New trends in home economics education

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New trends in home economics education
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In the early seventies, Members States of the United Nations indicated their belief in the importance of home economics education for the improvement of family and community life. (I) A stable family life was regarded as a pre-condition for national development in both developed and developing countries; in the latter, home economics education was thought to make a significant contribution towards this stability.

Unesco's response to this increased awareness included research into the role of this discipline in various countries throughout the world, which in turn led to the publication of this volume. It groups together a selection of original texts as well as extracts from conference reports and other publications in an attempt to provide a wide range of views by home economists working in different sectors of the educational spectrum and in widely differing geographical settings.

Inevitably there are substantial differences between countries in terms of the range and scope of home economics viewed both as a discipline and as a profession, especially in view of cultural and educational particularities. However, a constantly recurring theme throughout the nineteen articles is the crucial importance of the skills and knowledge imparted by home economics education.

This publication is directed at a wide readership including education administrators, supervisors and inspectors, teachers in universities and teacher-training institutions involved in pre-service and in-service home economics programmes and home economics teachers. It is hoped they will be stimulated in their thinking about home economics education trends by the various articles included. These articles describe the views of the many contributing authors and do not necessarily reflect those of Unesco.

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'Some thoughts on home economics and other 'helping' professions' by E.A. Cebotarev (Chapter 7) was prepared for the National Home Economics Conference held in Piróciaba, S.P., Brazil, September 1974.
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Volume 1
1 Concepts of home economics education

Home economics: a unified field approach

Eleanore Vaines

Introduction

This is an important time for home economics. International as well as national concerns are having an impact on all aspects of the field. Never have the human services which home economists deliver been more needed. Yet, despite its healthy position, home economics is still struggling to define its identity. The primary goal of this section, therefore, is to present one contemporary view of the field.

One way of defining the field

A considerable amount of energy has been devoted to defining this field. From home economics' early beginnings at the Lake Placid Conferences (1899-1908), individuals, committees and official associations have explored the common themes which bind the field (For example: American Home Economics Association, 1913; Committee on the Philosophy and Objectives of Home Economics, 1959; Lee and Dressel, Dressel, 1963; McGrath and Johnson, 1968; Schlater, 1970; Byrd, 1970; Bivens, et al., 1975).

Because home economics is still evolving, the systems model of five inter-related sub-systems which is proposed in Figure I (P; 16) represents one developmental point in the field's history. Over time, home economics has been organized in three ways: as a single field, as a collection of specialities and as a unified whole (Lee and Dressel, 1963 p. 40-41).

In the early days, home economics was a single field and all the students took the same course of study. As it grew and as knowledge developed, it moved toward the unified field concept. This concept holds that some areas of home economics are basic to others, as the study of textiles, for example, is part of the environment of families... The third or collection-of-specialities view has been emerging recently as the profession grows and develops. The drawbacks of this view has become very apparent because it has become increasingly difficult to tie these specialities together as a conceptual unit. (Marshall, 1973, p. 8-9)

The model also represents, therefore, one way of viewing home economics as a unified field (A. Kuhn, 1975 a,b). It is a system of five inter-related sub-systems. Each sub-system is a separate organization, yet each has meaning only in relation to the whole system. If used as intended, the model has potential for facilitating the continued evolution of home economics as a discipline and as a profession.

A discipline includes the knowledge base and modes of inquiry used by the field. The profession includes all the activities which the social system of the field uses to translate the discipline into the different levels of practice. The practices include activities such as research theoretical and philosophical developments, curriculum and, in turn, how these are translated into practical human services to achieve the mission of the field.

Ideally there should be a symbiotic relationship between a field's discipline and profession.
Home economics is a relatively young field; the discipline referred to at this stage as content orientation (in Figure I), the profession and the congruent relationship between these two are slowly maturing.

Like a map, the model can be used for a number of different purposes. The following are some of the functions:

1. To illustrate one way in which the organization of home economics as an applied area of study and as a unified field can be viewed.

2. To illustrate the two interrelated activities of the field: The evolution of the discipline (Parts I, II and V) and the profession (Parts I, II, III, IV and V).

3. To facilitate the identification of some of the common themes which all home economists share.

4. To facilitate the identification of how particular areas of expertise in home economics are related to the whole.

5. To facilitate the identification of issues within home economics.

6. To facilitate the identification of issues related to the field.

7. To facilitate the identification of areas for teamwork within the profession and with other areas of study.

8. To define areas of needed research essential to the continued development of home economics.

Utilizing the full potentials of the model and at the same time being aware of the limitations of such an illustration are important considerations. The model does attempt to clarify the conceptual territory of home economics by defining some boundaries and some major activities of home economists. It is also clear that the model is far from complete. This too is an asset. Such deficiencies can be a means of clarifying the missing links and areas in which there is need for systematic research efforts.

Some contemporary issues within home economics

Home economics has a history of delivering human services to individuals and families in many different settings. Keith McFarland has noted that the common themes which unify the many specializations represented under the umbrella of home economics are related to this history. He sees some of the implications of the Yankelovich Image Study (1974) co-missioned by the American Home Economics Association, as follows:

No amount of wishful thinking will produce a common identity having utility value in employment relationships..... They (home economists) do have attitudes in common, towards human services, and sensitivity as to the interrelationship of environment and personality upon behavior and performance (McFarland, 1975, P.5).

Each home economist usually does commit himself or herself to a content area of expertise, interest in particular clients, and preferences for the settings where their services are delivered. Two assumptions of the unified field approach to home economics are, therefore, that:

THERE ARE COMMON THEMES WHICH BIND THE WHOLE OF THE SOCIAL SYSTEM OF HOME ECONOMICS

and

EACH HOME ECONOMIST WITHIN THE SOCIAL SYSTEM IS A SPECIALIST OF SOME KIND

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These assumptions are intimately related to the identification of some of the contemporary roles of home economists. Marjorie East discussed these matters recently.

'I see something happening to us. We still value family life. We still work to improve the everyday lives of people. But there are some very basic changes in how some of us go about it.

"We used to work primarily with individuals, teaching them how to live better, how to decide, how to choose, how to cope, how to do. We used to concentrate primarily on the housewife or on the girl, who someday would be one, helping her adjust to the social conditions in which she lived. Many of us still do.

"But the new breed wants also to change the social conditions within which people live so that their choices can be among good alternatives instead of among bad ones. The new breed is aware of systems, of ecological chains, and of political processes and is developing the maturity they need to wield influence at the power centers. They know they have to learn new skills called communication, persuasion, and influence. They recognize that they have to learn how to accept and use controversy and argument. These new home economists know they are involved in a continuous, lifelong professional education process.

'These new home economists are less modest, meek, and gentle than the rest of us. They are confident, assertive, willing to argue, willing to take on major responsibilities. Maybe they are a bit brash; they certainly are eager to try some new ways.

'At the same time, these new professionals realize that they have to know their stuff. At the power centers they aren't dealing with decisions that affect only one family, they may influence the health of millions. They aren't talking with only a few housewives, they are working with other professionals - chemists, psychologists, lawyers, nurses, business executives, judges, engineers, senators. So we find college students now who want statistics, political science, genetics, criminology and business law besides their regular required curriculum. They want the knowledge and the skills for acquiring power in society and using it. They want to know all that a home economist knows, as well, but they have little tolerance for repetitious courses, or 'cut and paste' scrapbooks, or teachers whose aim is teaching them how to be better housewives or fathers or mothers themselves. These students are eager to become professionals. Their own personal homemaking skills are quite secondary.'  

(East, 1975, p.3)

This new breed which identifies its members with pride as home economists, is not related to a chronological age; rather, these home economists are typified by their committed attitudes to the field, what it is about, and their particular role. Some of the implications can be summarized by looking at shifts in thinking from the past. The new breed is:

Moving from

Thinking of home economics as a female occupation

To

Regarding it as a profession which includes both men and women serving males and females of all ages.
Telling clients what to do.

Focusing on individual rights and national concerns which can become a selfish end.

Seeing answers and primarily 'right' answers as the end of action.

The individual professional working alone.

'Winning', adversary stances which can polarize and alienate.

Defensive positions.

Education and professional preparation as a four-year course in a formal setting.

Using skills and techniques which help clients help themselves solve their daily problems.

A concern for individual rights in relation to the rights, responsibilities, and privileges as global citizens.

The focus is on co-operation collaboration in a conserver society and seeing individuals and families as USERS in a global exchange system.

Focusing on information, techniques and systems for dealing with complex issues which may have no answers or answers which are counter to intuition (common sense).

Co-operation between intra- and inter-professional TEAMS to benefit clients.

Using negotiation strategies such as conflict resolution, contracts, persuasion to emphasize co-operation and collaboration so people can work together to achieve worthwhile goals in keeping with the broad principles of social responsibility to other global citizens.

Investing energies in offensive leadership stances which include political action.

Learning in every form, as a life-time process. This includes knowledge, attitudes and skills to stimulate each person to develop his or her senses of self-esteem. Feelings of personal worth are essential for the professional home economist to help others help themselves.

Given the mission of home economics, home economists in every setting need to specifically address the environmental issues which effect and are affected by individuals and families in their near environment. This concern probably needs greater leadership action in so-called developed or industrialized countries, but the consequences will be felt by everyone around the world.

Because the earth is a finite resource, human and material resources of every kind are in some degree of crisis. Humans are again learning the lessons of how man and nature must work together for both survival and a good life.

Contemporary issues within and related to home economics are affecting the interpretation of the field around the world. It is an important time for practitioners in the social system of home economics to affirm their common themes, the strength in each member's specialization as related to the whole, and the important and unique human service which home economists deliver.

Home economics as a field of study and as a profession is concerned with improving the everyday life of humans. Its focus is on the interdependencies and inter-relationships among the phenomena and processes in the physical, and social cultural environments that impinge on human development. Its approach is ecological - a continuous search for the harmonious adaptation of the mutually sustaining relationships that couple humans with their environments.
'Underlying the Home Economics profession is the belief that the everyday life of humans can be improved and/or enhanced through the practical application of science to the problems and opportunities which are encountered at the household (family) level.

'The focus on the household (family) ecosystem involves developing research and education programs which demand an analysis of everyday operations of a household (family) and the development of alternative ways to improve living conditions and maintain viable environments. It proceeds by considering how the processes of managing (deciding and acting) are utilized in attaining essential values while meeting the essential needs of the household (family): food, clothing, shelter, nurturance, affection and socialization.'

(Paolucci, 1976, p. 776-7)

There is much that home economists have done. There is much still to be done.

Figure I

A CONTEMPORARY VIEW OF HOME ECONOMICS

Part I

Content Orientation

The focus of the content orientation is the interrelationship of two concepts:

The individual and family++

The individual and family in their near environment

I. EXAMPLES of areas which elaborate this concept are: The study of the family as an institution in Canada, the psycho-social interior of the family, communication in the family setting, human development over the life cycle, and the human development of the self.

2. EXAMPLES of areas which elaborate this concept are: The study of family resource management, family finance, foods, nutrition, housing, clothing, textiles and applied design.

3. EXAMPLES of support area of study essential to the content orientation focus include: Economics, Sociology, History, Anthropology, Psychology, Biochemistry, Statistics.

++ 'Family is defined as a unit of intimate, transacting, and interdependent persons who share some values and goals, resources, responsibility for decisions, and have commitment to one another over time'.

(Bivens, et al., 1975, p.26).

Goal of Part I:

To develop a knowledge base in relation to the focus of the content orientation of home economics.

Part II

The tools of home economics

The focus of the tools of the home economist is on the competencies which facilitate the translation of the content orientation into the delivery of human services.

Tools are content free; transferable to different settings, times, and people; appropriate for specific tasks; and most usable when the principles and rules for a particular tool are appropriately applied for a given context.
EXAMPLES of cognitive, affective, and psychomotor tools are as follows:

- Problem Solving
- Critical Thinking
- Observation
- Persuasion
- Questioning
- Active Listening
- Food Preparation
- Clothing Construction
- Research Methodologies
- Relationship Skills
- Evaluation Techniques
- Visual Literacy Skills
- Group Processes/Leadership Skills
- General Systems Theory
- Negotiation/Conflict Resolution
- Media (films, books, for example)


Goal of Part II:
To master a repertoire of tools.

PART III

The Human Development of the Home Economist

The focus of the human development of the home economist is on the continued development of the whole person.

'Professional helpers must be thinking, problem-solving people; the primary tool with which they work is themselves ........ Effective helping relationships will be a function of the effective use of the helper's self in bringing about fulfillment of his own and society's purposes.'

Goal of Part III
To continually grow and develop as a person

PART IV

The Human Services Which Home Economists Deliver

The focus of the human services which home economists deliver is on the following synthesis:

--- home economics as one of the 'helping' professions:
'... I am assuming that home economics is a 'helping' profession and that the end product of this helping is .... the attainment of the well-being of individuals and families, the improvement of homes and the preservation of values significant in home life' (Brown, 1970, p.2)

--- home economics as one of the applied professions which requires doing something with knowledge (Combs, et al., 1971, p.3-4).

--- home economics as one of the 'helping' professions which synthesizes Parts I, II,III, and IV and the home economist's role is to help clients help themselves.

EXAMPLES of human services which home economists provide for the 'healthy', coping, competent client include some of the following:

Community and School Educator
As members of social service teams
As members of rural or urban extension teams
As dietitians and nutritionists
As members of private and government business teams
As members of international service teams and new categories

Goal of Part IV
To deliver human services which help clients help themselves optimize their chosen life style.

PART V

The Mission of Home Economics

The focus of the mission of home economics is the integration of Parts I, II, III, IV of the system to deliver human services to individuals and families to optimize their chosen life style in keeping with the broad principles of social responsibility to other global citizens.

A mission is an ongoing process. It is more than a goal because it is usually never achieved.


Goal of Part V:
To give meaning and direction to the subsystems and the system as a whole.

The focus of the whole system:
REFERENCES AND BIBLIOGRAPHY


A new concept of household education as a school subject

Irmtraut Richarz

Recent processes in the development of home economics have resulted in a re-definition of the objects and problem areas of the discipline (Richarz, 1974). Whereas domestic science is primarily orientated towards problems of labour, technology and economics, home education tries to capture the complex social and economic dimensions of the household. Ergonomics, technology and business economics, as the nearly exclusive components of domestic science, have not disappeared in this process, but they have been redefined within a more comprehensive framework which takes the household, as a socio-economic unit of society, as its starting-point.

As the result of close co-operation with the didactics of the subject and the demands of curriculum theory (Robinson, 1972), this view of the household has led to a new concept of household-related education and to the new name of 'household education'. Richarz, nd. Within this concept the household is understood as an area of human co-existence and no longer as the exclusive domain of women. The technical, economic and social tasks waiting to be taken care of in this sphere of life are the concern of every member of the household.

This new concept also answers some of the criticism raised against the old domestic science education (Borris, 1972; Zinnecker, 1972). Objections were raised against the out-dated assignment of fixed roles to women in the division of labour between the sexes and the criticism was made that women, by being confined to the home, were isolated from events outside and thereby disadvantages in their educational opportunities and in life generally. In addition, problems in primary socialization of children growing up in such households were referred to.

Critics and specialists in education who propagated the abolition of domestic science education have tended to miss the point that, in order to solve the problems arising out of the re-definition of the roles of men and women, it is necessary to enable guided learning processes to take place. Household-related education can make a valuable and constructive contribution to these processes. A unilateral change in the idea of the role of women - and also of men - is likely to lead to tensions and conflicts in the household or a family just because everyone is dependent on everyone else. If a girl or a woman is to fulfil professional and public roles, then it is essential for the boy or man to be able and prepared to take over household tasks.

A concrete attempt to prepare pupils for the conditions of a 'personal and social existence' can be found in the new syllabi for the subject of household education for the primary and secondary modern schools of the State of North Rhine - Westphalia, published in 1973 (Richtlinien .. 1973). According to them household education is compulsory from the first to the 9th form and can in addition be added to by optional classes.

Aims of learning processes in household education

If households are conceived of as areas of co-existence of human beings in society where certain tasks have to be done to safeguard existence and to satisfy material and non-material needs, then the first aim would be:-

See appendix for definition
the development in boys and girls of knowledge, abilities and skills necessary for day-to-day fulfillment of household tasks.

These are tasks originating from the various areas of the household, e.g. purchase and preparation of food, cleaning and looking after clothing and accommodation which is often connected with the competent use of gadgets, machines, automatic machinery and household appliances. However, in addition to trying to enable the learner to fulfill object-related tasks, the school subject of household education also aims at the encouragement of behavioural dispositions conducive to a better understanding of the other person, for it is particularly true of the household, as H. Roth states, that 'Every use of things and goods is also association in a social sense; it occurs in relationship to another human being and can help or hurt him; one can only speak of adult behaviour when social considerations go along with that behaviour.' (Roth, 1971, p.482).

The next aim of furthering the understanding of interdependencies in the household refers first of all to the ability to co-ordinate the various tasks within the framework of the organization of labour in the household and to correlate the wishes and needs of the members of the household and the available means. In this context, however, it is also important to encourage the development of a behavioural repertoire which would then be available to minimize tensions and include the faculty of showing tolerance and consideration on the basis of personal relationships.

The two following aims take into consideration the fact that the household is a sphere shielded from the public, although it has interdependent connections with other social spheres and is of course subject to social change in general:

- Realization of the interdependencies of households. Ability to cope with problems arising in households as a result of general social change.

- The decisions taken in households need to take account of not only the wishes and needs of the members of the household and the available means, but also external factors such as the infrastructure involved in the availability of goods, services and leisure. Obviously, the economic and labour situation must be taken into consideration in the planning of the household, in particular in view of the household budget. Changes in the economic situation as much as changes in value judgments can demonstrate how important it is to recognize new situations and to react appropriately.

Finally, household education aims at competence in dealing with the physical, social and personal environment and at the ability to make decisions and to cope with situations in private and public life. (Roth, 1971, p. 180)

Boys and girls must become capable of making judgments and acting accordingly in the various non-personal areas of the household as well as in the context of the interpersonal relationships of the household and of society so that they act responsibly for themselves.

Structure of contents - examples

Course content is established according to the needs of each subject matter in terms of creating an awareness of the interdependent factors involved in the taking of household decisions. The first household orientation, within primary education, is followed in later years by attempts on a higher level to relate single aspects to composite relationships: 'objective' questions are treated on a parallel to interpersonal and social ones. The general topics suggested for household education in primary and secondary education of the State of North Rhine - Westphalia can serve as an example.

**HOUSEHOLD EDUCATION IN PRIMARY SCHOOLS**

Learning area: Elementary Science (forms I - 4)

- The household as place of human co-existence in society
- Food - housing - hygiene and pollution control in the household

**HOUSEHOLD EDUCATION IN SECONDARY MODERN SCHOOLS**

Learning area: social sciences, forms 5 to 6

- The household as place of co-existence in society
- Housing requirements and how they can be met
- Food requirements and provision of foods for the household

Learning area: work studies, forms 7 to 9
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Improvement of working and living conditions in the household by using technical aids and by applying insights from labour economics

The household as a business and the relationship to the overall economic situation
The household as a socio-economic unit and its tasks in a changing society

Household education is not only concerned with the preparation of boys and girls for their concrete tasks of daily routine in the household, but it also tries to make them aware, as part of the learning process, of important interdependencies - this can be seen in the choice of topics from the 7th and the 9th forms:

Improvement of working and living conditions in the household by using technical aids and by applying insights from labour economics:

Topics from former domestic science education such as preparation of food, work studies and technology can of course also be found in the new syllabus for household education; they have, however, been fitted into a larger framework which is indicated by the overall topic for the year i.e. the improvement of working and living conditions in the household by using technical aids and by applying insights from labour economics.

In the 9th form, topics centre around the perspective of the decisions and of human co-existence in the household.

The household as a socio-economic unit and its tasks in a changing society:

Household management as decision processes
Social development and increasing range of decisions in households - factors influencing decisions and aims of households
Suitable alimentation of the human being in view of changing life conditions and energy demands
Alimentation as an area of human activity
Suitable alimentation as a social problem

In this form, work centres around the technical, social and economic relationships characteristic of life in the household and their interdependence with processes in society at large, questions which in previous forms would only be treated in individual aspects. Factors influencing decisions of the household, e.g. from the social environment, can be simulated in connection with a hypothetical case such as 'a move to a new home - purchase of new furniture and financial arrangements' with all consequences for the members of the household. For the aim of 'ability to recognize new situations and to react appropriately to processes of change', the problem of suitable alimentation under changing life conditions and demands affords an excellent starting-point. The combination of non-personal and social aspects is also apparent in a topic such as 'the alimentation of babies and young children and the importance for the processes of socialization'. Boys and girls would want to develop insights into the effects of various forms of care and affection for the development of the young child.

Shaping the learning situation

Aims and contents of syllabi and curricula are important prerequisites for successful learning
Concepts of home economics education

Processes, but it is the shape and form of the learning situation that determines to a large extent how successful the learning process of the pupil is going to be.

In addition to his statement 'that school involves learning which is related to life and oriented to science', H. Roth (n.d.) required that, 'the learning process and life must be related, for only in that way can the interdependence of learning and doing, of science and life be brought into perspective.

If the subject of household education is to contribute to people finding it easier to cope with situations arising out of the co-existence in a household, then it must give proper scope to the development and encouragement of suitable modes of behaviour. 'Time-honoured' pieces of advice on how to run a household, often passed-on, unquestioned, like recipes - as they can still be found in many school books are hardly useful in this respect. Household education must provide the knowledge necessary to cope with new situations, but it must also offer scope for decisions and actions so as to prepare the ability to decide and act appropriately to cope with real life situations. Many forms of teaching offer themselves here, e.g. courses, explorations, case studies, project work. What is important is that the learning situation is not finite but open-ended, and less teacher-centred than pupil-orientated. As experience has shown and as Ilse Lichtenstein-Rother (1975) has pointed out in connection with this approach to teaching there are many opportunities for learning and for achievement when the theoretical and the practical are combined: even pupils who are too daunted to try or who rarely achieve such goals can develop independence, productivity, and creativity.

Many opportunities 'for learning by doing' for gaining experience by manipulating objects and doing things, are afforded in the 7th form through the combination of motivating household tasks such as provision and preparation of food, the appropriate use of gadgets and machinery and the application of insights borrowed from labour economics. Pupils can participate in the planning, and alternatives for concrete tasks can be developed; but they can also learn how to co-ordinate tasks, to control and evaluate the results and to transfer them to the structure and the organization of the household.

As a result of the above accompanied by a change in the social forms of classroom organization it is possible in the following years to discuss the various decisions necessary to be taken in a household.

Possibilities and problems of household education as a school subject

Aims, contents and forms of teaching in household education can contribute to making boys and girls reflect on apparently quite self-evident concepts and to preparing them for modes of behaviour which lead to an attitude favourable to the human co-existence in the household and to society. This subject can therefore in our present social situation make an important contribution to the ability to cope with present and future problems.

The subject which hitherto had been the exclusive domain of girls has now become compulsory for boys and girls at all levels - a new situation for pupils and teachers alike. There has been a positive reaction by all those immediately affected by this decision. It is significant that boys often show greater interest in the subject than girls. An enquiry amongst the parents of boys showed that most of them were in favour of the change; however, the necessity is seen not so much for the normal situation of two partners running the household, but as a preparation for exceptional situations such as illness of the mother or wife when the boy or husband would have to cope with the household himself.

A positive reception has also been given to the incorporation of social and sociological aspects and the orientation of household education towards the household as an area of human co-existence.

There are problems as to the size of the syllabus and its aims and contents in view of the limited time available. This is all the more problematic since the majority of teachers of the subject received their education at a time when the subject had a different direction and when the subject and its didactics did not yet exist in many training establishments. These remain important tasks for in-service training.

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Appendix

Household Education (Haushaltslehre)

Household Education is that subject which aims at preparing girls and boys to master situations which occur in the home. It is concerned with a particular sector of human co-existence within society. The new concept of teaching about the home has been evolved during the last few years under the influence of Household Science the requirements of curriculum theory.

Historical aspect

The aims, content and position of this subject in the teaching curriculum are influenced by concepts held as to the position and function of the private household, the status of women in the family and society and the respective duties and roles of men and women.

In the past, Household Education was a component of girls' education. It was orientated to the current notions about the various duties of the sexes, and prepared girls for their future tasks as housewives and mothers by teaching them about, and providing them with, skills in the preparation of food, the care of the home and the household linen and clothes.

In the more recent years, this was extended to cover matters of a more general business and economic nature as well as consumer problems.

New conception

Household Education as it has been developing in the last few years has a redefined scope. It now goes beyond those questions of techniques and business and labour economics so far covered and attempts to include the complex social and economic problems of domestic life.

Lessons should aim at enabling boys and girls to acquire knowledge, abilities and skills to deal with the problems which occur in the various areas of home life and to make decisions regarding life together and the organization of work within the home. Another aim is to encourage and develop those modes of behaviour which are necessary when people who live interdependently, as in the family, are confronted with new situations in the course of social change, and which will enable them to master unaccustomed situations in private or public matters.

The situation of Household Education teaching differs from federal state to federal state. Household Education is taught under various names and with the accent on varying aspects in elementary, secondary modern and grammar schools, both as a compulsory and as an optional subject, as an independent subject or as part of a field of studies (social sciences, etc.).

In the vocational training system, it is sub-divided into various areas, whereby, apart from the private household, greater emphasis is placed on the running of institutions and on professional catering activities.
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Focus on home and family

Vincent G. Hutchinson

Home economics has a vital contribution to make to the outcome of the curriculum debate. Society relies heavily on the capacity of the home and the family to care for the needs of individuals and so it can be argued that during the formative years children should clearly understand what makes the home and the family function effectively. This is of crucial importance to the individual and the wellbeing of society.

It is significant that in the report of a world survey of home and family education, published by Unesco in 1974, 81 per cent of the member governments of the United Nations thought home economics education would become increasingly important. This view was supported by all the technologically advanced countries in the Western hemisphere.

In 1975, the Schools Council established a three-year research and development project, 'Home economics in the middle years'. Its aims were to reconsider the place of home economics in the curriculum of 8 to 13 year-old pupils of both sexes, and its relationship with social and environmental studies, with craft subjects and with science; to identify concepts and competencies for home economics in the middle years; and to prepare teacher materials for use with children aged 8 to 13 and evaluate their effectiveness.

During the initial inquiry phase, the project team met many teachers, specialist and non-specialist in their schools, at teachers' centres and at conferences. Many difficulties relating to the selection of content were confirmed as were uncertainties concerning the appropriateness of teaching methods and the relationship of home economics to the varied patterns of integrated work now being undertaken in schools in the primary, middle and secondary sectors. The conclusions reached by the project team hold substantial implications for the structure and teaching of home economics.

The fundamental premise of the team is that the focus of home economics is the home and family. Home economics is a unique subject because, through its focus, it integrates knowledge and draws upon methodologies and perspectives from other recognized disciplines. It lies at the interface between the home and the family and the products and services offered by society.

Thus the teacher of home economics has to integrate knowledge from many sources and apply it to the practical problems of everyday living. It is precisely because it is relevant in everyday life that home economics arouses the interest of boys and girls, and justifies recognition as a key area of the curriculum.

With its focus on the home and the family, how could home economics create a framework of understanding which would be of lasting value to pupils? The evidence produced by the enquiry showed that much of the content of home economics was presented in too fragmentary a form to achieve this.

The most important ideas within home economics must be identified so that pupils gain a more organized and permanent understanding of the subject than that acquired by learning isolated facts and skills. The team concluded that a framework of key concepts related to the focus was an essential basis for further development.

To help in identifying and selecting the most important ideas, facts and skills of home economics with the home and family as the focus - the following factors were considered: those...
needs of individuals which are met within the home and family - physical needs for food, clothing and shelter, social and emotional needs for love, security and a sense of belonging and intellectual needs for stimulus and education; and the needs of society for healthy and educated citizens who are able to maintain economic viability into retirement and for stable social groups.

Knowledge related to the home and the family.

Consideration of these factors provided the long-term purpose of teaching home economics and enabled the team to derive the key concepts of the subject. In this way, five concepts were identified: nutrition, protection, development, interdependence and management. These form a framework for developing a study of home economics. Their purpose is twofold: to help in the formulation of objectives and the devising of learning experiences and to enable pupils to acquire not merely a particular skill or item of knowledge but to build up a conceptual framework, thereby enabling them to make wide use of their knowledge.

Each concept embodies a number of ideas which have been placed in an appropriate sequence for learning, taking account of the logical build-up of the concept and the developmental stages of children between eight and 13 years of age. (A guide relating the developmental characteristics of children to the teaching of home economics is being prepared and will be published.) This sequential approach to learning is an essential feature of the curriculum model developed by the team. It is hoped that through this sequential approach to, say, nutrition, a pupil will understand nutrition as the link between food and health. This involves progressing from concrete experience of food to the abstract idea of nutrients. Further, it is vital that the pupil should be able to use his nutritional knowledge. He must, therefore, build up a concept of management alongside that of nutrition in order to make wise nutritional choices within the home and family context. Hence, though all the concepts are individually identifiable, the sequence of ideas for all five are interrelated. However, although all five concepts are equally important, management is different in nature from the other four.

Management is concerned with processes, for example, planning and decision making, with developing in pupils, an approach to the home which will allow him to use knowledge and skills drawn from other areas of home economics.

The curriculum model involves consideration of not only key concepts but also pupils' needs and the school situation. Needs are determined partly by considering the characteristics of children at different stages of development in the middle years and partly by the teacher's assessment of pupils' previous knowledge, experience and attainment.

The school reflects the teacher's assessment of the needs of the neighbourhood, his or her own professional experience, and the resources available in the classroom, school and neighbourhood. The curriculum model provides a flexible strategy to enable teachers, in a variety of ways, to plan programmes of work containing learning experiences, modes of evaluation and opportunities for subsequent modification.

From its inception, the project has placed emphasis on teacher involvement. Teacher development teams have been established in different parts of England and Wales to consider and apply the ideas which have emerged from the project. The commitment of these teachers and members of the advisory service to the work of the project has been greatly appreciated.

Their participation has been essential in the preparation of trial materials for use during the final phase of the project. The interaction between specialist and non-specialist teachers in primary, middle and secondary schools and their shared concern in developing programmes appropriate to families today, with developing the capabilities and awareness of children and with laying a lasting foundation of practical use and value for the next generation of parents has generated many ideas and innovations.
An experimental family casework programme was started in the household and family economics advisory work of the Martha Association in Finland in 1971. It was called the 'Plan your household' advisory programme (suunnitelmakotitoiminta) and aimed at helping young families, especially those living in the urban areas, solve financial, economic and other problems arising from their approaches to the management of their homes. At the same time, the programme was directed at making the advisory work of the Martha Association in family and household economics, both present and future, more effective and comprehensive in nature.

I) This paper is an abstract of parts I and II of the 'Plan your household' advisory report (Part I. Advising families on home management: a background, p. 12-27; Part II. Carrying out the program, p. 28-76). Part III. Evaluation of the program on the basis of the final inquiry (p. 77-81) is presented unabbreviated.

PART I

Resources. As an economic unit, a family uses resources at its disposal to meet the demands of the family members. Time is the most limited of the resources available. Its amount cannot be increased. Therefore, special attention was drawn to time used by every participating family. Amounts of income and property are almost constant during a short advisory period. Thus the focus was on the arrangements in the use of time, income and property instead of efforts to enlarge their absolute amounts. The main theme in the programme was to change attitudes, to increase knowledge and to teach new home managerial skills to the families and their individual members. In the field of consumption, the families were helped to use, as effectively as possible, their existing resources. An impartial stand was taken regarding the special wishes and consumption needs of the family members, both adults and children. The purpose was to encourage the family members to specify their needs, to discuss them jointly and to find solutions they could all accept.

Standard of living. The programme focused on the improvement of the following components of the standard of living:

<table>
<thead>
<tr>
<th>Component of the standard of living</th>
<th>Types of the advisory programme</th>
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<tbody>
<tr>
<td>1. Health</td>
<td>Advisory work on nutrition and on time use</td>
</tr>
<tr>
<td>2. Food and nutrition</td>
<td>Advisory work on nutrition</td>
</tr>
<tr>
<td>3. Housing</td>
<td>Advisory work on household equipment, furnishings and gardening</td>
</tr>
<tr>
<td>4. Family and family relations</td>
<td>Advisory work on co-operation and joint responsibility</td>
</tr>
<tr>
<td>5. Education</td>
<td>Education expenses are included in the advisory work on book-keeping and budgeting</td>
</tr>
</tbody>
</table>
Research strategies for need identification in different cultural settings

6. Work and working conditions
Advisory work on time use (in household work) and the use of household equipment
7. Financial resources
Advisory work on book-keeping, budgeting, and cost calculation
8. Possibilities for political influence
Not covered
9. Leisure and hobbies
Advisory work on time use and family resources, advisory work on co-operation

Goals. Generally speaking, the following stages of consciousness, evaluation and decision making can be separated whenever an economic unit's functions are goal oriented:

1. Becoming conscious of the family members' individual and joint objectives.
2. Evaluation of the priority and attainability of the objectives.
3. Choosing between the objectives and the methods to achieve them.
4. Implementation of the decision.
5. Evaluation of the results of the implementation.
6. Use of the evaluation results in future goal setting.

The importance of goal setting was emphasized especially in advising the use of financial resources. Among other things, plans to purchase household equipment, schemes for children's education and some other major plans for the use of income, as well as investment plans, were mapped out at the beginning of the advisory period. The amounts of money required for the implementation of the plans were reserved in the budgets. The families were sent information published by different research institutes as well as information produced by the Martha Association to be used in making decisions.

The families were also helped to use their resources to promote equality between all family members. Enough time and other resources should be reserved for private or joint hobbies, without requiring anyone to sacrifice for the good of the other members. These aims were pursued by advising overall use of the resources, by encouraging discussions between the family members on the use of resources, by enlarging the family members' knowledge and homemaking skills and by changing attitudes making them more favourable to co-operation and family life.

Decision making. Decision-making processes in the families were influenced mainly by promoting communication and co-operation. It was impossible for an outsider to tell exactly what kind of division of work or resources would be best in each family and in every decision-making situation.

Prospects for household economics advisory work in Finland

In Finland there is not a system of household economics advisory work reaching all families and households in need of managerial consultations. Thus the 'Plan your household' programme was a new kind of experimental advisory work on the whole range of home management. Experiences derived from it can be utilized in future new programmes. However, the organized home economics advisory work dealing with many subject matter areas reaches only a part of the families in need. Therefore advisory work to reach more families in need should be intensified and enlarged substantially.

Availability of qualified personnel is a prerequisite for organizing any advisory work. The standards of home economics education in Finland are high even from the international point of view, and education in family and household economics is given in all levels of the field. What is needed is continuing education for persons qualifying for new advisory tasks supplemented by special courses for those qualifying for family economics counsellors.

Experiences from the 'Plan your household' programme show that advisory work directed to the whole family is needed in the present society. Thus there are reasons for developing continuously
New trends in home economics education

forms of advisory work which will raise the standard of living in homes and improve the well-being and happiness of the families and their individual members.

PART II

Start of the programme. Families in the programme were contacted through sixteen regional Martha District Associations. The intention was to find, in each district two to four families willing to co-operate. The families should consist of both parents together with children of school age or younger. In order to have a homogeneous group of advisees, only wage-earner, salaried and entrepreneur families were selected. In this way, thirty-eight families throughout Finland joined in the programme. It was hoped that the families would take part in the advisory work experiment for about three years.

Norms in the advisory work. There are no recommendations based on research available in Finland at this moment for home management in different families. Therefore information had to be collected selectively from sources of a different character. For example, results received in the Household Budget Survey of 1966 were utilized in advising on consumption and expenditures on household appliances and similar items. The survey, of course, shows only how different Finnish households, on average, use their income.

Advisory work on nutrition and the recommendations on the daily need of nutrients and use of foodstuffs were based on research results in Finland and other countries.

Instructions on time use were partly based on average figures resulting from some minor Finnish time use studies. Advisory work on household equipment, cost calculation and test results were based on results gathered from various sources, mainly of Finnish and Scandinavian origin.

Of course average national figures as norms and standards in an advisory work are not really good solutions. However, the lack of recommendations based on research work, especially in the areas of family economics and time use, had to be solved in some way.

Flow and targets of the advisory work

Advisory work on the use of family resources passes through four stages:

1. mapping the benchmark of the family;
2. mapping the situation in a statistical control family;
3. comparing the situation in a programme family and a statistical control family; and
4. giving recommendations and instructions to the programme family.

