's own system of values.

Cluster M (Philosophy of life) The average correlation within this cluster is .375; the reliability, .857.

55. Recognizes consequences of one's present system of values.
56. Accepts the importance of ethical values.
57. Accepts the importance of being sensitive to other people's problems.
58. Makes progress toward the development of social leadership.
59. Makes progress toward the development of civic leadership.
60. Desires to contribute to the welfare of society.
61. Assumes responsibility to initiate change when a situation should be changed.
62. Plans for long range goals.
63. Develops one's ability to use one's resources to achieve goals.
64. Accepts human behavior which may be affected by such differences as (a) family (b) race (c) nationality (d) religious beliefs (e) economic status (f) cultural background (g) geographic location (h) generation (i) individual capacities (j) physical differences.

The following goals appeared in no clusters, therefore, were treated individually. Letter names were applied to these goals for convenience in plotting on scattergrams and, like the clusters, were given a label for ease in referring to them.

8. Broadens interests. (Q - Breadth of interest)
11. Develops an ability to express oneself creatively (R - Creative self-expression)
14. Develops an ability to evaluate solutions suggested or attempted regarding social problems. (S - Social responsibility)
18. Develops an ability to evaluate consumer information. (T - Consumer responsibility)
41. Develops an ability to evaluate and solve problems of community health. (U - Community health)
42. Recognizes the contributions of the following areas in the humanities: literature, history, art, music, languages, philosophy. (V - World interest)
49. Recognizes homemaking as a vocation that will permit one to use one's particular interests and abilities. (X - Homemaking)
50. Understands the basis for deciding when a career and homemaking should be combined. (Y - Dual role)
65. Values contributions of other individuals. (Z - Contributions of others)

Interactions of Courses, Goals and Raters

In order to know whether there are any real differences among the variables being studied including courses, goals and raters (students and teachers), the significance of the first order interactions among these variables was determined.

For the interaction of course and goal an F value of 1.52 was obtained. This F value is significant beyond the 5 percent level and
approaches significance at the 1 percent level ($F_{.95} = 1.37$, $F_{.99} = 1.56$).

The significance of this interaction indicates that the courses are ordered differently on the various goals. The way the goals are arranged by both students and teachers depends upon the course. The goals of a course as described by both students and teachers are a function of the course.

An F value of 97.48 for the interaction of course and rater is highly significant beyond the 1 percent level ($F_{.99} = 1.41$). The significance of this interaction indicates that courses are ordered differently by students and teachers.

Because of the choice made earlier to set up a matrix of correlations on the basis of raters and goals rather than on the basis of raters and courses, one cannot conveniently get an error term for computing the F value of the interaction between goal and rater. This interaction was studied by plotting the scores for the two groups of raters (students - teachers) for all goals as shown in Fig. 2. The outlyers on the scattergram indicate that this interaction is also significant. Students did not arrange goals in the same way as teachers did.

Students and teachers seem to agree on the goals which received low scores since it is in this area of the plotted data that a positive relationship exists between scores of students and scores of teachers. In the high scoring goals the general direction of the scores take on a rather pronounced vertical direction indicating that teachers scored these goals higher than students.

There is a difference in perception of the contribution being made to
Fig. 2. Mean scores by students and teachers for the 65 goals.

*T - teachers  S - students
the same goals of general education by instructors of courses and their students. This is apparent on inspecting the scattergram in Fig. 2. For interpreting the data from the scattergram in Fig. 2 and those which follow, the reader needs to take into consideration that the scale on the student axis is two-thirds of the scale on the teacher axis.

Another way of looking at these data is to arrange the correlations of teachers with students on each of the 65 goals in descending order, as is done in Table 2, Appendix F. The three goals with the lowest correlations between students and teachers were three of the nine non-clustered goals.

The mean score on all the goals for each course for teachers and students was computed. These mean scores were plotted on a scattergram, (Fig. 3, p. 96). This scattergram illustrates the course by rater interaction previously discussed.

It appears by inspection that there are some courses which are outliers indicating that students and teachers do not score courses the same way. On a whole the student scores are higher than the teacher scores.

The significance of this course by rater interaction in addition to the significance of the two previous first order interactions, provides evidence that such differences as those among department offerings and contributions between core and professional courses that are discussed later are real.

Contributions of Core and Professional Courses

Another hypothesis to be considered in the present study is: both core and professional courses in the College of Home Economics make con-
Fig. 3. Mean scores on all goals for the 78 courses.

* T - teachers  S - students
tributions to the objectives of general education as defined in this study.

In order to determine the extent of contributions of the core and professional courses, the mean scores of teachers and students for core and professional courses arranged by departments for each cluster of goals and non-clustered goal were listed (Appendix F). These mean scores were plotted on scattergrams. For purposes of this study the departments were coded D1, D2, D3, D4, D5, D6, D7, D8. Scores for core courses are shown in Fig. 4; those for professional courses in Fig. 5. In general, findings concerning individual clusters and goals indicated that both core and professional courses contribute to the goals of general education as outlined for the purposes of this study. From teacher scores the greatest contributions in both the core courses as presented in Fig. 4 and professional courses of Fig. 5 seem to be made to the following clusters. Clusters are listed in descending order according to the number of times they received comparatively high scores ranging from 1.5 - 3.0 for core and professional courses in all departments.

10....Creative self-expression
9....Cognitive ability
8....Breadth of interest
5....Individual maturity
5....Consumer responsibility
5....Contributions of others

According to student viewpoint as to the amount of progress made, the goals in descending order, according to frequency of scores ranging between 1.0 - 2.0 are:

12....Breadth of interest
11....Contributions of others
10....Cognitive ability
10....Homemaking
Fig. 4. Mean scores of students and teachers by curricula in core courses for each cluster and non-clustered goal.

* T - teachers  S - students
** Symbol "o" was used for non-clustered goal
Fig. 4. (continued)
Fig. 5. Mean scores of students and teachers by curricula for professional courses for each cluster and non-clustered goal.
Fig. 5. (continued)
9....Individual maturity
6....Consumer responsibility

The goals receiving lowest scores according to teacher contributions arranged in ascending order according to frequency of scores ranging from 0.0 - 0.5 are as follows:

9....Dual role
11....World interest
12....Community health
13....Social responsibility

The four goals toward which students indicated they made least progress with scores ranging from 0.0 - 0.3 are:

6....World interest
6....Social sensitivity (national - international)
7....Creative self-expression
9....Social responsibility

The goals related to cognitive ability, breadth of interest, individual maturity and consumer responsibility scored high for both teachers and students. In general the students scored the goals consistently higher than teachers were scored. It must be remembered that the students scored the goal over the whole course whereas the teachers were judged on the response regarding learning opportunities reported.

Creative self-expression was scored between 1.5 - 3.0 for the teachers more frequently than any other goal in Fig. 4 and Fig. 5. For students this same goal of creative self-expression fell in the lower category of scores, 0.0 - 0.3, almost as frequently as the social responsibility goal which received the lowest score most frequently by students.

With regard to the goals on the development of cognitive abilities, there was only one department, in which the contribution fell in the lower
range, 0.8 for the core courses (Fig. 4a) and 0.7 for professional courses (Fig. 5a). This low score might be attributed to a difference in concept of creativity and critical thinking since this department places much emphasis on creativity. The writer believes that if creativity is viewed in part as originality of thinking, then creativity furnishes the impetus for more spontaneous solutions to problems. Creativity is an aspect of critical thinking. Some of the teachers in this department may not be attributing to themselves what may be rightfully their due, that is, generous contributions to critical thinking.

