



Home economics evaluation in Montana : the state of the art, 1982-83 and implications for teacher training
by Suzanne Edsall Bohleen

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Home Economics
Montana State University
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Abstract:

The purpose of this study was to determine the current evaluation practices of secondary home economics teachers in Montana regarding the use of evaluation, items and instruments. The theoretical framework for this research is "based on the acknowledgement by many educators that evaluation is an integral part of the learning-teaching process.

The following aspects of evaluation in home economics in Montana were studied: 1) difference in the frequency that home economics teachers use items and instruments in the cognitive domain, the affective domain, and the performance domain in the seven subject areas of home economics used in the research, 2) differences in the frequency that teachers "frequently use" each domain; 3) the rate that home economics teachers themselves evaluate the students and the rate that the students participate in evaluation of their own progress.

A questionnaire was sent to a randomly selected sample of one hundred secondary home economics teachers. AOVONEWAY, one-way Analysis of Variance, was used to determine if there was a significant difference among the variables. Both the Scheffe Test and the Tukey Method were used for multiple comparisons of pairs-of-means to determine which pairs were significantly different. Results of the research were tested with significance established at the .05 level. Significant differences were found in the use of the domains of learning in several pairs-of-means for subject areas.

The cognitive domain was found to be used with the most frequency in all but one subject area, clothing construction. In the affective domain child development and relationships had the highest mean and in the psychomotor/performance domain food preparation had the highest mean. These results are consistent with the literature cited. ' Montana home economics teachers did use evaluation by the teacher alone more frequently than self-evaluation by the student or evaluation by peers. This is contrary to the literature cited that stated evaluation should be a cooperative process. It is evident that a gap exists between what is stated by the experts and the actual practices of Montana's secondary home economics teachers.

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of

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in

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ABSTRACT

The purpose of this study was to determine the current evaluation practices of secondary home economics teachers in Montana regarding the use of evaluation items and instruments. The theoretical framework for this research is based on the acknowledgement by many educators that evaluation is an integral part of the learning-teaching process.

The following aspects of evaluation in home economics in Montana were studied: 1) difference in the frequency that home economics teachers use items and instruments in the cognitive domain, the affective domain, and the performance domain in the seven subject areas of home economics used in the research, 2) differences in the frequency that teachers "frequently use" each domain; 3) the rate that home economics teachers themselves evaluate the students and the rate that the students participate in evaluation of their own progress.

A questionnaire was sent to a randomly selected sample of one hundred secondary home economics teachers. AOVONEWAY, one-way Analysis of Variance, was used to determine if there was a significant difference among the variables. Both the Scheffe Test and the Tukey Method were used for multiple comparisons of pairs-of-means to determine which pairs were significantly different. Results of the research were tested with significance established at the .05 level. Significant differences were found in the use of the domains of learning in several pairs-of-means for subject areas.

The cognitive domain was found to be used with the most frequency in all but one subject area, clothing construction. In the affective domain child development and relationships had the highest mean and in the psychomotor/performance domain food preparation had the highest mean. These results are consistent with the literature cited. Montana home economics teachers did use evaluation by the teacher alone more frequently than self-evaluation by the student or evaluation by peers. This is contrary to the literature cited that stated evaluation should be a cooperative process. It is evident that a gap exists between what is stated by the experts and the actual practices of Montana's secondary home economics teachers.

CHAPTER I

INTRODUCTION

Evaluation is an integral part of the learning-teaching process (Cross, 1973:8). It is impossible to lead a discussion on learning without evaluation as a segment of that process. Tyler states that a discussion of curriculum or instruction is incomplete without the inclusion of evaluation (1950:104). Hatcher and Halchin state that successful teaching calls for the competent use of evaluation (1973:201). Through participation in curriculum workshops at Montana State University in June of 1978 and June of 1980 this researcher has become more aware of the integral part evaluation should play in curriculum development and the learning process.

Evaluation in home economics has a uniqueness found in the "problem-solving approach" that is often used and in the "hands-on experiences" included in the curriculum that are not found in many other fields of study (Cross, 1973:3).

Evaluation is concerned with the means as well as the end. (Fleck, 1974:366). Therefore it should be found throughout the learning process. The use of periodic evaluation can form the basis for learning experiences,

i.e. feedback and remediation (Chadderdon, 1974:18). Home Economics Teacher Evaluators in Iowa placed a great deal of importance on the ability of a teacher to plan for evaluation and feedback throughout the learning process. The abilities of a home economics teacher to plan for evaluation appropriate to the objectives and to develop plans that integrate objectives, learning opportunities, resources and evaluation were listed by Home Economics Teacher Evaluators in Iowa as competencies of teaching (Iowa State, 1978:19). Cross also stated that problem-solving objectives have more validity for home economics than any other type of knowledge objective. (1973:29). Griggs identifies important teaching skills as techniques that assist the student in retention of content and development of independent learning skills (1979:28).

Evaluation is a cooperative process (Mather, 1970:264; Gronlund, 1976:432; Cross, 1973:13; Chadderdon, 1974:2). If the student is to develop the ability to evaluate his/her work, then the teacher must be able to help the student to be realistic and must also be willing to listen to justifications by the student. Hall and Paolucci further stated that an effective evaluation program should aid in democratic human relationships, be a continuous part of an effective learning situation, and help both the teacher and the students to identify their own strengths and weaknesses and to plan intelligently for the next step (1961:287-8).