The 'Plan your household' programme focused on the following areas of family life:

1. use of monetary resources, book-keeping and budgeting;
2. purchase and use of household equipment;
3. use of other property;
4. time use
5. nutrition - (a) fat and sugar, (b) vegetables, berries and fruit and (c) weekly meal lists; and
6. handling garbage.

Benchmark interviews. The Martha Association programme counsellor economics consultant from every District Association visited each family at the beginning of the programme. Both the husband and the wife were asked to be present during the first discussion. In almost every family, they were both able to meet with the counsellor and the consultant.
During the visit, the family was informed of the goals and future steps of the programme. The experimental nature of the programme was emphasized, and the families were requested to express their opinions about the methods used and the necessity of the interest areas dealt with during the programme period.

A benchmark interview questionnaire was filled in during the first visit (Finnish report, p. 84-92). Later, each family was given advice mainly on the basis of information in and need analysis resulting from this interview. Without exception, families reacted positively to this first personal contact between themselves and the counsellors.

In the benchmark interview, data were collected on the family's social and financial status, possession of household equipment and appliances as well as plans to purchase or renew them in the near future, other investment plans and other information about the goals of the family. Discussions during the interview gave the counsellors additional information about the family's attitudes towards home management and division of work between the family members as well as about the family's habits and interests. Seeing the family house, its surroundings and transport facilities helped in, a later phase, especially the advisory work on budgeting.

The benchmark interview gave an impression that husbands were more precise than wives in recalling the family's income, interests and reductions of debts, insurances, and the purchase prices of household equipment. Several questions about these points remained unanswered if the husband was not present during the interview. Filling in the questionnaire took two to three hours.

Advisory work on budgeting. The families in the programme kept records about their expenses during a period of four months in total. The book-keeping months were October 1971, March 1972, November 1972 and April 1973.

On the basis of the benchmark interview and the Household Budget Survey, a corresponding statistical model family was made up for each family to be used in the advisory work on budgeting. Consumption of the average family was not, however, presented as ideal, but only as information about the consumption of a Finnish statistical family resembling the features of the programme family in question.

After book-keeping, a written statement about the family's consumption expenses was worked out and sent to the family. It included an evaluation of the structure of the family budget with the help of the budget constructed for the statistical model family from the Household Budget Survey. Recommendations were made selectively, keeping in mind the family's living conditions in each case. On the basis of only a few months' book-keeping, it was not possible to draw valid conclusions about the typical forms or divisions of the expenditures. The recommendations as well as the budgets were worked out so that the families would have a good opportunity to follow them in their actual consumption.

The family budgets for the years 1972 and 1973 were worked out (for examples, see the Finnish report, p.93-5). They were based on the monthly book-keeping record, the model families' budgets and on the information the families had given about their plans in the benchmark interview. Possible adjustments in the budgets were made on the basis of follow-up and book-keeping results during both years.

Advisory work on the purchase and use of household equipment. Because plans to purchase and renew household equipment were numerous, time and effort were given generously in the advisory work concerning them. The purpose of the work was to help the families to estimate the value of the services produced with the machines or appliances in relation to the costs; to evaluate correctly the suitability and characteristics of the machine or the appliance planned to be bought, in relation to the family's own needs; and to use machines or appliances, already at their disposal, as efficiently as possible.

Cost calculations (Finnish report, p. 96-110) were given to families planning to purchase or renew household equipment, as well as to the Martha Association and the District Associations to be used in other advisory work. The families were also sent test results and other available information about the equipment.

Also the letters to the families after the book-keeping months included advice on the purchases. Rationalization problems of the household work in some families were also discussed in articles in Emäntälehti magazine during 1971-73 (for the list of the articles, see page III, the Finnish report).

Advisory work on the use of other property. Some observations on the use of other property were
included in the programme. This form of advisory work was mainly aimed to give background information for budgeting, for the planning of the division of work between the family members, and for promoting co-operation in housekeeping. Questions dealing with housing, gardening, car costs, paying debts and insurances, as well as earning an income and getting an occupation were included in the programme.

Advisory work on time use. Through the time use investigations, attention was drawn to the division of work between family members in terms of paid work, school work, and household work. Time use in every family was ascertained by two measurements, the first of which was carried out on a weekday in November 1972 and the second in May 1973. The intention was to establish, by means of a third observation day, if there were any changes in the division of work and use of time during the advisory period. However, the shortage of employees in the programme prevented this. Thus it is not possible to draw conclusions about the effects of the advisory work in this project.

Records of the time use were made on charts where twenty-four hours were divided into ten-minute periods. Twenty-one different activities were named in the charts. (Records of the time use measurements are presented in tables and figures on pages 52-68 in the Finnish report.)

As a conclusion from time use research, it can be said that the division of housework between the family members was uneven. Housewives did most of the housework regardless of their possible employment outside the home. The amount of household work done by husbands remained relatively small and constant in all families. Instead, the relative amount of work input of the children increased when the total amount of housework diminished in the family. The time spent in household work per day was longest in families where the wives were not employed, 12.3 hours on the average. The shortest, 6.8 hours, was in families where the wives were in full-time employment outside the home.

Together with the results from the time use measurements, the families received a written evaluation. A drawing of column diagrams showed how the programme families on the average and the family in question used their time in different activities. The results were presented in different family groups depending upon whether the housewife was non-employed or employed part-time or full-time. With the aid of the diagrams family members could see how they spent their time compared with similar members in other programme families.

Advisory work on nutrition. In connection with 'For your health nutrition' programme and the 'Good morning breakfast campaign' of the Martha Association, the families measured their sugar and fat consumption for one month. The intention was to find out how much the families used of different kinds of fats and sugars and to guide them towards healthy eating habits if necessary.

The investigation of the use of fat and sugar was made in November 1972. Recommended maximum amounts of each nutrient were calculated in every family and for each family member. The book-keeping showed that in twenty-five families the fats were consumed in smaller amounts than the recommended maximum amount. Ten families consumed too much fat.

The consumption of sugar in nearly all families was below the recommended maximum amount. Only two families consumed more than recommended. However, only the use of visible fats and sugar were found out in these book-keeping measurements.

The results and an evaluation were mailed to the families together with information on the recommended maximum amounts for each family member (Finnish report, p. 113-14) and a pamphlet issued by the Martha Association on the use of fats and sugars.

The consumption of vegetables, berries and fruit was measured in April 1973. The method used was the same as in the case of fat and sugar. The families in the programme consumed a daily average of 60 grams of vegetables per capita. In ten families the average Finnish consumption was exceeded by at least 100 grams. Only three families exceeded the international recommendations on the use of vegetables.

The families consumed 131 grams of berries and fruit per capita per day on average. This amount is slightly smaller than the Finnish average. More than half of the families consumed berries and fruit in at least the recommended minimum amount per person.

If it had been possible to carry out the observations during some season other than Spring, the results would probably have been different. The use of potatoes was not included in the consumption of vegetables.

The purpose of planning weekly meals was to help in food preparation and division of housework between family members, as well as to save time and money. From the nutritional point of view, the aim was to emphasize the importance of varied and balanced diet in maintaining and promoting health.
The lists of weekly meals were planned a couple of times during the advisory period. A booklet from the Martha Association on the planning of meal lists provided a useful guideline and, if the families wanted, they could ask for help from the District Association.

Handling garbage. During Spring 1973, a one-week observation on the disposal of garbage was included in the advisory programme. Garbage was sorted according to the ease of its destruction, and the amount of each type of garbage was estimated or weighed. Due to the lack of resources, no concluding reports were made from this project to the Martha Association.

PART III Evaluation of the 'Plan your household' advisory programme on the basis of the final inquiry

Results from the final inquiry

Intention. In the final inquiry there were thirty-seven families left from the original thirty-eight Plan Your Household families. Only one family had dropped out of the experiment.

The final inquiry was sent to the families to be answered in April 1974. It was aimed at finding out the families' opinions about the usefulness of the programme attitudes towards the advice received, the importance of different topics for them and their wishes for the development of similar programmes.

Changes in family sizes. There were some changes in family sizes during the three-year experiment. There were originally four families of six, but now there was only one left. One family had had a new member, in another a son was in the army, and in one family two children were studying away from home. The death of a grandmother had made one family smaller.

Evaluation of the usefulness of the programme. At first we wanted to find out the families' general opinion about their participation in the programme. To make the answering easier, we gave different kinds of qualifying words. The results were as follows: eighteen families considered participation to have increased their amount of knowledge; nine families considered participation to have been a rewarding experience; five families considered participation to have been worth the trouble; four families considered participation to have increased knowledge, been rewarding and worth the trouble; and one family considered participation to have been troublesome, but to have increased knowledge.

Influence in housekeeping. When we asked about the influence of the programme in housekeeping, the same result was received as in the evaluation of the material benefit of the experiment; twenty-four families said that the programme had improved their housekeeping for the following reasons:

Controlling the use of money as well as the book-keeping made the expenses clearer which, among other things, decreased the food costs. The family's purchases were planned and thought over more thoroughly. When the whole family's knowledge about housekeeping was increased, it developed a more positive attitude towards it. Discussion about money matters became easier in some families. In some others, family members controlled their own expenses and explained to the rest of the family how the money had been used. Husbands and children became more interested in housekeeping during this control period.

We can, however, see from the answers that the families had previously kept records and together discussed money matters.

According to the inquiry, the families in the programme kept records as follows: twelve families continuously, twenty-one families at times and four families not at all.

Making use of the advisory work. Versatile advisory help was available for the families in the programme from experts in different fields. Twelve families used help from the Martha District Associations in purchases for the home. Advice was asked about the interpretation of test results
cost, and the location of stores selling household equipment. Additionally, advice was sought about
the planning of kitchen furnishings.

The result received shows that in respect of large and expensive equipment, experts are con-
sulted on test results and costs but smaller purchases are decided on the basis of personal discre-
tion and information.

Influence on time use observation. Time use observation led to fifteen families changing their
habits remarkably. Another eighteen said they had benefited from the time use observation.

The study was useful for the families because in this way they found out how much time they
spent in paid work and in work in the home, and who participated in the homework. As a result of
the observation on time use, planning of homework and timing of the priority of the jobs became
immediately easier. The following examples have been picked out of the opinions:

Children took more part in homework. Mothers had more spare time. Homework was better plan-
med, and thus more spare time was left for hobbies.

After the advisory letter on time use was sent from the Martha Association, nine families
reported still more changes in the family’s attitudes towards homework. After this, work schedules
were prepared for children. Jobs were divided between family members. Attitudes towards homework
became more positive.

Work due to the observation. The work in which families were involved in consequence of the dif-
ferent control forms gave the following results according to the inquiry: fourteen families con-
sidered observation on expenses most difficult and elaborate; ten families, on time; nine families,
on the use of fat and sugar; and four families, on the use of vegetables. Observation on income
had not caused difficulties for any of the families.

Advisory letters. In advisory letters, we handled results of different observations on each family,
and also gave an expert’s opinion of the observation. These letters, drafted by experts in the
Martha Association were considered necessary by thirty-six out of thirty-seven families.

As a result of the advisory letters and observation, thirty-one families consumed vegetables,
berries and fruit in accordance with the recommendation. There were even slight increase, even
though twenty-two families thought they had in general used sufficient quantities of vegetables,
berries and fruit. One respondent from Northern Finland reported that more vegetables were eaten
than before, though it was difficult to get them in winter. Observation on the use of fat and
sugar brought about changes in twenty-four families.

Programme content. Only a part of the activities at home was included in the programme: use of
money, time use, purchases, and food. This is why the participating families were asked what kind
of advisory work should possibly be added, what should be enlarged, what might be added and what
might be omitted if the activities were to be continued.

According to the answers, twenty-seven did not want to drop any of the subjects, three did
not answer at all, seven wanted to omit the observation on time use because they had it well organ-
ized already.

Some suggestions for the future Plan Your Household programme included clothing, information
on textiles, furnishing, taking care of the home, gardening and planning of gardens, problems of
mental health, consumer information on prices, buying, determining priorities of needs as well as
still more detailed advisory work on nutrition.

Summary

This final inquiry which included twenty-one questions gave an evaluation about the opinions which
the families had had during these three years. Opinions show that intensified advisory work can
serve families in a totally different way from ordinary advisory work. This is shown by the follow-
ing extracts from the answers:

'We have been pleased with the programme, if it continued, we would enquire still deeper into the
problems.'
'Our family has been healthier. Without this programme our consumption of vegetables would not have increased.'

'It was nice to take pains in such an interesting experiment.'

'I took the advisory letters to my Martha group.'

'The Plan your Household Programme has been mental therapy for me as a housewife, when I received credit from an expert for my work.'

The fact that several of the questionnaires were signed by both the husband and the wife is informative of co-operation within families. Thirty-six of the families were willing to continue with this kind of programme. This should show that participation was considered sensible by the whole family.

Reference

Research in home economics

Lila E. Engberg

Research questions and research needs

The field of home economics takes a value position regarding the importance of the family and creating a better quality of life for all people. This position and potential capability with respect to family life is unique, essentially because of the central focus on the organic whole of the family as an environment and the family in the near environment, and its mission to improve the quality of life. Early research and educational programmes in home economics, however, did not pay attention to the 'whole' of family life and the reciprocal relationship between man and his immediate environment. Subject areas such as food, clothing, home management, family and child studies developed as separate and distinct entities, each generating research which tended to become increasingly specialized and fragmented. However, current world-wide concerns about relationships between technology and people, about poverty, population growth, scarce energy resources, conservation and disparities between families in the industrialized and less industrialized parts of our various countries have given rise to broader conceptions of family problems and research needs.

1902 definition of the profession:

"Home Economics in its most comprehensive sense is the study of the laws, conditions, principles, and ideals which are concerned on the one hand with man's immediate physical environment and on the other hand with his nature as a social being, and is the study especially of the relation between these two factors ...." (AHEA, 1975)

in today's world has become increasingly relevant.

There are various examples of this. First, the nutrition problem will not be fully understood nor solved until we examine the complex pattern of relationships, beliefs and practices which revolve around food at family level. The type of labour normally associated with food farming in many countries is family labour. Both men and women are involved, men generally preparing the land for planting, women doing the planting, harvesting, threshing and winnowing, and carrying the produce home or to market. Women, most of whom are responsible for other domestic duties as well, have a heavy work load and low levels of technology available to help them. Thus the amount of time and energy available for meal preparation and care of family members is limited. There are questions to be asked about time and energy expenditures of men and women and the effect of their work roles and statuses on the nutritional well-being of family members.

Within the family system too, food is used as an exchange commodity which can be sold as cash or given away as payment of tributes. Problems of malnutrition in the family then, could be the fault of family, socio-cultural practices, the food production, distribution and utilization systems as well as the lack of nutrition knowledge. Many of these need to be examined together in research.

In an industrialized country such as Canada, the food problem takes on a different dimension. According to a recent national nutrition study, about half the adults in Canada are overweight. (Canada, 1975) Family patterns are such that children are encouraged to eat all the food that is served and, in addition, are given between-meal snacks and rewards of sweetened soft drinks, candies and pastries. Sweets are the prestige foods. Habits developed in childhood are carried into adult-
hood and coupled with a sedentary life-style lead to life long obesity and health problems. Questions related to income, family life style, decision-making patterns, parent-child relations need to be asked in order to understand and solve the obesity problem. These are the unique kinds of questions to be asked by home economists in order to help us see relationships between human behaviour, technology and nutritional status.

Similarly, questions related to how to improve man's physical environment cannot be answered without considering the daily activities, interactions and needs of various family members. Adequate housing is more than shelter. It provides private spaces for man's work and woman's work, for procreation and for children, for ritual and religion and common space for the public. Yet a 'built' environment which includes these spaces, enhances family life and the full development of the whole person is increasingly difficult to find in the city. (Krisdottin and Simon, 1977). It has been reported that the world's urban population has doubled in the last 25 years and that it is expected to double again so that half the world's population might be living in cities and towns by the end of this century. (Rio, 1976). What do we know about the housing needs of people who migrate? In some countries the only housing available in the cities is housing for single males or for small nuclear family units. Many women, children and elderly have been obliged to remain in the villages. How does the kind of housing available in the city influence the migration patterns and family life? How do people who migrate obtain their housing? In what new ways do they obtain and prepare their food? In what ways could families become involved in planning or building their own homes? Would communal kitchens, laundries and day-care centres meet the needs of poor families in the city? What would encourage people to remain in rural areas, thus avoiding the overcrowding and the tremendous upheaval and concentration of poverty in urban areas? Can we design and develop a middle level technology that would lighten the work load of rural women? These are interrelated questions that could well be explored by home economists.

Third, clothing is another human need which has importance to individual well-being. In many cultures, cloth tends to become a priority purchase as families move from a semi-subsistence into a cash economy. Dress is a visible 'sign' to outsiders of each person's role in society, of status in the family and in the larger community. Home economists need to ask questions about clothing needs and how various population groups obtain their clothing. What are the alternatives available and the costs? What are the clothing expenditure patterns? What construction features need to be learned by whom in order to provide comfort, function and acceptable aesthetics in clothing in a given culture? A focus on needlework or sewing within home economics has assumed that learning home sewing techniques was the answer for the family, but it is not. More research is needed, first to help us understand clothing behaviour and how families in various cultures meet clothing needs, then to identify individual and family clothing problems and test possible solutions.

So far, in this introduction, questions related to man and three physical components of his environment have been discussed but central to each of these are questions of family management. Management includes decision making and the organization of resources to reach family goals. What are the changing human and material resources available to the family in various socio-cultural settings? What kind of value-goal relationships do people have? What is their decision-making style? Who takes what decision in the family over the life cycle? Is there a male-female power relationship which needs to be understood or altered in order that certain goals are reached? Home economists do not study the family for the sake of understanding family structure or function but in order to learn how to help families achieve goals and reach a better quality of life.

This need was clearly pointed out in 'National goals and guidelines for research in home economics' sponsored by the Association of Administrators of Home Economics in the United States. (Schlater, 1970). Research-related concerns were organized under five major goals which could be useful in many countries because they reflect the definition and the totality of family needs; and they are broad enough to transcend international boundaries. They are presented here as a possible help to re-organizing subject matter which is now separate and isolated and to posing research questions.

Goal 1. Improve the conditions contributing to man's psychological and social development.

Goal 2. Improve the conditions contributing to man's physiological health and development.

Goal 3. Improve the physical components of man's near environment.

Goal 4. Improve consumer competence and family resource use.

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Goal 5. Improve the quality and availability of community services which enrich family life.

The research system

The goals mentioned above are broad enough to be considered universal within the field of home economics. However cultures differ; so do physical, social and political conditions and views of family problems. It is essential then, that each country or locality organize its own research system. A hierarchical system of research can allow different levels of participation and different levels of expertise to contribute within the system. Basic research may be needed to provide the theoretical concepts which form the guiding framework for a wide variety of research activities at lower levels. This may be internationally valid. Families themselves can participate in lower levels of field research or experiments within their home community. They can identify problems, and take part in a systematic test of solutions which will improve their own lives. The approach which is offered here is one which allows this. It is a middle level research which involves field workers, students and teachers in a process where they discover problems and issues related to home and family life and solutions to those problems in their own locality. Research is a never-ending discovery process which can take place at every level of education in universities, colleges, schools and out-of-school programmes.

The publication 'Learning to be' points out that there is educational wealth to be found in the daily life of the community (Faure et al. 1972, p.175) and that 'we cannot hope to absorb the knowledge explosion by cramming brains with more scientific facts.' (Faure et al. 1972, p. 148).

Educators can help people adopt a scientific frame of mind so that they become inventive; able to examine facts, shape concepts and develop their own solutions. Thus, they will become less dependent on foreign textbooks which may be inappropriate or quickly outmoded.

A similar approach is suggested by Coombs and Ahmed in developing an agricultural knowledge system. They state that:

'The problems identifying and responding to the needs of farmers are best handled when the research system reaches down to the farmer - when the researchers are in close liaison with both the extension service and a good sample of farmers themselves'. (Coombs and Manzoor, 1974).

A network of experiment stations linked to experimental rice production schemes carried out by farmers themselves helped farmers boost their rice production. A network of families linked through a home economics extension or other type of educational service to a research centre might similarly improve some aspects of family life. Research and action are then intertwined.

Research procedures

Research is really a discovery or problem-solving process. Its aim within a teacher-training college or lower level education programme is to develop the students' capacity to understand and pursue methods of inquiry and become more analytical. The steps in the process are: recognition of a problem situation; definition of the problem; formulating propositions for a solution or hypothesis; developing the research design; organization of data and measurement; collecting the data; data analyses and interpretation of results; formulating conclusions; writing the research report; and applying the findings.

The next few sections will describe briefly each of these procedures. A special effort has been made to simplify the explanation in order to encourage educators and field workers to take part in research activities. The practical concerns of the people rather than the scientific or intellectual interests of academics suggest the topics. Statisticians and computers are not necessary to help the process.
Recognition of a problem situation

Improvements in the quality of family life cannot be anticipated without recognition and understanding of the existing situation. Descriptive information such as the following may be required as a first step in establishing what families are like in a given locality; in other words, to establish local norms regarding:

a) household size, composition and organization
b) housing arrangements and conditions
c) occupation, sources and size of income
d) consumption and expenditure patterns
e) food patterns and nutritional status
f) clothing practices
g) husband-wife, parent-child relations
h) child care practices
i) work roles and management practices
j) use of the market and other community services

The listing is not necessarily complete and does not imply a sequence or isolation of interests. However, it is a first phase for home economics educators and students to study family life in their own communities.

It is important as well to study the market place and the goods and services available for families. What is sold in local markets and in the shops? What community agencies (e.g. health, family planning, agricultural extension) provide a service in the locality?

Phase two in the sequence of research activities could be to identify the problem areas. Problem situations are discovered through observing the discrepancies between what is considered ideal and what actually exists, and noting the difficulties or the concerns of the people. A research area may contribute to more than one of the listed goals but it must be well-defined and specific enough to be answered by scientific investigation and the level of resources (including the money) which is available; and it should be relevant to the local needs.

There may be technological problems that need to be solved to improve standards, cut costs, reduce the work load and facilitate family well-being, problems such as:

a) the design of pieces of equipment to use in the home, the farm, or village (e.g. for food processing)
b) the design of new space, work and storage arrangements in the home to meet changing family needs
c) the development of new food preparation to improve the diet
d) the development of play materials for children

Social concerns and human relationship problems within the family are another set of problems which may need solving through research. Students could work with families finding ways to identify goals and resources, to improve interaction behaviour, to guide development of their children. The concrete technical task to be done might serve as the vehicle for helping members of the family relate to each other in different ways. Women may not be able to design pieces of equipment or new kitchen arrangements on their own. They may need the support and engineering skill of men in the family or neighbourhood. They may need to initiate and negotiate, thus testing a communication skill at the same time as other skills and techniques are being tested.

A third stage in a sequence of problems is that of making research information available. An important part of the research effort is to explore ways of disseminating the new ideas to increasing numbers of families, to government and community agencies and to other research organizations.
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Since the overall goal is to improve the quality of family life, it is important that research efforts contribute to action and that the action in turn be evaluated. In that way, there is a continuing cycle of research activities. As one problem is solved, others are discovered. Family situations, living conditions and community services for families continually change and so do the types of problems. Findings about local problems can contribute to the understanding of larger issues related to the quality of life.

Definition of the problem

A problem situation may be recognized but the next task is to formulate a concrete definition of a problem which can be solved. Solutions must be feasible with the resources available. That is, the research project must be narrow enough to be managed, but not so narrow that little contribution is made to knowledge which already exists. There is a body of knowledge based on previous studies which have been undertaken. Every new study should be linked to other studies and fit a body of theory at a higher level of abstraction. The new study fills a gap in the total configuration of knowledge about a topic. It is important, then in defining the problem to recognize how it fits with other studies; and the purpose of carrying out an additional piece of research. That means it is essential to read and know the literature on the chosen topic. If the concern is child rearing practices and families' use of day care centres in Accra, the first task is to search for information which has already been written on that topic, then to identify what is not documented. There is anthropological literature about various ethnic groups in Ghana, there are theories about child rearing and other literature about use of day care centres. Those who are guiding the research in the larger research system ought to know this literature and help the student get acquainted with it. Advanced levels of research require a literature review and an explanation of how findings from the chosen study will contribute to that which is already known. The links to the literature may not be quite as obvious to researchers working at lower levels of investigation; Nevertheless they are important and point out the advantages of working within a hierarchical research system with higher authorities who have a knowledge base. In the field of home economics, the best way to identify a problem situation is through contact with families as they live their everyday lives. At higher levels of operation, the researcher can define and delimit the boundaries of the particular study to be undertaken. Some examples of problem areas and problem definitions will be given in the next section.

Formulating propositions for solutions or hypotheses

Usually in thinking about a problem area, the researcher also thinks about possible solutions or explanations. For example, we say

'The more we eat the fatter we get' or 'The more time women spend on agricultural work the less time they spend on household tasks', or 'The higher the incidence of bottle feeding the greater the frequency of diarrhoea in infants'.

These are propositions or speculations about how two variables relate to each other. Note that there must be at least two variables in order to have one proposition and that we assume the direction in which one influences the other. The term 'variable' refers to any characteristic whose value changes from one situation to the next or from one individual to the next.

The term hypothesis is often used in research to refer to a proposition, temporary theory or explanation about certain facts or happenings. The Concise Oxford Dictionary defines hypothesis as a

'supposition made as basis for reasoning, without assumption of its truth, or as a starting point for investigation'.

Hypotheses set the goals or give directions to research which is concerned about relationships.

Not all research begins with hypotheses, however. Descriptive research such as that suggested, the first step in getting acquainted with family life in a given locality, would not require a hypothesis. There are no propositions or theories about family life in these kinds of studies. Another important type of research is carried out in order to arrive at significant
hypotheses. Researchers may know so little about a topic that they cannot establish ahead of time what the relationships between various factors are going to be. There are many such studies, for example, one which examined the relationship of planned communities on the behaviour of the people living in them. There is a concern about two factors - 1) planned communities and 2) the behaviour of people, - but there is no proposition about the type of behaviour to expect.

Formulating a proposition with two variables is a small contribution towards a theory. Normally there are several variables that contribute to a given condition. In constructing a theory, the researcher describes in detail the kind of relationships and linkages which are expected between these variables. This type of research is complex and would take us too far away from the practical studies which are the concern of this publication.

Even though the study to be undertaken may not be suited to the stating of formal hypotheses, the problem must be stated clearly in order to give the direction of the study. Here are two examples of problems and the steps to be taken in formulating propositions for solutions.

A. Step 1 Identifying the problem situation

Many school children in Kenora school are not getting enough lunch

Step 2 Definition of the problem

How can the families in Kenora get involved in providing lunch for the children in school?

Step 3 Proposing a solution or proposition

If one of the community agencies prepared a low cost lunch to sell to the children, all children would have something to eat at noon.

B. Step 1 Identifying the problem situation

The families in Algoma eat very small amounts of protein in their daily diet.

Step 2 Definition of the problem

How can families in Algoma increase the consumption of legumes which are grown in their locality?

Step 3 Proposing a solution

If a fireless cooker was available so that dishes containing legumes could be cooked without increased fuel consumption, the amount of legumes consumed by families would be increased.

Note the problem was stated in the form of a question and that the question arises because of initial recognition of a problem situation. If the question is to be answered, we can propose a possible solution to be tested by research. An important step in getting research underway is to develop lists of questions related to a problem. The families themselves can help. No doubt they will have many questions and possible hunches about solutions such as those posed above. The work of the researcher is to clarify and help decide questions about the probable solutions. Some questions are too vague or abstract to be answered with the research procedures available. A question such as 'Do parents with liberal values have less difficulty discipling their children?' may be difficult to answer because we may not be able to define and measure liberal values.

It should also be noted that the problems in the two examples were specified to a locality. That means that the findings may not be generalized to other locations. Highly theoretical propositions do not refer to specific times or places. Thus the results are universally applicable. That is another of the differences between basic research which contributes to theory and smaller scale studies of an applied nature. The applied studies are not discounted but are recognized as meeting different kinds of needs within an accepted theoretical framework.

An article 'Hypothesis Versus Problem in Scientific Investigation', which appeared in a 1971 research methods publication puts forward the view that
'... hypotheses are not prerequisite to every study which contributes to organized and systematic knowledge of the observable world. It is also concluded that the recognition of a problem requiring a solution or a question deserving an answer is a step that must be taken in every sort of systematic study, and, therefore, that a problem is a more characteristic of scientific method than a hypothesis.' (Franklin and Osborne, 1971)

Let us be sure then, that our problems and propositions for solutions are clearly stated so that we can take the next step in our research.

Definition of terms

The terms which are used in the study must be defined in order to help clarify what is to be studied. The terms family or household for example have many meanings and it is important to state a definition to be used for a particular study. Definitions used by the Canadian Census include:

A family consists of a husband and wife (with or without unmarried children), or a parent with one or more unmarried children living together in the same dwelling. Adopted children have the same status as own children. (Census of Canada 1968, p.61)

Household according to the census, refers to .... all persons living together in a dwelling regardless of blood or marriage relationship and it may consist of one person living alone. (Census of Canada 1968, P.6.2)

These definitions may not be appropriate in another culture. Definitions of 'lunch programme' and of 'community agencies' would be required for the example given on page in order to delimit or clarify what is to be studied.

Developing the research design

The research design indicates the steps to be taken for collection and analysis of the data. It sets the framework for exploring the problem or for testing relationships between variables. Research designs differ depending on the nature and purpose of a particular study. Some of the differences and basic principles will be described below.

Variation. Research in the natural sciences such as the production of a new variety of crop or the introduction of a new ingredient in a prepared food product lends itself to controlled experimental conditions, allocation of treatments (e.g. varying amounts of fertilizer in the case of a crop, or differing amounts of an improved flour in a baked food product) and controlled observation. The research design should allow experimental conditions which are as different as possible to give the variance in relationships a chance to show. That is, we want the amount of fertilizer or flour used to be as varied as possible in each of a series of experiments so that differences in the end products of each experiment are easy to see.

Some of the experimental work carried out in the field of home economics may be purely technical in nature, thus lending itself to controlled experimental research design. Controlled experiments can be performed with groups of people too. In its simplest form, the group is divided randomly into two smaller groups, or two matched groups are purposely selected, half of whom receive the treatment while the other half do not. For example, one group of students in a school may be taught a set of carefully prepared nutrition lessons and the other group nothing on nutrition in order to find out if there is any change in eating habits due to increased knowledge. In this case, it would be important to find out the eating habits and the levels of knowledge of the entire group before and after the set of lessons. The two groups of students would be compared at the end of the experiment to find out if knowledge of nutrition changed and if it influenced food practices. Experimentation in the teaching of home economics is described by Hall. (Hall, 1967).
Many studies will be social in nature. Families are social units and thus research based on social theories may be appropriate for home economics purposes. Social or behavioural research cannot be undertaken using highly controlled experimental conditions. There are ethical questions to consider when human subjects are given certain treatments or when information (e.g. the nutrition information) is being withheld from some groups of participants in order to examine variations in behaviour. The suggestion offered is that the researchers gain the co-operation of all the people concerned and that they participate together in the experiment or study.

A research design can be developed to compare varying circumstances that exist in a population. There must be variation in order to take some measurements and make comparisons. In the school lunch problem, there will be variations in the childrens' family backgrounds and in the type of lunch, if any, eaten.

**Sampling.** A second basic requirement of research design is that a population of interest be defined or that a sample of that population be selected to take part in the study. Sampling is a part of most research designs because it is often impossible to gather information from every unit in the population of interest. The term population refers to all of the objects, attributes or people having a common trait. Samples of fertilizer would be taken to carry out a series of field trials on a given crop; samples of flour used to test the food product in a laboratory; samples of individuals in a community or country to test their preferences for a certain consumer product.

In social surveys it is important to know whom to interview in order to find the answers to problem questions. It is too costly and time-consuming to ask every individual, although this is done for some purposes. Census taking is an example of enumeration of the whole population in a country. The whole population in a school, all the households in a village, a whole group of people in a particular occupation, or all the early school leavers in a selected year are other examples of whole populations that might easily be included in a home economics study. A sample, on the other hand, is a cross-section of the larger population or universe. If it is taken in such a way that all the characteristics found in the population present in the sample, it is called probability sampling. The sample is representative.

In nonprobability sampling, the assumption is that one can pick the cases to be included in order to satisfy one's research needs (e.g. - the first hundred students to arrive at school on a certain day, a quota of cases from each of four socio-economic strata, in a given population for a financial expenditure survey, or all cases that are judged typical of a certain population of interest). One cannot make generalizations about results when this kind of sampling is used, but it may still serve a useful purpose for home economics studies. One could select all families who have children enrolled in the home economics class in a local school, for example, to find out the families' eating habits before and after a series of nutrition classes.

A large sample is not necessarily better than a small sample. Small samples, carefully drawn will reduce costs and can allow increased attention and accuracy in analysis of the data. In fact, the focus of home economics on families within a near environment and the need for a grass-roots approach which involves families means that nation-wide samples might be impractical. It could be extremely valuable learning for students and teachers to delimit a study to families in a selected neighbourhood or community. The neighbourhood where the school is located could be a priority study area.

Random sampling is a common type of probability sampling if results are to be generalized to other groups. In this type of sampling a complete list of individuals or families in the population must be available and numbered. Then one can draw numbers until one has the desired number of cases or use a table of random numbers, taking those cases whose numbers come up as one moves down the column of numbers. Details of this procedure and other sampling techniques can be found in most research methods and statistics textbooks. (Doby, 1967; Simon, 1969, Yang, 1966).

**Control.** All research other than descriptive research is troubled by the presence of confounding variables. In an experimental design, a means of control can be introduced by withholding treatment from half the sample and by varying other experimental material or physical conditions which are not of interest to the purposes of the study. If we are interested in the effect of fertilizer on a crop, we want to make sure it is the fertilizer that is causing
the difference and not some other factor. Therefore, the experimental field plots could be laid out so that some crops would be fertilized and others not, and some planted early and others late. These types of controls would help the researcher find out whether it really was the fertilizer that was causing the difference in production output.

Similarly, in the case of a food product we may wish to satisfy the taste of a group of consumers with respect to flavour, texture and appearance. Our main interest is in the effect of a new flour, but we prepare some products using the regular flour and vary some of the other conditions such as oven temperature and baking time. Then we can find out whether the texture that is preferred is really due to the new flour or not. The regular flour and other conditions serve as controls.

The controlled experiment has also been used in the social sciences. It was used by Abell in her study of radio farm forum on the behaviour of a selected sample of the population in Ghana. (Abell, 1968, p. 22-34). Random samples of people heard the radio broadcasts giving agriculture and nutrition information while others in the sample did not. All the people were given a test of their knowledge before and after the broadcast series to find out whether there were any changes in their understanding. If those who did not hear the broadcasts changed in the same way as those who heard the broadcasts, we could assume the programmes were a failure, but if those who heard the broadcasts had a higher level of knowledge at the end than those who did not, the programmes were a success.

When the manipulation of circumstances (such as the above) is not possible, a research design can be developed with at least three variables, one of which can serve as a control. We cannot explain the cause of a problem or arrive at a satisfactory solution to a problem without examining alternatives. One of the propositions given as an example was that:

'If one of the community agencies prepared a low cost lunch to sell to the children, all children would have something to eat at noon.'

I am sure home economists could recognize another variable - the size of the family's income, and a fourth variable - the willingness of the family to pay for the lunch for their children. These questions could be added and served as controls in the study. When large numbers of variables are considered together, it is possible to test for an association between two of the variables at a time while others are held constant by statistical manipulations. Variables can be considered in combination to help explain interrelationships. There are complex research designs and statistical techniques which can be used to help find explanations for certain phenomena. In the research design then, the researcher proposes the variables to control and how they will be controlled - either experimentally or statistically.

Measurement. The design should include a means of measuring the observations, controlling for measurement error and producing an interpretable result. In the case of the two technological examples given above, physical measurements are taken in absolute terms. There are instruments available to weigh the amount of fertilizer or flour used in the experiments and to obtain precise measures of some of the other variables (e.g. the time of planting, the oven temperature).

Measurement is the assignment of numbers to objects or events according to rules. A measurement procedure includes techniques for collecting data and for using the data in making statements about differences in the phenomena which are of interest (e.g. difference in level of nutrition knowledge or in family income.) The data may be collected in many different ways: by observation of behaviour, by interviews or questionnaires, by using available records such as census data, school records, other documents. The study may be such that the observation yields a score (e.g. observing oven temperature, adding up the results in a set of test questions) or a mechanism for scoring will need to be developed after the data are collected. Data collection and measurement will be discussed in more detail in later sections.