Since the cognitive abilities cluster scored higher than any other cluster, it might be well to consider the timeliness of this feature in all educational literature and in particular in general education where the development of cognitive abilities is currently receiving much emphasis. In fact, serious consideration is being centered on critical thinking, viewed broadly, as being the new integrating force in general education programs. By critical thinking is implied a point of view toward problems and their solutions and a manner of thinking about basic problems everybody must encounter in life. If this objective were given emphasis throughout all the departments, the impact on development of students would most probably be greatly enhanced because the teachers would then teach for the development of the same skills applied to different materials but with the same rationale.

For students the goal, breadth of interest, was scored in the higher range 1.0 - 2.0 more frequently than any other goal. Teachers scored this goal in the higher range also but not as frequently as students. The indi-
individual goal related to valuing the contributions of others was given high scores for teachers and by students for both the core courses and professional courses.

The consumer responsibility goal ranked among the higher scoring goals for both teachers and students with most of the emphasis coming from the professional courses in D7, D8, D5, and D4. The goal is quite unrelated to the departments not appearing in the list. Mention is made of this because one of the main purposes of the study is to find where, in which departments, the students are provided learning opportunities for each of the goals. If the behaviors related to the specific goals are stressed in some department in those courses to which all students will have access, there is no need for undue repetition.

The homemaking goal appeared in the lower range of scores for teachers; but students placed it among the higher scoring goals. This goal was among the individual goals which did not seem to cluster. The original goal read, "recognizes homemaking as a vocation that will permit her to use her particular interests and abilities". On inspecting the interview schedules a majority of the teachers of the 78 courses said they assumed no responsibility for this goal; therefore, it must be borne in mind that the low rating may have been the result of teachers indicating that they assume no responsibility. If teachers said they assume no responsibility for a goal, this goal received a 0 score as making no contribution. This would lower the over all mean for this goal. It must be remembered that assuming no responsibility for a goal is not synonymous with making a mediocre or meagre contribution. It was not among the purposes of this study to inves-
tigate reasons for the occurrence of this situation where students make much progress and teachers assume no responsibility.

The goals which scored low 0.0 - 0.5 most frequently for teachers and by students were the two related to world interest and social responsibility. With regard to world interest the contributions that were made came principally from D6 and D4. In the other departments, as indicated by the interview schedules, the majority of teachers assumed no responsibility for the goal. Students claimed little or no progress. This was one of the individual goals which did not enter a cluster, and was worded "recognizes the contributions of the following areas in the humanities: literature, art, history, languages, philosophy".

The present study takes into consideration only the home economics courses in the core and excludes the required core courses outside home economics such as English, history, government, psychology, literature, modern languages, and philosophy. The writer is not intimating an attitude of complacency in home economics with regard to the goal related to world interest. In regard to a general education goal like this one related to world interest, and this could be said concerning almost any general education goal, the teacher plays an essential role. It is here where knowledge of her subject matter is insufficient for, in addition, she must be able to deal with her subject matter in ways which indicate its relationship to other areas and to the cultural heritage of which she is a part. In this manner she could contribute to the world interest goal even though the subject matter was not specifically in the humanities.

The social responsibility goal, another individual goal, seemed to
receive little emphasis on the part of teachers and students. Similarly low scores particularly by students, were attributed to the cluster of goals related to social sensitivity (national-international). This might be a goal where renewed or initiatory emphasis needs to be applied in providing learning opportunities for the students. Home economics abounds in opportunities to assist the students in development of social consciousness, social awareness, social attitudes. The 12 competences (3) which form the basis for the philosophy and objectives of home economics, imply the promotion of greater awareness of social aspects of the immediate scene as well as of the issues underlying current social problems.

The community health goal was scored among the lower contributing goals for teachers of all departments except D7 which scored comparatively high in both core and professional courses. Students in most departments attributed higher scores to this goal than teachers did, but in general little emphasis seemed to be placed on this goal.

The goal related to dual role seems to be perceived differently by teachers and students. Teachers were allotted the lowest ranges (0.0 - 0.5) of scores, and students claim they made appreciable progress by attributing higher scores.

The two clusters, mental health (P) and philosophy of life (M) may be discussed in combination because inspection of the scattergrams of both the core (Fig. 4) and professional courses, (Fig. 5) indicates comparable results. In no instance in either the core (Fig. 4) or the professional courses (Fig. 5) do the teachers score below 0.5 nor do the students score below 0.3. Neither goal was among those scoring most frequently between
1.5 - 3.0 nor in the range 0.0 - 0.8. Repeatedly it was found among some of the individual goals that made up these two clusters, mental health (P) and philosophy of life (M) that individual teachers stated that they assume no responsibility for certain goals, yet the students in these courses made appreciable progress 1.0 or more. For example, in Dl, judging from student scores, progress of students seems to be higher than teacher emphasis with regard to the cluster on philosophy of life (M).

If it is reasonable to assume that the major criterion of teaching effectiveness is to be found in the extent to which students achieve the objectives set for a course, then the writer believes that the objectives of a course or for a unit of a course should be made explicit and then purposeful attention given to those experiences most likely to achieve the behavior implied in the objective. Therefore, those teachers, who have much of themselves to give and much to impart to students, would probably do more by giving purposeful attention to this cluster under consideration rather than depending on incidental teaching, or teaching by implication or as an opportunity presents itself.

In summary the data concerning the hypothesis, both core and professional courses in the College of Home Economics make contributions to the objectives of general education as defined in this study, provide ample evidence to support acceptance of the hypothesis. The tendency is evident that students score higher than teachers. This may be the result of students scoring each goal over the whole course and teachers being scored on a single response concerning one learning experience for a goal.
Differences among Departments

In reference to the hypothesis: there is no difference among the various departments in home economics in contributing to general education, the data were analyzed in another manner. There are six clusters and nine individual goals which are represented in Fig. 6 and Fig. 7. The eight plotted numbers signify the eight departments in the College of Home Economics. For this analysis and for purposes of this study the eight departments are again coded. In Fig. 6 for core courses "D3" represents an orientation course. In Fig. 7 for professional courses "D3" represents the department of home economics education which does not contribute to the core courses.

Contributions of the various departments to the goals of general education as outlined in this study were examined by enumerating those scores of each curriculum which represent appreciable contributions, (1.5 - 3.0) according to teacher scorings and (1.0 - 2.0) according to student progress scores, from all scattergrams of both core and professional courses from Fig. 6 and Fig. 7. Institution management and home economics education do not offer courses for the core so contributions for these two departments are found only in Fig. 7.

There is evidence that the curricula contribute differently to the goals of general education. D1 teachers seem to place emphasis on six goals as indicated by the high scores and for the same reason D1 students say they make appreciable progress in nine goals. Even though D2 also places emphasis on six goals, they are not the same goals as D1 stresses.
Neither do they come from the same source, that is, contributions of D1 to these six goals come principally from the core. Contributions from the core benefit all home economics majors and not only the majors in department, D1. Contribution of D2 on the six goals where high scores were evident come mainly from the professional courses.

The relation between number of high scores for students and teachers in the two departments seems to be quite different. In D1 core courses students indicate that they make appreciable progress, judging from frequency of high scores, in nine goals; in D2 core courses there are no high scores, but in professional courses both departments have high scores in the goals they seem to be stressing.

D3 and D5 make their contributions to the goals from the professional courses only since these two departments do not offer courses in the core. Therefore, within these two departments the general education contributions for their majors would have to come from the core of other departments and their own professional sequences.

D3 scores for teachers are higher than in any other department in both core and professional courses. In the core of D3 students do not seem to agree with high scores of teachers since they score considerably lower than teachers.

In D1 there is a greater difference between teachers and students in terms of number of high scores than in any other department. The difference is most apparent in the professional courses where teachers received high scores in one goal but students had high scores in seven goals. D7 professional courses had two high scores for teachers and seven high scores for
Fig. 6. Mean scores of students and teachers by cluster and non-clustered goals in the core courses by curricula.
Fig. 6. (continued)
Fig. 6. (continued)
Fig. 6. (continued)
Fig. 7. Mean scores of students and teachers by clusters and non-clustered goals for each curriculum.
Fig. 7. (continued)
Fig. 7. (continued)
Fig. 7. (continued)
In summarizing the contributions of the various departments it is evident that they contribute differently, but some similarities exist in emphasis on four goals to which almost all departments make comparatively high scores. These goals are those related to cognitive ability, creative self-expression, breadth of interest, individual maturity. D2, D4, D5, D7 and D8 have high scores in consumer responsibility.

Little emphasis from any departments seems to be evident for goals related to social sensitivity (national-international), social responsibility, community health, world interest and dual role. The remaining goals seem to receive emphasis from several but different departments.

Another way of analyzing the data to ascertain the differences in contributions to general education by the various departments and also to estimate the extent of the contributions of the core courses in home economics as compared with professional courses is presented in Table 1.

In summing the teachers' scores through each cluster of goals for the core courses and then summing scores for each professional sequence the core contributions can be compared with each of the professional sequences. An example might be: a major from D3 actually received (using teacher's scores) 616 points from the core courses out of a possible number of 1680 points according to the criteria set up for scoring in this study. From her professional courses she actually received 985 points from a possible 2184. Her actual combined total from core and professional courses was 1601, and her possible combined total from core and professional courses was 3864. This score, 1601, is 41 percent of the possible total and
Table 1. Actual and possible scores for students and teachers on contributions of economics to general education.

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a Number of required professional courses within department.

b Code numbers for various departments.

c A = actual score, P = possible score.

d Interpretation for cluster letters in Appendix E.
and teachers on contributions of core and professional courses in home department.

<table>
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<th>D5 (9)</th>
<th>D6 (17)</th>
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E.
indicates that a major from D3 attains 41 percent of the possible general education score attainable in her department. See Fig. 2.

Using the same department as an example but taking into consideration the student scores, one finds an actual score of 479.9 for core courses. (This core score was the same for all departments) and 1120 as a possible core score. From professional courses the actual score was 700.1, and the possible professional score was 1456. Therefore, the actual combined total from core and professional courses was 479.9 plus 700.1 or 1120 and the possible combined total of core and professional courses was 1120 plus 1456 or 2576. This indicates that from student opinion, the students attained 46 percent (Fig. 9) of the possible general education score attainable in that department, D3.

On examining Fig. 2 and Fig. 9 there is ample evidence to indicate that home economics contributes to general education in the institution concerned. Here, as in previous analyses, students score somewhat higher than the teachers were scored.

In order to determine for each department what percent of the general education contribution as shown in Fig. 8 is attributable to the core courses and what percent to professional courses the possible total score of the core was added to the possible total for each department. Using this possible score for the department as the divisor, percentages were calculated by using the actual core score and actual professional score as dividends. The results for each department are presented in Fig. 10. According to these results D1, D4 and D8 derived a greater percentage of their totals as shown in Fig. 8 from the core courses, and the remaining
Fig. 8. Percent of actual contribution to general education goals by curricula.

Fig. 9. Percent of progress claimed by students toward general education goals in each curriculum.
five departments derived greater percentages of their total contribution from professional courses. Students differ somewhat (Fig. 11) in that D1, D2, D4, D5, D3 derived a greater percentage of their totals from the core courses.

Considering the data in Table 1 there is ample evidence that the various departments make appreciable contributions to general education.

Of course, there is no assurance that home economics would have reached its potential even if most of the departments had attained the possible score. The main purpose of the study was to ascertain to what extent home economics contributes to a general education. This purpose has been partially accomplished although the measure was crude.
Fig. 10. Difference in contribution in total general education by core courses and professional courses for each curriculum.

Fig. 11. Difference in progress claimed by students to total general education by core courses and professional courses for each curriculum.
SUMMARY AND RECOMMENDATIONS

This study developed out of a concern for the contributions of home economics toward achieving the commonly accepted goals of general education. The study has been confined to home economics as it is represented in a large land-grant College of Home Economics encompassing a broad scope of home economics within its eight departments.

The sample was limited to the 78 home economics courses offered during the winter and spring quarters of 1959-60. Only those courses designated as home economics were used.

The purposes that were achieved were: (a) the development of a list of objectives to which it was assumed a number of leaders in general education would give nearly unanimous endorsement (b) the development of a student check list concerning these objectives of general education (c) the development of criteria for judging the quality of learning experiences as related to general education.

The hypotheses to be tested in the study were the following: 1. Both core and professional courses in the College of Home Economics make contributions to objectives of general education as defined in this study. 2. There is no difference in the extent of the contributions of the core courses and professional courses in home economics to general education. 3. There is no difference among the departments in home economics in contributing to general education. 4. There is no difference in perception of the goals of general education for a course between the instructors of courses and the students.

Among the data needed to test the hypotheses were, 1. information from
each instructor of the 78 courses (the population for this study) as to what learning opportunities she provides in her courses so that students will make progress toward the goals of general education as outlined for this study; 2. opinion responses from the students enrolled in each of the 78 courses concerning the progress made in each of the 65 goals. Responses of teachers were recorded on an interview schedule, and opinions of students on check lists.

The interview schedule (Appendix C) for the teachers provided an inventory of learning opportunities as they related to the 65 goals of general education. Three questions were asked of each interviewee concerning each of the 65 goals.

1. Is it important that a student in the College of Home Economics (name of goal)?

2. Do you accept responsibility for this goal in your course?

3. If your answer is yes, what do you do so that students will make progress toward this goal?

A student check list (Appendix D) was prepared. For each of the 65 general education goals the student was asked to check the estimated amount of progress she felt she made during the course under consideration. The function of the check list was to collect the data necessary in determining to what extent teachers and students perceive the attainment of the goals of general education the same way.

After the 78 completed interview schedules were assembled, criteria for judging the quality of the learning experiences as recorded by the instructors were developed. Each response of the teacher was assigned a quantitative value according to the quality attributed to it.
In order to establish the reliability of the investigator to judge the quality of the learning experiences as to their value in contributing to general education, the investigator used the following procedure. A jury of experienced educators and the investigator assessed values according to the criteria established. In each of the 65 goals the correlation between the jury judgments and those of the investigator were found. The correlation between the jury judgments and investigator judgments was .93. Then the investigator proceeded independently to assign values to the learning experiences.