Data analysis. It should be established ahead of time, as part of the research design, how the separate bits of information are to be organized or summarized so that the data provide a descriptive or analytical result. Analytical results require statistical manipulations. Then relationships between variables can be examined.
Organization of data and measurement. In carrying out a study of research the attributes to be observed and measured must be determined. Following are examples of simple types of social measures which might be used in home economics.

a) An item index is the simplest way to categorize information. Some questions asked generate only a one item index, indicating presence or absence of an attribute of interest. In the examples on pages 40-41, we note that the researcher is interested in (A) the presence or absence of a low-cost lunch served at the school and (B), in the presence or absence of a fireless cooker.

b) In addition, the research may contain exploratory questions which generate a wide range of answers, for example 'What is your favourite snack food?' In this case, he would need to formulate categories of foods in order to group the data collected, take a count and calculate a percentage of each category. He may decide on a grouping such as that given in the table below.

<table>
<thead>
<tr>
<th>Favourite Snack</th>
<th>percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit</td>
<td>20.2</td>
</tr>
<tr>
<td>Vegetable</td>
<td>4.1</td>
</tr>
<tr>
<td>Meat, poultry or fish dish</td>
<td>2.5</td>
</tr>
<tr>
<td>Milk or cheese</td>
<td>9.8</td>
</tr>
<tr>
<td>Sweet pastry or cake</td>
<td>55.4</td>
</tr>
<tr>
<td>Bread or cereal product</td>
<td>6.1</td>
</tr>
<tr>
<td>No snacks eaten</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The purpose of grouping is to simplify the handling of large numbers of individual items, but each item must fit into one category only; and the categories or classification system selected must suit the respondent's own categories of thought. That is, a cereal product must be understood to be different than a sweet pastry. The categories must be mutually exclusive. Dishes containing legumes might be put into categories according to various preparation techniques or according to type of legumes used, depending upon the interest of the researcher. Reasons given for including small amounts of fish in the daily diet might be put into categories such as: - high cost, - unavailable in the local market, - disliked by the family, - lack of knowledge regarding preparation or - lack of storage facilities in the home. The categories can be revised and items reclassified until they become most useful for understanding a given situation.

c) Developing typologies requires a similar kind of grouping. One may want to identify and group family types by stage in the life cycle (e.g. newly married couple, nuclear unit with pre-school children, nuclear unit with school-aged children, etc.); or one might wish to develop a range of different house types based on type of construction used, on number of rooms, or some other system to distinguish the rich and the poor. When the data are grouped, it is possible to count the respondents in each of the categories and then calculate a percentage.

d) A fourth way to organize the data and arrive at a measure is to develop an index or score. A score is a simple count of a number of items that describe a behaviour or a count of easy-to-observe indicators of quality of a certain product. Thus a food product could be given a score by subdividing various characteristics such as flavour, texture, colour and general appearance, and giving each a score of 5 points. A score of community participation could be developed by noting the number of organizations in which an individual belongs.

In order to arrive at a scoring system, there must be general agreement about the indicators used to arrive at a particular judgement. Some concepts such as children's maladjustment or co-operation may be more difficult to judge. One would need
agreement regarding the indicators or symptoms of maladjustment and the indicators of co-operation. Examples of measures that were valid in previous studies of these concepts might be used again in new situations when complex concepts are to be measured.

In research it is important to know whether the measurement procedures used are measuring what they were intended to measure and whether similar results would be obtained when the measures are used again to measure the same thing. The first is a question of validity of the measures and the second of reliability. Is our indicator of community participation a valid measure of that concept or not, is the question. In order to find that out or validate our measure, we need to collect evidence other than membership in organizations - evidence such as providing voluntary help in the neighbourhood, voting, attendance of community meetings etc. and to obtain agreement that these indicators are appropriate to the locality. Two or more authorities who agree on the indicators, or two or more observers who test, revise and re-test the questions until they get comparable results, will help validate the measure. If the measure is valid, it will be reliable; however, the validity problem is a major one which will need to be explored further by those researchers who wish to improve their research capacity. Note, too, not all characteristics need to be measured. (Kaplan, 1971, p.121-28). Too much faith put into numbers and statistics, and measures which are incorrectly used can be misleading.

Collecting the data

This section will be limited to ways of collecting behavioural data and not technical data, although both are important in the field of home economics. It will include brief descriptions of case studies, participant observation, interviews and questionnaires, knowing that use of available data and experimental studies are also important approaches.

Case studies. Case studies of individual local families at one point or at different points in time can serve very useful purposes in home economics teaching. They may serve as illustrations of various life-styles, family organization, cooking and food utilization procedures, decision-making patterns etc. They are descriptive studies but may point out stress or problem situations that could lead to hypotheses testing and more analytical studies at some later stage.

The information can be collected by studying personal documents or 'own story' accounts which have been written (e.g. expenditure records) by participant observation, interview or a combination of all of these approaches. The interview will be important when the researcher has a specific purpose in mind and specific questions to ask related to that purpose. However, it needs to be fairly unstructured in order to elicit spontaneous or free responses about behaviour patterns. A woman's description of the things she does throughout the day, the tools she uses and the amount of time spent on each task could be useful management information. It is important for home economists to know about resources such as time available to homemakers. It is also important to know the tasks of the male members of a household and the amount each family member contributes to the whole. Students in secondary schools who could write case studies of their own families or neighbourhood families would be contributing volumes of information for study in home economics classrooms.

Participant observations. Direct observation is the most important method for scientific inquiry in all forms of research. A food scientist looks at the food product using criteria he has established in advance in order to see if the product meets a standard. The chemist looks at his experiment with a practical eye to note the changes as they occur in his chemical reaction. Similarly, a social scientist can observe behaviour as it occurs.

Participant observation refers to the fact that the researcher can become a part of the situation he wishes to study. A student who studies incidents in his own family is really a participant observer. Women who are low-income residents recruited to observe housing arrangements and family life-style in their own neighbourhood are participant observers. They are likely to have more accurate perceptions of family life in their locality than outsiders. Often outside researchers attempt to collect information so that they can improve conditions only to find that the people they came to help are unco-operative and disinterested. Many people have a negative or skeptical attitude towards research, an attitude which is frequently justified. The questions families are asked seem irrelevant; they do not understand the language, the purpose of research nor the results.
If on the other hand, the problem people were involved in a study of their own situation, in the formulation of questions and in the search for answers, an appropriate solution to their problem might be anticipated.

A participant observer must be able to establish good social relations with the people he is to observe. He participates in some of the activities of the community and develops trust. Then people are more willing to talk and disclose some of their everyday concerns. Structured observations are required if the plan is to obtain systematic descriptions of selected incidents.

Interviews and questionnaires. The purposes of the research may indicate that observations of several people or several families is needed in order to obtain a frequency distribution of some characteristic. That is, we may want to know how frequently each of twenty families in our sample eats legumes during one week, or how many of each of the twenty families are found at low, medium and higher income levels. In this case, we would need to get our information through an interview or by sending a questionnaire form to each family.

In an interview, the respondent gives a verbal report in response to questions asked. In a questionnaire, the respondent answers questions by writing his responses on a form. Questionnaires are cheaper to administer and can be given to large numbers of people at one time either by sending them through the mail, dropping them at each house to be collected later or by having a group fill in the answers to the questions at one sitting (e.g. a class in school). There are standard questions to be answered, thus less variation in responses as compared to the interview. The disadvantages of the questionnaire are that some people are semi-literate or illiterate and cannot understand the questions. Also, the response is generally poor as compared to the face to face interview. The interview allows clarification of questions and probing, thus a more accurate response and a higher chance that every question will be considered.

Both questionnaires and interviews require that a set of questions be formulated in a language which is at the level of the respondent. The form of the questionnaire should be as simple as possible, with clear instructions, reduced amount of reading, phrased in a way which creates a positive attitude rather than a threat, organized in sections - the first set of questions easy to answer with low threat potential, and the last set of questions judged to be the more sensitive (e.g. questions such as size of income or family planning practices). The conventional procedure is for questions to be determined by the researcher based on the hypotheses or the proposition, and the variables which were stated as a part of the study. An alternative could be for selected interviewers who understand the problem situation to help formulate the questions during training sessions. We suggested in the previous section the advantages of involving local people in studies of their own community. They know the respondents and can use common sense expressions which are fully understood. They can invite volunteers from the neighbourhood to participate in pre-testing and rewording the questions and become so involved and excited by the learning process that they become more reliable in their work.

Interview trainees can improve their questioning skills by role-playing interview situations, observing each other and then discussing the outcome. Developing communication skills through careful observing, questioning and listening is an important skill to be learned for home economics educators and community workers. Regardless of whether they will be doing research or not, there is a need to improve inter-personal skills as one works in the family and with families. Learning to ask appropriate questions and to listen attentively to responses is one of the educator's roles.

Data analysis and interpretation

After the data have been collected, the next step is to summarize the information in such a way that we can interpret the results. Interpretation requires the attachment of meaning to the results; findings must be linked to those which come out of related studies.

It was suggested in the section on organization of data and measurement that the responses to various questions be grouped into categories, that each category be mutually exclusive and that all possible responses be covered.

The next step is to develop a code system so that a single number can stand for each of the categories. For example, you may wish to classify and add up the number of respondents by sex: In your questionnaire you could use the code 1 for females and 2 for males; then you could easily
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total all the I's and the 2's. School enrolment per classroom could be divided into categories, each category given a code as follows:

Code
1. 0-30
2. 31-40
3. 41-50
4. 51-60
5. over 60

A family's socio-economic status could be categorized as low, medium, high and given codes of I, 2, 3, respectively, and so on.

If your sample is fairly small, you will be able to put the codes on the questionnaire forms and count by hand to get the totals of each response. A loose-leaf notebook or a card sort system could be of help for larger samples. Each item which is being tabulated could be listed on a separate card with the codes for each. A category for 'no response' and for miscellaneous responses which do not fit other categories should be provided.

Small (80 cm x 140 cm) code cards that can easily be sorted and counted will simplify the data processing. The use of colours and heavy lines on the cards will help distinguish the codes and make sorting into piles according to the response very easy. Then one can count the I's, the 2's etc. and arrive at a total for each.

Electronic data processing systems are used for complex mathematical operations and for large quantities of data. They will not be discussed as these methods go beyond the scope of this article. Our concern is that home economics educators and students without access to advanced computer technology can do research.

The coding and counting operation ought to be checked by a second person in order to assure reliability, however, at this step in the procedure.

Summary techniques

Statistical analysis is the next step in summarizing the data after getting the total response to each of the categories. Again, it is beyond the scope of this article to go beyond simple descriptive statistics and cross-tabulation.

Often it is easier to make comparisons if numbers are translated into percentages - that is, if the sample is large enough and the percentage figures are easier to read and understand than the original numbers. One may present both the numbers and the percentages in a table or only the percentages as in the example below.

<table>
<thead>
<tr>
<th>Age</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>32.6</td>
</tr>
<tr>
<td>6-12 years</td>
<td>35.0</td>
</tr>
<tr>
<td>13-15 years</td>
<td>31.6</td>
</tr>
</tbody>
</table>

(total children 456)

The decimals may be omitted in the presentation so that differences are easier to see. In some situations, the use of decimals gives a false sense of accuracy.

A second rule to follow is that presented by Zeisel in 'Say it With Figures'(1968) with respect to setting up a cross-tabulation table. Cross-tabulation is a simple way to relate two or more factors to each other. The general guide rule is that the percentages should be computed in the direction of the causal factor, as shown below.
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TABLE 3
Levels of Cowpea Consumption by Education

<table>
<thead>
<tr>
<th>Cowpea consumption during previous month</th>
<th>Elementary percentage</th>
<th>Secondary percentage</th>
<th>College percentage</th>
<th>TOTAL percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional</td>
<td>68</td>
<td>44</td>
<td>29</td>
<td>47</td>
</tr>
<tr>
<td>Frequent</td>
<td>32</td>
<td>56</td>
<td>71</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Number of cases</td>
<td>(316)</td>
<td>(120)</td>
<td>(42)</td>
<td>(478)</td>
</tr>
</tbody>
</table>

According to the rule, comparisons are made across and one can easily see that the consumption of cowpeas in a given month increased with education. That is, 71 per cent of the college educated as compared to 32 per cent of those with elementary school education consumed cowpeas frequently. Note the researcher would have had to identify in advance what was meant by frequently (e.g. eating cowpeas twice a week or more).

Cause and effect relationships are not always clear. Sometimes percentages can be run either across or down and present different points of view. Explanations regarding the use of percentages and cross tabulations are presented clearly in the book by Zeisel.

Casual analysis

The cross-tabulation procedure can be extended by including alternate variables with the two variables that are of interest so that all possible interrelations show up. The presence of a third factor to act as a control variable was explained on page . This factor in a cross-tabulation may confirm the original interpretation of the results or may indicate that the interpretation was incorrect. Below is an example.

Lunch appeared to be taken to school more frequently by the girls rather than the boys according to the results shown below.

TABLE 4
Lunch taken to School, by Sex

<table>
<thead>
<tr>
<th>Lunch taken</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>No lunch</td>
<td>73</td>
<td>68</td>
</tr>
<tr>
<td>Total cases</td>
<td>(432)</td>
<td>(386)</td>
</tr>
</tbody>
</table>

However, when age of the children was also taken into account you will notice it was really not the girls but the young children who had taken their lunch. Note Table 5.

TABLE 5
Lunch taken to School, by Sex and Age

<table>
<thead>
<tr>
<th>Take lunch to school (percentage)</th>
<th>Girls Below age IO</th>
<th>Girls 10 and older</th>
<th>Boys Below age IO</th>
<th>Boys 10 and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cases</td>
<td>(240)</td>
<td>(192)</td>
<td>(212)</td>
<td>(174)</td>
</tr>
</tbody>
</table>

There is hardly any difference between girls and boys below age 10. About 78 per cent of them
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take their lunch to school. Those who do not take lunch were omitted from Table 5 in order to simplify the presentation, thus making it easier to see the results. Home economics researchers, however, would be concerned about a third factor. That is the influence of the home. Their proposition or hunch might be that children from high income families would be more likely to take lunch to school than those from low income families. Findings which include that variable could be presented as in Table 6.

<table>
<thead>
<tr>
<th>Economic Status</th>
<th>Girls Below age 10</th>
<th>Girls 10 and older</th>
<th>Boys Below age 10</th>
<th>Boys 10 and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>25</td>
<td>19</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Middle income</td>
<td>39</td>
<td>35</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>High income</td>
<td>41</td>
<td>50</td>
<td>40</td>
<td>48</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

There we see that no matter what the age or sex of the child, those who belong to higher income families are more likely to take lunch than those from middle or lower income families.

Note the title of a table is important. It ought to convey quickly the information which is to be presented. As a rule, the heading of the categories listed on the left (the line headings) is mentioned first in reference to the categories going across (the column headings). 'Much information can be packed into a table' according to Wallis and Roberts and if we learn to read tables as well as the text, we can economize on time and get a clearer understanding of research results.

There are other simple statistical procedures to characterize what is 'typical' in a group. An arithmetic mean or average can be computed if we have family income figures, or test scores from a classroom (totals which can be divided by the number of cases). A median can be established by determining a point above and below which 50 per cent of the cases fall. The use of term mode refers to the score in a set which occurs the most frequently. Standard deviation, and coefficient of co-relation are other procedures used to show the relationship of different variables to each other. These and various statistical tests of significance are used in more methodical types of analyses and will not be described.

It is the task of the researcher to interpret the results. He has knowledge which goes beyond what can be noted at face value in the tables. He can describe, speculate and caution the reader by bringing up his observations about the data; and he can point to questions which are still unresolved. Participants in the research may help with the interpretation however as they have insights which may escape the researcher. The involvement of families in interpretation and in drawing conclusions may be a step towards follow-up action. They can share the question 'What do we do next?'

Formulating conclusions

When a study has been completed, it is essential that some generalizations be arrived at as a result of the evidence at hand. Conclusions may consist of brief summaries, critical comments about the procedures used and the limitations of the study but must go beyond that to help the reader relate this new knowledge to similar studies and to its application in everyday life. The conclusions drawn should relate to the purposes of the study. The evidence that is put together must answer the big questions asked at the beginning. The evidence must be clear in order to formulate a generalization rather than an opinion. The potential for follow-up studies may also be pointed out. In concluding that many low income families were not providing lunch for their children to take to school, we may also conclude that community help is needed in order to solve the problem. How can a community help the low income families? Who should help the children? Would a school
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lunch programme be the best solution? These are possible questions to be explored after noting the results presented in Table 6.

Writing the research report

The purpose of writing a research report is to communicate the results of a study to an audience. The first question to be answered then is 'who is my audience?' The report should be written in language which suits that audience. It could be written for other researchers in an academic community or for educators who are working with families. In either case clarity of expression and readability is important. Use short rather than long involved sentences, but vary the length somewhat in order to avoid monotony. Use few abstract nouns and cut out altogether words which contribute little to the meaning. Identify with the reader, visualizing the words they would use. Follow a pattern or outline, with paragraph headings to help the reader move from one section to the next.

All research reports include statistical tables and statistical analysis but they should be kept to the minimum in the text. Those that are less pertinent to the main ideas presented can be included in an appendix at the end. Too many tables and too many new terms in the body of the report irritate the reader.

In general, research reports should cover the following:

1. a statement of the problem
2. a description of the study design, the population or sample, the data collection procedures and the methods of data analysis
3. the results
4. conclusions and application of the findings

The length of the report too, will depend on the audience, where it is to be published and the cost. Two or three types of reports might be written using the same findings, an elaborate one for a research journal and simpler ones for field workers and teachers who can apply the information.

In writing, each person must discover for himself a personal style and a place to begin. It is not necessary to start with section one and follow the outline step by step to the end. One might start writing the piece that is most exciting and then go on to the other pieces. The pieces can be shuffled around and the outline changed until all the parts fit together logically.

Applying the findings

Home Economists are concerned with the application of research findings right from the outset. The study was proposed because of a problem situation related to family life in a particular locality. If the investigator had the co-operation of families during the planning and data collection stages, immediate application of results might be easier to accomplish.

Research begins when there are questions. Different disciplines ask widely different questions in their inquiry. Each has a different starting point, different goals and different explanatory principles. Each has a knowledge structure which continually takes a new shape and a wider scope as bits and pieces of knowledge formally considered separate are embraced and become part of a larger pattern. Home economics can take its own shape through its inquiry about how to improve the quality of family life, and the addition of research information.

Conclusion

Physical, social and political conditions are radically different from one country to the next. Home economists are not necessarily equipped to identify and solve family problems in cultures which are alien to their own. They may help to develop a conceptual framework and basic principles which are universal but they will not know the realm of problems which exist nor the questions to ask of families in the local community. A highly qualified research expert's tasks include developing a research framework, conceptualization, and generating interest.

Other personnel such as field workers and classroom teachers who are in contact with families will know the problems to explore within their own communities. They can become more observant.
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and questioning and get involved in a problem-solving or discover process which will help their own learning and that of the families they expect to help. Research bridges can be developed to help systematize the learning and link the separate pieces of information as it is discovered. There is no end to the discovery and to the changing configuration of knowledge in the field of home economics.

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Identifying community needs

Thelma Howard

The importance of basing Adult Education programmes on the needs of the participants is stressed in a recent document, (1976) and emphasized in the community development literature where workers are encouraged to 'start where the people are'. (Carey, 1970) Many field workers, whether they are in community development or a more specialized field such as Home Economics, find that the needs of people are often difficult to identify. Many factors affect how and when, as well as what needs are expressed to a community worker. Community workers may be faced with a dilemma when asked to work on a recreation project which appears inconsequential compared with a problem such as the lack of clean water in a community. They may find it incomprehensible that the people in a community do not see an 'obvious' need or they may find themselves in a situation where people acknowledge a need but appear reluctant to act.

The following analogy presented by Desmond Connor (1966) in a handbook for community workers may be useful when examining the problem of needs. Connor used the analogy of the ice-berg, one-ninth of which is above water for all to see, eight-ninths of which is hidden under water. The needs hidden 'under water' are the unfelt needs, the needs that are not felt by either the people or the worker. They exist, but people are unaware of them. Connor suggests that this analogy fits with personal experience as most people could not cope with a full awareness of all their needs. A psychological defense mechanism enables people to deal with a few needs at a time, and once a need is met, then a 'submerged' need rises to take its place.

The needs of which people are aware, the one-ninth 'above water', are divided by Connor into two categories:

1. Needs felt by the people and the community worker.
2. Needs felt by the people but not recognized by the worker.

Connor also has a third category which is not part of the 'tip of the ice-berg' -

3. Needs felt by the worker but not by the people of the community. See Figure 1.

![Diagram showing three categories of needs: Felt needs, Unfelt needs, and a submerged need.]

Figure 1.
Field workers may find it useful to consider these categories in relation to the communities in which they work. Some possible questions to be raised in field work discussions include: What issues are raised in category (3) if the worker finds that he/she is persuading the community to act on needs he/she alone sees? If the people feel that the worker is unaware of their needs, as in category (2), will they try to persuade the worker that these needs are real, or will they refrain from expressing them? What conditions will encourage them to express their needs to the worker? What about category (1)? If there is recognition of a need by the people and support comes from the community worker, can any pitfalls occur? One of the following case studies suggests that there may be an added dimension to the first category. People may be well aware of a need but for various reasons do not discuss it with the worker. The worker then may assume that the people do not recognize that particular need and proceed with his/her work in that community on that assumption. The following case study from Papua, New Guinea, illustrates such a situation.

The 'Moale' settlement has existed on the outskirts of the city for several years. The settlement developed from houses built by two men from a rural area who had come to the city to seek their fortune. Eventually they were joined by families, friends and relatives from their home area, thus creating a fair-sized community. The original residents had made a rather tentative agreement with the landowners and were paying a rental fee made up of food and other materials. The 'Moale' community, like similar settlements in and around the city, was now having difficulty in adequately dealing with the influx of modern bureaucracy. Tax collectors would come requesting money but not explaining clearly why the money should be paid. There was the suspicion that the visitors might not always be authentic government workers. The community was being asked to pay for water without anyone explaining why water was free in the mountains but not in the city. The landowners were inconsistent with their demands for rental payments, and were making occasional threats to take back the land for their gardens.

It was into this unsettled atmosphere that a Community Development worker arrived. She explained what kind of work Community Development workers did, and how she had worked with other similar settlements. Was this community interested in learning more about her kind of work and discussing whether they felt a need for such a worker to work with them on their problems? The next time she visited the settlement, the leaders met with her and expressed an interest in this new kind of work. The leaders brought up various concerns and these were discussed: the problem of collection of water bills; an explanation of water payments; a concern about high food prices and low wages.

One of the first projects the community worker took on was the development of a store for the 'Moale' community. The women felt that the existing store's prices were higher than necessary; a store run by one of their own people was one solution. Through the work on the store development, the Community Development worker became well acquainted with two women who were concerned about the lack of any stimulating activity for the women who were accustomed to working long hours in their gardens. In this area, only small plots of land were available to them. Discussion brought out an interest of women in sports. They had seen groups of women playing basketball and wished to join the league. The Community Development worker helped them work out what they needed to consider before joining — transportation, fees, uniforms, practice sessions, and equipment. In the course of a discussion following one of their games, the women expressed concern about the health of their children. The Community Development worker had just visited the Nutrition Centre and spoke enthusiastically about the work being carried out, especially in regard to child nutrition. She suggested that the women's group might like to visit the Centre, as the Centre was encouraging tours by community groups. A special outing and a chance to visit a place outside the settlement created a great deal of interest. The Community Development worker and one of the women made arrangements with the Centre and a large group went on the tour. The visit was a success! The women felt welcomed at the Centre and observed many interesting projects using local food. The Nutrition Centre workers made several references to the many wall posters and photographs contrasting healthy and undernourished children. These posters had caught the eye of the 'Moale' women.

As might be expected, there were no immediate changes in the food habits of the young children following the tour, although the women talked about their trip for many days. It was during one of these reminiscences that the Community Development worker reminded the women that the Nutrition worker had indicated that she would be willing to visit their settlement and undertake a food demonstration on child feeding. The Community Development worker asked if anyone was interested in going to the Centre to arrange such a meeting. Doubting looks were exchanged. Would the workers in the Nutrition Centre be just another group of government employees who said they would come and never kept their promise? The women were interested and perhaps because they were encouraged by the Community Development worker who emphasized that the Nutrition worker was interested in visiting them, two women volunteered to make the arrangements. Before the day of the visit to the settlement, the Community Development worker had talked to the Nutrition worker and had stressed the impor-
tance of the women actively participating in the demonstration, so when the Nutrition worker came, she had the women grating and mixing their own food and feeding their children. Would the children (accustomed to milk and sweet potato) accept food that was new to them? Success! Smiling faces from mothers and children indicated that the mashed papaya was a tasty dish. This innovation had a chance of success as the mothers could use utensils and food on hand; they also knew they could prepare it themselves and best of all - the children loved it.

The Community Development worker was feeling very pleased that she had indeed helped the people meet a real felt need of the women. She had had doubts about spending her time with sports activities when she could see very obvious health and economic problems facing the 'Moale' settlement. Here was a project that she could share with pride during her field work discussions with fellow-members of staff. The next visit to the settlement held a surprise for the Community Development worker. The women were still talking about the demonstration and what they were now feeding their children, but they said they had something much more important to discuss with the worker. All the basketball sessions were fun and the children's food was a very good thing, but what they really wanted to learn about was family planning.

Why did they not approach the Community Development worker with this important need earlier? In some communities the answer may have been shyness, or the need to have the relative assurance of having healthy children before they would even consider family planning. During the field work discussion on this project, the Community Development worker gave her analysis of the situation. She felt that other factors were at work; Family planning was a traditional practice of this group in its original rural location. However, when the group moved into the city, they lost their sources of information about the necessary rituals and procedures. The old women with this knowledge had remained in the villages back home. The Community Development worker felt that one had to look into the community's past experiences to find the explanation as to why they hesitated to express real needs.

In the past the community had been visited by many government and mission workers. Many of these people had made promises to them and few were kept. They rarely saw the same workers twice. Landowners also presented problems; they would make a request for rental fees, then return in a few months with a different request. The 'Moale' settlement did not have a history of positive experiences with outsiders.

A Community Development worker comes to visit. She did come from a different area of the country, but spoke a language in common with the settlement, so clear communication was possible. She talked of a new kind of work - so had others, but she was consistent. She came when she said she would, even when it rained! They had nothing to lose by testing her. When they worked on the store development, she could tell them what licences they needed and where they should go in that great maze of government buildings to apply for a licence. She had also told them about buying 'wholesale' which was a new idea to them. She had several suggestions about water collection methods, some of which they didn't like, but she didn't press her ideas and even seemed to encourage them to choose their own way! She was always very supportive in all their projects.

It appeared to the Community Development worker that the women were testing her before they were willing to risk sharing a really important need. Perhaps they also needed to test her relationship with government workers as well, and may have been doing this with the Nutrition Centre. Once the testing had been done and they were satisfied, then they could talk about the more important problems that were facing them.

In addition to testing people such as the Community Development worker, people often need to test themselves in a relatively unimportant situation before they attempt to tackle a larger problem.

In another settlement in the same city, another Community Development worker found such an example. The settlement in this case was a 'labour compound' which was the designation for the living quarters made available to men and their families who worked for a specific company. A community feeling rarely existed within these compounds as the workers from many different tribal backgrounds tended to socialize within their own groups. In most cases living conditions in the compounds were far from ideal, but the men feared dismissal if too many complaints were expressed. The Community Development was uncertain about the potential of any action, given the realistic fear of the men. However, she had been asked by some of the women to come to their compound. They wished to develop a netball court within the compound. Again this was seen as an activity to help alleviate boredom as the women didn't even have a patch of ground for a garden. The development of the court took a long time. It required contacting the company for use of the land (too stony for gardens), finding materials they could afford, identifying what resources they had within the compound (e.g. a man who could weld the hoops for the baskets), and organizing the settlement into a 'work bee' to clear and flatten the court area and erect the poles. The project was a success. This was the first time such a communal effort had been launched.
Having experienced success with this first project, the women were willing to work on a larger issue - that of improving the sanitary facilities of the compound. This required going to the company manager and requesting money to be spent on improvements. What about the fears of the men? The women had discussed the possible repercussions and decided that the men could always say that the women had carried out this action without their permission and knowledge, if the company's reaction was extremely negative. However, the women had a good reception from the 'big man' when they had inquired about the land for the netball court so they felt they had some chance of success. They and the Community Development worker had also worked out a strategy on how to present the issue and what contribution they would offer to make toward the project. No one will know for certain what prompted the manager to agree to improve the facilities that obviously had needed improvement for some time. Perhaps it was the initiative of the women that had impressed him, perhaps he needed only to be asked; the important point is that the women had learned to work together, that there is strength in unity, and that they could approach a figure of authority and express their concerns.

To some Field Work Supervisors, the development of a netball court or the women's basketball team may have appeared as an unimportant request, and recommended that community workers should not become involved in such a frivolous request. These case studies present only two of many reasons why a seemingly superficial need is expressed and acted on. The studies also indicate that community workers should not assume that people are unaware of a major problem in their community. Before coming to such a conclusion, they should consider the possible reasons why the people may be reluctant to talk about or work on such a problem.

The case studies also point out the importance of having a programme with an inter-disciplinary approach. To be effective, community workers must be receptive to all needs expressed by the people. If they are unable to work with the people on a particular need, their programme should enable them to establish contact between the community and the appropriate resource. Experience in Papua, New Guinea, has shown that the responsibility of the community worker does not end with the contact being established. The worker has valuable information and experience in working with people, particularly people in a specific community. This knowledge and experience should be shared with the new resource person. As in the case of the 'Moale' community, the Community Development worker approached the nutrition worker to discuss with her what the best approach might be when demonstrating food preparation to that group of women. A specialist, such as a nutrition worker, may have needs expressed to her which must be met by another resource, i.e., agriculture. In a programme with an inter-disciplinary emphasis, she would be able to work with the people to clarify the need, if necessary encourage and assist the people in contacting the agriculturalist, and share with the resource person her knowledge and experience in that community.

The biggest challenge facing any community worker or specialist is the ability to work with a community in such a manner that enables the people of that community to say 'We did it!'
3 Modes of curriculum planning

Curriculum development: current trends

Gary A. Griffin

Curriculum planning as control

Curriculum planning is an exercise in control of students, people, events, places, time, energy, knowledge, skill, and other related phenomena. That is, when one plans that students will have certain educational contacts – in this instance, the content and skill related to nutrition science – one, by definition, has chosen not to attend to other phenomena. Put another way, given the limited time and energy resources available to educators and students, planning for the interaction of those educators and students controls their behaviour. As we suggest certain outcomes of nutrition education programmes, we are at the same time implicitly suggesting that other, unplanned-for outcomes are not as important as those we include in our curriculum. As we suggest that students do certain things, read certain print materials, write and report about certain phenomena or produce certain products, we are controlling the students' time and energy and eliminating from their present lives other opportunities to read, to do, to write and report about, and so forth.

When one considers that a curriculum plan is a major form of social control, the importance of a sound, reliable and widely accepted system of values becomes critical. Certainly, when one believes that the social, cultural, political and economic ramifications of a people's knowledge and skill as such apply to the concepts undergirding reasoned and sensitive use of the environment – specifically that which is consumable – one must make critical control decisions. What values will inform what we plan for and with young persons and adults? What evidence can we garner which will support the use of these values as criteria for selection of one piece of knowledge or skill into or out of our curriculum? How can we continue to justify the curriculum we present as it is tested over time?

The curriculum issue here is that we must be able to justify, to rationalize, to monitor our curricular decisions – whatever they may be – according to a strongly and clearly stated value position. This is not nearly as easy as it sounds. First, it is not easy because it is not a behaviour that we are accustomed to using. We often present a curriculum or an instructional programme as though it had sprung full grown from the forehead of Zeus. A curriculum is too often the listing of certain activities for students and educators with little or no systematic attention given to why such activities are presented.

Second, the value positions which may appear to support the inclusion or exclusion of certain curriculum elements are open to social, political and economic question. Especially in countries which are characterized by a multi-cultural, multi-ethnic populace, we find that one person's values are another person's poisons to mix a metaphor. The argument here centres around the concept of a clarification of values. How much do those who plan curricula know about the persons who will use them? Is there a system of values that both groups share? Are there conflicts in values between the planning persons and the users? If there are conflicts, how can they be resolved? How powerful are the conflicts in terms of the potential utility of the curriculum? Will the conflicts prevent use? Or, more probably, must the curriculum take some middle ground and, without compromising the expectations of the planners, cause the users to modify or at least put aside for the moment value positions which are in conflict?

Third, we are not always certain of the source of our values. Do we value a certain nutrition-related concept because it has had some empirical justification? Do we value it because it has a cultural or social tradition? Do we value it because somehow it 'fits' with the way we view and make sense of the world? As curriculum planners, we must be able to sort out these various
modes of justification, of valuing, and be able to present them with reasonable precision to those who will be expected to use our curricula.

I have noted that curriculum planning is a form of social control - most often institutionalized in places called schools. When the notion of control is explicit rather than implicit, as is more often the case, the importance of values becomes sharply apparent. We must, as curriculum planners, develop the skill of rationalizing our curriculum decisions, presenting that rationalization to those who will engage themselves with our curricula, test the rationalization against the values of our clients, and clarify for ourselves and for others the bases for our valuing.

Three curriculum designs

Each of the following three curriculum designs can be adapted or modified to fit a particular sociocultural milieu. Although they are essentially different on certain dimensions, elements from each might be shifted from one to the other so that some hybrid or amalgam results which draws upon two or three of them to make a fourth. There is nothing sacred or inviolate about any of the designs. They are ways of talking about curriculum and curriculum planning - ways that have been seen to be fairly productive and useful. What is important is that each of us, as curriculum planners, considers which design or which recombination of elements is most appropriate for the target population, for the cultural surround into which it is to be placed, for the system of values we start with, and for the problems which we wish to solve or somehow ameliorate.

The three curriculum designs are the rational-empirical design, the engagements design, and the emergent design. These labels are not ones commonly found in the curriculum literature. When one considers for example, the rational-empirical design, for instance, one takes into account that the work of various curriculum experts and theoreticians might be included under this rubric but varying degrees of specification and varying emphases would be present if one considered the experts' work separately.

The Rational-Empirical design

The rational-empirical design is probably the most commonly used and most widely known of the designs I will be discussing. The design rests upon the assumption that educators can and should plan in advance for what students will learn. The curriculum planner using this design has a responsibility to specify in the curriculum what shall be learned, how it shall be learned, how what is planned for shall be organized, and how what is learned is measured at the conclusion of an instructional sequence.

The most common form of specifying what shall be learned in the rational-empirical design is the behavioural objective, a statement which indicates the behaviour expected of students and the piece of content for which that behaviour is considered appropriate. It should be noted that the emphasis here is upon what the student is expected to achieve, not what the teacher is expected to do or what the school is expected to provide. Examples of behavioural objectives for nutrition education might include: to recall locally produced foods which provide high quality protein; to apply knowledge of the cultural milieu to the formulation of a community nutrition education programme; to demonstrate the relation of local food distribution systems to the presence of malnutrition in vulnerable groups; to formulate a plan to inform members of the community of the special nutritional requirements of various age groups; and to demonstrate the relation between local soil conditions and food which is or can be produced.

These examples illustrate that what is being presented in the objective for instruction is a combination of desired behaviour - recalling, applying, demonstrating, planning - and content - provision of high quality protein, the cultural milieu, community education programmes, food distribution systems, and so forth.

Once the objectives have been formulated, it is the task of the curriculum planner in the rational-empirical design to present a set of learning opportunities which are believed to be powerful in achieving the desired ends. That is, what activities can be planned for students and teachers which can best accomplish the objectives? A problem with learning opportunity selection and formulation, especially in highly developed countries, is the prevalent dependence upon print. We insist on attention to books, texts, etc., to a very large extent. We too often ignore the powerful possibilities of using activities which are essentially tactile, aural, manipulative, or a combination of all of the senses. Our dependence upon selections which are print-bound often too rigourously limits the potential outcomes. When we begin to expand the opportunities for learning
beyond print, we also expand the possibilities for learning. A balanced curriculum should provide opportunities for students to learn through reading, of course, but it should also include options which, for their success in achieving behavioural objectives, call for students to touch and to manipulate and to construct and to analyse their environments through discussion. A critical issue and one which looms large as a criterion is the mode of learning most effective with a given population. Obviously, to expect pre-school youngsters to read technical material is absurd. It would be equally absurd to expect older, more experienced and knowledgeable students to learn solely through the manipulation of physical properties. We must, in formulating objectives and in planning activities to achieve them, attend to the particular learning characteristics and skills of our students. To do so is to include the student in our conscious planning - not just as the object of our work but as a data source.