Data were reduced to manageable form by combining into clusters the goals that intercorrelated highly among themselves. Six clusters were identified and reliability estimates were obtained for them by using the Spearman-Brown prophecy formula for predicting reliability. Nine goals did not enter into the six clusters so were treated individually.

In order to determine whether there were any real differences among the variables being studied (courses, goals, and raters, [students and teachers]), the significance of the first order interactions among the variables was determined.

For the interaction of course and goal the F value is significant beyond the 5 percent level and approaches significance at the 1 percent level. The significance of this interaction indicates that the goals are arranged differently for courses.

The interaction of course and rater is highly significant beyond the 1 percent level. These results indicate that courses are ordered
differently by students and teachers.

The third first order interaction, between goal and rater, was studied by plotting on a scattergram the scores for the two groups of raters for all goals. The outlyers on the scattergram indicate that this interaction is also significant. Students did not arrange the goals in the same way as teachers.

The significance of these three first order interactions provided evidence that such differences as those among department offerings and contributions between core and professional courses are real.

To determine the extent of contribution of the core and professional courses, the mean scores of teachers and students for core and professional courses on each cluster of goals and non-clustered goal were plotted on scattergrams. Findings concerning individual clusters and goals indicated that both core and professional courses contribute to the goals of general education as outlined for the purposes of this study. Judging from the frequency of high scores, the greatest contributions by teachers seem to be made to the following clusters of goals: creative self-expression, cognitive ability, breadth of interest, individual maturity, consumer responsibility, contributions of others. According to student viewpoint in relation to amount of progress made toward attainment of goals, the following goals seem to receive emphasis: breadth of interest, contributions of others, cognitive ability, homemaking, individual maturity. The goals receiving lowest scores were those related to social responsibility, world interest and social sensitivity (national-international).

Data indicate that in three departments a greater percentage of the
general education is derived from the core courses than professional courses. Students attribute more progress toward goals from core courses in five departments.

In reference to the hypothesis concerning differences among the departments in contributing to general education, it was evident that differences existed. Four goals seem to receive similar emphasis among all the departments judging from the frequency of high scores. These goals were those related to cognitive ability, creative self-expression, breadth of interest, and individual maturity. Little emphasis from any departments seems to be evident for goals related to social sensitivity (national – international), social responsibility, community health, and world interest. The remaining goals received emphasis from several but different departments.

Some recommendations suggested by the present study are the following:

1. It is recommended that there be a restatement of the objectives of general education as outlined for this study to conform to the clusters as they were identified when the data were reduced to manageable form.

2. It is further recommended that a similar study be undertaken by each department of the College of Home Economics but that the number of goals be further limited and the responses of teachers be extended so judgments could be based on more comprehensive evidence.

3. A similar study might plan to have students and teachers rate the importance of objectives and then determine if their progress correlates with how important they believed the objectives were.

4. Consideration should be given to study the kinds of pre- and in-
service education of college home economics teachers that would help to expand the contributions to general education.

5. A curriculum study could well be undertaken to determine the best possible types and content of courses which home economics might develop for general education purposes.

6. Urgently needed is a study related to methods of evaluating attainment of general education goals which are a part of a program of home economics in higher education.

7. It is recommended that the current cultivation of liberalizing elements in professional education be continued in the College of Home Economics.
BIBLIOGRAPHY


ACKNOWLEDGMENTS

Appreciation is expressed to the instructors of the College of Home Economics who responded to the interview schedules and cooperated with the details associated with student check lists.

To Marguerite Scruggs for her generous assistance in helping to guide the study to completion, to Hester Chadderdon for acting as one of the jury members in judging responses of teachers, to Leroy Wolins for the guidance in statistical analysis, sincere thanks are expressed.

Warm gratitude is expressed to Margaret Naczki for her time consuming, willing assistance and patience for the duration of the study.

The investigator is sincerely grateful to Mattie Pattison for her thought-challenging, spirit-lifting, understanding guidance throughout the entire investigation.
Appendix A. The Core Curriculum at Iowa State University
College of Home Economics

The general education of students in the College of Home Economics is provided by a group of required courses known as the core curriculum and by freedom to elect courses of a general nature.

The core curriculum has three major objectives, namely, the (1) development of the student as a person, (2) preparation for family life, (3) preparation for the responsibilities of citizenship in its broadest sense.

The courses in the core curriculum are required of all students in the College of Home Economics.

A. A. --- 103 Basic Design
A. A. --- 261 Basic House Planning and Interior Design
C. D. --- 236 Principles of Child Development
C. D. --- 270 Family Development: The Individual and His Family
F. & N. --- 107 Introduction to Nutrition
F. & N. --- 203 Foods I
F. & N. --- 209 Foods II
F. & N. --- 303 Family Meal Management
H. Ec. --- 105 Orientation
H. Mgt. --- 174 Management for Daily Living
H. Mgt. --- Option
H. Eq. --- 154 Fundamentals of Household Equipment
T. & C. --- 145 Costume Selection
T. & C. --- 204 Textiles

Courses in the core curriculum other than those in home economics include courses in chemistry, economics, English, government, history, physical education, psychology, sociology, speech, zoology, and an option in philosophy, modern languages, mathematics, and literature.
APPENDIX B. PROFESSIONAL COURSES AS REQUIRED IN THE 13 MAJOR SEQUENCES AT IOWA STATE UNIVERSITY—COLLEGE OF HOME ECONOMICS

Applied Art*

A. A. — 231 Drawing and Composition
A. A. — 232 Drawing and Composition
A. A. — 233 Drawing and Composition
A. A. — 305 Advertising Design
A. A. — 324 Life Drawing
A. A. — 344 Craft Design
A. A. — 345 Craft Design
A. A. — 384 Survey of Art
**A. A. — 393 Sculptural Design
**A. A. — 401 Senior Study Tour
**A. A. — 404 Seminar
A. A. — 405 Advanced Advertising Design
A. A. — 424 Painting and Composition
A. A. — 434 Textile Design
A. A. — 445 Advanced Craft Design
A. A. — 464 Intermediate Interior House Design
A. A. — 485 Medieval and Renaissance Art
A. A. — 486 Modern and Contemporary Art
**A. A. — Option
**H.Ec. — 400 Professional Relations
T.&C. — 224 Clothing Construction
T.&C. — 414 Historic Textiles or
T.&C. — 454 History of Costume

Child Development

C. D. — 240 Literature for Children
C. D. — 336 Development in Early Childhood
C. D. — 366 Play and Play Materials
**C. D. — 368 Study Tour
C. D. — 466 Principles of Nursery Education
C. D. — 487 Supervised Teaching in the Nursery School
**C. D. — 488 Administration of Program for Young Children
C. D. — 480 Development and Guidance in Later Childhood
**H.Ec. — 400 Professional Relations
C. D. — 481 Group Children's Work

*Lists do not include courses outside of home economics.

**Courses not included in the present study.
Dietetics

F.&II. --- 209 Foods II
F.&II. --- 303 Family Meal Management
F.&II. --- 305 Nutrition and Dietetics
F.&II. --- 400A Field Study Tour
F.&II. --- 404 Seminar in Food and Nutrition
F.&II. --- 409 Diet Therapy
F.&II. --- 410 Nutrition during Human Growth and Development
F.&II. --- 411 Selected Studies in Experimental Foods
F.&II. --- 418 Methods of Teaching Hospital Dietetics
F.&II. --- 421 Experimental Foods
F.&II. --- 422 Experimental Foods
F.&II. --- 423 Experimental Foods
*H.Ec. --- 400 Professional Relations
I.Mgt. --- 380 Large Quantity Cookery
I.Mgt. --- 484 Purchasing
I.Mgt. --- 487 Organization and Management

Experimental Foods

F.&II. --- 209 Foods II
F.&II. --- 303 Family Meal Management
F.&II. --- 305 Nutrition and Dietetics
*F.&II. --- 400B Field Study Tour
F.&II. --- 404 Seminar in Food and Nutrition
F.&II. --- 410 Nutrition during Human Growth and Development
F.&II. --- 421 Experimental Foods
F.&II. --- 422 Experimental Foods
F.&II. --- 423 Experimental Foods
*H.Ec. --- 400 Professional Relations
H.Mgt. --- 488 Family Finance
*H.Ec. --- 315 TV Demonstration Techniques
I.Mgt. --- 380 Large Quantity Cookery

Community Nutrition

F.&II. --- 209 Foods II
F.&II. --- 303 Family Meal Management
F.&II. --- 305 Nutrition and Dietetics
F.&II. --- 400A Field Study Tour
F.&II. --- 404 Seminar in Food and Nutrition
F.&II. --- 409 Diet Therapy
F.&II. --- 410 Nutrition during Human Growth and Development
F.&II. --- 411 Selected Studies in Experimental Foods
F.&II. --- 414 Community Nutrition
*H.Ec. --- 400 Professional Relations
H.Mgt. --- 488 Family Finance
### Home Economics Education

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<td>303 Lighting and Kitchen Planning</td>
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<td>400 Observation Trip</td>
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<td>407 Gas and Electric Ranges</td>
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Institution Management

F.&N. --- 209 Foods II
F.&N. --- 303 Family Meal Management
F.&N. --- 305 Nutrition and Dietetics
F.&N. --- 411 Selected Studies in Experimental Foods
*H.Ec. --- 400 Professional Relations
I.Mgt. --- 380 Large Quantity Cookery
*I.Mgt. --- 400 Study Tour
I.Mgt. --- 404 Seminar
I.Mgt. --- 434 Purchasing
*I.Mgt. --- 435 Equipment
*I.Mgt. --- 436 Institution Management Experience
I.Mgt. --- 487 Organization and Management
I.Mgt. --- 489 Household Administration
I.Mgt. --- Option
I.Mgt. --- 280 Group Food Service

Restaurant Management

F.&N. --- 209 Foods II
F.&N. --- 303 Family Meal Management
F.&N. --- 305 Nutrition and Dietetics
F.&N. --- 411 Selected Studies in Experimental Foods or
F.&N. --- 421 Experimental Foods and
F.&N. --- 422 Experimental Foods
*H.Ec. --- 400 Professional Relations
I.Mgt. --- 380 Large Quantity Cookery
*I.Mgt. --- 400 Study Tour
I.Mgt. --- 404 Seminar
I.Mgt. --- 434 Purchasing
*I.Mgt. --- 435 Equipment
*I.Mgt. --- 436 Institution Management Experience
I.Mgt. --- 487 Organization and Management
I.Mgt. --- Option

School Food Service

F.&N. --- 209 Foods II
F.&N. --- 303 Family Meal Management
F.&N. --- 305 Nutrition and Dietetics
F.&N. --- 410 Nutrition during Human Growth and Development
F.&N. --- 411 Selected Studies in Experimental Foods
*H.Ec. --- 400 Professional Relations
I.Mgt. --- 380 Large Quantity Cookery
*I.Mgt. --- 400 Study Tour
I.Mgt. --- 404 Seminar
(School Food Service Continued)

I.Mgt. — 434 Purchasing
I.Kgt. — 485 Equipment
I.Kgt. — 486 Institution Management Experience
I.Kgt. — 487 Organization and Management
I.Kgt. — Option

Textiles and Clothing

A. A. — 211 Fashion Illustration
A. A. — 212 Fashion Illustration
A. A. — 434 Textile Design
A. A. — 384 Survey of Art
H.Ec. — 400 Professional Relations
T.&C. — 224 Clothing Construction
T.&C. — 324 Flat Pattern Designing
T.&C. — 401 Senior Study Tour
T.&C. — 404 Advanced Textiles
T.&C. — 414 Historic Textiles
T.&C. — 424 Designing by Draping
T.&C. — 444 Advanced Costume Selection
T.&C. — 454 History of Costume
T.&C. — 464 Textile and Clothing Purchasing
T.&C. — 465 Professional Opportunities in Textiles and Clothing
T.&C. — 527 Tailoring
T.&C. — 525 Adv. Draping

Textiles and Clothing Merchandising

A. A. — 211 Fashion Illustration
A. A. — 212 Fashion Illustration
A. A. — 384 Survey of Art
A. A. — 434 Textile Design
A. A. — 305 Advertising Design
H.Ec. — 400 Professional Relations
H.Ec. — 422 Home Economist in Business
T.&C. — 224 Elementary Clothing Construction
T.&C. — 324 Flat Pattern Designing
T.&C. — 401 Senior Study Tour
T.&C. — 404 Advanced Textiles
T.&C. — 414 Historic Textiles
T.&C. — 424 Designing by Draping
T.&C. — 444 Advanced Costume Selection
T.&C. — 454 History of Costume
T.&C. — 464 Textiles and Clothing Purchasing
T.&C. — 465 Professional Opportunities in Textiles and Clothing
APPENDIX C. INVENTORY OF LEARNING EXPERIENCES IN THE CORE COURSES AND PROFESSIONAL COURSES OF HOME ECONOMICS AT IOWA STATE UNIVERSITY- COLLEGE OF HOME ECONOMICS AS THEY RELATE TO THE AIMS AND PURPOSES OF GENERAL EDUCATION
Instructions for responding to the Interview Schedule

The items making up the following interview schedule are a breakdown of the goals of general education. The purpose of the interview schedule is to ascertain to what extent your course contributes to the goals of general education.

No one course is ever expected to attain all of the goals of general education and some courses lend themselves to encompassing more goals than others. So in responding to the items of this interview schedule do not feel uncomfortable about omitting an item if it is not appropriate for your course.

There are ten major goals of general education with which this interview schedule is concerned. Following each of the goals is a group of sub-goals representing various aspects of that goal. In reference to each sub-goal you will be asked three questions. Please respond to the first two questions by underlining Yes or No. The third question is "What do you do so that a student will make progress toward this goal?" In responding to this question please be as specific as you can and keep in mind only the course under consideration.

On the back of each page at the bottom are numbered spaces. Each number represents the approximate amount of time which you may be devoting to the item under consideration. Place a check (✓) below the number which corresponds most closely to the amount of time you may be devoting to that sub-goal.
Following is a description of what each number represents in the time allotment:

No. 1—No time allowed or referred to vaguely
2—Referred to incidentally when opportunity presents itself
3—One-half to two class periods or the equivalent of this
4—Two and one-half to four class periods or the equivalent of this
5—The goal guides planning wherever it applies
6—If none of the above applies, then state your time allotment in 6

Example: Sub-goal number 5 of Goal One is related to ethical values. If you refer to this sub-goal in this course when an opportunity presents itself or incidentally, but you do not plan to spend any amount of time for focusing on it, then place a check directly below the 2.