The next major task for the curriculum planner in the rational-empirical design is the organization of the curricular elements. What is expected to be learned first? What sequence of activities is most likely to achieve the objectives most efficiently? What objectives are natural prerequisites for other objectives? The two concepts here are vertical organization and horizontal organization. Clearly, vertical organization refers to sequence over time. What should happen first, next, last? What materials and activities are to be used with primary level students, with intermediate level students, with adult students? This vertical organization is a concept with which we are all familiar. Less obvious, however, is the concept of horizontal organization. This refers to those activities and objectives and other school-related phenomena which the student experiences at about the same point in time. As an example, we can consider the IO or II year-old student who, as part of his/her instructional sequence, participates in a nutrition education curriculum. That is not his/her entire programme of studies. He/she is probably also studying mathematics, literature, some social sciences, physical education, and physical science. The notion of horizontal organization suggests that each of these bodies of knowledge and skill should, whenever possible, reinforce and build upon one another. A good integrated curriculum for our hypothetical student would attend to the relations between nutrition education and the social and physical sciences. What can the teacher of literature contribute to the understanding of nutrition concepts? What can the social science classes do to promote further understanding of a people's beliefs and mores as they relate to eating habits and customs? What can the science programme do to undergird with scientific principles the content of nutrition being taught to the student? Clearly, there will be isolated learnings present in any curriculum which, by their very natures, are not amenable to such cross discipline treatment. But it is believed that acting put the concept of horizontal organization increases power and the efficiency of the learning system.

Related directly to horizontal organization in the school is careful attendance to the experiences that students undergo in other, non-school parts of their lives. Most of us have other affiliations than that of the school. Students belong to organizations, social and civic. They are members of religious groups. They form ad hoc groups of peers. They are members of families. A systematic programme of instruction would pay particular attention to ways in which student activities in these non-school groups reinforce or are reinforced by the school programme. An example is the movement in the United States for both boys and girls to have experiences in food preparation and an understanding of the importance of nutrition to their lives. (Formerly, only girls were provided with these opportunities.) A school which cares about the degree to which outside forces impinge upon school programmes would see to it that there is some food-related content in the local Boys Club, that parents encourage participation in food preparation activities in the home, that summer jobs for students include ones related to food preparation or distribution, that church socials sponsor a boys' division in their food bazaars, and so forth. We must be conscious of the fact that the school provides considerably less than the student's entire education.

The final decision area facing the designer of a rational-empirical curriculum is that of evaluation. Evaluation may sometimes be seen as being apart from curriculum planning. I do not believe that such is the case, nor that it should be. The curriculum planner who formulates behavioural objectives, plans learning opportunities for them to be accomplished by students, and organizes both into a coherent instructional sequence must also be concerned with how and under what circumstances it will be known whether the curriculum was effective or not.

There are two basic kinds of evaluation: student evaluation and programme evaluation. We rate students with ease by giving them grades or percentage points or with some other system. The bases for these ratings, however, are often less easily articulated. What is it about a particular student that places him or her at the 90th percentile? What do we know about another to give him/her an A or a B or to award the coveted Honours rank? In the rational-empirical design, if we have formulated our behavioural objectives with precision and clarity, we almost automatically know what to look for in the student. If our objective
calls for recall of certain principles and the student dutifully lists them, we know that he/she has achieved the goal. If we ask that students know how to plant and maintain a garden so that edible fruits and vegetables are the result, we can observe and examine the garden to see if, and to what degree, the student's behaviour matches our expectations of it. This is a very strong point to this design - the direct and positive relation between the formulated objective and the evaluation process. But we must be careful, as planners, that our evaluation matches our objective. Too often we expect certain behaviours (or, at least, say we expect them) and then measure for other behaviours. The most common error here is one associated with the argument about the print-bound nature of instruction commented upon earlier. If we expect students to be able to manipulate and rearrange certain properties to produce something new and/or unique we must insist that the evaluation process call for that manipulation and rearrangement and not depend solely upon a pencil and paper test. With pencil and paper instruments we are often testing for something beyond what we are teaching - reading and writing. Although reading and writing are, naturally, admirable skills for all students to possess, we are really more interested here in nutrition concepts and skills. We want to know if the student knows, understands, cares about the nutrition principles and practices we think we are teaching. To depend upon skill levels in reading and writing to find that out is to engage in poor evaluation practice and, more seriously, to do disservice to students and to the teachers who work with them.

The second evaluation type is less familiar to us: programme evaluation. We sometimes ignore the fact that evaluation results, when they are disappointing are often telling us something about our curriculum and instruction as well as something about our students. If we do not achieve our objectives with the level of accomplishment we desire, we should re-examine our curriculum. Perhaps our objectives are unrealistic. Perhaps our learning opportunities are not as appealing to students as we thought they were. Perhaps we have taught in an illogical sequence. Perhaps we have assumed that reinforcement from other areas was taking place when, in reality, it wasn't. Perhaps our evaluation procedures are not appropriate or are too highly technical for the students or, in some other way, poorly designed. When evaluation is conceived of as an opportunity for programme study and revision, we can see that the curriculum planning process has come full circle. We revise or maintain or eliminate based upon information provided by students as they move through the curriculum. As we find that certain students do not learn, we reconceptualize what we expect or how we want to accomplish what we expect, or both. These programme decisions, then, take us back to the formulation of objectives, the provision of learning opportunities and their organization, and our methods of evaluation. If we are concerned about the relevance and about the effect of our curriculum designing, we never allow this sequence to end but continue to edit, modify and to revise.

The engagements design

The engagements curriculum design is one that depends largely upon the statement of values argued for earlier in this paper. In this design, one sets forth a fairly elaborate statement of what is valued in a certain content or skill area and presents that which is valued for students' attention. Hence, the term engagement: the students engages himself/herself with some valued skill, artifact, piece of knowledge, activity. The selection of what the student is to become engaged with rests valued in a certain content or skill area and presents that which is valued for students' attention.

These programme decisions, then, take us back to the formulation of objectives, the provision of learning opportunities and their organization, and our methods of evaluation. If we are concerned about the relevance and about the effect of our curriculum designing, we never allow this sequence to end but continue to edit, modify and to revise.
others, but we do not suggest that understanding the phenomenon of growing is all that the students will get out of the activity. Some students may concentrate upon the properties of growth and will, in effect, learn some physical science as a consequence of the activity. Others may note the changing colours, patterns and shapes that the plants assume and take aesthetic understandings with them as a consequence of gardening. Others may note the effect of water on soil and the relation between soil banks and water retention and, consequently, better understand principles and properties of soil conservation and environmental protection. The point is that we provide the activity because it is valued by the culture or by a powerful subculture and because we believe that students should have some understanding of that activity. Beyond these basic specifications, however, we allow the students to come away from the activity with what is most appealing, most intriguing, most meaningful to them.

This provision of opportunities to experience what a culture values, although less rigorous in terms of specification of outcomes than the rational-empirical design, does not lack in rigour when it comes to the matter of evaluation. Evaluation of the engagements is the task of finding out whether or not the student attaches the same or similar value to the activity as the culture and, beyond that, what specific forms that value takes for each student. Evaluation here calls for the teacher or other person in charge of instruction to observe with precision the degree to which the student attends to the activity, the responses elicited from the student by the activity, where the engagement leads the student as a consequence of his/her interest and needs, and so forth. These evaluation procedures, largely informal and much less highly structured than formal tests and such, call for a level of perception and a sensitivity to student responses that are as difficult to find as are examples of superbly designed standardized tests.

The emergent design

This curriculum design calls for the content and the nature of instruction to emerge from the concerns, needs, desires of the students. Its most obvious manifestation is probably that of the British Infant School and the subsequent open education movement that is now under some pressure from various interest groups. We have seen that the rational-empirical design is highly controlling in that the decisions about what shall be learned, how it shall be learned, how what shall be learned is organized and evaluated are all made pretty unilaterally by the curriculum planner. Less controlling is the engagements design in that the consequences of the engagements are not decided precisely or in advance by the planner but still controlling in that the engagements are selected from a universe of possibilities by the planner.

In contrast to these designs, the emergent design is one that is controlled by students rather than controlling of students. One might think of this design as one in which the conventional relation of student and school is reversed. That is, the usual pattern is that the school is the stimulus and the student responds to that stimulus. We look for the degree to which the student responds appropriately to what we expect of him or her. In the emergent design, the student is the stimulus. The school responds to what the student thinks or believes is necessary for his/her well-being. In such a design the school and the persons in it really do little in the way of specific planning for instruction. They do not prepare objectives. They attend only minimally to the pre-setting of engagements or activities. They, instead, develop a set of techniques and knowledges that will help them to clarify with students what it is that the students believe to be a desired school life. There is a tendency to look upon this mode of schooling as one which abrogates the responsibilities of teachers, one which has little or no structure, one in which the authority figures in the environment play little or no active part. Such is not the case. The skills necessary to elicit from students what they think school should be about are formidable difficult to acquire. We educators are, in fact, much more skillful with, and accustomed to, telling and manipulating than we are in questioning and responding to students with sensitivity, awareness and willingness.

In terms of nutrition education programmes, it is obvious that certain parameters must be set to contain what the school's responses and the elicitations of student expectations are to be. The limitation we would impose would be to specify that certain times in the day or week or semester will be devoted to issues of nutrition and then to allow students to develop programmes of studies based on what it is that they want to know about or how to do. If this design were to be adopted, it would be necessary for teachers and others in the school to have considerable understanding of the students in the programme, their cultural aspects as well as their cognitive and physical development stages. With such understanding of the students to be served by an emergent curriculum, one can anticipate what it is that students are likely to know already, what it is that
they are likely to care about, what skills they are likely to be able to put to use, what questions or issues are likely to be intriguing to them, and so forth. The emergent design, more than either of the other two, calls for an intimate understanding of the client of the educational programme.

In addition to the knowledge of the student, it is naturally incumbent upon the educator and curriculum planner to have a ready and available understanding of the nutrition concepts and skills which are likely to be brought up for attention by the students. This understanding must be both broad and deep. It must contain information and behaviours that relate to knowledge of the students in that anticipated questions must be readily answered. The implication that the educator must be all-knowing, however, is misleading. The educator should, naturally, have command of the subject matter but, perhaps more important, he/she must have command of the resources available to students which relate directly to the subject matter. This command over resources is really the central role of the educator in the emergent design. The educator must be able to help the student wend his/her way through the often dazzling, sometimes confusing, mazes that constitute the growing body of nutrition science. The educator, then, becomes a responder, a guide, a resource person, a questioner.

As in the other designs, the question of evaluation is one that must be addressed directly. To say that the students are the primary resources in the planning and execution of an instructional programme is not to say that the school does not have a major responsibility to judge how effective that instructional programme is or has been. As with the engagements design, the evaluation procedure draws little upon the notion of some prespecified set of expected outcomes. Instead, the evaluation in the emergent curriculum focuses upon how effective the programme was in meeting the articulated needs and desires and questions of the students. Did what occurred as a consequence of student initiation really accomplish what the student wanted? Did the consequences appear to be reasonable to the student? To the educators? To others in the school? To parents? What verification can be offered to justify both consequences and perceptions of consequences? What might the educator have done to increase the power of the school experience for the student? What unanticipated outcomes were present as the instructional sequence proceeded? What expected patterns of behaviour on the part of students were observed? With what results? What unexpected patterns of behaviour emerged? With what results? These questions, it can be seen, are very different from those in either of the other designs.

Conclusion

This paper has presented three curriculum designs. The designs are seen as three perspectives on the control of the matter of education - control over decision-making authority, the content and mode of instruction, the allocation of time and energy and other resources, and control over the outcomes of educational programmes. The rational-empirical design, resting on the assumption that educators and curriculum planners can and should specify in detail the expected consequences of education and the manner in which these consequences are induced, is seen as the most controlling. Somewhat less controlling is the engagements design which has as a central principle that certain encounters with the culture are intrinsically valuable and should be offered to students to deal with on their own terms. Least controlling is the emergent design which operates upon the reversal of the conventional education-student relationship - the educational institution becomes the response mechanism and accommodates the stimuli presented to it by the students.

As was stated at the outset, the intention here is not to suggest that any of these designs is holy or in some other way sacrosanct. They are presented because they represent what are believed to be the three principal modes of thinking about and planning of curriculum. As one's cultural, social, political and economic context is understood and acted upon appropriately, it is highly probable that elements drawn from each may be present in the resultant curriculum. It is important, though, to suggest that this mixing and matching be done with care, with thoughtfulness, with disciplined understanding of the nature of education within the society, and with constant attention paid to the effects of the implementation of the design upon students.

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Planning curriculum to reflect the purpose of home economics

Shirley M. Kreutz

New knowledge produced by various fields of study is immensely useful in enhancing the quality of home and family living and enhancing the quality of life is one function of home economics education. A proliferation of knowledge has resulted in more information to convey than there is time for teaching. Consequently, the age-old question of what is of greatest worth is more imperative than ever. The challenge of curriculum development is to determine which content should be taught and how this content is organized for greatest effectiveness and efficiency in learning. Outcomes from this search guide educational instruction and provide criteria for student evaluation.

This paper presents selected procedures for deriving goals and objectives that reflect the primary purpose of home economics as held by the author; namely, helping family members perceive the interrelationship of the near environment and human development. This conceptualization for selecting and organizing content is developed by assuming the following translator role in educational research described by Short (1973): synthesizing previously uncombined components and adding invented parts. These procedures have been useful in developing home economics curriculum for selected secondary schools in the State of Nebraska.

Two distinctions are necessary in implementing the conceptualization: the distinction between curriculum and instruction and the distinction between knowledge and human events. In relation to the first distinction, curriculum is concerned with what is taught or the intended learning outcomes; while instruction is concerned with how these outcomes are attained through appropriate learning experiences (Johnson, 1970-71).

In relation to the second distinction, knowledge of a field of study is comprised of its concepts, propositions, skills and attitudes; and human events constitute the phenomena to which the knowledge is applied. Stoner recognizes a similar distinction between dimensions of home economics - the discipline and the profession. 'The discipline is the base of knowledge and modes of inquiry of a field. A profession is characterized by the way an organized group of people use the discipline to identify problems and examine them' (1977, p.2). She further states a discipline is reflective of values accepted by a profession as well as defining their approaches to problems.

A discipline or a field of study can provide the source of knowledge from which content is selected and organized for learning. Popkewitz maintains that basic organizing concepts and their interrelatedness can be used in curriculum development. Although he contends that in many 'recent curriculum studies, structure has been narrowly conceived as an object of study rather than as a mode of analysis, which can provide educators with powerful means for dealing with problems of understanding ..... forming thoughts that structure meaning' (Popkewitz, 1972, p. 155), he also argues that 'each subject-matter field chooses to confront particular instances of human activity by asking different questions about human events ..... forming unique patterns of looking at events (p.159). Popkewitz views 'school as a praxis that should provide an environment that gives man power to open one's horizons and to show new aspects of humanity from the vantage point of many different schemes and patterns' (1973, p.115).

Therefore, in this conceptualization home economics knowledge and its interrelatedness are the substance of curriculum. The following two terms will be used in the remainder of this paper to connote knowledge and its interrelatedness: content element as a concept, proposition, skill or attitude; and content structure as the ordering relationship between content elements (Posner and Strike, 1976). Knowledge has great transfer potential and can be applied to a variety of situations. Human events associated with the field, on the other hand, are unique and the source of situational examples for instruction. 'One does not learn experiences; one learns through experiences' (Johnson, 1970-71, P.25).
New trends in home economics education

For instance, the life cycle is commonly used for situational examples in the study of home economics. While the life cycle in itself is not the object of study, it does provide a variety of experiences through which intended learning outcomes can be attained. Should the life cycle be combined with content elements of housing and furnishings, for example, then learning generally focuses on those prescriptions or standards appropriate for people at different phases of the life cycle. These facts constitute relevant information, but they are not the intended learning outcomes. Rather, the intent of learning is to inquire into the relationships between life stages of family members and various alternatives to shelter and to apply this knowledge in finding satisfying solutions for individual or family members based on their wants and needs.

While problems change, content elements and content structure remain relatively stable. The pattern for viewing human events does not change as quickly as do human events themselves in a rapidly changing society. While the life cycle in itself is not the object of study, it does provide a variety of questions to inquire about the relationships between life stages of family members and various alternatives to shelter and to apply this knowledge in finding satisfying solutions for individual or family members based on their wants and needs.

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Selecting and organizing curriculum

The task of curriculum development is that of selection and organization of intended learning outcomes which are appropriate and reflective of a field of study. A network of intended learning outcomes or objectives facilitates long-term planning, which make explicit a model of the total programme. A model along the lines of Figure I provides a comprehensive, cohesive, and coherent pattern that aids short-term planning. Those extemporaneous decisions filling some of a teacher's day are also more appropriate when based on knowledge of the long-term plan.

Figure I. Graphic description of a network of derived goals and objectives.

Identifying basic goals

The purposes of an educational programme are made operational through translation into basic goals. Bellack defines the purpose of schooling 'as helping learners use intellectual and aesthetic re-
sources of their culture to guide intelligent action and to understand the world around them' (I964, p.29).

Home economics is viewed to be compatible with this educational purpose. 'Home economics is the study of laws, conditions, principles and ideals which are concerned on one hand with man's immediate physical environment and on the other hand with his nature as a social being; and especially the relationship between these factors' (AHEA 1902, p.71). Paolucci (1977) expands on this purpose by stating the major goal of households as one of growth and development of its members, and that advances in science and technology make it feasible for today's home members to exert increasing control over everyday happenings to enhance development of family resources.

Therefore, the basic educational goal of home economics is well expressed by Paolucci (1966): to help family members understand the nature of human development and perceive the consequences of particular kinds of home activities for the development of its members.

Selecting area goals

Area goals are derived from the basic goal and communicate those fundamental concepts identified with each of the six areas illustrated in Figure 2 below.

Figure 2 Fundamental concepts of home economics areas and their interrelatedness.

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<th>Resource Allocation:</th>
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<td>values, standards, goals</td>
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<th>Sensory Exploration:</th>
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<td>balance, proportion and scale, rhythm, emphasis</td>
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<th>Decision-making Process</th>
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<table>
<thead>
<tr>
<th>Food and Nutrition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical and chemical properties</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>universality, uniqueness, development and adaptive change</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Textiles and Clothing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical and chemical properties</td>
</tr>
</tbody>
</table>

Three areas constituting the threads of home economics are studies in their own right and need to be viewed separately for general underlying concepts. These threads are recognized as socialization (development and relationships), resource allocation (management), and sensory exploration (related art). Having an ideational framework enables the learner to process new information and to perceive the areas as sources for ideas useful in solving problems. The author refers to this selection and organization process as a separate approach.

An integrated approach relates socialization, resource allocation and sensory exploration to knowledge of properties of commodities in the near environment which form traditional home economics subject-matter areas: foods and nutrition; textiles and clothing; and housing and furnishings.

A second integrated broad problems approach transcends all six areas, with knowledge from each area used in solving problems. These three approaches to selecting and organizing content should not be thought of as exclusive in application. All approaches are needed in some combination within the educational programme.
New trends in home economics education

Selecting and organizing course objectives

A course or terminal objective appropriate to the desired approach - separate, integrated or broad problems - is derived from the area goal(s). The class of problems or human events to which knowledge is applied is also communicated in this objective. The objective must be broad enough to encourage application to a number of appropriate problems through which learning will be attained. Ideally an analysis of a course objective will reveal that problem solving is required to attain the intended learning outcome. This is appropriate given the basic home economics goal.

Selecting and organizing other terminal objectives

Fundamental organizing concepts are inherent in course objectives and, therefore, are derived from those objectives. They are then translated into terminal objectives, which also require problem solving to attain the outcome. During instruction these terminal objectives are combined in a course objective to assist the learner in perceiving the interrelatedness of fundamental concepts or to convey holistic understanding. Terminal objectives and their sequence identify lifelong learnings. Depth and breadth of understanding increases with instruction at each age-grade level.

Grouping enabling objectives

Supporting concepts are derived next from content elements' co-ordinated with the terminal objectives and translated into enabling objectives. In this conceptualization, enabling objectives are means for understanding and verifying fundamental concepts. They may be structures in a pre-designed curriculum product or left open-ended for classroom teacher and student input. Analysis of enabling objectives should reveal them to require some combination of principle learning and concept learning.

Discussion

Objectives in this conceptualization have the following three characteristics:

1) They communicate conceptual intent of learning;
2) They are organized with the intent that sequence grouping is also part of what is learned; and
3) They are sequenced to be consistent with the learning process.

Gagné and Briggs (1974) tell us that concept learning, principle learning and problem solving as intellectual skills form the basic structure of formal education. These intellectual skills have a subordinate-superordinate learning relationship and provide a base for determining the sequence of instruction. Motor skill learning is incorporated with intellectual skills where needed to carry out some physical activity, while attitudes express a personal choice of action.

There is a division of thought in education regarding the relationship of cognitive, motor and affective domains in curriculum. Johnson (1969) suggests that the three domains are probably hierarchial, ranging on a continuum from motor skills, through cognitive skills, to affective behaviour. If fundamental organizing concepts and their relations identify values of home economics and if these concepts become the vantage point for viewing human events, then it should follow that the learner is using the value system underlying that field of study. Thus, there is an intellectual basis for values and attitudes.

A scope and sequence format, though limited in versatility, seems the best device for describing and analysing course objectives in a total programme. Either a sentence outline or a flow chart format is used in deriving objectives in a course. The flow chart seems to facilitate clustering of related ideas and to aid in analysis and re-analysis of the order of learning units.

Subject matter analysis charts have been developed for five areas of home economics. These charts aid curriculum workers to identify content elements related to the fundamental concepts of each area.

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The challenge of curriculum development is to determine which content should be taught and how the content is organized for effectiveness and efficiency. The paper presents procedures for deriving goals and objectives that reflect the purpose of home economics; namely, helping family members perceive the interrelationships of the near environment and human development.

Fundamental organizing concepts of a field and their interrelatedness can be used in curriculum planning. Two distinctions are made when applying the selection and organization procedures to home economics. The distinctions are between curriculum and instruction and between knowledge of a field and its related human events. Knowledge and its ordering relationships are the substance of curriculum, while human events are the source of learning experiences in instruction. Thus, fundamental concepts and their interrelatedness provide a basis for selecting and organizing goals and objectives.

The purpose of the field is translated into a basic goal. A network of derived goals and objectives is used to retain the intent of home economics. They include area goals - which reflect the basic goal of home economics and also communicate their fundamental concepts - course objectives, other terminal objectives, and enabling objectives. The enabling objectives can be structured in curriculum development or left open-ended for classroom teacher and student input. Objectives related to intellectual skills (concept learning, principle learning and problem solving) form a basis of the curriculum. Motor skills are incorporated where some physical action is required to complete a performance. A value system underlies a field of study.

REFERENCES


Defining objectives for early childhood education

Wijdan Shami Basit

Educators as well as individuals in their daily routine are always faced with making decisions. What shall we do today; where shall we go; what shall we buy ... and as educators, what shall we teach and what shall the students learn. However, as individuals, we rarely pause to think why... answering why of something means thinking the purpose of doing it ... the objective of carrying out that act, and this puts upon us a great responsibility for doing that act.

As educators, determining 'what to teach' from the enormous amount of knowledge available requires making decisions as to what knowledge is relevant and essential for the particular group a person is dealing with, at that particular time, and also requires determining why that specific information is needed; what is the objective of selecting that specific knowledge or that specific task.

There is no clear answer to such questions. The designer of an educational programme must make systematic and educated guesses about them. He must spell out objectives for the programme which, according to Tyler, become the criteria by which 'materials are selected, content is specified, instructional procedures are developed, and evaluative techniques are prepared.' (Tyler, 1950).

In the past, educators formulated goals of a programme in general terms. For example, in home economics education teachers expected their students to gain greater appreciation of home 'making'. How much constitutes a 'greater appreciation' and how is appreciation to be measured and difficult factors assessed? (Chamberlain and Kelly, 1975, p. 8).

If the aim of teaching is to bring about learning and if the aim of learning is to bring about changes in the learners' behaviour, it becomes imperative to design programmes which help elicit a change in the behaviour of the learners - and thus it becomes essential to state objectives in operational terms, i.e. in terms of the ultimate behaviour expected of the learner. The logic behind the previous statement is that

'Since no one can see into another's mind to determine what he knows, one can only determine the state of the learner's intellect or skill by observing some aspects of his behaviour or performance (using the term 'behaviour' to mean overt action).'
(Mayer, 1962, p. II).

Recent trends in education emphasize objectives that specify the ultimate behaviour expected of the students.

Gagné (1972, p. 394-6) states that the clarity of objectives reaches a maximum when the effects of instruction can be observed in the performance of the learner. Terms such as understanding, appreciation and knowledge are difficult to define, and are likely to be misinterpreted. Tyler (1950, p. 36) said:

'One can define an objective with sufficient clarity if he can describe or illustrate the kind of behaviour the student is expected to acquire so that one could recognise such behaviour if he saw it.'

However, stating objectives in behavioural terms is not above controversy. Arthur Combs, (1972, p. 5) has said:
The goal of education everywhere must surely be 'improved behaviour' on the part of the students. Logically then, to improve education, it would seem, we need to determine the behaviours we wish to produce, activate the machinery to produce those behaviours, then test the product to determine if, indeed, the goals were achieved.

However, despite the 'logic' of this approach, Combs recognizes the difficulty in evaluating behavioural objectives. Ends are prescribed in advance and students are in some manner brought to these predetermined ends.

Kneller raises a number of objections to the use of behavioural goals. He maintains that such an instruction depends on standardized methods, empirical testing, and results that are measurable .... whereby, learning is self-directed, often unstructured and unpredictable, and behavioural objectives do not make adequate allowance for creativity, imagination, individual differences and flexibility. (Fleck, 1968, p. 128).

Many teachers feel that some of the most important things they deal with in their classroom are feelings, values, self-concept, inquiry, discovery .... those things that are very individual and personal, are really not describable in behavioural terms. (McCullum, 1974, p.2).

Jackson offered the argument that teachers just don't specify their objectives in terms of measurable learner behaviours and implied that since this is the way the real world is, we ought to recognize and live with it. (Jackson, 1966, p. 20).

However, the real issue is not behavioural objectives or non-behavioural objectives. It is how these objectives can be stated clearly and from where these objectives emerge.

The psychologist Jean Piaget has commented on the educational process as follows:

'When the active school requires that a student's efforts come from the student himself instead of being imposed, and that his intelligence undertake authentic work instead of accepting pre-digested knowledge from outside, it is simply asking that the laws of all intelligence be respected.' (Hohmann et al 1977, p. 13)

The new trend in designing programme objectives for children between 3 to 5 years of age relies heavily on the belief that the child is capable of acting autonomously, making choices, developing preferences, taking initiative, setting its own course for problem solving and evolving a code of ethics, yet interacting with the challenge in his environment. The teacher is seen as an active participant in the child's learning, helping him organize his thoughts and priorities and providing an instructional programme which meets his needs, interests and abilities. His or her job is to provide in the programme activities which will foster the development of children.

The concept of developmentally valid education assumes that human beings develop capacities in predictable sequences throughout the life span, and at each developmental stage new capacities emerge. Yet, despite the predictability of developmental sequences, human development does not produce uniform predictable outcomes. All people have individual characteristics from birth which progressively differentiate into unique personalities and this should always be taken into consideration. To develop in all aspects of their lives, children must interact with objects and people in their environment. The fact that environments are continuously changing and children are continuously growing makes it important that a continuous reassessment of the children's behaviour and needs should be undertaken.

To be relevant objectives and programmes should change as children change. Children develop at different rates and have different interests; not all of them can reach specific objectives at the same time. This calls for proceeding with caution when writing objectives for young children. Objectives should be written to provide direction and show progress but not to pressurize the child toward attaining fixed standards. (Butler et al, 1975, p. 19).

As previously discussed, during the recent shift toward the adoption of behavioural objectives, educators seem to have taken sides for either educational objectives or goals. However, as Butler and Colleagues state:

'Without a sense of broad goals, behavioural objectives become isolated, overly narrow purposes which on the positive side are observable. Without specific behavioural objectives, broad goals are like good intentions which do not lead to action. Therefore, goals and behavioural objectives should be complementary to each other.' (Butler et al, 1975, p. 18).
They also maintain that goals can be broad developmental objectives, and around each broad goal a number of specific objectives can be identified. These specific objectives 'represent particular parts or strands of any broader developmental goal. The word 'strands' emphasizes the unity of goals and objectives - these strands are woven together into a unitary fabric of development'. (Butler et al, 1975, p. 18).

They also stress that if objectives are based on developmental sequences, they are also developmental in the sense that their natural, observable sequence has been established by careful research. (Butler et al, 1975, p. I6 - I8).

Given that developmental change is a basic fact of human existence, and each individual is developmentally unique, and that there are optimal times for particular types of learning, experiences need to be made available in each developing behaviour area at a level which is appropriate to the child's current development. And a developmentally valid education is that which

'(I) exercises and challenges the capacities of the learner that are emerging at a given developmental stage; (2) encourages and helps the learner to develop his or her unique pattern of interests, talents, and long-term goals; and (3) presents the learning experience when the learner is developmentally best able to master, generalize, and retain that which is learned and relate it to previous experiences and future expectations.' (Hohmann et al, 1977, p. 21).

Employing developmental objectives in planning instructional programmes for early childhood education means an intelligent participation and planning on the part of the teacher in the child's learning activities. Children will have different needs in relation to each objective, which may require changes in materials and equipment, changes in room arrangements, changes in the structure of the programme to enable individual children to progress toward developmental objectives at their own rate, and even changes in the skills needed by the teacher himself. (Butler et al, 1975, p. 22-4).

Since such a programme is concerned with the totality of the child, it integrates the cognitive, affective, and psychomotor domains of development, seeing them as complementary forces in the development of the child.

Butler and colleagues present valuable examples of developmental objectives for early childhood education. However, for the purpose of this article one example will suffice to show the relationship of goals and specific objectives and the integral relation of the three domains of development - the cognitive, the affective and the psychomotor.

Suppose one of the broad goals is 'to help children develop positive peer relationships'. A number of developmental objectives may contribute to this broad goal. It is known that children are more able to enter into peer relationships when they are less dependent upon adults. Therefore a developmental objective to achieve greater independence from adults would be a possible part of the educational plan. Children's imaginations develop, they progress beyond an interest in things to an interest in how human relations are organized, and thus move into co-operative forms of play and as a result, increased peer relationships. It is also known that the child's ability to think of what he wants to say and to verbally express his ideas increases his success in peer relationships. Finally, if the child has the gross motor ability to participate in peer group activities, his peer relationships will be improved. Thus

'the goal of developing positive peer relationships will be advanced by working on objectives in the areas of thinking, communicating, growing socially and emotionally, and developing perceptual and motor skills.' (Butler et al, 1975, p. 19).

If the goal of teaching is learning and if our concern is the development of the child in his totality, our role will have to change from imparting knowledge in face to face situations to actively participating in the child's learning, and intelligently facilitating it.

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Programme formulation

Programme development in the College of Home Economics, Helwan University

Hayat Elnaggar

Background

In October 1975, the Higher Institute of Home Economics (HIHE) became a college of Helwan University. The up-dating and revision of curricula were necessary, not only to meet university requirements, but also to meet the increasing demand within Egypt and from other Arab states for high calibre professionally-trained home economists. It was agreed that, for the time being, the faculty should limit curricula revision to three major areas of study, namely home economics education, nutrition and institutional management (I) and clothing and textiles.

The introduction of other major areas will be considered in the future. At present, the college offers degree courses at bachelor, master's and doctorate levels in the areas of study mentioned above, as well as providing special courses for foreign students. The annual intake is between 250 and 300 students, and the total enrolment amounts to about 1,300 students at undergraduate level plus between 20 and 30 graduate students. Out of the total enrolment, about 80 students come from countries in the Near East and a few from African countries.

The graduates of the home economics education programme are appointed by the Ministry of Education as teachers in preparatory and secondary schools. The graduates of the other two major programmes have to undertake one year of Public Service after which they are appointed to posts according to their areas of study. The clothing and textile graduates work in ready-to-wear garment manufacturing establishments, in textile factories, for dress-makers and for leading clothing and textile wholesalers and retailers. The nutrition and food science graduates work mainly in canning factories, hospitals, child and mother health centres, and as research assistants in the Institute of Nutrition and The National Research Centre.

The curriculum of HIHE, which was adopted and implemented in 1963, was in use until October 1976 when the newly developed curriculum was approved. The B.Sc. level curriculum which is the subject of this paper is a four year university level curriculum which includes a first year core curriculum consisting of subjects from the sciences, arts and humanities, the principles of which are applied in home economics courses and which also give the depth and breadth that are frequently lacking in professional training in technical subjects, followed by second, third and fourth year curriculum for the three major areas of study which includes a few core curricula courses.

Method adopted for revising the curriculum

A committee of faculty members was appointed by the Dean to make recommendations for the re-organization and revision of the curriculum. The following procedures were adopted to enable the committee to carry out its task.

(I) This major was changed in the new curriculum to Nutrition and Food Science. The reason was the presence of a College of Hotel and Institutional Management in Helwan University. Duplic-ation was thought inadvisable.
I. A questionnaire was given to 200 practising graduates comprising 100 teachers, 70 nutritionists, and 30 clothing and textile graduates working in their respective professional areas. The questions were devised to obtain information about the nature of their work; whether or not they were satisfied with the courses they had studied; and to identify the courses which needed strengthening and the new areas of knowledge thus required.

2. Meetings were held with supervising personnel in places where graduates were employed to find out points of weakness reflected in the graduates' work performance, and to try to rectify these weaknesses when planning the new curriculum.

3. Since the educational system does not allow students to make a choice of 'electives', another questionnaire was given to fourth year students to obtain their evaluation of the subject matter taught and their reaction to the curriculum as a whole.

Recommendations of the Faculty Committee

Following consideration of the data obtained from the questionnaires and meetings, the Faculty Committee recommended the following measures.

I. An introductory course in home economics in the first year, for which there was a clearly identifiable need.

2. Specialization to begin in the second year instead of the third year as had been the practice hitherto.

3. Student teaching practice in schools should begin in the third year and not be confined only to the fourth year.

4. More courses in the areas of nutrition and food science e.g. food analysis and food evaluation; and clothing and textiles e.g. chemistry of textiles and of dyes; the care and repair of sewing machines.

5. As some of the courses covered subjects of no direct importance to the students, it would be more appropriate if these were incorporated as parts of other courses due to changes in socio-economic conditions e.g. horticulture and agricultural economy, as women are no longer involved in farming.

6. More courses were needed in the humanities.

7. Lack of knowledge of English in areas of study was deeply felt by the graduates. Hence, one of the courses in each area of study should be taught in English to increase the students' vocabulary in relation to their specialization and to help them in their reading.

The outcome

In the light of the findings and the recommendations, a tentative curriculum was drafted which the Dean discussed and reviewed with faculty members. The curriculum was then approved by the 'College Council'. From there it went to the 'Board of the Education Sector'. (I) Alterations were made where appropriate. When the curriculum was finally approved by the 'Supreme Council of the Universities', a Ministerial Decree was issued authorizing its implementation.

The revised curriculum includes a core curriculum taken by all students enrolled in the college regardless of their major areas of study. It includes a total of 106 classroom hours of instruction, the majority of which are concentrated in the first two years. These hours may be classified (in figures) under the headings of the Arts and Sciences which find application in home economics.

(I) The Dean is a member of the Board of Education. All curricula of Colleges of Education throughout the country have to be approved by the Board prior to receiving final approval of the 'Supreme Council of the Universities'.

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New trends in home economics education

Figure 1

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Hours</th>
<th>Subject Areas</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td></td>
<td>Sciences</td>
<td></td>
</tr>
<tr>
<td>Art and Design</td>
<td>10</td>
<td>Organic Chemistry</td>
<td>12</td>
</tr>
<tr>
<td>Ancient Art</td>
<td>6</td>
<td>Mathematics and Statistics</td>
<td>8</td>
</tr>
<tr>
<td>Modern Art</td>
<td>6</td>
<td>Core Curriculum in Home Ec.</td>
<td>30</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>(total) 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>6</td>
<td>Introduction to Home Ec.</td>
<td>4</td>
</tr>
<tr>
<td>Physiology</td>
<td>6</td>
<td>Principles of Nutrition and Food preparation</td>
<td>8</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>(total) 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>2</td>
<td>Child Care and Child Development</td>
<td>4</td>
</tr>
<tr>
<td>Sociology</td>
<td>2</td>
<td>Home Management</td>
<td>6</td>
</tr>
<tr>
<td>Vocational Psychology</td>
<td>4</td>
<td>Hygiene and Home Nursing</td>
<td>4</td>
</tr>
<tr>
<td>Social Psychology</td>
<td>4</td>
<td>Ethics of Clothing</td>
<td>2</td>
</tr>
<tr>
<td>Family Relations</td>
<td>2</td>
<td>Care of Textiles</td>
<td>2</td>
</tr>
</tbody>
</table>

Total weekly class hours in core curriculum = 106

The revised curriculum for Nutrition and Food Sciences major includes, in addition to the 106 hours core curriculum, 114 hours of study classified as shown in Figure 2.

Figure 2

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Hours</th>
<th>Subject Areas</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>(total) 32</td>
<td>Foods</td>
<td>(total) 44</td>
</tr>
<tr>
<td>Advanced Nutrition</td>
<td>4</td>
<td>Food Science and Food Analysis</td>
<td>8</td>
</tr>
<tr>
<td>Nutritional Problems in Developing Countries</td>
<td>4</td>
<td>Experimental Foods</td>
<td>12</td>
</tr>
<tr>
<td>Nutritional Survey and Project</td>
<td>10</td>
<td>Quantity Foods (I)</td>
<td>10</td>
</tr>
<tr>
<td>Nutrition Education</td>
<td>4</td>
<td>Food Hygiene (2)</td>
<td>4</td>
</tr>
<tr>
<td>Diet Therapy</td>
<td>10</td>
<td>Food Evaluation</td>
<td>10</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>24</td>
<td>Food Technology</td>
<td>10</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>8</td>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>12</td>
<td>Psychology</td>
<td>8</td>
</tr>
<tr>
<td>Paracytology</td>
<td>4</td>
<td>Social</td>
<td>4</td>
</tr>
<tr>
<td>Family Economics</td>
<td>4</td>
<td>Vocational</td>
<td>4</td>
</tr>
<tr>
<td>Accounting</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) 3 weeks summer training in hospital kitchens where quantity foods are prepared
(2) 16 field trips are arranged for the students.
The revised curriculum for the home economics education major includes, in addition to the 106 hours of core curriculum, 136 hours of additional study classified as shown in Figure 3.

**Figure 3**

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Hours</th>
<th>Subject Areas</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of Education</td>
<td>4</td>
<td>Developmental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Methods of Education</td>
<td>6</td>
<td>Social Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Methods of Teaching</td>
<td>4</td>
<td>Educational Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Teaching Aids</td>
<td>4</td>
<td>Seminar Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Student Teaching</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition Education</td>
<td>4</td>
<td>Home Economics Subjects</td>
<td>66</td>
</tr>
<tr>
<td>Adult Education</td>
<td>3</td>
<td>Clothing Construction</td>
<td>22</td>
</tr>
<tr>
<td>Evaluation in H. Ec. Ed.</td>
<td>3</td>
<td>Fashion Designing</td>
<td>4</td>
</tr>
<tr>
<td>Art Education</td>
<td>4</td>
<td>Food Science and Experimental</td>
<td></td>
</tr>
<tr>
<td>Biological Sciences</td>
<td></td>
<td>Food Standardisation and Project</td>
<td>14</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>6</td>
<td>Advanced Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>6</td>
<td>Design and Embroidery</td>
<td>4</td>
</tr>
<tr>
<td>School Hygiene</td>
<td>2</td>
<td>Home Furnishing</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Household Equipment</td>
<td>6</td>
</tr>
</tbody>
</table>

The revised curriculum for the clothing and textile major includes, in addition to the 106 hours core curriculum, 132 hours of study classified as shown in Figure 4.

**Figure 4**

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Hours</th>
<th>Subject Areas</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>12</td>
<td>Pattern and Clothing Construction</td>
<td>26</td>
</tr>
<tr>
<td>Textiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of Textiles</td>
<td>4</td>
<td>History of Costume</td>
<td>4</td>
</tr>
<tr>
<td>Design and Printing of Textiles</td>
<td>4</td>
<td>Advanced Pattern Design</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry of Textiles</td>
<td>2</td>
<td>Costume Design and Draping</td>
<td>24</td>
</tr>
<tr>
<td>Dyeing of Textiles</td>
<td>2</td>
<td>Tailoring</td>
<td>12</td>
</tr>
<tr>
<td>Analysis of Different Textiles</td>
<td>6</td>
<td>Design and Embroidery</td>
<td>4</td>
</tr>
<tr>
<td>Fundamentals of Textiles Industry</td>
<td>4</td>
<td>Mass Production of Clothing</td>
<td>8</td>
</tr>
<tr>
<td>Study of Sewing Machines</td>
<td>8</td>
<td>Marketing</td>
<td>2</td>
</tr>
<tr>
<td>Anatomy and Model</td>
<td>8</td>
<td>Art Education</td>
<td>4</td>
</tr>
<tr>
<td>Accounting</td>
<td>2</td>
<td>Industrial Statistics</td>
<td>2</td>
</tr>
</tbody>
</table>
As the success of the curriculum re-organization is so dependent upon the development of appropriate course content, the Chairmen of the different Academic Departments were requested to submit course descriptions of all the courses taught by the Faculty members of their Departments. The course descriptions were to help in the development of the syllabi of the courses in order to avoid any unnecessary repetition; to ensure that the contents of courses are co-ordinated and to identify the references to be used in every course. The members of the Faculty were also requested to investigate and develop methods that might be used to evaluate student performance.

Conclusion

An overview of each of the three major areas of study indicates an orientation appropriate to the needs of students pursuing their chosen professional route. Within the home economics education major, the combination of subjects studied provide adequate preparation for a 'general home economist'. This is essential as the graduate is expected to teach food and nutrition, home management, clothing and textiles, and child care in preparatory and secondary schools. The curriculum for the nutrition and food sciences major prepares the graduates for their professional tasks in the field of research in foods and nutrition, extension work in the area of nutrition, and the supervision of meals in hospitals etc. The curriculum for the clothing and textile major equips the graduate with basic knowledge appropriate to a wide range of professional employment opportunities.
Implications for non-formal education programme planners
Beatrice Paolucci, Margaret Bubolz and Mary Rainey

Overview

The analysis of pertinent data and synthesis of literature relative to the contributions of the family, and especially women, to social and economic development affirm that through time and across cultures the family has been and continues to be a primary economic and social unit of society. The family is an economic unit in the sense that it serves as the basic arena for the production, allocation and distribution of goods and services essential to the day-to-day survival and maintenance of family members. It is a social unit in the sense that through the continuity of communications and interactions between and among family members, everyday tasks are carried out and individual personalities, attitudes, skills, and the discipline necessary for living in the larger world are shaped.

The significant contribution that the family can make to economic and social progress is often underestimated. This is true because estimates of contributions to economic and social development are computed largely on the basis of inputs by family members into the market economy in the form of sale of agricultural and home produced products and for paid employment in the form of labor and professional services. A large part of a family's contribution to the economic and social system is invisible. It is comprised of the non-market, unpaid activities of family members in the form of production of goods and services for family consumption, i.e. the production and preparation of food for the survival of family members and the nurturing, care and education of family members so they can cope with their immediate environments and function productively in the larger society.

Social and economic progress is dependent upon the productive capacity of humans, i.e. the quality of human resources. The family is critical in both the formation and development of human resources.

The pervasive influence of the family upon its members, especially children, is widely acknowledged (White and Watts 1974; Bronfenbrenner 1974; Hess, Shipman et al. 1968; Boulding 1973). Characteristics such as mother's attitude, self-esteem and sense of internal control during the child's infancy seem to be related to his or her later intellectual performance. The effect of differential parental time investments in activities within and outside the family environment in large measure shape the child's view of the world and his/her role within the society. Sex roles are learned very early in life. What is considered appropriate and right for males and females plays a decisive role in a person's aspirations and motivations for a career. The increasing attention currently being drawn to under-utilization of the potential of women requires both men and women to establish sex-role behaviours and attitudes which will facilitate optimum life fulfilment and societal contribution for both sexes. Socialization patterns for relating to others also appear to be in large part formed in the family.

The need to maximize the human potential suggests that attention be given to learning and education throughout the life cycle. The family has a special function to play in socialization for dealing with everyday problems, in re-socialization for new roles, and in anticipatory socialization for people to enter or re-enter the work force or to undertake education for a new career. The map of the world held by family members, their view of potential behaviours of those around them as well as of places and things, will determine the life chances of individuals; how far they can go and what they can do (Boulding, 1969).

In addition to their significant - albeit often unmeasured and uncounted - non-market and
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social contributions, family members also participate in and contribute to the market economy. In the least developed countries, rural farm production for use within the family is necessary for survival and accounts for a considerable share of the national output. As economic development proceeds, more and more of the production for family use is replaced by family production for the market and by shifting family members to wage labour and non-farm enterprise (United Nations, 1973). As nations become more industrialized, both men and women work away from home in increasing numbers, but women continue to play a major role in the family, along with outside employment (Boserup 1970, 1975; Blake 1974).

The family provides an integrative function for society through its essential contribution to the development of individual trust and the expectation of reciprocity in human transactions. These provide the glue which enables social and economic systems to function. Continuity and conservation of human relationships, values, religious systems and traditional arts and crafts are also rooted in family life and provide stability, meaning and integration for society. The family plays a significant part in the quality of life experienced. In a six-year study of factors contributing to the quality of life in the United States, it was learned that the family and the responsibility that people have for one another were more important than any other factor in determining the distribution on income and well being (Morgan, et al. 1974). Similar findings have been reported in other research (Andrews and Withey 1974; Bubolz et al. 1975).

The ultimate aim of social and economic development is that of improving the well-being of humans. According to Presvelou "development goals must include: satisfaction of the elementary needs of food, shelter, clothing and health, and improvement in the way of life of more than 60 per cent of the world's population living in rural areas; establishment of social justice through a humanly acceptable distribution of goods and services; exploration of the possibility of freeing the individual from the uncertainties of nature through education and self-actualization." (Presvelou, 1973).

Much of this development begins at the family level; in all cultures the family is the major provider of human resources and is a key instrument in shaping their development. Thus, the family can be a powerful force in developing an awareness in members of their worth, enabling them to function more productively in becoming the ultimate resource for the creative reconstructions of society and for achieving the pinnacle of development: improving the well-being of people.

Ecological model for viewing the role of the family in social and economic development

The family exists in a complex milieu of physical, social and institutional systems that form the environments of the family. The model presented in Figure I is an ecological, (I) descriptive model that conceptualizes the family (B) as a human system made up of subsystems of individual family members organized as a unified entity, in interaction with the environment (A). The family system produces human resources and with the help of other social systems, transforms those resources to provide the human capital reserves of a society. The family exists in and interacts with a number of environments (A) and influences the resources available to the family and the manner in which activity is performed. The family, as a unit and through its individual members, participates in both market and non-market activities (C) that contribute to the social and economic well-being of the family, the community, and the society (D). The ever-changing status of the family's and the society's social and economic development provide feedback to the family and to other social systems. Such feedback aids in making management decisions about the allocation and dispersion of human and non-human resources.

The primary value of the ecological model is to call attention to the multiple and interacting systems that impact on the family and the diversity of functions performed by the family that contribute to development goals. The model provides a framework for the description and analysis of populations and activities for need and resource assessments, for planning and programming strategies, and for programme evaluations. The model, applied to a specific family or community can aid educators and planners in:

An ecological model addresses both systems and environments and the interactions between the two.
I. Identifying the systems that interact with families and therefore link families to the larger physical and social environment;

2. Assessing the human and non-human resources available to families for specific tasks;

3. Identifying and quantifying activities or contributions of families and family members in the marketplace, the community, and the home.

4. Tracing the origins of and the effects of social and economic development.

Although the model would need to be adapted to the specifics of a given community or family and to a given situation, it may be useful in research for identifying potential relationships for analysis. For example, the aggregate activities of families in self-help village projects may be quantified and compared to the resultant perceived community satisfaction or morbidity statistics of villagers. In this example, one relationship between (C) and (D) is established. Similar relationships can be generated between environmental inputs (A); the quantity and quality of family activity (C), and resultant nature of families in social economic terms (D).

The reader may note that this model represents merely one way in which to label and classify the people, things, and actions that influence development. The main focus in this model is the family, as individuals exist primarily in this human system. However, this is not to say that other human systems or environmental influences cannot be moved to the central focus and then their interactions with other systems and their contributions be analysed.

An especially important interface (i.e. point where interactions occur) is that between the family and non-formal educational programmes. To aid in applying the model to this group of educators, two specific examples follow:


Ecological Model for Viewing Role of Family in Social and Economic Development
Example one: Task - to analyse the specific needs, competencies, and interactions of a target population, young farmers, so as to plan appropriate instructional strategies for an already identified educational thrust.

I. Locate the target population in the model. In this case, the young farmer would be located within the family (B) and further within a specific set of interacting environments (A).

2. Analyse the personal attributes of the young farmer (B1). Consider such things as past experiences, interests and motivations, competencies for this and similar tasks, learning styles, literacy, etc.

3. Determine the present contributions of the young farmer and other family members in both market and non-market activities related to the goals of the programme (C). Present activity patterns may provide clues as to when to introduce new information and how best to construct examples and learning tasks for immediate relevancy and application. If new activity patterns are required, consider the way in which the entire family will be affected as it reallocates resources to maintain on-going activities.

4. Identify competing or complementing inputs to the family that may influence the reception of the instruction, its content and delivery (A). What systems do the family participate in? How many social or cultural institutions inhibit or aid the implementation of the instruction? What is the status of the physical and human-built environments that contribute resources for family activity?

5. Analyse the family structure attributes (B2) to determine how best to provide information/encouragement to receive the support of the family and to contribute to its knowledge base? Consider past participation patterns of other family members in educational programmes. Be prepared to work through lines of authority and influence within the family and within the larger community.

Example two: Task - to evaluate the impact of a handicraft training programme designed to increase traditional handicraft skills of women or the social and economic status of the family.

I. How did participation in training affect the women's on-going participation in market and non-market activities (C)? If changes in activity patterns were necessary, were these changes disruptive or easily accommodated to by other family members? Did these changes in activity patterns produce any perceivable changes in the structural attributes of the family (i.e., allocation of roles, esteem, power, or effect within the family) (B2)? Did these changes in activity patterns produce any perceivable changes in relationships to people and institutions outside the family (i.e., money-lenders, shop-keepers, peers) (A3)?

2. Did participation in the training programme change the personal attributes of participants (i.e., skills, motivations, self esteem) (B1)?

3. Did participation in the training programme change the production activities of families in regard to the handicrafts involved? Were more or better quality goods produced to exchange for goods, services or status? Were more or better quality goods produced for sale?

4. If goods were sold or exchanged, were there 'profits'? How were profits utilized? Did the production, sale, or exchange improve the family's well-being (i.e., accumulation of resources or allocation of resources to meet specific needs or goals)? What effect will changes in the family's resource base have on future activities of the family (i.e., nutrition, division of labour, need for more education)?

5. Did participation in the training programme have an impact on the production of other goods or services not directly related to the instruction, or the management and interpersonal communication skills of the participants (i.e., were there 'carry-over' effects in other areas of production and management)?

6. Did participation in the training programme have an impact on the personal attributes of other family members? Were skills and knowledge shared and passed on to others? Did such a contact motivate others to participate in similar activities? Did changes in participants have a negative or positive effect on the personal attributes and relationships of others?

The model, with the competencies outlined as necessary for effective functioning in the several environments in which human beings live, is suggested as a basic framework applicable to
range of cultures. Description of specific target audiences, delineation of major needs for non-formal education and strategies for delivering non-formal education must await a more intensive and critical analysis of how families in different cultures are structured and how they function in a particular culture.

In the last analysis, the model must make sense to the particular non-formal education personnel whose responsibility it is to deliver programmes that fulfill the promise of building human resources with a specific group of persons. The model must be situation applicable. Its applicability was in some measure tested by submitting it for reaction to a non-formal educator with extensive Latin American experience.

Questions to be considered in conducting family needs and resource assessment

All educational programmes need to be continuously supported by a knowledge base undergirded by a thorough assessment of the needs and resources of the target population. In order to understand the family's needs and resources, the ecological model is proposed. The model helps to focus on the family holistically. Viewing the family and the environments which impact upon it should be helpful in identifying family stresses and problems. The family also has an impact on the environments, i.e., productive family members contribute to the market and non-market activities of the community. The model highlights areas where non-formal education is needed and can be most efficiently introduced to increase the competencies of family members and hence their social and economic contribution. Surveys of whole families are needed in order to gain a view of the totality of family activities within the context of their environment. Family problems do not exist in isolation. They are interdependent and interrelated and situation specific. Problems affect not only individual family members but also the family unit. Hence their solution is dependent on a holistic view.

Some of the questions which need to be addressed in planning non-formal education programmes for the family are:

1. What are the marriage and family patterns? The number, sex and relationship of persons living in a household or compound or cluster?
2. What are the decision and authority patterns in the family? Who decides and who carries out family activities such as spending the money, doing farm and housework, caring for and discipling children, determining which children attend school, determining who participates in community activity?
3. How do rural family members spend their time? Who does what, where, when, and with whom, and how much time is spent? How much time is spent by women, men, boys, girls, in activities such as: farm work, and food production and marketing; household work including production of goods and services used in the home; care of children and other family members; paid work off the farm; producing and selling items in the market place; travel, sports, leisure activities; formal and non-formal education; religion, recreation and cultural events; rest, eating and visiting?
4. What are the primary resources, values and goals of the family as a unit? Of individual family members?
5. What are the patterns and modes for carrying out everyday activities related to food, clothing, household maintenance, sanitation and health care, care of young and ill, and communication within the family?
6. How is the family linked to the community? Who in the family leaves the home to attend work, school, day care, or child development and nutrition centres, health and family planning clinics, extension and community meetings and religious political events?
7. What organizations and services are available to assist families? Do these services compete with or complement each other?
8. What is the mobility pattern of family members? Who leaves the farm and village to work in urban areas? What kind of jobs do they find? What connections with the family and village do they maintain?
9. How available is information through mass media? Do homes have transistor radios, television, newspapers, books, magazines?
10. What informal learning activities go on in the home and family? In the community? What kind of self-planned learning takes place in the home? Where does the family go for information for its self-directed learnings?
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Surveys of whole families will provide baseline data for development of non-formal education and other programmes. They will also provide a benchmark by which to measure and document social and economic change.

Guidelines for identifying family competencies

Building and enhancing competence is the essential process in the development of human resources. The effectiveness with which people live can be seen as based on their competencies with respect to the environments in which they function.

Competencies essential for everyday living can be seen as occurring in three related domains: family, community and world of work. These include the ability to carry on family functions, to participate in the community and utilize social institutions and to perform successfully in social and economic institutions.

The model summarizes data previously presented and highlights the need for the following competencies which can be achieved through access of learners to non-formal programmes and reinforced in the family setting:

A. Competencies needed to function as a family member

1. Health and nutrition

The goods and services produced by family members require knowledge and skills concerning food production and preservation, health, sanitation and personal care.

2. Evaluation, decision-making and problem-solving

The forgoing of values and attitudes in the family is behaviour-learned not only through interactions between parent and child, but among all family members. While the family is the initial setting in which the infant learns to trust its environment, all family members continuously learn how to work co-operatively, set and reset goals, make decisions both inside and outside the family. A critical competency affecting family welfare is use of a framework for making decisions with respect to family size and the spacing of children that will be in keeping with limits of resources available. Resources to be considered should include the time and talent of family members as well as material wealth required.

3. Family living and parenthood

New demands on, and changing roles of, men and women require new patterns of interaction and relationships both within and outside the family. Previous models may no longer be appropriate. Education in family and parental roles and relationships is indicated. Understanding of child development and ways to teach children can enhance parental effectiveness and add to the potential productivity and health of people. By understanding and directing family interaction a major area for forging skills, attitudes and values for the future can be shaped. Social equity as a value, heralds a reassessment of the family roles of men and women, children and adults.

4. Household production of goods and services

In many settings, varying according to availability of goods in the market place and resources of the family, skills are needed with respect to production of food crops, fish and meat for household consumption, construction and maintenance of the home, weaving, sewing and care of clothing and beautification of surroundings. Increased emphasis will need to be placed on family services -- care and nurturance of children, aged and the ill.

B. Competencies needed by family members to function in the community and utilize social institutions.
I. Social mapping

Adults carry with them knowledge of the location of resources in the communities in which they live. These social maps of the environment enable their holders to function in bureaucratic systems, utilize political and social structures, recognize where to make purchases, obtain jobs, lobby for their interests, use social services such as libraries, protection from fire and theft, and health care. Although roles of family members differ from society to society, the social mapping competencies of mothers can be critical in meeting minimal requirements for survival and in passing on these survival skills to other family members.

2. Marketing competencies

Ability to make effective consumer decisions requires knowledge of an increasingly wider range of goods and services with respect to use, characteristics, and quality. These decisions depend on literacy and numeracy skills to read, assess contents and material, calculate costs and make purchases. Increasingly acknowledged is the importance of knowing how to obtain and use credit, and other financial mechanisms. Ability to market goods produced in excess of household needs may also be necessary.

3. Civic participation

Competencies needed to be an effective citizen include an understanding of the political system. It requires advancement by the adult to a stage of valuing and decision making which analyses issues related to the social good by reference to a social ethic. These decisions require expression through the exercise of the rights and responsibilities of citizens i.e., voting, taxation, participation in government.

4. Voluntary participation

The quality of community life relies on the commitment of individuals through contributions of their resources of time, abilities, and wealth, often as members of voluntary associations, and through participation in self-help projects, contributions to the celebration of local festivals and other activities. The support and participation in projects at the community level calls for a wide range of skills ranging from administrative leadership, group participation, financial management, and specific talents in areas such as recreation, teaching, music, art, and politics.

C. Competencies needed by family members to participate in social institutions

1. School

Success in school can be traced to the impact of different family environments. Competencies enhanced through the home which impinge on success in school vary from culture to culture in both degree and kind. These include such competencies as motor, cognitive and linguistic skills, achievement orientation, ability to participate in co-operative relationships, respect for authority and ability to make choices.

2. Work

Information directed to family members can affect participation in careers by bringing them to a level of awareness of available alternatives. Through behaviour learned in the family anticipatory socialization occurs, thus equipping the individual with a repertoire of skills, attitudes and values required to aspire to and succeed in training and educational programmes and to persevere and perform at work. Adult motivation to work comes largely through encouragement from the family, and the need to provide for family maintenance and achieve family goals. Release from emotional tensions sustained at work is largely a family responsibility.
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Recommendations for programme development

Curriculum development and implementation. Curriculum, designs focusing on family learnings need to be developed by non-formal educators working co-operatively with subject-matter specialists such as nutritionists, home management specialists, health educators, and agriculturalists. Particular materials for developing family competencies need to take into consideration the unique nature of learning in the family: its diversity in age span, sex roles, and cognitive skills; its reliance on self-motivation and self-direction of the learner, and its dependence on materials that can be used in a variety of settings.

Curriculum materials should include not only specific content areas but also be attentive to process learnings. They should foster skills in how to learn, that is in how to set goals, determine the pace of learning, seek information from appropriate sources and establish criteria for determining success.

Non-formal curriculum designers should make a special effort to bring together formal and non-formal educators to examine programming in its entirety. Such efforts will result in integrated programmes that will facilitate developing family competencies, avoid duplications of efforts and assure the meeting of essential needs.

Because of the nature and scope of family-focused non-formal education, it is recommended that special attention be given to the training of para-professionals who can assist family members in their particular settings. For example, nutrition aides who help the family use local foods and familiar recipes to meet nutritional requirements can be more effective because of their familiarity with local culture as well as their specialized nutritional knowledge.

Programming. Family-focused, non-formal programming should begin by offering assistance in areas of critical need, i.e., food production and preservation, child care, family planning, and preparation, for new roles in the labour force. Because the home provides a natural laboratory for learning, non-formal educators should recognize appropriate time and place for intervening with new information. They should approach family members when they have time free to learn and suggest projects which, while begun outside the home in group settings, can be pursued in depth and applied in the home.

For much family learning, family members are teachers of other family members. Non-formal programmes for family should help family members in these teaching roles. Methods and materials should be developed that would be useful for parents as teachers as well as children as teachers.

Evaluation: Evaluation procedures which measure changes in behaviour resulting from non-formal learnings should be developed. These measures should identify what was learned, what competencies were developed and the impact of the new level of competence on market and non-market activities of family members. These measures might include before and after comparisons of how family members spend their time and money.

The efficiency and effectiveness of non-formal family education programmes can be determined by making comparisons between learning projects which are self-planned versus group planned, carried on in the family versus community settings, delivered through mass media versus on a one-to-one basis, or utilizing single versus formal and non-formal education systems.

Non-formal family education: reactions from a Latin American field experience

What is attempted here is the identification of some of the reactions of one person who has worked for many years in Latin America and who has experienced some of the satisfactions and frustrations of efforts to change women and families in hopes of promoting social and economic development. Obviously, other non-formal educators will perceive other issues and variations in priorities and strategies. This is merely one example of how the documented suggestions might be translated into action.

Thinking. Evaluating. Wondering. Choosing. Trying. Questioning. Programming. Acting. All of these are possible reactions to what has been presented. Given the realities of the inter-relationships of the systems in the two fields (each system with its own past, present and future; each system with its own goals and methods), it is unlikely that all concepts developed and suggestions made will be meaningful and feasible in any one setting.

2 By Linda Nelson.
Decision makers, programme planners and practitioners in all systems execute their tasks with limited resources and are expected to produce results within relatively short time periods; therefore, one of the major issues raised by the presentation is the consideration of where the non-formal educator might initiate actions to implement these suggestions.

Each cultural setting will filter the concepts in different ways. Ideas will be perceived on various continua which may range from boring to stimulating, repellent to attractive, practical to esoteric.

Where any practitioner might decide to begin implementation will depend also upon the specific responsibilities of employment in combination with the needs and goals of the agency and the present status of women and families in the local, national or other geographical area for which programmes are to be developed.

If non-formal educators see merit in the reasoning presented, each will need to make a commitment to the central role of women and families in social and economic development. This is not always easy, because women and families are not often high prestige groups. All non-formal educators involved in programmes may need to take some risks and benefits may appear elusive. While it might appear that this refers to high-level planners only, for change to occur, all levels of non-formal educators must demonstrate commitment. The plans, no matter how promising, will seldom be put into practice unless non-formal educators at all levels are willing to try. Although high level planners may need to be committed in order to allocate resources, the local educators need to provide data on local needs and acceptance and are unlikely to do this unless convinced of their importance.

Following commitment to the potential role of women and families in economic and social development, concrete content ideas and a system for diffusion of the educational content are required. These are interdependent and need to be developed simultaneously. In many countries at least the rudiments of a non-formal educational system exist; therefore, some of the first actions might revolve around strengthening the system to involve more women and families.

Who are the non-formal educators? What are the expectations of their programmes? What kinds of support do they experience?

In many rural Latin American communities the non-formal educational function is added to the responsibilities of the local school teacher. One of the reasons for this is that the local school teacher maintains contact with the community for a time period sufficiently long to permit trust to grow. Trust is a relationship which is built slowly. It is a factor which appears repeatedly in the literature as a component in successful efforts to promote change.

In addition to school teachers, there are few others who are dedicated, skilled and available to live in isolated communities for the time necessary to develop trust on the part of the potential participants in non-formal educational programmes. Although the teachers in the formal school system may have the skills and the trusting relationship, they usually lack the time and the kinds of information which are timely and useful in non-formal programmes. While teachers may be sympathetic to the needs and goals of non-formal programmes, they are already fully occupied and cannot easily divide their efforts.

Educated people in Latin America tend to reside in cities; roads are limited, transportation is costly in relation to income; literacy is low. This is part of a cycle which makes communication slow and barrier-laden. Local leaders may be strong in manual skills and knowledge of local language and customs; however, they are often weak in information, attitudes, non-manual skills and behaviours which are indicated as necessary or helpful in complex societies. If local people leave an isolated community they are not likely to return or, if they do return, they are likely to be reabsorbed without making any major changes in the community life. Some catalyst is needed if women and families in isolated and usually traditional communities are to be reached. That catalyst needs to be a trusted person.

Long-term investments need to be made in continuous training for local leaders which may include transportation, special housing, and the use of intermediary personnel between local communities and highly educated specialists. To envision productive, non-formal educational systems without some investment and some sacrifice from educated nationals seems unrealistic.

In many Latin American families, it is common for older children to care for younger siblings. Obedience is highly valued and children have few ideas on how to educate or entertain; therefore, children of various ages can be seen sitting in a doorway waiting for parents to return from field or market. Some of the apathy is related to malnutrition, but much of it is related to lack of ideas for activities. Non-formal programmes connected with, or independent of, formal school systems might help older children to play with and transmit learning to their siblings. Vocabulary, numerical concepts, physical skills, gardening, and notions of how to complete errands could be contents of non-formal experiences.
Decision-making is one of the crucial skills needed to move family members from passive to active participation in their communities and nations. The range of options which are available so that people recognize opportunities to experience choice, observe the consequences and develop the realization that there is more than one way to confront any situation. Non-formal educators need to be alert to ways to help all family members learn to make decisions which relate to their needs and desires and to the changing communities in which they live.

Many non-formal programmes for women in Latin America have been based on making a product, that is, the learning of manual skills such as cooking and sewing. In many communities, the males have only permitted the women to attend a meeting when they brought home a product as evidence of their activity. The results of decision-making experiences are more difficult to see.

In one community, a planned programme to teach decision-making aspects of meeting family food and clothing needs was developed by non-formal educators. In a series of meetings, the farm homemakers were encouraged to examine different ways to solve a situation and to compare the results. For example, the families were encouraged to think of all possible ways to obtain school uniforms for their children. Some remade uniforms of others, some bought new uniforms, some made new uniforms on the sewing machine and others by hand. All the products were compared for costs in money and time as well as the quality and appearance and the reactions of the children who were to wear the uniforms. In another series of sessions, the families made different kinds of holiday breads, and purchased some too. The home and commercial products were compared for flavour, appearance, costs in money and time. In each of these experiences, the conclusion of the participants was that each of the solutions was 'best' for at least one of the families. All the people shared different ways of reasoning and learned that there are many different ways to reach goals, solve problems, use resources and make decisions. It was a revelation to the families and to the non-formal educators that there are seldom 'correct' answers in family and community living. These non-formal teachers and learners gained a great deal of knowledge and skill in decision-making and awareness of other people and how to work with them.

As family members learn new skills and attitudes, they need to be helped to teach these to children. Mothers have the long-term contacts and the trusting relationships with their children. They can be helped to teach the children before they enter school and can also reinforce formal learning experiences. Much informal learning is vicarious as the children learn through imitation and incidental learning. Non-formal programmes might orient parents to teach consciously, using the many opportunities open to them. Children can be helped to reason and use information and thus learn how to learn and to teach others.

One mother in a rural community was observed to help her six-year-old to apply her numerical knowledge, orient her daughter to teach her siblings and to help with household work simultaneously. This mother was peeling potatoes for her family's lunch. The potatoes were in a sack in another room. The six-year-old was asked to bring two potatoes to her mother. The mother began to peel these potatoes and asked the child to bring her three more potatoes. When the child returned with the potatoes, the mother asked her to show the three potatoes to her younger brother. As the mother continued peeling potatoes, she sent her daughter to the next room again and again with the instructions to bring a specific number of potatoes and share her counting knowledge with her young brothers and sisters. The mother could have carried all the potatoes she would need from the next room to the kitchen at once in her apron; however, she chose to teach her daughter a variety of uses of numbers as she worked slowly and cared for her family at the same time.

Many observations of this kind of opportune and conscious teaching by parents could be combined into a series of lessons for use by non-formal educators in a cultural area. One of the possible economical ways to accumulate ideas for feasible content would be to have a non-formal educator or a researcher interview a number of people who have had opportunities to observe families. The object would be to determine useful practices already in use by some families which could then be taught to other families. These practices which are already 'known' by some families could then be extended to others through the non-formal system or the families who employ them might be encouraged to become non-formal educators and transmit these practices which contribute to competencies needed for social and economic development to neighbouring families.

Summary

Based on the synthesis of data presented in this report, it appears that increased attention needs to be given to supporting and undergirding education within the family system for it is here that the foundations for learning are first established and in one way or another are continued throughout life. The family is a pervasive and influential educator. One of its untapped potentials is
that of preparing all its members, male and female, to function productively in the larger social and economic systems, thus adding measurably to national development. Through linkages with other educational systems, the informal and non-formal family education system can efficiently accomplish this task.

Changes in family roles of any family member, such as increased participation in the market economy, will bring changes in the family unit -- its function, structure and the roles of all members. Because of the nature and content of learning in the family, non-formal educational delivery systems are viewed as critical in supplementing and complementing family learning. Those interested in enhancing development would do well to look closely at the major contributions the family can make. The quality of life achieved by individuals in their family settings directly affects the total society. In its simplest and yet most important form, a nation is no more than a reflection of the sum of its families.

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Programme formulation in practice

Anne M. E. Miller

This paper deals with programme formulation in a developing country where national and international staff were faced with the task of establishing a programme of home economics education for secondary school teachers and primary school teacher trainers.

The first step in the process was the decision to establish a teacher-training college in a rural area, an attempt to diversify the school curriculum. Students who had completed secondary school courses and held qualifications in School Certificate science subjects were recruited for the home economics programme but, apparently, there was a lack of suitably qualified staff. The students were taught science for six months, but the approach was too theoretical and they failed to see any relevance between it and their chosen major - home economics.

Student dissatisfaction was expressed at a high level after visiting another college where the home economics programme was fully established. As a result a home economics officer was transferred to the college from the Ministry of Education in order to develop the programme. Later, a foreign specialist was appointed to increase the qualified manpower stock. It was hoped that she would act as a catalyst to accelerate the process of programme formulation and development. Little progress of a lasting nature can, however, be made if the foreign specialist does not have a national counterpart to whom she relates well. The national counterpart should be mature, intelligent, perceptive and endowed with considerable energy and enthusiasm for the task. It helps if she commands the respect of her fellow officers in the Ministry of Education and colleagues in the College, particularly the decision makers.

Other inputs were needed such as physical items of buildings, furniture and equipment. No purpose-built buildings were available, so a large house intended for staff accommodation was allocated to the home economics department. Kitchen tables and stools were obtained from the furniture store so that students did have seats and a surface on which to work. The group was small - fourteen students - and easily accommodated in the large living area of the house.

Existing knowledge, values and goals of the society had to be considered in order to establish the aims, objectives and content of the programme for home economics education. Home economics is a field of study which is essentially rooted in the culture in which it is based, since its central focus of concern is the individual, home and family life in relation to food, clothing, shelter, health and human relationships. The home economics programme must grow and develop from and within the culture. This is of particular importance for a teacher education programme.

The 'World Survey of Home and Family Education within Formal Education' conducted by the International Federation of Home Economics for Unesco revealed that 81 per cent of the member states of Unesco at government level expressed the view that, in the future, home economics education would be more important than at present. The majority of the less industrialized countries regarded effective education in home economics as a pre-condition for national development and an improvement in the quality of life in their countries.

But what of the students and their existing knowledge, values and goals? What of the college community and their families and the immediate society? What image did home economics hold for them and what were their expectations of it? Only two schools in the area offered home economics as a subject for West African School Certificate examinations, so few of the students had received any formal instruction in home economics. This first group were all young women who had recently completed a secondary school course. Most of them had attended boarding school so even their knowledge, traditionally received from the mother and grandmother, was limited. But they wanted to learn about home economics and how to teach it in the schools. More specifically, they wanted to
learn to bake, cook and sew because this was what was expected of home economists in their society. They were expected to become better home-makers and family members, but to this had to be added the dimension of professional education necessary to produce the teachers for the schools.

Further reference to the 'World Survey of Home and Family Education within Formal Education' shows that 'Better utilisation of local food and other local supplies' heads the objectives for home economics education in sixty-four of the eighty-five countries which participated in the survey. 'Better organisation of family life' followed in second place, selected by sixty-three countries. Contact with members of the community, both professional and lay, yielded further evidence of existing knowledge, values and goals in the society. Doctors at a nearby hospital revealed that at least 50 per cent of the children they examined were malnourished and there was a high incidence of health problems and infectious diseases in the area. Malaria and measles particularly affected the children of pre-school age. The local market was ten miles away and only held at four-day intervals. Observation was made of the foods available and the general economic level of the people. Understanding of the relation between food and health, nourishment and productivity, was growing, but slowly. The first and most important target in the programme was food and nutrition, emphasizing the view expressed by Professor F. Aylward (1977) at the Oxford Conference, namely, 'Food which is the concrete and nutrition the theory'. The national counterpart had a clear idea of the aims she wanted to achieve with the potential teachers. A labourer was recruited together with a responsible and intelligent girl-assistant. Ground was prepared to make a kitchen farm and the students planted and grew indigenous foods. Improvements in the preparation of local food and processing methods were discussed, studied and practised. Search was made for materials, reports of research and research institutes where valuable work on indigenous foods was being undertaken. This knowledge was utilized to add breadth and depth to the programme, making it more relevant to the needs of the community.