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GOAL ONE  TO DEVELOP ONE'S OWN POTENTIAL AS AN INDIVIDUAL
1. Is it important that a student in the College of Home Economics accepts responsibility for her own decisions and actions? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

* The numbered spaces appeared on the back of each sub-goal page.

2. Is it important that a student in the College of Home Economics recognizes the roles that may be expected of her and develops the abilities required of each role? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
3. Is it important that a student in the College of Home Economics recognizes her own abilities? 
   Yes No

   Do you accept responsibility for this goal in your course? 
   Yes No

   If your answer is \textit{yes}, what do you do so that students will make progress toward this goal?

4. Is it important that a student in the College of Home Economics understands the factors that influence one's physical development? 
   Yes No

   Do you accept responsibility for this goal in your course? 
   Yes No

   If your answer is \textit{yes}, what do you do so that students will make progress toward this goal?

5. Is it important that a student in the College of Home Economics understands the factors that influence one's social and emotional development? 
   Yes No

   Do you accept responsibility for this goal in your course? 
   Yes No

   If your answer is \textit{yes}, what do you do so that students will make progress toward this goal?
6. Is it important that a student in the College of Home Economics recognizes her own intellectual abilities and accepts her potentials?  
Yes No

Do you accept responsibility for this goal in your course?  
Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

7. Is it important that a student in the College of Home Economics makes resourceful adaptations to existing conditions?  
Yes No

Do you accept responsibility for this goal in your course?  
Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

8. Is it important that a student in the College of Home Economics broadens interests?  
Yes No

Do you accept responsibility for this goal in your course?  
Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
9. Is it important that a student in the College of Home Economics evaluates her own progress objectively? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

10. Is it important that a student in the College of Home Economics solves personal problems intelligently? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

11. Is it important that a student in the College of Home Economics develops an ability to express herself creatively? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
GOAL TWO

TO BE AWARE OF AND TO KNOW HOW TO PARTICIPATE
AS AN INFORMED AND RESPONSIBLE CITIZEN IN
SOLVING THE SOCIAL, ECONOMIC, AND POLITICAL
PROBLEMS OF ONE'S COMMUNITY, STATE, NATION

1. Is it important that a student in the College of Home Economics
develops a sense of responsibility for community well being?  Yes No
Do you accept responsibility for this goal in your course?  Yes No
If your answer is yes, what do you do so that students
will make progress toward this goal?

2. Is it important that a student in the College of Home Economics
recognizes problems which society needs to solve?  Yes No
Do you accept responsibility for this goal in your course?  Yes No
If your answer is yes, what do you do so that students
will make progress toward this goal?
3. Is it important that a student in the College of Home Economics develops an ability to evaluate solutions suggested or attempted regarding social problems?  
   Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?

4. Is it important that a student in the College of Home Economics develops an ability to cooperate with others in the solution of social problems?  
   Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?

5. Is it important that a student in the College of Home Economics keeps abreast of social movements and recognizes their influence on society?  
   Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?
6. Is it important that a student in the College of Home Economics keeps informed on major political movements and recognizes their influence on family, community, state and nation? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

---

7. Is it important that a student in the College of Home Economics develops an ability to evaluate consumer information? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

---

8. Is it important that a student in the College of Home Economics recognizes the effects of industrial progress on social well-being? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
9. Is it important that a student in the College of Home Economics appreciates the necessity for laws? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

10. Is it important that a student in the College of Home Economics develops an ability to judge the adequacy of community facilities (health, educational, recreational)? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

11. Is it important that a student in the College of Home Economics develops an ability to use community facilities effectively? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
GOAL THREE  TO UNDERSTAND THE IDEAS OF OTHERS AND TO EXPRESS ONE'S OWN EFFECTIVELY

1. Is it important that a student in the College of Home Economics understands the ideas of others (written and spoken)?  Yes No

Do you accept responsibility for this goal in your course?  Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

2. Is it important that a student in the College of Home Economics expresses her ideas effectively (written and spoken)?  Yes No

Do you accept responsibility for this goal in your course?  Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
3. Is it important that a student in the College of Home Economics assumes and defends intelligently a position on important issues? 
   Yes  No

Do you accept responsibility for this goal in your course? Yes  No

If your answer is yes, what do you do so that students will make progress toward this goal?

---

GOAL FOUR
TO RECOGNIZE THE INTERDEPENDENCE OF THE DIFFERENT PEOPLES OF THE WORLD AND ONE'S PERSONAL RESPONSIBILITY FOR FOSTERING INTERNATIONAL UNDERSTANDING AND PEACE

---

4-1

1. Is it important that a student in the College of Home Economics recognizes the interdependence of a. cultural groups?  Yes  No
   b. nations? Yes  No
   c. races? Yes  No

Do you accept responsibility for this goal in your course? Yes  No

If your answer is yes, what do you do so that students will make progress toward this goal?
2. Is it important that a student in the College of Home Economics is sensitive to problems of underdeveloped countries? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

GOAL FIVE TO ACQUIRE AND USE THE SKILLS AND HABITS INVOLVED IN CRITICAL THINKING

1. Is it important that a student in the College of Home Economics learns independent of supervision? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
2. Is it important that a student in the College of Home Economics enjoys living in a changing world?  
   Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?

3. Is it important that a student in the College of Home Economics recognizes the importance of research?  Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?

4. Is it important that a student in the College of Home Economics enjoys discovering solutions to problems?  Yes  No  
   Do you accept responsibility for this goal in your course?  Yes  No  
   If your answer is yes, what do you do so that students will make progress toward this goal?
5. Is it important that a student in the College of Home Economics learns how to use research findings? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

6. Is it important that a student in the College of Home Economics reaches decisions after a period of objective consideration of issues involved? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

7. Is it important that a student in the College of Home Economics recognizes when information is reliable? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
8. Is it important that a student in the College of Home Economics organizes facts and concepts into generalizations (principles)? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

9. Is it important that a student in the College of Home Economics applies generalizations (principles)? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

10. Is it important that a student in the College of Home Economics recognizes new problems in light of evaluation and appraisal of experiences? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
11. Is it important that a student in the College of Home Economics transfers what she has learned from other courses and non-class experiences? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

GOAL SIX TO MAINTAIN AND IMPROVE HER OWN HEALTH AND TO COOPERATE ACTIVELY AND INTELLIGENTLY IN SOLVING COMMUNITY HEALTH PROBLEMS

1. Is it important that a student in the College of Home Economics recognizes and applies the principles of good physical health? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
2. Is it important that a student in the College of Home Economics recognizes and applies the principles of good mental health? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

3. Is it important that a student in the College of Home Economics develops an ability to evaluate and solve problems of community health? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

GOAL SEVEN

TO APPRECIATE THE CONTRIBUTIONS OF THE HUMANITIES FOR AN UNDERSTANDING OF THE WORLD IN WHICH ONE LIVES
Is it important that a student in the College of Home Economics recognizes the contributions of the following areas in the humanities to an understanding of the world in which one lives:

- literature
- languages
- art
- philosophy
- music
- history

Yes No

Do you accept responsibility for any part of this goal? Yes No

If your answer is yes, please check those areas for which you take responsibility.