The study of clothing, a valuable family resource, was added. No clothing was produced in the country on any large scale and that available in the market and stores was costly. Garment construction and study of the fabrics produced locally, and imported, were introduced to develop the needlework already taught in the schools by the teachers, largely trained for primary schools. Students had to start by learning basic skills, processes and use of simple tools and equipment, but rapidly progressed to produce garments for themselves, for children and for other family members, both knit and sewn. Maternal and child care studies developed with the aid of the doctors in the nearby hospital and the college nurse. Student teachers developed awareness, knowledge and understanding of the needs of vulnerable groups in the society and searched for ways of meeting them. In their final year of the three-year course, an innovation was introduced to the system whereby every student was required to carry out an individual study on an approved topic related to the home economics field. This involved some reading and a practical study within the community. Students investigated traditional practices related to child care, care of the pregnant woman, and marriage and betrothal customs. Thus knowledge of cultural family patterns and practices was built up and developed. In the light of the knowledge gained from guiding these studies, and from other sources of feedback, modifications were made to the programme formulated over a period of four years.

Budgetary resources were provided within the limits of the overall budget of the college. These were based on estimates prepared by department staff on an annual basis. Students and staff in turn contributed their knowledge and skills to the organization of college ceremonies and celebrations. They showed what home economics could do and so won a respected and well established place in the college and schools. National staff were recruited through advertisement and personal contact. International budgetary resources provided fellowship studies overseas so the department head could acquire her Master's degree. This was essential to establish the status of home economics as an academically respectable discipline within the college curriculum. Two other graduates were appointed. Two former students of the college returned as teaching assistants. Further on-the-job training for the assistants helped to overcome the staffing problems and prepared them for further study in the university of a neighbouring State. This was compatible with the overall social and economic planning for the country requiring indigenization of personnel as soon as possible and the taking over of responsibility by the national staff. As staff became available, so they were involved in programme planning. A pattern was formed to provide a model which could be adapted, altered, and shaped by those best suited to do it to meet the particular social and economic needs and cultural values of the community. As the programme developed, links were established with basic studies in Mathematics, General English, and the theory and practice of Education. Recognition grew of the importance of science related to home economics to strengthen and support the programme. This remained an issue largely unresolved at the time of withdrawal of international support. Yet if science and technology are to contribute to development,
New trends in home economics education

they must be utilized to solve the problems of the home and everyday life. Now science education is questioning its image. Is it possible to marry the two and so achieve improvements in both? Other disciplines are needed to develop home economics education, and home economics can provide a focus for them. In the future, it may well be the developing countries which provide new trends in home economics education, contributing to both national and international needs.

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Strategies for introducing home economics education into secondary schools in developing countries

Margaret E. S. Roberts

Introduction

There are still several countries in the world which have not yet included home economics in the curriculum for all schools. Rather, it may be included in the curriculum of a few selected or private schools and may be taught by an indigenous teacher who has some training overseas or by someone from another country, an expatriate. As a result, it cannot be said that there exists a definite programme of home economics at either the secondary or primary level.

This article deals with the major factors which would require consideration and planning in the event of home economics being introduced in all secondary schools within a state, region, or area under the direction of either a national ministry or a department of education.

Preparatory/secondary school

Home economics is a multi-aspect subject, with three main areas of study and practice, the lives of individuals, families and communities. It is concerned with everyday living and with life long learning and practice. Moreover, it is perhaps the one school subject which draws upon most other subjects in the curriculum. New methods of teaching/learning can promote among students a realization of the need to recognize the inter-dependence of subjects in order to make the school experience meaningful.

The purpose, aims and objectives of home economics in the curriculum may be stated in several ways and in great detail. The purpose of Home Economics in the general curriculum can be outlined as follows: it should take account of the needs of those students who are likely to leave school at Form III; it should provide a proper foundation for those who have the potential to undertake post-Form III work; and it should provide a basic theoretical and practical learning experience prior to embarking upon a programme leading to school-leaving certificate examinations at Form V or VI levels.

The main aims of teaching Home Economics in secondary schools should be: to expose students to a learning situation that is relevant to the needs of the various ethnic and/or socio-economic levels; to provide students with an integrated course of study that will enable them to use aspects of all core subjects within the field of home economics; to develop physical skills in all subject areas of home management through the use of typical, locally-purchased equipment usually found in the normal house; to encourage attitudes favourable to cultural and economic development in a racial or multi-facial society; and to inculcate in students a sense of responsibility in respect of the economic and social aspects of home and family life.

Two major objectives are: to prepare students for life in a community in which the application of Home Economics is essential for establishing and maintaining personal and family living standards; and to underline the specific features of Home Economics Education seen as a constituent part of comprehensive and integrated general secondary education conceived in the perspective of life-long learning.

Specific aims and objectives for Home Economics in secondary schools are: to develop an ability to judge the state and standard of hygiene in every area of home economics in school and in the home; to develop in the student an interest in, and awareness of, the functioning of practical and applied nutrition; to develop the ability to communicate and discuss the practical as-
Teachers' guides may be in the form of detailed syllabus content suggesting the number of lessons with a theme for each, giving reference material, visual aids, practical activities and evaluation objectives for each teacher to develop in her own way. Suggestions for student investigation, suggestions for questions to be asked and answered and suggestions for presentation of findings and the use of findings can be as detailed as necessary to give each teacher the chance to show her initiative to make the learning situation and experience really relevant, meaningful and interesting for the students. An indication of the amount to be covered in a given period of time, by term and year, is also shown for the teacher to follow.

A teachers' guide may also take the form of collected and grouped lesson places for a given period of time in the school year. These may be written for her or she may be responsible for making her own plans.

Teachers-in-training usually learn how to plan and write out each lesson in preparation for teaching a class during school practice. A collection of these prepared notes can be a very valuable aid for beginner teachers and provide a ready and handy reference for them during their first years in teaching. These lesson plans could be the work of a curriculum committee and produced in sets for the teachers in school, but care should be taken to avoid rigidity and to allow scope for the initiative of the individual teacher.

Preparation of all types of teaching aids is part of the work of a trained home economics teacher, organizer or supervisor. This may be decided collectively by the curriculum committee (see below) so that all schools may share the same experience, but scope should also be left for the initiative of the teachers and of the students themselves.

Written texts can be prepared for both teacher and student and distribution in adequate numbers ensured. The student may also be provided with a record book for each subject text in which she records results, reacts to questions set in the text to prove her understanding of the theory or writes her own evaluation of a section.

In-service teacher-training courses at regular times during the year would ensure teachers' familiarity in the use of new materials.

Wherever possible, at least one copy of relevant text-books in all subject areas of home economics should be available to the teacher and student through the school library. This choice of texts should include material for different age and ability groups.

During initial training or in-service courses, teachers must be shown how to use and adapt foreign textbooks to local needs so that the maximum benefit can be obtained from this reference material.

Students should always know the source of references whenever information from such text-books has been used by a teacher - this helps widen their horizons by encouraging further reading.

Flannelgraphs, pocketboards, models, teaching modules, specimens, charts and diagrams can be made by teachers and students to provide interest and extra learning opportunities. Slides, tapes, films and other audio-visual items can be prepared for students with the help of mechanical equipment such as projectors and recorders. Sets of such prepared material can be lent to schools through the organizer or education officer for home economics employed by the ministry or department of education.

Secondary and tertiary levels

This section considers the place of Home Economics in the school curriculum and the possible career opportunities open to students who have studied the subject.

The school curriculum should allow for all students to take science and home economics as well as language, mathematics and social studies, with a fair allocation of periods per week.

Two double forty-minute periods, i.e., two eighty-minute periods per week for home economics is considered to be a normal allocation of time to allow for the integration of theory and practice.

Emphasis should be on relevant theory being understood through realistic practical activities related to life styles in different types of homes of the country, state, district or area in which the school is located.

The multi-aspect subject is generally divided into three main subject areas usually entitled food and nutrition, home management, and clothing and textiles. A topic from any one of these areas could provide the THEME of a lesson but should include a variety of activities from any of the other seven areas (see fig.1) covering real life situations to make the experience both interesting and relevant for the class. (This would help to eradicate the old fashioned 'Cooking, Cleaning and Sewing' approach to Domestic Science which has led to the low status of this school subject.)
pects of classroom home economics related to home and family life; to develop an understanding of, and ability to use, the appliances and equipment provided by modern technology; and to develop in each student a capacity for reasoning, sound judgement and the exercise of creative skills for her individual satisfaction and achievement.

The ideal class size for working with groups of four is twenty-four, making six groups of students as the maximum. This size of class has been found to be the most economical in cost and distribution of labour to permit a good group representation of the applied topic. However, if class streams are made up of twenty students or less, there should be as many groups of four as possible, with one or more groups having only three students. It is usually not practical to work with a group of five students as sharing of duties is not so easy.

Any classroom with flat-topped tables which can be grouped into units will suffice in order to introduce home economics into schools. A nearby source of water and water disposal is an advantage; otherwise large vessels for carrying fresh water and removal of waste will be required.

Basic kits can be used to introduce practical home economics into a school. These should consist of a minimum of items of relevant local equipment to allow each group of four students to operate in any classroom situation. It is important to avoid the use of sophisticated items unless these are available in sufficient quantity.

The emphasis should be on typical items of equipment and cleaning agents in common use in a large percentage of homes in order to keep costs as low as possible. Over time, this permits a gradual acquisition of equipment related to socio-economic levels so that each class in home economics offers a variety for each group. The kits should be so grouped in boxes that they can be easily stored, transported and checked before and after use.

The place of home economics in the general curriculum must be ensured before embarking on a school programme. As it is a multi-aspect subject, adequate time allocation has to be considered prior to developing the curriculum and breaking it down into component parts. Equal weight should be given to the three major subject areas and a chart showing the scope and sequence with appropriate headings and number of years is given below. This allows for quick viewing of what can be planned or attempted within the time allocation.

<table>
<thead>
<tr>
<th>Year</th>
<th>Food and Nutrition</th>
<th>Home Management</th>
<th>Clothing and Textiles</th>
<th>Consumer Education</th>
<th>Child Care and Development</th>
<th>Health and Hygiene</th>
<th>First Aid and Home Nursing</th>
<th>Science and Personal Grooming</th>
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A breakdown of the time allocation might read as follows:

1. Number of years: 2, 3 or 4 years
2. Number of terms per year: 3 or 4 terms
3. Number of weeks per term (average): 10 weeks
4. Number of lessons per week: 2 sessions of double periods (minimum desirable)
5. Number of minutes per lesson: 40 minute single lesson
6. Number of new lessons per year: $2 \times (3 \times 10) = 60$
7. Additional lesson times (where a 40-42 week school year is in operation) to be used for revision, repetition, testing, student planning, holidays, open days and examinations when required.

The subject areas given in the curriculum have to be divided to indicate important topics to be dealt with in each term and year to ensure the acquisition in logical sequence of theory and practical experience. The outline can also show more detail, giving an indication of the number of lessons per topic and the year in which each subject area should be taken. This leaves scope for a teacher's initiative (rather than a rigid order of work) while ensuring that each area is taught to some depth.
New trends in home economics education

Students should be made aware at all times of the extent to which other school subjects contribute to the practical and theoretical experience of Home Economics education. Ideally, the subject teachers at each form level should work together when planning each subject syllabus so that related fields can be taught concurrently either on an individual subject basis or through a team teaching approach. This would enable students to inter-relate and make use of knowledge acquired simultaneously in other subject areas.

Science and Home Economics should be compulsory at lower secondary levels with additional applied and integrated science for home economics taught in either classroom by either teacher. Science for home economics should also be an assessed and tested subject within home economics unless it forms a major part of a general integrated science course at secondary and tertiary levels of education.

Both home economics and science should be compulsory school subjects for all girls in junior secondary / junior high / junior technical schools.

The curriculum and syllabus content should provide a suitable and realistic basic training that will enable girls to:

a) have sufficient background education to pursue higher education in the upper sector of the secondary school leading to the award of a school leaving certificate;
b) take up a career in practical nursing at the non-professional level;
c) secure entry to a field of employment which requires some knowledge of methods of food preparation, the acquisition of sewing skills or methods of housekeeping;
d) practice effective methods of housekeeping in the parental home or their own home when they get married.

The prescriptions for the senior, secondary, senior high or secondary technical schools level should enable girls to have an academic approach to all subject areas of home economics including science.

The school certificate qualification in home economics education should be recognized as a criterion for entry to tertiary education, for primary and secondary teacher training, institutional management, commercial home economics, nursing, physiotherapy, pre-school nurseries, agriculture and social welfare, to name but a few career opportunities for young women.

The prescriptions should also provide a broad basic practical experience for all students so that those not going on to tertiary education can make full use of their schooling at home.

School leaving certificate

Any combination of home economics and general science, chemistry, biology, or physics, as two subjects of the school leaving certificate should be the criterion for entry to secondary teacher training. The inclusion of a science subject would also provide a student with another opening within tertiary education in a scientific field other than home economics, thus giving the student an additional career opportunity.

The school qualification or leaving certificate should provide the student with a wide choice of careers. Courses in home economics at tertiary level should emphasize the importance of promoting improvements in the quality of life through nutrition, hygiene and health as well as becoming proficient in the many practical skills associated with home economics.

Emphasis throughout teacher-training for secondary schools should be on the practical skills required to utilize theoretical knowledge in order to enable student-teachers to understand the 'why' and 'how'. Teachers must be equipped to aid the development in their students, of awareness, insight and understanding.

The curriculum and the resultant training programme should be entirely relevant to the requirements of the country, state, district or region. It must also consider the various ethnic groups and/or socio-economic levels with their differences in life styles and homemaking practices which include diet, nutrition and the use of foodstuffs, housing, child-rearing practices, national dress, customs and habits, culture, family structure and associated responsibilities of individual members, together with patterns of consumer behaviour and ways in which family resources are managed.

The certificate or diploma qualification course for secondary teachers should aim at providing a broad basic education to enable teachers to meet the needs of students in the junior secondary, high or technical schools. Emphasis should be placed on teacher preparation, proficiency in techniques and ability to conduct organized, practical activities with groups of students to enable them to understand theories and principles through practical application in all subject areas of home economics.
Curriculum development applied to home economics with specific methodology is also essential to enable the teachers-in-training to acquire a useful 'instrument' or process which provides a methodological tool, both relevant and flexible, for planning their programmes in school.

The B.Ed. course should be a post-certificate or post-diploma course which enables students to specialize in one of the three main areas, e.g. nutrition, home and family life or textiles and clothing, so that they study in depth and could teach the particular subject in upper secondary schools at the School Leaving Certificate level.

The course should include methodology for tertiary level in lecture preparation, preparation for conducting seminars, in-service courses, public service work with adults, evening or extension courses, curriculum development and the preparation of suitable curricular materials for different levels of education.

Other courses in home economics include institutional management courses which are concerned with preparation for employment in hotels, hostels, halls of residence, hospital nurses' homes, and school meals services; these are specialized courses that should make use of home economics subjects taken during schooling. Dietetics, nutrition, or management of any of the above-named establishments or services require a sound training and practical experience.

Commercial home economics are qualified to deal with convenience foods, food preparation, recipes for commercial producers, pattern designing and garment construction, quality testing and carrying out consumer education surveys.
Proposal for changing the communication training for home economics change agents to facilitate and inspire contributions to mass media: a case study at the University of Panama

Norma L. Simpson

Introduction

In the May 1973 issue of CERES FAO Review, Ramiro Beltran (1972) accused those who control mass media of remaining incommunicado with the development process. He said the messages which are disseminated:

....are not for the millions of destitute peasants who must overcome development....
Both in form and content these journals, pages and programs are quite beyond the field of interest of the rural masses and their ability to understand them.

While his accusation may be valid, the statement does not coincide with conversations the researcher has had with Latin American communicators. They say persons in social change positions, such as home economists, have not asked for opportunities to use the mass media. Others say the change agents have shied away from chances that have been given to them because they fear working with the media.

Another defensive reason given by mass media personnel is that many professional persons are not prepared to make top-quality contributions to mass media. Communicators claim that non-media professionals display little knowledge of the potential uses and limitations of mass media. In addition, non-media personnel display little confidence in themselves as producers of messages for mass media. As a result, their messages are weak and unconvincing.

For a combination of these reasons, some communicators contend that the change agents are responsible for the fact that media owners will not accept social change messages. Or, if the owners do permit messages, they transmit them at inappropriate times or places to benefit the audience.

On the other hand, some change agents express a negative attitude toward using the media for educational purposes. Their reaction may stem from the fact that they do not learn much from the media and thus they presume that no one else does either. Change agents might conclude, therefore, that the media play little, if any, role in their job responsibilities. The conclusion may have evolved from negative attitudes toward the media by the professionals who train change agents. Or it may have evolved from curricula which do not include mass communications training as an integral part of the curricula. One dean of an institution of higher learning said, 'Communications training is not as important as other required subject matter. It's sufficient to relegate communications training to in-service training workshops once the individual is on the job.' The result, however, is complaints from change agents that there is too little training and that it comes too late -- after the change agents have made a bad impression on the public and on the media owners.

In addition, curricula planners emphasize face-to-face contact and neglect mass communications. As a result, the students frequently become change agents with a similar emphasis. They neither have had role models who use the media nor formal instruction to suggest that there might be advantages to disseminating information by more than one approach.

Situational restraints

In a Journalism Quarterly report, Brown (1970) mentioned a theoretical concept which seems rele-
Application of educational technology to home economics education

vant here, though his study involved Chilean farmers. He outlined two types of restraints related to the adoption of new practices. The situational ceiling is set by existing physical, economic, institutional and technological factors. The individual's knowledge ceiling may be at or anywhere below the situational ceiling and is set by technology the individual is already aware of and using. The information-persuasion gap refers to the ignorance of, or reluctance of the individual to experiment with technology accessible to his situation but beyond his experience.

Table I has been adapted from Brown's emphasis on agricultural production to this paper's concern for the opportunities change agents have to use mass communications as well as face-to-face communications.

Table I
Factors influencing changes in productivity
Adapted by Simpson from Brown (1970)

<table>
<thead>
<tr>
<th>Potential Productivity</th>
<th>Reform Increment by media owners, curricula planners and employers</th>
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<tbody>
<tr>
<td>Institutional Gap</td>
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<tr>
<td>Information-Persuasion Gap</td>
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<tr>
<td>Information Increment</td>
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<tr>
<td>Individual's Knowledge Ceiling</td>
<td>Present means of disseminating information</td>
</tr>
</tbody>
</table>

First, the home economics change agent's knowledge ceiling depends on exposure to mass media and techniques used to mediate messages. The exposure may be vicarious experiences - with a professor, friend or relative contributing to the media. The fewer the role models, the more limited is the exposure, and probably the lower the individual's knowledge ceiling will be.

Another possible exposure may be imposed upon the change agents by employers who demand production of materials for mass media without prior training and without supervision. This 'school of hard knocks' approach frequently discourages as well as teaches the change agents. And at times the knowledge is neither adequate nor accurate.

Another means of exposure may be through periodic in-service training which - as previously mentioned - may be too little or too late to encourage high productivity of mass media messages. However, if home economics students could have some exposure to mass communications theories and techniques prior to completing their higher education, they would have a higher knowledge ceiling at the beginning of their professional careers as change agents and have a higher ceiling to build upon during in-service training sessions.

Brown also stated that the behaviour of the farmer depends on the 'situational relevance' of the practices of the individual. Therefore, efforts should be made to make the content of the messages more functionally or locally relevant. He mentioned two ways to do so. One is to tailor the information to the individual's existing situation. The other way is to imbed the information in a package of new programmes and services that push up the situational ceiling.

Generally speaking, it is too expensive to teach mass communications concepts on a one-to-one basis, with the training tailored to each specific need of a single individual. Therefore,
the researcher and several Panamanian colleagues took the other alternative and attempted to imbed mass communications training into their newly developing home economics curriculum at the University of Panama. Great effort was made to make the training both locally relevant, using Panamanian and Latin American examples of mass communications efforts, and functionally relevant by applying the newly learned mass communications concepts to family-oriented information.

The doctoral dissertation, on which this paper is based, is entitled Development of a Mass Communications Unit for the Home Economics Curriculum at the University of Panama. The research began in August 1972 and was completed in December 1974 at Oklahoma State University under the supervision of Dr. Ruth Pestle. At the time of the study, the University of Panama home economics programme Programa Para Educacion Para El Hogar, was in its third year of existence. (Simpson, 1974).

Status of the media in Panama

At the time of the study, mass media in Panama were considered to be in abundant supply by Unesco standards (World Communications, 1964). A government decree provided close supervision and censorship of the media, to the chagrin of the Inter-American Press Association (Ornes, 1973).

There were seven daily newspapers in Spanish with a circulation of approximately 140,000 plus ethnic newspapers for people of Anglo, Jamaican, Chinese and Italian descent (Weil et al. 1972).

Most of the magazines sold in Panama were produced outside of the country. There were four, Loteria, Tierra Y Dos Mares, Vanidades and Vistazo, either published in Panama or with Panamanian editors or editions.

More than seventy-five privately owned radio stations broadcast each day in the country, with thirty-three operating in Panama City. Most of the stations operated on one kilowatt of power or less. A newly established government station, with 10 kilowatts of power, operated with repeater stations designed to reach the most remote parts of the country. About 80 per cent of the homes had at least one radio in 1971.

There were three television stations in Panama at the time of the study - two privately owned and the United States Armed Forces station in the Canal Zone. Panamanians owned about 122,000 television receivers in 1971, a large increase over the 1964 Unesco figures of 30,000 receivers (World Communications, 1964).

Few books are published in Panama, though there are a number of printers and publishers. The National Printing Office does publish some works in the fields of humanities, history and international relations; however, most are governmental reports, manuals or statistical references.

There was no domestic film industry; thus films were imported to meet the demands of the recreation-minded city dwellers. All commercial films are subject to censorship.

Research strategy

The study consisted of:

a) two pre-treatment questionnaires to construct a three-part profile of the students;
b) a treatment of the mass communications unit taught by the researcher for a day class and a night class of all third-year students; and

c) a post-treatment test and questionnaire to describe changes in knowledge gain and attitudes toward use of mass communications for home economics information.

The primary dependent variable was knowledge gain, with special attention paid to the variances between the gain of the day students and the night students, important considerations as the three-part profile will reveal.

Since the home economics programme was new, no previous studies had been done with the home economics students. A major portion of this research dealt with a three-part profile of the students. The demographic profile was gathered for all of the third-year students. The data included descriptive measures of age, education, place of residence, work experience, participation in extra-curricular activities and other educational opportunities such as workshops.

A randomly selected half of the students formed the level of living sample. They provided data for the level of living profile. Of the sixty questions devoted to level of living information, fourteen questions were based on the Belcher/Vasquez-Calcerrada (1972) studies on a cross-cultural level of living scale.
The other half of the randomly selected students responded to questions about availability, use, believability, and potential of mass media from the point of view of the students. This mass media profile included measures of how much the students had used mass media in the past, and how much they thought they would use mass media in the future. Students in the Mass Media Sample also were measured for their knowledge of mass communications concepts in a true and false quiz and in essay questions.

The design used for the study was the Separate-Sample pre-test-post-test Design, Number 12 in Campbell and Stanley's Experimental and Quasi-Experimental Designs for Research (1970):

\[
\begin{array}{cccc}
R & O & (X) & (O) \\
R & & X & \\
\end{array}
\]

R means that both samples were selected at the same time
O means the before observation which was made of the Mass Media Sample only
X means the treatment, the two-week unit as taught by the researcher
O means the after observation, which was slightly modified by measurement (O)

By measuring all the students in the post-test, we were able to compare the responses between those who had had the Mass Media Form and the Level of Living Form of pre-test questionnaires. The post-test questionnaire elicited four types of information:

a) equivalent-form measures for knowledge gain;

b) student evaluations of each part of the two-week unit;

c) student problems related to hearing and understanding the researcher in the classroom; and

d) students' affective reactions to the prospect of using mass media in the future and the need to learn to use mass media as part of their university careers.

Demographic profile

As previously mentioned, the unit was taught twice — one class during the day and one class at night. Table 2 shows the age groups by percentage. The mean age of the day students was 27 years, and the mean age of the night students was 35 years. Mean age for the population was 29 years. These students are very different in age from traditional third-year students in the United States and most other developed countries.

<table>
<thead>
<tr>
<th>Years</th>
<th>Percentage of Day Students</th>
<th>Percentage of night students</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24</td>
<td>44</td>
<td>16</td>
</tr>
<tr>
<td>25-29</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>30-34</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>35-39</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>40-44</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>45-49</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>No answer</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Remember that this home economics programme is the first degree-granting programme in Panama. Previously students had graduated from vocational home economics programmes that dated back to 1928. The curriculum for the new degree programme has a stronger scientific base, including a senior thesis requirement. Family-oriented information based on research in Panama has been limited and the requirement will help to provide more relevant information about families for the professional home economist to use in classroom and mass media presentations.
Educational experience

Nearly 50 per cent of the students had studied only in coeducational institutions with 46 per cent attending government-financed secondary schools. This finding differs from the stereotype of Latin American private school education which leads to a university degree. Only five students (7 per cent) mentioned studying outside of Panama.

The researcher felt the mass communications unit might be more situationally relevant if she referred to examples related to the previous recreational and informal educational experiences of the students. Such information would give insight into previous student opportunities to learn about or use mass media. Table 3 shows the involvement of the students in extra-curricular activities during their school years. Few students participated during their university school years, probably because of work commitments. Most students participated during secondary school years.

**TABLE 3**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of students mentioning activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports</td>
<td>53</td>
</tr>
<tr>
<td>Dance</td>
<td>31</td>
</tr>
<tr>
<td>Music Lessons</td>
<td>18</td>
</tr>
<tr>
<td>Arts and Crafts</td>
<td>16</td>
</tr>
<tr>
<td>Drama</td>
<td>16</td>
</tr>
<tr>
<td>Religious Clubs</td>
<td>13</td>
</tr>
<tr>
<td>Guides (Girl Scouts)</td>
<td>8</td>
</tr>
<tr>
<td>4-S Clubs (similar to 4-H clubs in the United States)</td>
<td>4</td>
</tr>
</tbody>
</table>

Most students joked, though rather seriously, about having too many home responsibilities to be involved in group activities. But there were other reasons, too. Panamanian parents frequently allow young women only to participate when there is female adult supervision, such as school sports clubs or Panamanian folkloric dance groups. Folkloric dancing is a national pastime for people of all ages, and forms a part of the cultural heritage of which they are very proud.

Work experience

The day students had worked for an average of 4.5 years and the night students for more than 10 years. One question in the demographic profile revealed the upward mobility of the students. For example, one student had worked as an usher, a seamstress, a factory worker, a teacher, and had worked her way up to become a home economics instructor for the Ministry of Education.

After reviewing the number of years that students had already worked, it was not surprising to see the number of years which they anticipated they will work in the future. Sixty-four per cent of the students indicated they would work more than ten years. Twenty per cent of the students anticipated working more than twenty years. Considering current economic trends, the students are probably realistic. It is also one more reason for being concerned with their ability to contribute to mass media.

Mass media profile

Another portion of the student profile was the mass media profile with data collected from the Mass Media Sample or from all the students. It includes data about the availability and use of mass media, believability in the mass media, use of advertising, experience, and capability of participating in mass media before and after the unit was taught, and their feelings about the
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prospect of contributing to mass media. This paper will deal with only three parts of the profile - the availability and use of mass media in the homes of the students, experience preparing information for mass media, and the feelings of the students toward the prospect of contributing to mass media as part of their professional role.

Availability and use of mass media in the homes

The students had a high degree of access to mass media. Ninety-seven per cent of their families owned at least one radio; 97 per cent owned at least one television set; and 93 per cent owned at least one phonograph. In addition, 50 per cent of the families owned a tape recorder; 66 per cent owned a camera; and 10 per cent owned a projector.

Only one-third of the families subscribed to a newspaper, but three-fourths of the students reported 'reading a newspaper yesterday.' Three-fourths of the students liked the women's sections of the newspaper, but more than three-fourths of the students thought the women's sections would be better if the content were different.

While the majority of the students regularly listened to Radio Mia, the average student regularly listened to at least three of Panama City's thirty-five radio stations. Most preferred music and news programmes.

The average student read 2.7 foreign magazines on a regular basis, including Buen Hogar (the Spanish edition of Good Housekeeping) and the Central American edition of Vanidades. The average student regularly read less than one Panamanian magazine.

These data were valuable to the researcher and her Panamanian colleagues in making the final revisions of the curriculum for the unit after the pre-test was completed. High ownership of tape recorders was the greatest surprise. However, during the course of the two-week unit, we learned that most of the students had never taped their own voices nor heard their own voices. The tape recorders were used for playing music tapes. This is an example of the information-persuasion gap which existed between the individual student's knowledge ceiling and the situational ceiling.

Experience preparing information for mass media

The data from the Mass Media Sample about their experience preparing any type of information for the mass media were revealing (see Table 4). Despite their years of work experience, only 6 per cent of the Mass Media Sample had written an article for a newspaper, only 11 per cent had talked on the radio, and 13 per cent had appeared on television. Only 5 per cent had made a filmstrip.

Generally, it was the younger student who had performed on radio or television, though we are not certain if the performances were for professional reasons or for entertainment reasons.

<table>
<thead>
<tr>
<th></th>
<th>Yes percentage</th>
<th>No percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing for newspapers</td>
<td>6</td>
<td>91</td>
</tr>
<tr>
<td>Writing for magazines</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>Talking on radio</td>
<td>11</td>
<td>60</td>
</tr>
<tr>
<td>Appearing on television</td>
<td>13</td>
<td>54</td>
</tr>
<tr>
<td>Making filmstrips</td>
<td>5</td>
<td>43</td>
</tr>
</tbody>
</table>

None of the students had experience writing for magazines, though 20 per cent of the students did not respond to the question. The other 80 per cent of the students indicated they had no magazine writing experience.

To achieve the 'potential productivity' mentioned in Brown's schema in Table I, curriculum planners, employers and media owners will need to re-evaluate the 'institutional gap'. These institutions may need to encourage and reward home economists for preparing mass media messages.
Feelings about the prospect of contributing to mass media

In order to help home economists to reduce the gap between the knowledge ceiling and the situational ceiling, communications trainers need to be more aware of the affective factors which influence the adoption of new technology. We were concerned about the ways the students might feel about the prospect of contributing to mass media in their professional roles. Measures were taken of the Mass Media Sample before the treatment and of all the students after the two-week unit was taught. Efforts were made to statistically analyse the responses. However, because of the small number of students in the study, coupled with the patterns of responses, statistical analysis was not possible. In spite of that fact, the writer includes this discussion because she feels greater attention should be paid to affective factors in future studies of home economists learning to use mass media for professional goals.

For this study, six adjectival groups were selected from twelve groups by the consultant panel of home economics communicators. Their decision was based on the most common reactions heard when training home economists to use mass media in the United States. Table 5 shows the before/after changes of feeling reported by the day and night students.

<table>
<thead>
<tr>
<th>Feelings about the prospect of contributing to mass media</th>
<th>Day Students (percentage)</th>
<th>Night students (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BEFORE</td>
<td>AFTER</td>
</tr>
<tr>
<td>not interested</td>
<td>0 0</td>
<td>64 83</td>
</tr>
<tr>
<td>interested</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not worried</td>
<td>0 3</td>
<td>19 8</td>
</tr>
<tr>
<td>worried</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not prepared</td>
<td>14 6</td>
<td>3 6</td>
</tr>
<tr>
<td>prepared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reluctant</td>
<td>5 0</td>
<td>3 0</td>
</tr>
<tr>
<td>anxious</td>
<td>28 14</td>
<td>16 16</td>
</tr>
<tr>
<td>afraid</td>
<td>8 3</td>
<td>3 0</td>
</tr>
<tr>
<td>tranquil</td>
<td>8 36</td>
<td>16 50</td>
</tr>
<tr>
<td>calm</td>
<td>17 40</td>
<td>13 44</td>
</tr>
<tr>
<td>excited</td>
<td>3 14</td>
<td>19 0</td>
</tr>
</tbody>
</table>

Response to the first word group in the table, not interested – interested, was a paradox. While the students may have heard that the researcher was coming, little attention was paid to the fact that the two weeks would be for a communications unit prior to the time that the pre-test was administered. The researcher deliberately stayed away from the campus to avoid influencing the pre-test. But student grapevines everywhere are effective and the responses could have been influenced by the small group of second-year students who pilot-tested the questionnaires. However, we were somewhat surprised to see the high percentage of interest considering the fact that so few students had contributed any information to mass media before the unit was taught.
Perhaps it was because so many of the students anticipate that Panamanian families will use mass media 'a lot' for family-oriented information.

The day students tended to become less worried about using mass media. The night students, however, reported different feelings. Twelve per cent more night students reported feeling worried about the prospect of using mass media after the course. Sixteen per cent more day students reported feeling prepared after the unit, compared with the 53 per cent increase in night students who felt prepared after the treatment. The variances in their feelings about the prospect of contributing to mass media in the future prompted the researcher to consider further research in this area and how communications trainers might work to change negative feelings toward the media.

Level of living profile

A third part of the student profile related to the level of living of the students. In 1967 Deacon (1967) studied the use of Level of Living measures in Central America and learned that no single measure had been widely accepted by any country. However, in the early seventies rural sociologists Belcher of the University of Georgia and Vasquez-Calcerrada (1972) of the University of Puerto Rico began reporting on a level of living scale that could be used cross-culturally. The scale was designed originally for an observer to rate the technological efficiency of the homes while looking at the home. However, Belcher felt that the fourteen item scale could be used in a questionnaire format.

Each of the fourteen items has a 5-point scoring system, allowing total scores to range from a high of 70 to a low of 14. The researcher felt that a simple scale like the Belcher/Vasquez-Calcerrada (B/V-C) scale could be useful to a home economist to help determine the needs of the audiences that the home economist does not know. In this case, the audience was comprised of home economics students and the scale gave the researcher more information about the lifestyle of the Panamanian students than could be obtained under normal circumstances. The data about these third-year students can serve as benchmark data for other studies involving the students in the future, especially as other researchers test the scale in Mexico, Venezuela, Peru, Paraguay, and El Salvador as well as in the places where it was developed - Puerto Rico, the Dominican Republic and in rural areas of the American state of Georgia. While the scale does not discriminate effectively in the upper income levels according to Belcher, it seems to be quite discriminating for the lower income levels. Table 6 shows the comparison of the three Latin American locations, including the third year students in the new home economics programme at the University of Panama in 1973.

Table 6
Percentage comparison of Belcher/Vasquez-Calcerrada level of living scores

<table>
<thead>
<tr>
<th>B/V-C Scores</th>
<th>Panamanian Home Economics Students (percentage)</th>
<th>+Rural Puerto Rican Families (percentage)</th>
<th>+Rural Dominican Republic Families (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>65-69</td>
<td>27</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>60-64</td>
<td>55</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>55-59</td>
<td>15</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>50-54</td>
<td>3</td>
<td>24</td>
<td>-</td>
</tr>
<tr>
<td>45-49</td>
<td>-</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>40-44</td>
<td>-</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>35-39</td>
<td>-</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>30-34</td>
<td>-</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>25-29</td>
<td>-</td>
<td>-</td>
<td>38</td>
</tr>
<tr>
<td>20-24</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>15-19</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
New trends in home economics education

+ Reported in *Rural Sociology*, June 1972 (Belcher, 1972). In addition to the fourteen-item scale, the Level of Living Form pre-test questionnaire contained items recommended by other researchers. The information was used during the teaching of the two-week unit to capitalize on situationally relevant information related to the well-being of the families in Panama.

For example, supermarkets now play a more important role in the food marketing system of Panama City. This is a major societal shift from the less expensive, large open markets (mercados). Students in the Level of Living Sample reflected the shift. Eighty-eight per cent of the sample buy most of their food at the supermarket, while only 30 per cent indicated that they shop at the mercado. The percentages do not total 100 per cent because students responded to more than one shopping location. Data such as this were helpful to the researcher as well as to faculty members at the University of Panama for other home economics courses.

The treatment: a two-week unit

'Three major efforts of the study were directed at:

1) collecting sufficient Latin American examples of home economics messages;
2) selecting the concepts, generalizations and techniques that exist in the mass communications discipline to integrate into the home economics concepts and generalizations; and
3) planning the curriculum for the two-week unit.

Latin American home economics messages

First, the researcher solicited examples of home economics mass media messages prepared in Latin America. Twenty-three sources responded. To have more locally relevant research data to include in the 'new package of programs,' as Brown (1970) called them, the researcher co-operated with APLAFA, the Panamanian Family Planning Association.

In 1972, the administrator of the San Miguelito Agency, her assistant and the writer surveyed fifty women in a *barrio* on the edge of the city to determine which of the thirty-five radio stations in the city they preferred. Those women living in the poorer part of the barrio more often mentioned Station Montunita. Family planning messages were not broadcast on that station. In 1973, during the pre-test, the home economics students at the University of Panama were asked the same question. As Table 7 shows, Montunita was not even in the top-five ranking.

<table>
<thead>
<tr>
<th>Rank</th>
<th>barrio women</th>
<th>Third year home economics students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low income area</td>
<td>Moderate income area</td>
</tr>
<tr>
<td>1</td>
<td>Montunita (30)</td>
<td>Radio Mia (36)</td>
</tr>
<tr>
<td>2</td>
<td>R P C (20)</td>
<td>Montunita (20)</td>
</tr>
<tr>
<td>3</td>
<td>Radio Mia (16)</td>
<td>Radio TV2 (16)</td>
</tr>
<tr>
<td>4</td>
<td>HOXO (12)</td>
<td>R P C</td>
</tr>
<tr>
<td>5</td>
<td>Radio TV2 (8)</td>
<td>Radio Impacta</td>
</tr>
<tr>
<td></td>
<td>Onda Popular (tied 8 each)</td>
<td></td>
</tr>
</tbody>
</table>

The tendency for change agents not trained in the use of media is to think that other people prefer the same mass media as the change agent. Thus, if the home economists or Family Planning
Application of educational technology to home economics education

experts in Panama really want to reach the low income group, they must select the media that the barrio people already use. The barrio women generally listened to radio early in the morning. It is hot in Panama, and if the laundry is not done by 7:00 a.m., one will be uncomfortable doing it. The women listened between 5:00 a.m. and 10:00 a.m., while they did household chores. At 10:00 a.m. they turn on their television sets.

Selection of concepts and generalizations

The second effort mentioned under the treatment was the selection of concepts to include in the unit. The home economics profession, in 1967, published a booklet of Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (American Home Economics Association, 1967). The concepts and generalizations for each discipline, under the rubric of home economics, are widely accepted by professionals in those disciplines. On individual index cards, the researcher noted those concepts most closely related to communications or which implied learning about new comparable nature existed for mass communication concepts. Therefore, the researcher gleaned concepts from thirty-five sources, typing each concept on a card along with the source of the information. These cards were grouped into seven categories:

1) General Communications and Diffusion;
2) Pictorial Communications;
3) Communicating Through Exhibits;
4) Communicating Through Photography;
5) Communicating Through the Printed Word;
6) Communicating Through Radio and Tape Recordings;
7) Communicating Through Television.

The panel agreed with 158 concepts, which tended to be more specific than the home economics concepts and generalizations.

Planning the unit

Final choice of the concepts was delayed until the researcher returned to Panama, tabulated the pre-test questionnaires and made the final plans for the two-week unit. The tentative unit included the following:

In-class activities

First class -- Lecture about these selected visual media and home economics specialties:
   a. Exhibits--historic costumes
   b. Slide Presentations--kitchen remodelling
   c. 16 mm Films--home management
   d. Television Film Clip--family relations

Second class -- Lecture about filmstrips and home economics specialties:
   a. Filmstrips to be shown include:
      Feeding of babies
      Growing food for the family
      Sanitation of the home
      The father in family planning
   b. Filmstrips to be shown include:
      Feeding of babies
      Growing food for the family
      Sanitation of the home
      The father in family planning

First lab
   Demonstration of filmstrip process
   Practice session for students in class
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Third class -- Lecture about these selected audio and print media and home economics specialties:
   a. Tape recording to be heard - nutrition
   b. Low literacy printed material to be read;
      Nutrition
      Gardening
      Raising small animals for food
      Family finance
      Family relations
      Illustrate techniques for writing radio scripts

Fourth class -- Lecture to illustrate scientific principles of tape recorders. Demonstrate body positions and voice techniques related to voice quality.

Second lab
   Demonstrate techniques related to delivery of believable messages.

Out-of-class activities

Each student would read selected messages.

Each student would prepare:

(1) a short filmstrip for her own files and
(2) a short cassette tape recording for broadcast over the loudspeaker system at the Main Market or other mass media system.

In addition, the researcher prepared a daily lesson plan for each of the ten contact hours for the day class and the night class. The plans helped assure that both classes were taught in approximately the same fashion and using the same information. The plans included: teaching techniques; home economics subject matter emphasis, tentative mass communications generalizations related to exhibits, 16 mm film, slide presentations, television, filmstrips, radio, tape recording and newsletters; media techniques involved; time required in class; potential uses; source of the information and equipment needed. All of these efforts were made to control as much as possible the intervening variables which could affect the knowledge gain variable for the two classes.

Knowledge gain

Knowledge gain was measured by equivalent-form true and false, and essay questions before and after the treatment. Seven null hypotheses were tested using the t-test. (MM = mass media, LL = level of living samples)

Hypothesis I--There will be no difference between the number of incorrect responses of the MM sample, LL sample and the population in the true and false post-test quiz.
   ACCEPTED.

Hypothesis 2--There will be no difference between the number of incorrect responses in the pre-test and post-test true and false quiz for the MM sample. REJECTED, Significant \( .001 \) level.

Hypothesis 3--There will be no difference between the post-test responses to the True-False quiz for the population, the MM sample and the LL sample for the day students. ACCEPTED.

Hypothesis 4--There will be no difference between the pre-test and post-test incorrect responses to the True-False quiz and the MM sample of day students. REJECTED, Significant \( .01 \) level.

Hypothesis 5--There will be no difference between the number of incorrect responses to the True-False quiz for the MM sample, the LL sample and the population of night students.

Hypothesis 6--There will be no difference between the pre-test and the post-test incorrect responses to the True-False quiz for the MM sample of night students. REJECTED, Significant \( .01 \) level.
Hypothesis 7--There will be no difference between the knowledge gain on True-False items for the day and night students. ACCEPTED.

The true and false data reveal a highly significant gain in knowledge from the pre-test to the post-test. Rejection of hypothesis 2 supports the idea that students in the mass media sample increased their knowledge rather dramatically. Accepting hypothesis 1 supports the idea that the two samples were not different in spite of the pre-test factor. Hypothesis 4, 6 and 7 support the idea that the day and night students made the same knowledge gains in spite of their differences as groups. Accepting hypothesis 3 and 5 supports the idea that the samples within the day and night groups were like the population as a whole and that generalizations about knowledge gain can be extrapolated to encompass the population rather than merely the mass media sample which took the pre-test as well as the post-test.

The knowledge gain measures included five identical short essay questions for the pre-tests and post-tests. The researcher established acceptable criteria for each response which generally reflected the beliefs of communicators and generalizations.

Evaluation of the integrated unit

All students evaluated each part of the unit, the handouts, the evaluation forms and the conditions related to the classroom environment. About 71 per cent 'liked most' making the filmstrips; about 37 per cent 'liked most' the part about taping and broadcasting; 32 per cent 'liked everything'; and 21 per cent 'liked the teaching methods'.

Twenty-six per cent of the students 'liked least' the amount of time allotted to the unit. About 26 per cent said there were 'too many new concepts' in the two-week unit, while 51 per cent said there were the correct number of concepts. For most of the students, the unit contained the correct amount of theory and practice. Over 80 per cent of the students indicated they would use the content of the unit in the future.

Originally, the integrated unit had been designed for the first year of the university home economics curriculum. However, some felt that the students would have too little subject matter to be able to prepare messages for mass media, and the unit was integrated into the third year programme. Thirty-two per cent of the students indicated that the unit should be taught in the third year of the programme and 32 per cent felt the unit should be in the first year of the curriculum.

Ninety-seven per cent of the students felt that home economics students should learn to use mass media BEFORE completing their university studies. Part of their enthusiasm can be attributed to the fact that the average student felt she was 'capable' of contributing to mass media. There is at least one other reason for interest in the media. Over 80 per cent of the students indicated that Panamanian families would use mass media 'a lot' in the future to obtain home economics information.

Immediately after the unit and the student evaluations were completed, the researcher and the director of the Panamanian home economics programme discussed the impact of the research project. The director indicated that the students were pleased with what they had learned, though the density of ideas was too great for everyone to handle. Also, the students regretted that there was not more time for the researcher to spend with them, both in the classroom and in informal settings. The situation was partly attributed to the researcher's efforts to avoid contaminating the results of the unit, and partly financial constraints which meant that the researcher could not be in Panama for a period of time after the project was completed.

When asked if a mass communications unit might become a regular part of the curriculum, the director said it was too early to decide. The final decision would be made by the person who would be teaching the class.

Conclusions

Major decisions about use of mass media hinge on the attitude of home economists toward the role of the profession in society. If they believe that the only contribution will be on a face-to-face basis in the classroom, and primarily with female students, then the profession will continue to serve only a portion of the population and for a short period of their lifespan. On the other hand, if the professionals believe that technology is changing rapidly and that adults outside the classroom also need and want home economics information, then the professionals need to re-evaluate the ways that students are trained to serve people they never see.

Pre-service educational programmes will need to increase the individual's knowledge ceiling
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about the mass media and about mass audiences of various ages and both sexes. Employers and media owners will need to establish the higher levels of productivity which they hope home economics will attain, and curriculum planners will need to increase the situational ceiling in pre-service training with faculty members who are sensitive to home economics goals. Finally the profession must reward those who strive to close the information-persuasion gap by becoming effective mass media home economists.

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6 Supervision and in-service education for home economics

Consideration of multi-faceted roles of supervisors, advisers and inspectors in the dissemination of ideas, strategies and programmes

Justina N. Anazonwu-Bello

In many developing countries, the scope and content of the home economics education has not received a clear definition reflecting its multi-disciplinary character and its true dimensions; consequently, the terminology has undergone many changes with the passage of time and is currently described as 'Human Ecology', a term which has been adopted by some universities. By its title in the different countries, home economics education applies scientific principles to practical living experiences in the family within a community. It is concerned with promoting the quality of life of family and community members, through the application of a knowledge of the physical and social sciences. In effect, home economics education draws upon the sciences to solve the complex problems of living.

Primary objectives

Home economics education represents all practices and endeavours geared towards productive and satisfying living. This philosophy summarizes the primary objectives as those of general education (continuous individual and social growth) - to develop the individual's potentialities for home and community living, to develop resourcefulness for productive and satisfying living, to recognize needs in the family/community relationship, to develop a scientific approach to solutions of problems of family/community living, to develop ability to adjust to different life situations and circumstances, and to acquire knowledge and skills relevant to home and community life.

Scope and content

A meaningful home economics programme has a cultural bias, since it prepares the individual to face the challenges of family and community living in an ever-changing world. It draws upon many disciplines in finding practical solutions to the complex problems of the home and the community. For practical purposes, home economics has four major aspects:

1. Food and nutrition: covers basic nutrition concepts and their application to culinary practices, i.e., elementary dietetics, food processing and preservation and recipe development.
2. Home management: concerns competence in the management of family resources for the achievement of family goals, including consumer education for wise spending of family-income, investments for family security, work simplification techniques for household organization, aesthetic aspects of house design, decor and furnishings, and first aid and home nursing.
3. Child development and care cover child psychology (study of the problems of child growth and development) and maternal and child care.
4. Textile and clothing construction deals with the study of the manufacture of textiles; design and clothing construction; care of fabrics including laundry work practices; and needlecraft and allied art.
The roles of supervisors, advisers and inspectors in home economics education

Supervisors, advisers and inspectors of home economics education are home economics field specialists in their own right; this is by virtue of the expertise which they have acquired from years of experience in this field. In their professional capacities, they are dependable sources of information on all areas of the subject. To maintain this status, they must update themselves in the teaching and learning processes of home economics. This helps them fulfill their multi-faceted role helping teachers and students develop the necessary skills and competences.

The primary role of these field specialities is to ensure the effectiveness of home economics programmes at the various levels of education by devising ways and means of attaining and maintaining high standards in the achievement of set goals.

The supervisor's role

The major role of the supervisor is centred around curriculum development and the planning of course content. The involvement of teachers, principals and advisers is indispensable in this exercise, as it is teamwork which creates a workable and meaningful programme for the solution of problems identified in executing the curriculum. After all, it is the teachers who interpret and carry out the programme. The supervisor can only follow up the objectives of the programme, experimenting, as it were, with ways and means of testing its effectiveness in real situations. She determines a change or initiates a review of the curriculum as often as living experiences reflect change within the stages of national development.

Effective co-ordination of home economics programmes demands frequent visits to the various institutions which offer home economics at different levels. These visits provide opportunities for evaluating existing programmes, for identifying problems, and for collecting evidence of the need for seminars, workshops, and in-service training for teachers and instructors. The experiences demonstrated by teachers and students should be of great help to the supervisor in devising effective techniques for improving the level of achievement both of students and of teachers.

In her role as an examiner, the supervisor should ensure a continuous assessment of students' progress throughout the course of study, so that students' intellectual achievements are not judged only on the results of a final examination.

Experience has shown that examination alone cannot achieve much in this regard; regular tests and assessments are necessary. Although final examinations would testify to knowledge and understanding of home economics theories, they may not be true assessments of ability to cope with domestic problems in actual life situations, reactions to specific circumstances, ability to adjust to unpredicted circumstances, and resourcefulness towards ambitions and aspirations, intelligent judgement in decision-making.

After all, students are not being prepared for examinations only, but for living experiences also.

To make sure that students are well-prepared for both examinations and future life, the supervisor should direct the teachers and instructors towards placing equal emphasis on academic and on practical performance. This is why the assignment of home projects should be encouraged in the course because they create actual situations and special circumstances to enable students to put their knowledge into practice and discover the problems peculiar to specific circumstances. Their findings make interesting topics for future class discussions in a bid to find practical solutions to problems. Home projects are especially recommended for students in developing countries, which are changing very rapidly with the challenges to citizens of scientific and technological advances.

Evaluation of home economics programmes is another vital role of the supervisor who can make significant contributions towards curriculum improvement, through conferences, seminars, refresher courses and workshops. The participation of all home economics personnel at such group meetings offers them (through the supervisor's guidance) the opportunity to analyse their different situations, identify common problems and suggest practical solutions. Team work is necessary in trying out new course content and teaching methods whenever the need to undertake change arises; the working parties set up at such conferences and workshops provide effective forum for such experimentation. It is important that the supervisor fulfills the role of a resource person, making herself available to help and support the implementation of new ideas. She offers guidance in devising new techniques for evaluating the effectiveness of existing home economics programmes and the teaching/learning processes being adopted in the various situations. In establishing desirable standards, it is necessary to pool ideas and plan together whenever the occasion arises to introduce new content or improve old programmes.
Supervision and in-service education for home economics

It is quite obvious that the evaluation of the extent to which set goals have been achieved tests the effectiveness of the programme, the teaching methods used and the response of students to the methods adopted. Teachers and instructors should be helped by the supervisor to make the programme a meaningful one, so that students can apply the knowledge acquired to real-life situations. They should see their home and community settings as laboratories where they can test the theories learned in home economics and opportunities for continuing classroom experiences and making further explorations. Adoption of this approach is to be encouraged as it provides the essence of home and community projects assigned to students during their course of study.

Curriculum review: constant evaluation is essential to a successful follow-up of the methods directed towards achieving the objectives of home economics programmes. It is a practical test of the effectiveness of existing programmes in meeting the demands of family and community living, which change constantly with different stages of national development. There is no doubt that a flexible curriculum contributes more to educational excellence than a rigid one. The curriculum should change with the changing needs of the social and economic order. It is logical therefore, that in reviewing existing home economics programmes, serious consideration should be given to national targets as related to the needs of families and communities within their various socio-economic status groups. An effective curriculum should make provision for job opportunities or earning capacities for all individuals to fit them into the current national development schemes according to their talents. The curriculum should provide for more than examination requirements in developing the basic skills, abilities and competences for family and community living; individuals are being prepared for life experiences and should be well-equipped for such.

The inspector's role

The importance of inspection in ensuring the achievement and maintenance of high work standards cannot be over-emphasized. There are many factors to be considered in assessing educational standards as they affect academic standards.

I. Facilities

(a) Accommodation: laboratories for home economics courses are not suitably equipped in many poor countries and this constitutes a great hindrance to the effective teaching and learning processes peculiar to home economics. Although an ideal type of accommodation can be very expensive, there should be possibilities for improvement of available facilities. It is important to make adequate provision for the essentials that would reflect the needs of the subject both in theory and in practice. For example, in some countries textile and clothing courses are conducted in classrooms used for general subjects. This does not allow for a good standard of work from the viewpoints of either the teacher or the learner. The facilities of a laboratory should reflect all that goes on there, as well as providing for productive activities and high quality results.

(b) Equipment: adequate and proper equipment is essential to the development of the right skill and efficiency in practical work. The common saying often associated with technical education - 'The right tool for the right job' - is also applicable to home economics. There is a general tendency to lay too much emphasis on academic work at the expense of practical application to actual situations - an attitude which can be responsible for poor facilities in institutions. In fact, sound academic work would not be possible if an institution were substandard in other respects, so the availability of equipment is a major factor in promoting standards.

(c) Instructional materials: should provide facts on which the programme is based. There is no doubt that books and other instructional aids written and structured according to the students' background would help with meaningful execution of the curriculum. The Education Board, supervisors, advisers and principals have joint responsibility in the selection of appropriate materials for teachers and students. Home economics materials should supply the essential tools for an intelligent interpretation and execution of the programme. If they were based essentially on
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experiences of life situations, they would then contribute much towards practical solutions to the complex problems of homemaking and community living. In other words, recommended text books should be of necessity related to home and community environment; such instructional materials should rather be prepared by indigenous authors and producers who are already familiar with the kind of experiences to which students would be exposed. For example, home economics books written in the African/Nigerian context would be more meaningful to African homes and communities and would go a long way to foster home economics education in Africa; of course, this is not to suggest condemnation of foreign books.

There are basic principles of living standards to be established by universally accepted yardsticks. Besides, one can always learn from without their immediate environment, to improve their own lot.

2. Personnel: The staff issue in any subject area is very important both in terms of quality and numbers available. There are different categories of staff ranging from those who acquired competence from on-the-job-training, and those who are qualified by virtue of years of experience in the job, to those with recognized academic qualifications. They all have significant contributions to make if they have proper and adequate facilities to work with under favourable conditions. There is a general tendency to underrate staff who have no paper qualifications but who can be very efficient and devoted.

Inspection report: an evidence of achievements

The inspector should establish uniformity in the standardization of training programmes for home economics teachers. This is essential for realistic assessment of students' progress and teachers' efficiency. It also provides means of presenting vivid reports that can easily identify factors which are likely to affect standards in the teaching and learning processes. Her reports are reasonable measures for evaluation of home economics programmes. The inspector should ensure that achievement reports reflect the failures and successes of the means and methods applied towards achieving the major objectives set out in the curriculum. Teachers help to establish a form of continuous assessment of students' course work performances for purpose of comparison with performance in the final examination.

In routine inspections, the inspector should take pains to inspect the teachers' lesson plans and students' work books in order to identify their weaknesses and problems and give guidance where necessary.

Home economics is functional only if it improves people's standard of living in their home and community situations. The inspector is an assessor of students' ability to apply in real life situations the knowledge gained in home economics. Her reports should reflect this as evidence of the teachers' efficiency or weakness in attaining the desired goals.

The adviser's role

The home economics adviser's role is more or less that of a consultant in the Education or School Management Board. As a specialist, her role is a unique one as consultant to school authorities for the provision of all facilities needed for proper execution of the programme.

She should be able to effect proper co-ordination of the various national projects that have some relevance to home economics. In her advisory capacity, she can influence the initiation of research into areas of home economics which should be supported with scientific, economic and other important data in the achievement of national goals. The adviser should have the responsibility for collecting available research information and making it available to institutions to help them update their teaching.

The adviser has a vital role to play in the production of suitable instructional materials and in making recommendations for scholarship awards to home economists in all areas of home economics.

An adviser should not succumb to the temptation of over-stepping her bounds to assume the
role of a principal, thereby clashing with the decisions of school authorities. Rather, she should
limit her role to that of offering suggestions, recommendations and guidance for consideration by
the institution.

Summary

The multi-faceted roles of supervisors, advisers and inspectors in the dissemination of ideas, strategies and programmes can be summarized as follows:

1. to help develop realistic programmes of home economics education at all levels by successful involvement of School Boards, principals and staff of different institutions who would execute the curriculum;
2. to ensure that learning experiences are related to the needs and aspirations of home and community. This can be done through content evaluation of programme conferences, seminars, and workshops, where common problems are identified and suggestions offered for their solutions;
3. to review curriculum for improvement in order to meet the changing needs according to the stages of national development;
4. to co-ordinate home economics programmes in isolated national projects, e.g. health programmes, agricultural projects, community development schemes;
5. to disseminate information through news letters, magazines, journals, women's programmes, youth clubs etc.
6. to support research projects in all areas of home economics.
Preparing family life educators: an in-service workshop in family life education

Margaret E. Arcus

Home economics is generally recognized as a helping profession which works with individuals and with families in terms of their needs for family living. As these needs for family living change, home economics programmes change. At any particular point in time, content which has 'always been a part' of home economics may receive renewed emphasis and attention as it appears to have new relevance to the clientele we serve.

One of the content areas in home economics which is receiving renewed attention in Canada at present is that of family life education. Several forces have led to this: rapid social change which places new demands on individuals and on families; new knowledge which has been generated about human and family development and behaviour; and the expressed concerns of many individuals for the quality of their own lives.

Family life education is of course not a service unique to home economists. Many others, such as social workers, health educators, clergy, counsellors, psychologists and sociologists, also provide a variety of family life education programmes. Although each of these may approach their programmes in different ways and different settings, all who offer family life education face many of the same issues and concerns. One of the most pressing of these concerns is the selection and training of family life educators.

It is clear from a review of family life education literature that competent family life educators are crucial to the successful realization of the goals of family life education (Report of the National Commission on Family Life Education, 1968; Committee on Educational Standards, 1970; Somerville, 1971). Good teachers are required in all subject matter areas, but the nature of family life education is such that special attention needs to be given to the qualities and characteristics of teachers in this area. Here, more than in most other areas, the personal characteristics of the teacher become important as they are interrelated with the subject matter of the field. Most discussions of the qualities and characteristics important in family life educators recognize this interrelationship (Committee on Educational Standards, 1970; Fohlin, 1971; Whatley, 1973) and identify criteria for family life educators which include both personal and professional characteristics.

There is general agreement that the following characteristics are among the most important for family life educators.

1) The teacher should have sound knowledge in the many content areas within family life education and be able to bring together findings from many different disciplines and apply these to concepts and issues in the family life classroom.
2) The teacher should have sound knowledge and identify with the broad philosophy and the basic principles of family life education in order to develop sound, defensible programmes.
3) The teacher should have skill in using and evaluating family life materials and resources and be able to use a variety of teaching methods appropriate to family life education.
4) The teacher should be able to work effectively with young people and to become involved in their growth through working with them both individually and in groups.
5) The teacher should have worked through his/her own feelings and attitudes concerning family life topics and have insight into and acceptance of his/her own life experiences.
6) The teacher should be aware of and be able to work realistically within the current local situation. Other characteristics which may be mentioned include 'a sense of humour', 'emotional stability', and/or 'a fund of good judgment and common sense'. Among the personal characteristics which are not considered important qualifications for family life educators are age, marital status, and parenthood status.
It is an important first step to identify the kind of people needed to teach family life education. It is not enough however to simply describe the 'good' family life educator. Efforts must be made to ensure that educators with appropriate qualifications are prepared for their role in family life education. This preparation may occur either during pre-service education or as in-service education.

Ideally, family life educators would be selected and trained during their pre-service education, with some kind of certification granted at the conclusion of this training. Preparation for family life education would be spread over the entire pre-service period and would provide many opportunities to develop a broad base of knowledge in family life education topics, to examine and clarify attitudes and feelings toward family life topics, and to develop basic skills for planning programmes and for working with students in family life education. Field experiences would be an essential part of this training.

The current situation is such however that we cannot wait for these pre-service trained personnel to emerge in numbers adequate to handle the needs for family life education programmes. The need is urgent enough that programmes are being developed and presented whether teachers are adequately prepared or not. Under these circumstances, many programmes may be inadequate or ineffective or both.

One of the major challenges in home economics at the present time is to devise in-service education programmes in family life education for those who may already be involved in family life education or who may be in a key position to initiate such programmes. We need to assist more and more teachers to become the kinds of teachers who can contribute effectively to successful family life education.

There are several possible patterns for in-service education: guest speakers or seminars; two- to three-day conferences; workshops of one or more weeks; and courses offered during regular terms or during summer school. Each pattern has advantages and disadvantages and serves to satisfy different kinds of objectives. As well, each requires different kinds of participant involvement. Over time, a school district or an educational institution might be involved in providing in-service family life education which incorporates all of these patterns.

The School of Home Economics at the University of British Columbia has been involved in each of the in-service education patterns noted above. One approach found to be particularly effective has been a three-week credit workshop offered during summer school.

In this workshop, sessions meet daily from nine to five, and incorporate a variety of learning experiences. In addition to the usual lecture/discussions, participants may hear guest speakers, make field trips, work on small-group assignments, or work independently in the library. This type of educational organization makes it possible to meet a variety of objectives while participating in an intensive experience.

In order to facilitate maximum participant involvement in the workshop experiences, enrollment is limited to 15-20 participants. As the workshop was designed as an in-service educational experience, participants must have had prior teaching experience and attended previous courses in at least some of the content areas of family life education.

University credit is granted upon successful completion of the workshop.

One important characteristic of family life educators noted earlier was that such teachers should have knowledge of and identify with the broad philosophy and the general principles of family life education. This was a major goal of the workshop. Specific objectives related to this goal were to know more about the field of family life education, to become more aware of the philosophies of other family life educators, and to identify and clarify one's own philosophy of family life education.

Several experiences were planned in order to meet these objectives. The participants were expected to read widely, both from a prepared list and from readings which they 'discovered'.

This workshop has been offered several times; however, to facilitate the following discussion, information concerning organization, objectives and experiences, and evaluation reflect the commonalities of all the workshops, rather than any one workshop experience.
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The following questions served to guide both the reading and subsequent discussions:

a) what seems to be the general principles of family life education?

b) what key beliefs seem to represent the philosophies of the authors you read?

c) what seem to be the major conflicts, issues, and problems in family life education?

d) list the statements you consider to be the most significant in the articles you have read.

Participants were then presented with the following quotation: 'We must make some assumptions about the future of family living if our programs of education for marriage and family living are to be relevant and appropriate for the kind of living with which youth and adults will be confronted in the years ahead'. (Frank, 1959). Following reading and discussion, participants listed assumptions being made about the future of the family and considered the implications of these for family life education programmes.

Participants were also asked to prepare a written statement of their philosophy of family life education. This statement was to include their beliefs about families, their beliefs about family life education, and the major goals they would establish for their own programme in family life education. (This assignment was adapted from Luckey, 1968).

Many teachers are concerned with the practicalities of family life education and seek specific assistance with curriculum development and with methods, techniques, and resources for the classroom. The position presented in this workshop was that such concerns are important but that satisfactory decisions on such matters are based upon a prior consideration of the philosophy and principles of the field. Objectives related to these practical concerns of teachers were to examine critically and/or develop curriculum models in the various content areas of family life education, to evaluate critically materials in family life education, and to expand and enhance techniques for teaching family life education.

Several content areas within family life education were identified: the family as an institution; the family as a living unit; human development; human sexuality; self-development and understanding; and communication skills and processes. These topics were selected somewhat arbitrarily and served primarily to focus discussion and experiences rather than to define or describe the field of study.

For each of these topics, participants examined and critically analysed curriculum materials and resources as prepared by themselves or by others. This required the development of criteria for evaluating such materials, reflecting both philosophical and practical concerns. Some resources and materials were used as part of the workshop experiences while other were examined during an afternoon 'resource fair'.

As all participants were experienced teachers, they were already familiar with many teaching techniques. However, many sought additional help in adapting these techniques to family life education content. Major emphasis was given in the workshop to the use of case studies; to discussion and other group techniques; and to the creative use of film (such as using only a portion of a film when this might be more appropriate to class objectives). Participants experienced these techniques as well as discussed them.

Each participant prepared a curriculum resource paper on a topic of their choice. This resource paper included a statement on the need for the topic in family life education; reviews of current research, theory, and writing on the topic; a statement of objectives for the topic at a particular grade level; and a list of appropriate resources and techniques for that grade level. These papers were discussed and shared with all participants at the end of the workshop.

Three other objectives were identified for the workshop, bringing the total up to nine: to develop strategies for handling critical issues and values questions in family life education, to examine one's own attitudes toward various aspects of family living, and to update knowledge about families, including reading, interpreting, and using current research about families.

Experiences related to these objectives were incorporated in the activities already discussed, but the objectives were considered important enough to warrant specific mention.

A major concern in family life education is the role of values in the classroom, and in particular, the teachers' own values and attitudes. These concerns were discussed within each of the content areas mentioned earlier, and specific techniques and resources were identified which might assist the teacher with values questions. All discussion provided opportunities for participants to explore their own attitudes and values and to consider the implications of these for their own family life education programmes.

Throughout the experience of the workshop, participants were also encouraged to update their knowledge about families and family living. New information was incorporated into all sessions, with specific attention given to this in the curriculum resource papers.

Evaluation of this intensive workshop approach to in-service family life education indicated that it was both meaningful and effective. Participants reported that 'living and breathing'
family life education for an intensive three-week period contributed greatly to their understanding of family life education and of themselves. Most participants believed that they gained more from this approach than they might have from a regular course.

Specific comments from participants indicated that the workshop 'clarified my own ideas and thoughts', 'has encouraged me to change my content', 'has given me confidence in what I'm doing and in what I want to do', and 'has enriched my life as well as my classroom'.

It was believed that the small group atmosphere, facilitated by limited enrolment, was critical to meeting the goals of the workshop. Participants were able to work closely together and to participate extensively in workshop experiences and discussions. Many interpersonal support systems were developed by which participants could assist each other following the workshop.

While participants found it helpful to become familiar with as many curriculum guides and resources as possible, they reported that they profited both personally and professionally from doing their own planning and development of both programmes and resources.

Participants recommended that other intensive workshop experiences be offered.

There were several advantages to this pattern of in-service education. The momentum achieved during an intensive workshop allowed a great deal to happen in a relatively short period of time. Participants both experienced and studied family life education. Although the specific time period was selected because it met university requirements for a credit course, three weeks was considered to be adequate to meet the objectives of the workshop and to gain some depth in understanding family life education; Three weeks also appeared to be the maximum length of time for this workshop; although all participants indicated that they wanted and needed 'more', they also reported that they needed time to think about the experiences of the workshop and to try out some of the ideas before receiving more input.

Summer school appeared to be the most appropriate time to offer an in-service education workshop, as most participants were relatively free of other professional commitments. According to the participants, one advantage of the workshop format was that they could receive intensive training in family life education and yet have some 'time for themselves' before another school term began.

An important motivating factor for many participants was the credit granted upon successful completion of the workshop. This credit assisted many teachers in their career development and advancement. Although receiving credit for a family life education course was not the same thing as attaining certification as a family life educator, the credit was a form of recognition and served to help identify to school administrators those teachers who had at least some special training in family life education.

Although a great deal of planning and preparation was required to present the workshop, this pattern of in-service education did not make undue demands on the resources of the School of Home Economics. Its major disadvantages was that not all potential participants could arrange personal and family matters during summer school in order to participate in an intensive professional workshop. Thus, using this approach alone would not reach all who might want or need such family life education training.

As Home Economics departments renew their emphasis on family life education, one of the most pressing educational concerns becomes the selection and training of family life educators.

It is clear that competent family life educators are crucial to the successful realization of family life education goals.

Among the qualities and characteristics most important in family life educators are:

1) The teacher should have sound knowledge in the many content areas within family life education and be able to bring together findings from many different disciplines and apply these to concepts and issues in the family life classroom.

2) The teacher should have knowledge of and identify with the broad philosophy and the basic principles of family life education in order to develop sound, defensible programmes.

3) The teacher should have skill in using and evaluating family life materials and resources and be able to use a variety of teaching methods appropriate to family life education.

4) The teacher should be able to work effectively with young people and become involved in their growth through working with them both individually and in groups.

5) The teacher should have worked through his/her own feelings and attitudes concerning family life topics and have insight into and acceptance of his/her own life experiences.

6) The teacher should be aware of and be able to work realistically within the current local situation. Other characteristics which may be mentioned include 'a sense of humour', 'emotional stability', and/or 'a fund of good judgment and common sense'. Among the personal characteristics which are not considered important qualifications for family life educators are age, marital status, and parenthood status.
Preparation for teaching family life education may occur during pre-service education or as part of in-service education. The need for training of family life educators is such that major attention needs to be given to in-service education programmes.

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Suggestions for the organization and supervision of home economics in schools in developing countries

Margaret E. S. Roberts

The inclusion of home economics in the curriculum of all secondary schools requires some uniformity in educational standards and practice. This in turn implies the need for some form of control, preferably through the Ministry of Education and/or Department of Education. While there are innumerable possible schema, the following suggestions could provide a good starting point for a country which at the moment has no suitable structure on which to build.

Staff

The staff required would be one Supervisor/Inspector or Senior Education Officer with one or more assistants depending on the number of schools.

Supervisor/Inspector or Senior Education Officer

Qualifications: A qualified teacher of Home Economics from a recognized teacher training college with a qualification at Degree or Diploma level.

Experience: Several years of teaching at secondary level with all form levels up to and including leaving certificate work.

The duties would include supervision of curriculum development units, making teaching materials, organizing and conducting block in-service courses and on-the-spot in-service training in schools, making sets of tests and examinations, random samplings of results and practical assignments, devising progress and record sheets for the various form levels, supervising teachers in schools, requisitioning equipment and supplies, keeping accounts for the home economics budget.

Assistant

Qualifications: A qualified teacher of Home Economics from a recognized training college.

Experience: Some years of teaching in a secondary school.

Duties would include assisting the Supervisor in all aspects of the work.
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Diagramatic distribution of duties and responsibilities

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<tr>
<th>SUPERVISOR</th>
<th>ASSISTANT</th>
<th>ASSISTANT</th>
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<tr>
<td>CURRICULUM</td>
<td>SCHOOLS</td>
<td>TEACHERS</td>
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Curriculum committees
Curriculum development
Revision of syllabus content
Writing and revising curriculum materials
Testing - Trial Questions
Final examinations:- Setting papers
Practical tests
Marking
Random sampling
Theory and practical Results

Regular visits to Government Schools and Private Schools
to:- Advise teachers, Giving-on-the-spot training,
Testing Student Progress.
Distribution of curricular materials, equipment where relevant

In-service courses
On-the-spot training
Checking class records.
work and test at each form level
Assisting teachers with problems
Assisting with teaching practice
supervision of training college trainees.

Curriculum

Curriculum committees may be made up of qualified teachers and persons from associated fields such as health, social welfare and agriculture.

Sub-committees may be formed for each subject area of home economics for the writing of new materials and revision of those in use.

The Curriculum Committees would be responsible to the Supervisor and her assistants for the writing of curriculum material, reviewing the curriculum to identify areas in need for change, making up tests and question papers on each subject area testing at different levels.

The writing, production and distribution of all curriculum materials for schools will be the responsibility of the supervisor. Everything in use should be reviewed at regular intervals by the committees to improve and revise as required. Some may be tried out in selected schools before large scale production for all the schools. In this case, Evaluation Sheets should be prepared at the time of writing and explained in detail before the teacher embarks on the trial of new materials.

The aims and objectives should be well defined for each item of trial material.

Curriculum development requires a constant critical review of the curriculum, syllabus content and trial materials to ensure that changes made are relevant to the changing needs of the developing school situation. With the general improvement in education at primary level, students in secondary schools will be of a new type and ability. The curriculum must be developed to suit the higher standards of education wherever applicable.
New methods of teaching subjects also affect the curriculum content in any one year and
are often the reasons for curriculum change and development.

In order to introduce new curricular materials and new methodology, in-service teacher
training courses should be held regularly - at least twice a year in the beginning years. These
courses may be for one week or more, full-time wherever possible and compulsory for all practising,
school teachers of home economics.