What do you do so that a student will make progress in those areas wherein you accept responsibility?

---

GOAL EIGHT
TO ACQUIRE THE KNOWLEDGE AND ATTITUDES BASIC TO A SATISFYING FAMILY LIFE

---

1. Is it important that a student in the College of Home Economics knows the functions of a family in a democratic society? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
2. Is it important that a student in the College of Home Economics realizes the importance of democratic family relationships? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

---

3. Is it important that a student in the College of Home Economics recognizes the satisfactions and/or responsibilities of a homemaker? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

---

4. Is it important that a student in the College of Home Economics realizes the effect of the family on growth and development?

   a) socially? Yes No
   b) emotionally? Yes No
   c) mentally? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
5. Is it important that a student in the College of Home Economics knows the effect of the family on learning? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

GOAL NINE

TO CHOOSE A SOCIALLY USEFUL AND PERSONALLY SATISFYING VOCATION THAT WILL PERMIT ONE TO USE TO THE FULL HIS PARTICULAR INTERESTS AND ABILITIES

1. Is it important that a student in the College of Home Economics attains a socially useful and personally satisfying vocation? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
2. Is it important that a student in the College of Home Economics recognizes homemaking as a vocation that will permit her to use her particular interests and abilities?  
   Yes  No

   Do you accept responsibility for this goal in your course?  
   Yes  No

   If your answer is yes, what do you do so that students will make progress toward this goal?

3. Is it important that a student in the College of Home Economics understands the basis for deciding when a career and homemaking should be combined?  
   Yes  No

   Do you accept responsibility for this goal in your course?  
   Yes  No

   If your answer is yes, what do you do so that students will make progress toward this goal?

GOAL TEN  TO CLARIFY ONE'S OWN PHILOSOPHY
1. Is it important that a student in the College of Home Economics develops an attitude of objectivity? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

2. Is it important that a student in the College of Home Economics accepts and applies scientific principles? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

3. Is it important that a student in the College of Home Economics realizes the importance of each individual developing her own personality? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
4. Is it important that a student in the College of Home Economics develops her own system of values?  
   Yes  No  

Do you accept responsibility for this goal in your course?  
   Yes  No  

If your answer is yes, what do you do so that students will make progress toward this goal?

5. Is it important that a student in the College of Home Economics recognizes consequences of her present system of values?  
   Yes  No  

Do you accept responsibility for this goal in your course?  
   Yes  No  

If your answer is yes, what do you do so that students will make progress toward this goal?

6. Is it important that a student in the College of Home Economics accepts the importance of ethical values?  
   Yes  No  

Do you accept responsibility for this goal in your course?  
   Yes  No  

If your answer is yes, what do you do so that students will make progress toward this goal?
7. Is it important that a student in the College of Home Economics accepts the importance of being sensitive to other people's problems? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

8. Is it important that a student in the College of Home Economics makes progress toward the development of social leadership? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?

9. Is it important that a student in the College of Home Economics makes progress toward the development of civic leadership? Yes No

Do you accept responsibility for this goal in your course? Yes No

If your answer is yes, what do you do so that students will make progress toward this goal?
10. Is it important that a student in the College of Home Economics desires to contribute to the welfare of society?  Yes  No

Do you accept responsibility for this goal in your course?  Yes  No

If your answer is yes, what do you do so that students will make progress toward this goal?

11. Is it important that a student in the College of Home Economics assumes responsibility to initiate change when a situation should be changed?  Yes  No

Do you accept responsibility for this goal in your course?  Yes  No

If your answer is yes, what do you do so that students will make progress toward this goal?

12. Is it important that a student in the College of Home Economics plans for long range goals?  Yes  No

Do you accept responsibility for this goal in your course?  Yes  No

If your answer is yes, what do you do so that students will make progress toward this goal?
### 10-13

13. Is it important that a student in the College of Home Economics develops her ability to use her resources to achieve goals?  
- Yes  
- No

Do you accept responsibility for this goal in your course?  
- Yes  
- No

If your answer is yes, what do you do so that students will make progress toward this goal?

### 10-14

14. Is it important that a student in the College of Home Economics accepts human behavior which may be affected by such differences as:  
- a) family  
- b) race  
- c) nationality  
- d) religious beliefs  
- e) economic status  
- f) cultural background  
- g) geographic location  
- h) generation  
- i) individual capacities  
- j) physical differences

- Yes  
- No

Do you accept responsibility for any part of this goal?  
- Yes  
- No

If your answer is yes, please check those for which you take responsibility.

What do you do so that a student will make progress in those differences wherein you accept responsibility?

### 10-15

15. Is it important that a student in the College of Home Economics values contributions of other individuals?  
- Yes  
- No

Do you accept responsibility for this goal in your course?  
- Yes  
- No

If your answer is yes, what do you do so that students will make progress toward this goal?
APPENDIX D. CHECK LIST FOR ESTIMATING PROGRESS TOWARD CERTAIN GOALS OF A GENERAL EDUCATION
CHECK LIST FOR ESTIMATING PROGRESS TOWARD
CERTAIN GOALS OF A GENERAL EDUCATION

We are interested in finding out to what extent this course
(Name of course)
has helped you to make progress toward some of the goals of a general
education. No one course is ever expected to help you make progress
in all the goals but some courses lend themselves toward this more than
others.

In checking your progress in the following list of goals, keep in mind
this one course only. Use as a basis for judging your progress any work
done during class periods, instructor's lectures, specialists invited to
class, outside reading (assigned and independent), audio-visual aids, any
other learning experiences which the instructor provided or suggested, or
anything you yourself did as a learning experience independent of super­
vision that was a result of taking this course.

DIRECTIONS: Below are four columns entitled "Estimated Progress Toward
Goals". Place a check (✓) in the column which best
indicates the amount of progress you made in this course
on each of the goals.

I THE FOLLOWING GOALS REFER TO YOUR
POTENTIAL AS AN INDIVIDUAL.

<table>
<thead>
<tr>
<th>What progress do you feel you made in this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. toward accepting responsibility for your</td>
</tr>
<tr>
<td>own decisions and actions?</td>
</tr>
<tr>
<td>2. toward recognizing the roles that may be</td>
</tr>
<tr>
<td>expected of you and developing abilities</td>
</tr>
<tr>
<td>required of each role?</td>
</tr>
<tr>
<td>3. toward recognizing your own abilities?</td>
</tr>
<tr>
<td>4. toward understanding the factors that</td>
</tr>
<tr>
<td>influence one's physical development?</td>
</tr>
<tr>
<td>5. toward understanding the factors that</td>
</tr>
<tr>
<td>influence one's social and emotional</td>
</tr>
<tr>
<td>development?</td>
</tr>
<tr>
<td>6. toward recognizing your own intellectual</td>
</tr>
<tr>
<td>abilities?</td>
</tr>
<tr>
<td>7. toward making resourceful adaptations to</td>
</tr>
<tr>
<td>existing conditions?</td>
</tr>
<tr>
<td>8. toward broadening your interests?</td>
</tr>
</tbody>
</table>
9. toward evaluating your own progress objectively?
10. toward solving personal problems intelligently?
11. toward developing artistic creativity?