Testing procedures, standardizing practical work, new ways of group and team teaching and
the introduction of new equipment can also be included in such courses allowing practical application
wherever possible to familiarize each teacher in what she will practise in her own school.

The courses may be organized and executed by the supervisor and/or her assistant(s) on a
regional basis to reduce travelling by teachers, or they may be held in a school in a different
area each time so that teachers can see the types of rooms used for home economics throughout a
region or district.

On-the-spot in-service training can also be carried out by the supervisor and assistant(s)
on their regular school visits at least once per term to each school. Individual advice and en-
couragement may be given to teachers in their own classroom situation to help them combat prob-
lems which have been identified.

Evaluation

Record sheets are designed to show student ability in all skills, activities and tests applicable to
the many subject areas of Home Economics. Teachers should keep these up-to-date at all times and
these record sheets should be inspected by the Supervisor and/or her assistant(s) on each school visit.

Markings out of ten make for easy percentages whenever required, to calculate class aver-
ages or the mean, and measure each student's performance whenever required.

The Supervisor and/or her assistant(s) may test a class if in doubt about the record sheet
marking.

Progress sheets are kept for each class and each student. Each list shows the skills,
processes, methods and experiences to be mastered within a given time - usually one or two years.
Each student also has the responsibility of making certain she has done each item and she is also
responsible for ensuring that she obtains the experience if she happens to have missed it with
her class.

Continuous assessment may be taken from the record sheets and the student assessed on her
overall progress or individual performance.

Each teacher should try to form the habit of assessing the ability of students at each
class session. She may do this by marking or allocating a letter to indicate a range of ability.
The internal assessment of each student should be considered as part of the overall per-
centage for each term, year, and for national or overseas final examinations. The student should
be made aware of this process from the start so that she is aware of the necessity to work con-
sistently and not just for each examination.

This internal assessment (taken from record sheet and continuous assessment) can also be
extremely useful in the case of an aggrotat pass.

As mentioned earlier testing should be carried out regularly with or without notification
to the student. The ten-point type of test taking 10-20 minutes of class time should aim at find-
ing out how well students have understood work done in the previous two to three weeks.
These tests should be simple, straightforward, and should test understanding of instructions,
language, lesson content and skills.

Wherever possible, examinations should test the understanding of the use of theory and know-
ledge.

Questions set should be critically examined to ensure relevance and absence of ambiguity
or the possibility of memorizing and regurgitating theory.

The type and weight of examinations may be dictated by the Ministry or Department of Edu-
cation but wherever possible essay-type questions and answer should be avoided as they limit the
number of questions which should be set on the work covered within the number of weeks of classes.
Final examinations set by those responsible to the Ministry or Department of Education
should aim at standards with international recognition rather than those satisfying internal ass-
essors only.
Research

Qualified home economists should be encouraged to investigate and organize research in many subject areas of home economics, including nutrition problems, the cost of living for ethnic groups and socio-economic levels.
Some thoughts on home economics and the other 'helping' professions

E. A. Cebotarev

Home economics programmes today generally fail to instil their graduates with a sense of identity or to project a well-defined public image, both of which are indispensable if home economics is to be established in its own right, with a clear demarcation between it and the other 'helping' disciplines such as social work or community development. It is this regrettable situation which leads to the lack of political support and to the questioning of the value and place of home economics in national educational and development efforts. At present, home economics is being unfairly appraised on the basis of what it was not able to achieve for a variety of reasons, many lying outside the discipline per se, rather than as most development-related projects are, on what it could accomplish if the proper focus and support were forthcoming.

It is my intention to describe in this paper what I believe to be the unique character of home economics and to clarify the areas of overlap with such 'sister' disciplines as social work (I) and community development, highlighting areas of action that only home economics can proficiently perform.

Some basic questions

What is home economics? In North America, it has been repeatedly defined and re-defined, but no definitive conception of the discipline has been developed as yet. (2) A similar trend is observable in the southern continent, where the National Home Economics seminar (September 1974) was only one instance in many, in which home economics was being critically appraised. This points to the 'openness' of home economics, which is an enormous asset for our discipline, enabling it to respond effectively to the demands of a variety of situations found in various countries.

Today, a great deal of the controversy, uncertainty and questions about home economics seems to stem from ways the discipline is identified and evaluated: in this process, disproportioned emphases are placed on the 'structure', the 'what', or the content of home economics curricula and action programmes, as compared to the 'functions', the 'what for' or purposes of these programmes (formal or informal) per se. Sometimes even home economists lose sight of the aims of their discipline. A shift of attention from the 'structural' (static) to the 'functional' (dynamic) aspects of home economics, as they relate to the family and to society, can be of great utility in clarifying some of the recurring questions.

The dynamic, functional character of home economics can be noted in the close parallels between its evolution and the developments in North American society (Surviranta, 1973, p. 31). Quan (1965), for example, detects a movement from technological to humanistic concerns in home

(1) I am using social work throughout this paper to refer to what in Latin America is known as servicio social or asistencia social (Paraiso, 1969, p.14-15).

(2) A perusal of the American Journal of Home Economics, can show the numerous attempts to formulate more up-to-date definitions for Home Economics. The reorganization of home economics curricula and the re-naming of home economics departments illustrate the same trend.
New trends in home economics education

Economics. Others claim that home economics in the United States began as a single, undifferentiated field in which all Home Economists received more or less the same basic training (Lee and Dressel, 1965). This period reflects the success attained by the use of technology in industrialization, emulated by home economics in its heavy emphasis on applying the knowledge of the natural and physical sciences to home-making skills. As home economics knowledge generated in this initial stage accumulated, the concept of home economics as a 'unified field' emerged in many institutions. (1)

'This concept holds that some areas of Home Economics are basic to others, as the study of textiles, for example, is part of the environment of families. In order to be a Home Economist in the textile area, one must not only be a textile specialist, but also relate textiles and their use to the family environment, decision making and consumption' according to Marshall (1973, p. 8).

The third and most recent trend is the conception of home economics as a 'collection-of-specialties'. This is definitely an effort of home economics to match up the profession with the demands for skills and opportunities of jobs in an increasingly differentiated and specialized society. (2) Now home economists specialize in foods and nutrition, child development, clothing and textiles, etc. with considerable disregard for other specialties in home economics; they fill specialized jobs in industry, business or public institutions. This gives an undeniable strength to home economics as a profession, but the lack of an overbearing, unifying concept to hold these specialties together introduces new vulnerabilities. Administrative units that are no more than a collection of loosely connected specialties cannot survive in today's institutions of higher learning. This third conception of Home Economics opens up the possibilities, as Marshall has pointedly argued, that home economics 'will be raided and preyed upon at an increasing rate in political power plays by administrators from other disciplines.' (1973, p. 9) And the contending disciplines can rightfully ask: What is there in a child development, family relation, food and nutrition, interior design and decoration, housing, health and sanitation, arts and crafts or any other programme that warrants its place in Home Economics rather than in psychology, sociology, biology, chemistry, architecture, arts or any of the basic sciences or disciplines on which home economics draws? What makes home economics unique and so necessary? I grant you, without a unifying concept, these are hard questions to answer and the relevance of home economics is difficult to maintain.

This problem is by no means restricted to home economics in the United States. Latin Americans have, by introducing many aspects of the American home economics model to their countries, inherited along with its strength, some of the weaknesses of this profession. It is up to them now, to critically examine Home Economics in their countries and to formulate their own conceptions clearly and distinctly. They must point out some of the unique features, which are not addressed by any of the basic sciences on which home economics rests, nor fully considered in our sister 'helping' disciplines (social work or community development).

The core concept of home economics:

To state that home economics focuses on the human family may be viewed as a truism or a platitude, but it must be noted here. The family, wherever in the world and independently of its specific structure, is still a very basic social unit of society, even in a highly developed one. A large part of people's lives takes place within the family. People are born into and grown up in it; they are fed, clothed and cared for there; they learn to live, to love, to strive to work and to achieve in the midst of the family environment. (3) The family is the social unit which in the strictest sense is most closely related with its individual members' survival, well-being, success and happiness. A great part of what we today call the 'quality of life' or well-being depends on how efficiently and well the family performs a number of services in the private life of individuals. (4)

(1) In some institutions this crystallized into the 'Human Ecology' framework.

(2) For an excellent discussion of these three conceptions of Home Economics, see Lee and Dressel, 1965.

(3) In sociological literature on social stratification there exists ample evidence of the crucial role that the family background (environment) has on the individual's performance in later life.

(4) For example, Howard says that 'the meaning of well-being is often translated into greater physical/psychological resistance to morbidity, contingent upon a better knowledge and use of such traditionally non-medical and non-health factors as food, shelter, clothing, etc. (1972, p. 74).

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Strong, well-adjusted families are capable of providing most of the needed material, economic, emotional, and social supports and services for their individual members, and are thereby indispensable for the development of healthy and strong nations. It is with the improvement of these supports and services that Home Economics is fundamentally concerned.

Families, however, do not perform these functions in a vacuum, but through the use of available material and social resources in interaction with their environments.

When years ago Ellen Richards formulated the fundamental concept of home economics as 'the study of the interaction of man and his environment', she was referring to this interaction. Even though this broad statement fails to specify sufficiently which man/environment relations fall within the domain of home economics, today this basically 'ecological' character can be discovered in most home economics teaching and action programmes. Therefore, I would propose that home economics is a 'bridging' and 'normative' discipline. It spans the physical-biological and socio-psychological domains within the socio-cultural context of the family, and it is 'normative' in the sense that it carries the notion of betterments and improvements of overall human well-being.

But how does home economics accomplish this? If we can picture the family as a social system, with its values, goals, aspirations, needs, norms and roles, on one hand, placed within a life-supporting system made up of physical-material and socio-cultural resources, (1) on the other, we need to specify the mechanism of interaction between the two. Rather than taking the flow of energy (basically an analogy from biological-ecological models) as some home economists and anthropologists have done (Compton and Hall, 1972 or Rappaport, 1971, for example), (2) I like to suggest that in our discipline it is through the (home) management process that we can influence this important function (see figure 1).

Many home economists have recognized the centrality of management concepts for our discipline. Bratton (1971, p. 7) for example says that 'home management is the bridge between the material and the human'; she also links it to the idea of 'quality of life'. Others state that it is the main process for converting environmental resources into 'products' (3) for the satisfaction of family needs and goals (Schalter, 1967, p. 93-9; Maloch and Deacon, 1966, p. 31-5; Nickell and Dorsey, 1967; Nelson and Martin, 1967, to name only a few). (4) Compton and Hall suggest that 'universal' management principles, when applied to the family, become an 'ongoing process which encompasses those human actions directed toward the realization of values and goals' (1972, p. 36). They state further that management, formerly considered task-centred and confined to the work in the household, is now viewed in a human behavioral context in relation to all aspects of the home and the wider community in which the families live. The systems approach is credited to have been the major stimulus to home management conceptual integration, which provides functional unity within the household, relating the socio-psychological level of values and goals, with the physical level, through the use of resources. (Compton and Hall, 1972, p. 30-3).

The fact that the well-being of families and the quality of people's private and, to a certain extent, public lives depend greatly on the ability of the family to use resources, or on the quality of the management process, is widely recognized. It is in this area, I believe, where the undeniable strength of home economics and its superiority over its 'sister' disciplines lie.

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(1) 'As a life-support system, the family receives physical sustenance from the natural environment and is dependent upon its social environment for its affection and socialization needs' says Compton (1972, p.7). For our purposes I like to deviate from this conception and view the family as a social system separately from its supportive, material and social environments.

(2) It creates many methodological problems and needs to be supplemented by socio-cultural considerations (Klausner, 1972, p. 334-63).

(3) 'Products' are conceived here in a very broad sense, not to be restricted to mean material things.

(4) Some 25 years ago management in the home was described as 'concerned with the acquisition, use and care of human and non-human resources, involving planning, organizing, co-ordinating, and controlling them. And involving such tasks as cleaning, cooking, baking, washing, ironing, care and education of children and general maintenance and care of the home'. Its implications for activities outside the home were already recognized in connection with the allocation of time and energy for work and employment, recreation and play (Fitzsimmons, 1950, p; 4-5).
The value of a discipline capable of transmitting the knowledge needed for getting quality goods and services for meeting family needs with the most economic and wise use of resources is undisputed. Not only would it be of benefit to families, but also indispensable for the development of society, by virtue of freeing otherwise misused resources (money, products, time and energy) for alternative uses (Cebotarev, 1974, p. 24-8).

Home economics has yet to reach the status of such a discipline. Its conventional, currently prevailing subject-matter centred approach (I) detracts from a holistic view of family needs and militates against an effective and convincing performance of its basic function (see Figure I). (2) If home economics could re-arrange its approach slightly and use family or home management as the integrating concept of its many subject-matter areas, it would not only acquire a unifying, basic concept focusing it more clearly on the functional aspect of the discipline, but also a means for gearing its programs to the conditions of its work, be they urban or rural, in developed or in developing societies.

In this unified approach comparable value would be given to the social science-based (in Figure I: meanings) 'process' competencies, (3) as to the physical and natural science-based 'technologies' and skills. It is perhaps in the area of 'technologies' and practical skills where Home Economics has an undisputable advantage over other strictly social-science based applied disciplines. (4) The joint application of 'process' and 'technological' knowledge to family well-being is the real strength of home economics. It can be clearly seen in the quality of the management process. Management, consisting mainly of decisions dealing with the allocation of scarce resources to various family needs and goals, is enhanced by 'technologies' or resource-utilization skills and knowledge. They open new alternatives for resource allocation and consumption and enrich the decision-maker's options. The skills involved in most home-making activities are not a negligible asset for anyone who is concerned with optimally 'making ends meet' in a family. The advantage of having home economics programmes more directly focused on the functional aspects (integrated by the management process) is that this provides it with a clearer, more stable identity on one hand, and legitimates greater flexibility and variety of contents (structure) of the discipline, on the other. With an inductive approach, starting with the understanding and consequent improvement of the locally used family management system, home economics could acquire a truly Latin American character or that of any other country where it is being carried out. (5) The resulting programmes promise to be more realistic, effective and convincing because the rationale on which they are based is difficult to refute. (6)

A focused programme would provide definite justification and integration for activities which are currently undertaken by Home Economists in a more or less disjointed manner. (7) For example, rural Home Economics programmes would focus more on the improvements of intra-family (or household) resource- (human and material) utilization. To enhance the management process, a greater number of production, processing and preservation skills would be introduced, along with new

(1) Any one of the variety of 'collection-of-specialties' approaches.

(2) In field work this is often translated into work by 'project' where (generally desirable) projects are introduced with little regard for the existing complex of needs, resources and priorities, on the level of the family rather than the community.

(3) Such as decision-making, planning, communicating, organizing, socializing, etc.

(4) An unfortunate trend downgrading homemaking skills emerged in recent years in the United States. While they definitely could not serve as goals of Home Economics teaching per se, they are indispensable and useful means for the achievement of family well being and quality of life.


(6) The improvements of managing or economizing ability is a recognized requisite for the success of any enterprise.

(7) I am not dealing here with home economists working for industry or business. However, even though they are committed to selling or testing a product, they do this in the light of the most economic use for the consumers.
Home economics and other 'helping' professions

Home economics and other 'helping' professions in Latin America are fraught with ambiguities, and this will continue as long as the practice of 'improvising' personnel for home economics positions in Latin America will persist. (4) Already some years ago Vergara and MacKinnon remarked on this subject: 'The result is that the role of Home Economists loses its definition because it is filled by many people, both professional and volunteer. The fact that they are (only) partially qualified means that the subject matter - and the way it is presented - resembles more what could be offered by any woman with everyday experience. The special capacity of a home economist is overlooked when anyone can fill her role.' (1961, p.21). Social work in Latin America has comparable problems for similar reasons (see Paraiso, 1969, p. 14-15). (5) It is therefore erroneous to judge home economics and its value on the basis of programmes that carry this name but are staffed with social workers, community developers or nutritionists. These professions have important roles to play, but are not interchangeable with that of home economics (see Figure 2).

The distinctions of professional roles in 'helping' disciplines at the field level are needed because they define the demand for home economists on the job market. In Latin America, the public sector is still their major employer, be it in the field of education or in social development work.

Placed on a generality-specificity continuum (Figure 2), the four (6) most common 'helping' disciplines (social work, community development, home economics, nutrition) show considerable differences in focus, approach, purpose, methods and knowledge base.

The most general and broadest in scope is probably Social Work. It is definitely 'social problem' oriented, whether in its conventional, conservative or newer radical forms, (7) and

(1) There is a definite relation between what we designate as 'resources' and our available technologies. Only those materials for which there exist utilization procedures (technologies) acquire the status of 'resources'.

(2) Consumer education is used here in its more conventional sense, although I believe that including resource-use or utilization in the concept is most useful (Nelson, 1970; Davis, 1945).

(3) To achieve lasting results and effective improvements in the way of life of people, it appears to be necessary to recognize that families have multiple survival and development needs, requiring simultaneous attention that can best be met in a systems approach to the problem.

(4) I am referring here mainly to positions in field or action programmes and not to academic positions.

(5) 'El problema de delimitar el servicio social como sector aparte de la politica y de la accion social se complica mas aun porque muchas instituciones con funciones y objetivos de servicio social no estan dirigidas por trabajadores sociales capacitados ni cuentan con personal idonea.' (Emphasis mine) (Paraiso, 1969, p. 14)

(6) I have excluded public health nurses because they have fairly well-defined and specific roles.

(7) The newer, radical forms of social work reject the older position which takes the existing social structures for granted and attempts to help individuals to adjust to or to cope with these structures. Instead they advocate organization and action for radical structural changes in society as the role of social worker (Ander-Egg, 1969, p. 5-10; Richan and Mendelsohn, 1973).
New trends in home economics education

has an explicitly remedial or therapeutic approach. That is, it deals with healthy, normal and well-adjusted individuals or groups. The main strength of social workers is their social sciences based methods and skills. They receive only a smattering of the home and family related (non-social) trainings that are the home economists' major domain. Of a list of thirty-two major social work activities carried out in Latin America, only two were directly specifically to families (as units) with content comparable to that of home economics (Paraiso, 1969, p. 328-31). Therefore the social workers major thrusts lie in counselling, case work, group work and some community organization, directed mainly to helping misadapted individuals or groups to adjust and cope with their social environments. In terms of the model presented in Figure I, social workers mainly help their clients to deal with the use of extra-family resources of the institutional and public type, although in the process they may have to engage in some therapeutic action on intra-personal or intra-family levels. (Vergara and MacKinnon, 1961, p. I-22, or any other of the social work references).

In terms of generality-specificity, home economics and community development lie somewhere in the middle of the continuum, but community development has a somewhat more limited field of action than either social work or home economics. Community development workers have a strictly social sciences-based background and direct their attention to group work and self-help, predominantly on group or community problems. They are proficient in inducing social action but have to rely on expert advice for the solution of specific, technical problems. The domain of community development workers is thus that of groups and community organization and action, the very areas that home economics only tangentially includes. Home economics has a different thrust. Its family orientation and broad knowledge base make it equally useful and applicable to healthy, normal families as to those having 'problems'. Its emphasis on education and human development contributes to the mainly 'preventive' character of this discipline. Although it often performs a 'remedial' function, its prime orientation is to make good lives 'better'. The practical, family-centred approach is also of value for home economics employed in business or industry. It is far from this perspective that appliances and products are tested and marketed.

The most specialized of the 'helping' disciplines in our example is nutrition. The nutritionist, more than any other field worker, has specific, well-substantiated knowledge applicable to a very specific part of individual and family life. It is also probably easier to establish the need for the nutritionist's guidance and for evaluation of her (his) work, than of any of the other 'helping' disciplines, because of the direct relationship between nutrition and health. The work of the nutritionist, although of basic and undisputable value, focuses on only one of the basic human needs in spite of the fact that 'men don't live by bread alone' and leaves the others unassisted.

To summarize, this comparison shows that there should be very little overlap between the core approaches of Home Economics and the other helping disciplines. If programmes are manned with well-trained field staff (in their respective disciplines) and focused on their specific areas, they would be highly complementary. The comparison further indicates that the other 'helping' disciplines could only partially and inadequately replace Home Economics, if the well-being of the family and of the individual, in his private sphere, the family, are of any concern.

Conclusions

At this point, I would like to point out that home economics possess a great deal of the practical knowledge (both in the 'process' area as in 'technologies') needed for the very basic and universal activity of managing and economizing; (1) which goes on in the private, family sector in society. (2)

(1) 'Economizing is getting things you want with the most frugal use of resources. This means that the total resources used-time, energy, skills or ability, and material goods - are as small as is consistent with gaining the desired end' (Fitzsimmons, 1950, p.291).

(2) Unfortunately, due to our present system of economic accounting, these economizing activities seldom find their way into the Gross National Product (G.N.P.) or other development measures, and are, therefore, not too seriously considered in development planning. Household produced goods and services have, however, an important role to play in national, social and economic developments. (See Boserup E., Women's Role in Economic Development, 1972, N.Y. St. Martin's Press).
In many cases Home Economics has used this knowledge to its best advantage, in an integrated manner, for improving this very fundamental human activity. In others, it became distracted with narrow specialization or 'fixation' on the structural aspects of the discipline. The latter cases gave rise to many of the controversies surrounding Home Economics. Today, a conscious and explicit refocusing of Home Economics approaches on the fundamental process of family management and economizing can be helpful in delimiting the identity of this discipline and assuring its legitimate and permanent place among the 'helping' disciplines concerned with social betterment.
Figure I. THE CORE CONCEPT OF HOME ECONOMICS
(Its Relation to Family Well-Being)

Family/Environment
Interaction

Home Economics
Function

Home Economics
Structure

THE FAMILY
As a Social System
(With values, goals, needs, norms and roles for its members, striving to increase the well-being and survival chances of its members.

Interaction Process
(Existing System of Resource Use)

THE LIFE-SUPPORT SYSTEM+
All Physical and Social Resources

Intra-Family resources, actually and potentially available

Extra-Family resources, actually and potentially available

Improving Management (Process) for +
Producing - Utilizing
Processing - Consuming
Storing - Maintaining
Goods and Services

Meanings ++
(Socio-Psychological aspects)
Clarification of values and goals
Identification of resources
Planning and decision-making, etc.

Skills and Know-how ++
(Technological aspects)
Nutrition and foods
Health and sanitation
Housing, furnishing and clothing
Child-care and development
Family relations, recreation, etc.

+ This biological term refers here to the broad concept or resources, material and socio-cultural, existing in the family, community and society.

++ Categories under these headings are only indicative, not exhaustive.
**Figure 2**

**COMPARISON OF SELECTED 'HELPING' DISCIPLINES**
*(Applied or field aspects)*

<table>
<thead>
<tr>
<th>General</th>
<th>Community Development</th>
<th>Home Economics</th>
<th>Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus:</strong></td>
<td>Social Problems, Deviance, Delinquency, Poverty</td>
<td>Citizens' participation and action</td>
<td>Multifaceted, family-life activities*</td>
</tr>
<tr>
<td><strong>Approach:</strong></td>
<td>Therapeutic, Remedial (Sometimes Preventive)</td>
<td>Remedial - (Sometimes Preventive)</td>
<td>Prophylactic, Preventive (Sometimes Remedial)</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td>Adjustment of Individuals to environment</td>
<td>Self-help, social action, participation. Development of social Structures</td>
<td>Improved utilization of resources in the family environment</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td>Individual-Case Work, Counselling, Community Organization, Group Work</td>
<td>Group Work, 'Process' approach, Community Organization, Planning</td>
<td>Education, Group Work, Extension Work, Community Development</td>
</tr>
<tr>
<td><strong>Knowledge Base:</strong></td>
<td>Broad Psychiatric, Socio-Psychological Methods</td>
<td>(Socio-Psychological and Sociological Methods)</td>
<td>(Educational, Socio-psychological Methods, Mass Media)</td>
</tr>
<tr>
<td></td>
<td>Social Sciences (Psychiatry, Psychology, Sociology, Law, etc.)</td>
<td>Social Sciences (Sociology, Social Psychology, etc.)</td>
<td>Physical-Biological and Social Sciences, The Arts</td>
</tr>
</tbody>
</table>

*Some Home Economists will disagree and say that the focus is on people. People, as actors, are certainly involved in these activities and their change. It is, however, too broad a concept for characterizing Home Economics, making it vulnerable to attacks of other 'people' oriented disciplines.*
New trends in home economics education

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Modification of home economics programmes within formal and informal education

Emmy Hookham

For many years, educational systems have been accused of too much inertia. Today, the situation has changed completely. The educational world has embarked upon the path of reform. In some states, these reforms are taking the form of a total, if not revolutionary, renewal of the national educational system as a whole. In other States, the intention is to adapt the existing system to changes in the social and cultural environment as harmoniously as possible, on the basis of scientific data and carefully evaluated pedagogical experience. In almost all cases, the style of the reform reflects the political evolution of the State in question. Consultative bodies, such as educational councils or committees of experts, composed of representatives of the different political, educational, cultural and economic circles concerned, have been set up for the purpose of advising the government on these reforms.

The forces at work in the modification of structure and content in home economics education should be considered as components of overall educational change. We shall look at four different aspects of these forces: - crucial change forces in the society; change and accumulation of new professional knowledge; effectiveness of the delivery system of home economics education; and the problem of formulating strategies for effective change. These aspects of home economics programme development are inter-related and interdependent parts of a total organic system. Effectiveness and ultimate impact depend on how well we understand these aspects.

Amongst the many societal forces, some of the major forces which affect educational structure can clearly be identified. There is an increasing demand for education. The underlying ideology can be traced back to the multitude of problems which thwart societies in various ways. There are the problems of insecurity and personality disturbance, violence and drug abuse, hunger and malnutrition, and persistent poverty, to mention only a few. Knowledge and skills are needed to help people under rapidly changing conditions to combat with their own resources, the problems at hand. There is also the need for greater awareness of the problems and for desirable transformation in society. Self-reliance, individual and national, is the underlying concept for soundly based action.

Apart from increased demand for education, there is increased pressure for equal access to education for all people, regardless of sex, age or social status. Women and girls are not offered equal educational opportunity in general, let alone in higher education, and in many countries there is under-recruitment to education from all sections of the lower-income groups. One might also mention the large number of young people who, when they finish their studies, find that the education received has been irrelevant to their needs.

Furthermore, there is a need and desire for life-long education. Along with age and changing social conditions, the life styles of individuals and families have changed over the years and new knowledge and skills are required. Technological advance has resulted in a rise in demand for on-the-job retraining in response to the introduction of new and more sophisticated processes in many occupational fields.

1This paper was originally delivered to the XIIIth Congress of the International Federation of Home Economics held in Ottawa, Canada, July 1976.
Fortunately, simultaneously with the quantitative expansion in education, there is the
growth in demand for quality in education. Educational systems and institutions are expected to
account for their actions in respect of educational development. First and foremost, people
demand programmes which are relevant in content, that is to say, relevant to everyday life and to
their work. Relevant objectives and new approaches to setting these objectives are in demand.
Secondly, people want education to be delivered in more human ways, which has brought educational
technologies and techniques once again into the focus of educational discussion. Thirdly, real
work experience has become desirable as part of education in order to link education with produc-
tive work thereby creating an integrated experience for the participants.

These societal forces, all of which are of a general nature, have profoundly affected the
modification and structuring of the educational system, allowing for more equal and adequate educa-
tion throughout the life span of people, and the trends, separately and as a whole, are also affect-
ing the modification and restructuring of home economics programmes.

The second major force in reshaping educational programmes is the expansion of knowledge.
The accumulation of new knowledge is taking place at an accelerating rate (the 'knowledge explo-
sion') and there is a continuous demand for more research to keep accumulated knowledge constantly
under review. This applies to home economics, as well as to disciplines of a related nature. The
field of knowledge of home economics is, in this connection, a particular case in point. It is
a subject which is almost unique in that it deals with basic everyday problems in the lives of
people and therefore it also appears to be more complex in nature.

Rooted in the belief that the objectives and content of home economics programmes should
focus on individual, family and community needs, numerous investigations have been carried out in
different settings to assess such baseline information as is necessary for relevant programme
planning. A number of disciplines are involved in such investigations - sociology, economics,
psychology and the natural sciences are some which may be drawn upon as appropriate. A consider-
able amount of new knowledge has also been accumulated on the complex function of the household
and the family in a changing society, and methodologies for such baseline research have been con-
siderably refined over the years.

But, simultaneously with field investigation of relevant needs, new knowledge is accumul-
ating from laboratory research in special areas of home economics and/or related fields. We need
only mention areas such as textiles, household equipment and economy, housing, human behaviour,
nutrition and food, in order to give some indication of the range of knowledge involved. All in
all, it may be said that new knowledge is accumulating from work undertaken both in the field and
the laboratory to provide a substantial base of information for our educational programmes.

The question to be raised here, however, refers to the crucial inter-relationship between
these two fields of research. Laboratory and field research should go hand in hand. The develop-
ment of new knowledge in either of these two categories of research, if the latter are allowed
to remain in isolation from one another, may prove utterly futile and meaningless unless approp-
riate communication is established between these two areas of endeavour. The application of
knowledge newly gained in the laboratory should help to solve real life problems, but the comm-
unication to the laboratory of needs identified by research in the field is of critical impor-
tance for guiding research activities in meaningful ways.

It is of the greatest importance therefore to home economics educators that newly acquired
knowledge be complementary and become integrated in research programme design whenever possible.
Unfortunately, when examining various types of home economics research programmes, this is not
what we always find. More often than not, we find research programmes based completely on sub-
ject disciplines, without regard for needs and conditions in the field. Likewise, we may find on-
ging investigations in the field without application of the rigour of subject disciplines needed
to reach a solution of the problem into which inquiry is being made.

We have examined some societal forces and the development of sound knowledge as factors
affecting the modification of educational structure and content. Nevertheless, we may have devel-
oped strategies for reform and a substantial body of knowledge of excellent quality and still have
little impact. The next aspect to consider, therefore, is the programme delivery system. Our
impact is only as strong as the delivery system used to implement the programme, together with
the qualifications and dedication of the home economics personnel involved in its execution.
Hence, if we believe that we have a contribution to make towards the improvement of living con-
ditions of families, and towards helping people become self-reliant in solving basic problems in
everyday life, we must ask ourselves just how well our delivery system functions in order to meet
these needs? There are a number of factors to consider in this connection which can be raised in
the form of questions. It will be for each one of us, within our own sphere of responsibility at
different levels, to evaluate our performance and to assess our potential response to the challenge
of the future.
New trends in home economics education

Firstly, to what extent are home economists members of overall national planning commissions, represented on provincial planning bodies, or in positions to influence political and educational authorities in order to make them aware of the contribution which home economics can make towards the improvement of human living conditions and the creation of a new social and economic order?

There are some complaints that other professions deal, in substantial measure, with what home economics educators are in a unique position to handle. This may well be so. Our programme in home economics deals with such fundamental things in our everyday lives as food, shelter, family relations, child care and parenthood, so that if we do not satisfy the expectations of society with regard to our performance, someone else will do the job for us. If we do not vigorously respond to current challenges, the day may arrive when our programmes become obsolete.

Secondly, to what extent are home economics educators members of networks for curriculum development and other educational innovations? Are there teams of home economists who keep the curricula under constant review and who undertake evaluation and revision? Who bargains for time allocation and for the subject to become compulsory for both sexes when overall educational programmes are being reconstructed? New approaches in curriculum development are applied. The focus is on localized objectives, relevance and the selection of content in accordance with clearly established priorities. To what extent do we observe these new trends?

Thirdly, there appears to be a multitude of innovations in educational technology and in the use of audio-visual learning aids. Do we take advantage of these innovations, using them and adapting them to our particular teaching needs and adding them to our resource centres? Are we creative enough in applying new teaching methodologies in order to get the message across to our various target groups? Do we indeed affect values, attitudes and practices? Imparting knowledge might not be too difficult; to affect emotions and develop skills is much more difficult. To what extent therefore do we plan for the reinforcement of our teaching by involving families and communities in the achievement of the intended and desirable change?

Fourthly and finally in our effort to examine the delivery system of our programme, a question of paramount importance is that of home economics personnel, in terms both of quantity and quality. Do we have enough professional, highly-qualified and competent personnel who can give appropriate leadership to innovation and to the improvement of home economics programmes? If not, do we plan for such training? Do we have enough middle level personnel, mainly teachers for primary, secondary, vocational and out-of-school programmes? Without professional quality and a sufficient number of staff, there can be no effective delivery system.

Lastly, there is the question of strategies for programme change. How do we change an on-going home economics programme so that it will reflect current demands from society? How do we promote innovative ideas about the setting of educational objectives, selection of content, methodology and technology, structures and evaluation? And how do we secure durable, desirable changes in the programme? The problems and hazards facing a home economics educator who wishes to change an existing programme are many. Some experiences gained with change efforts in programme planning may therefore be of interest.

In an effort to effect change, we often forget that educational systems and sub-systems function as social organizations of people who behave in relation to each other and in the context of a community which is now beginning to hold educators and educational systems accountable for their actions. In this process students, teachers, supervisors and administrators are involved within and across the boundary of the system to the people themselves.

Consequently, there is a need for the clarification of goals and expectations between all parties concerned, professional and lay. In other words, there is a need for a dialogue. Lack of conformity between the expectations of the community the individual student and the educators, and between the educators themselves, may lead to failure. Change introduced may not be sufficiently drastic and sweeping to suggest the possibility of failure occurring. On the other hand, innovations might be considered as a possible threat to the existing social structure of cultural habits and customs, and gather around itself certain negative thoughts, feelings and resistance. The clarification of goals and objectives - what the programme is about to do, with and by whom - is therefore central to any programme change effort. At the earliest stages of development the programme should include a dialogue between everyone involved in, and affected by, its execution in order to render its formulation more successful.

Then there is the need to open up the whole of the educational system. Upon examination, it appears that many home economics programmes are devised by closed departmental units. Innovations are found to be too demanding and threatening to personal prestige. New ideas and information are blocked, intentionally or by default. To maintain a home economics education programme with integrity, strength and continuous growth, it is necessary to build adequate mechanisms to allow the entry of new ideas, new approaches to persistent problems, new solutions to pressing
Concerns and new strategies. An open system is therefore needed for the life-giving infusion both of people and ideas. It is furthermore a system which not only allows changes to occur as a result of changes in content or pedagogical advances, but actually provides for and mandates innovation and change. The open programme system is characterized by formally-organized mechanisms which promote communication between those concerned. It means a rapid flow of ideas and information as they relate to the needs and the purposes of instruction.

Furthermore, the clarification of roles and responsibility within the system is important. Confusion about professional functions obstructs the implementation and effectiveness of our programmes and the obligation to remain accountable to the profession is neglected. There are, for example, teachers who cannot and will not consider themselves as doing anything more than meeting with students; and there are supervisors, charged with the responsibility of giving guidance to educational programmes, who do no more than design structural charts and distribute papers. What does it mean to be a teacher? To filter through some knowledge? Does it mean maintaining a position of isolation, or working with teachers of other subjects, with parents and in the community?

Does being a supervisor mean inspecting performance within rigidly established structures, or keeping professionally up-to-date so as to be able to offer professional inspiration.

In addition, it is necessary in this connection to consider the relations of various personnel at different administrative levels and across the boundaries with personnel in other professions. It is believed that everybody in a functional programme system has a role to play, and the clarification of who will do what, with which type of professional qualifications, will produce a healthier professional organization and more effective programme operation.

Finally, amongst the factors which influence the success of change is the consideration of sequential action to bring the programme into full implementation. Let us for a moment assume that a programme is about to be designed for a given educational system. What then would be the steps to take in the planning process from the time of conception to the adoption of the programme? There is the research/investigation aspect, which deals with need-identification; there is the invention aspect, which plots out broad sketches of what alternative programmes might look like; from the alternative proposals, components of the programme are selected and incorporated into a package. The first evaluation takes place as soon as the programme design has been tried out in a setting which is similar to the one for which the programme is intended. No more details are needed here. The procedure continues however until the school system takes formal action to adopt and install the programme, which should then take root throughout the educational system. The point made here is that if success is to be achieved, the operation must be carried through systematically.

To summarize, an effort has been made to identify some of the societal forces affecting the modification of educational structures, and their implications for home economics education. We have examined the question of the nature of research to provide the knowledge base for the development of home economics programmes. In particular, the question of the relevance of content has been emphasized. Then we looked at the delivery system of the programmes. We are only as effective as our delivery system. Finally, we considered some strategies for the implementation of change in home economics education. The four points which we have discussed are all in inter-related and interdependent factors in the overall pattern of change effort. They must all be taken into consideration if results are to materialize.

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