II THE FOLLOWING GOALS REFER TO RESPONSIBLE CITIZENSHIP IN ONE'S COMMUNITY, STATE, AND NATION.

What progress do you feel you made in this course

1. toward developing a sense of responsibility for community well-being?
2. toward recognizing problems which society needs to solve?
3. toward developing an ability to evaluate solutions suggested or attempted regarding social problems?
4. toward developing an ability to cooperate with others in the solution of social problems?
5. toward keeping abreast of social movements and recognizing their influence on society?
6. toward developing an ability to keep informed on major political movements and recognize their influence on family, community, state, and nation?
7. toward developing an ability to evaluate consumer information?
8. toward recognizing the effects of industrial progress on social well being?
9. toward appreciating the necessity for laws?
10. toward developing an ability to judge the adequacy of community facilities (health educational, recreational)?

<table>
<thead>
<tr>
<th>ESTIMATED PROGRESS</th>
<th>TOWARD GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much</td>
<td>Some</td>
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</tbody>
</table>

- -
11. toward developing an ability to use community facilities effectively?

III THE FOLLOWING GOALS REFER TO EFFECTIVE ORAL AND WRITTEN EXPRESSION AND UNDERSTANDING THE IDEAS OF OTHERS.

What progress do you feel you made in this course?

1. toward understanding the ideas of others (written and spoken)?

2. toward expressing your ideas effectively (written and spoken)?

3. toward assuming and defending intelligently a position on important issues?

IV THE FOLLOWING GOALS REFER TO THE INTERDEPENDENCE OF THE DIFFERENT PEOPLES OF THE WORLD AND ONE'S PERSONAL RESPONSIBILITY FOR FOSTERING INTERNATIONAL UNDERSTANDING AND PEACE.

What progress do you feel you made in this course?

1. toward recognizing the interdependence of
   a) cultural groups
   b) nations
   c) races

2. toward developing a sensitivity to problems of underdeveloped countries?

V THE FOLLOWING GOALS REFER TO THE SKILLS AND HABITS INVOLVED IN CRITICAL THINKING

What progress do you feel you made in this course?

1. toward learning independently of supervision?

2. toward enjoying to live in a changing world?

3. toward recognizing the importance of research?

<table>
<thead>
<tr>
<th>ESTIMATED PROGRESS</th>
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<tbody>
<tr>
<td>TOWARD GOALS</td>
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<tr>
<td>Much</td>
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<td></td>
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</tbody>
</table>
4. toward enjoying the discovery of solutions to problems?
5. toward learning how to use research findings?
6. toward reaching decisions after a period of objective consideration of issues involved?
7. toward recognizing when information is reliable?
8. toward organizing facts and concepts into generalizations (principles)?
9. toward applying generalizations (principles)?
10. toward recognizing new problems in light of evaluation of experience?
11. toward transferring what you have learned from other courses and non-class experiences?

VI THE FOLLOWING GOALS REFER TO PERSONAL AND COMMUNITY HEALTH.

What progress do you feel you made in this course

<table>
<thead>
<tr>
<th></th>
<th>Much</th>
<th>Some</th>
<th>None</th>
<th>Not Sure</th>
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</thead>
<tbody>
<tr>
<td>1. toward recognizing and applying the principles of good physical health?</td>
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<tr>
<td>2. toward recognizing and applying the principles of good mental health?</td>
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<tr>
<td>3. toward developing an ability to evaluate problems of community health?</td>
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</table>

VII THE FOLLOWING GOALS REFER TO CONTRIBUTIONS OF THE HUMANITIES.

What progress do you feel you made in this course toward recognizing the contributions of each of the following areas in the humanities to an understanding of the world in which one lives

a) literature
b) art
c) music
d) history
e) languages
f) philosophy
g) ________
VIII THE FOLLOWING GOALS REFER TO THE KNOWLEDGE AND ATTITUDES BASIC TO A SATISFYING FAMILY LIFE.

What progress do you feel you made in this course

1. toward knowing the functions of a family in a democratic society?

2. toward realizing the importance of democratic family relationships?

3. toward recognizing the satisfactions and/or responsibilities of a homemaker?

4. toward realizing the effect of the family on growth and development a) socially b) emotionally c) mentally

5. toward knowing the effect of the family on learning?

IX THE FOLLOWING GOALS REFER TO VOCATIONAL PREPARATION.

What progress do you feel you made in this course

1. toward selecting and/or preparing for a socially useful and personally satisfying vocation that will permit you to use to the full your particular interests and abilities?

2. toward recognizing homemaking as a vocation that will permit you to use to the full your interests and abilities?

3. toward understanding the basis for deciding when a wage earning career and homemaking should be combined?
THE FOLLOWING GOALS REFER TO A PERSONAL PHILOSOPHY OF LIFE.

What progress do you feel you made in this course
1. toward developing an attitude of objectivity?
2. toward accepting and applying scientific principles?
3. toward realizing the importance of developing your own personality?
4. toward developing your own system of values?
5. toward recognizing the consequences of your present system of values?
6. toward accepting the importance of ethical values?
7. toward accepting the importance of being sensitive to other people's problems?
8. toward developing leadership in solving social problems?
9. toward developing civic leadership?
10. toward contributing to the welfare of society?
11. toward assuming responsibility to initiate change when a situation should be changed?
12. toward planning for long range goals?
13. toward developing your ability to use your resources to achieve goals?
14. toward accepting human behavior which may be affected by such differences as
   a) family
   b) race
   c) nationality
   d) religious beliefs
15. toward recognizing and accepting valuable contributions of other individuals?

<table>
<thead>
<tr>
<th></th>
<th>Much</th>
<th>Some</th>
<th>None</th>
<th>Not Sure</th>
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</thead>
<tbody>
<tr>
<td>e) economic status</td>
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<tr>
<td>f) cultural background</td>
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<td>g) geographic location</td>
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<td>h) generation</td>
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<td>i) individual capacities</td>
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<td>j) physical differences</td>
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</table>
APPENDIX E. INTERCORRELATION OF TEACHER RATINGS OF GOALS BY CLUSTERS
Fig. 12. Intercorrelation of teacher ratings of goals by clusters.
<table>
<thead>
<tr>
<th></th>
<th>J</th>
<th>K</th>
<th>O</th>
<th>L</th>
<th>P</th>
<th>M</th>
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<tbody>
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<td>11</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

**Intercorrelation of Teacher Ratings of Goals by Clusters**

- Identification of clusters: J = Individual maturity, K = Social sensitivity (personal-community), O = Social sensitivity (national-international), L = Cognitive ability, P = Mental health, M = Philosophy of life.
APPENDIX F. TABLES OF CORRELATIONS OF STUDENTS AND TEACHERS ON GOALS AND OF MEAN SCORES OF STUDENTS AND TEACHERS FOR CLUSTERS
Table 2. Correlations of teachers with students on each goal in descending order.

<table>
<thead>
<tr>
<th>Goal</th>
<th>$r$</th>
<th>Goal</th>
<th>$r$</th>
<th>Goal</th>
<th>$r$</th>
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<td>.75</td>
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<td>.48</td>
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<td>.74</td>
<td>60</td>
<td>.48</td>
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*Core courses, P-Professional courses.
Table 4. Mean scores of students by departments and core courses for each cluster of goals and the non-clustered goals.

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\(^a\)C-Core courses, P-Professional courses.