The experts in evaluation agree that evaluation should be in terms of selected objectives (Bloom, 1981:18; Cross, 1973:23; Iowa State, 1978:19; Spitze and Griggs, 1976:7; Chadderdon, 1974:16). This means the evaluation technique or instrument used should be determined by the type of objective. Objectives are classified into three domains: cognitive, affective, and psychomotor. Each domain has been divided into a hierarchy of levels. The cognitive domain was categorized in 1965 by Benjamin S. Bloom. The cognitive domain is concerned with rational learning - knowing and thinking (Chamberlain and Kelly, 1981:18). The affective domain was categorized in 1964 by David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia. The affective domain deals with emotional learning - caring and feeling (Chamberlain and Kelly, 1981:18). The psychomotor domain was classified by a home economist, Elizabeth J. Simpson in 1966-67 and also by Dennis Herschbrok in 1973. The psychomotor domain relates to physical learning - doing and manipulating (Chamberlain and Kelly, 1981:18).

This proposed research is limited to the "state of the art" or current practices of home economics teachers in Montana. The collection of this information will serve as a basis for the continued systematic approach to curriculum development formulated in the Scope and Sequence for

Vocational Home Economics Education in Montana published in August, 1980.

Statement of Problem

The purpose of this study is to determine the current evaluation practices of secondary home economics teachers in Montana regarding the use of evaluation items and instruments utilized to assess student knowledge, behaviors and products. Therefore this study will investigate the evaluation of student knowledge, behaviors and products, not the measurement of the many other facets of program planning, program evaluation, and evaluation of teachers, although it is recognized that student evaluation and program evaluation are not mutually exclusive.

Hypothesis

This research was designed to test the following hypotheses.

1. There is no significant difference in the rate that home economics teachers use the items and instruments which measure the cognitive domain for each of the seven subject areas: clothing construction; clothing selection, textiles, and grooming; nutrition; food preparation; consumer education; child development and relationships; and housing/home furnishings.
2. There is no significant difference in the rate that home economics teachers use items and instruments which measure the affective domain for each of the seven subject areas: clothing construction; clothing selection, textiles, and grooming; nutrition; food preparation; consumer education; child

development and relationships; and housing/home furnishings.

3. There is no significant difference in the rate that home economics teachers use the items and instruments which measure the psychomotor/performance domain in the seven subject areas: clothing construction; clothing selection, textiles, and grooming; nutrition; food preparation; consumer education; child development and relationships; and housing/home furnishings.
4. There is no significant different in the frequency that home economics teachers rate items from the cognitive domain as "frequently used" in all subject areas than those items in the affective or performance domain.
5. There is no significant difference in the frequency that the home economics teacher alone uses the items and instruments and the frequency that the students are involved in the evaluation process in the use of these items and instruments.

Assumptions

1. Home economics teachers are able to recognize the extent to which they use evaluation items and instruments in their classrooms.

2. Home economics teachers are able to recognize the extent to which they involve students in the evaluation process.

Limitations

The findings of this study will be limited to the opinions of secondary consumer and homemaking teachers employed in the State of Montana during the school year 1982-83.

Definitions of Terms

Some terms throughout this paper may have a variety of interpretations. The following terms are defined in order to clarify their usage in this study:

Affective Domain - Those objectives which describe changes in interest, attitudes, and values and the development of appreciation and adequate adjustment. (Krathwohl, Bloom, and Masia, 1964:62).

Behavioral Objectives - A statement describing a proposed change as a result of learning. The behavior must be observable (Cross, 1973:23).

Cognitive Domain - Those objectives concerned with rational learning, knowledge, and thinking (Bloom, Hastings, 1971:10).

Evaluation - 1) A process which determines the extent to which objectives have been achieved. 2) A process of making an assessment of a student's growth (Cross, 1973:5,6).

Measurement - 1) A process of obtaining quantitative evidence. 2) The scores received during the evaluation process (Army, 1953:4,5).

Objectivity - The extent to which personal judgement is eliminated from the rating or scoring situation (Cross, 1973:69).

Psychomotor/Performance Domain - Those objectives which describe skills, muscular or motor, and having to do with the manipulation of materials and objects (Bloom, 1971:10).

Reliability - A high degree of accuracy and consistency, a high degree of objectivity. The accuracy with which the evaluation instrument measures whatever it is meant to measure. (Cross, 1973:72).

Scheffé Test - A multiple-comparison method used to make all possible comparisons among K groups. It can be used to compare each group with the mean of two or more groups or to compare a mean of two or more groups with the mean of two or more other groups. The Scheffé Test has been criticized as too conservative (Spatz and Johnston, 1981:238).

Tukey Method - A multiple-comparison method used to determine a minimum difference between means that would allow the null hypothesis to be rejected. This difference is termed the honest significant difference, HSD. (Hopkins and Glass, 1978:364).

Usability - Implies convenience, availability, serviceability, and practicality. It involves administration, scoring, construction and application of data. (Cross, 1973:67).

Validity - The extent to which a form of evaluation assesses what it is expected to assess. (Cross, 1973:75).

Chapter II will present a review of current literature. Chapter III will outline the procedures of the study. The results and recommendations are reported in Chapters IV and V. The results of the survey will provide a basis for recommendations for preservice and/or inservice preparation regarding evaluation of student knowledge, behaviors, and products.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this chapter is to present an overview of the literature related to evaluation to assess student knowledge, behaviors and products in the home economics classroom. The cited literature will provide a background in the following areas: (1) relationship of evaluation to teaching, (2) evaluation in the three domains of learning, and (3) evaluation and student participation.

Relationship of Evaluation to Teaching

Evaluation is a part of the learning process and inseparable from teaching (Cross, 1973:8). Home Economics Teacher Evaluators in Iowa placed a great deal of importance in the ability of a teacher to plan for feedback and evaluation. They felt that the competent home economics teacher should plan for evaluation appropriate to the objectives and develop plans that integrate objectives, learning opportunities, resources and evaluation (Iowa State, 1978:19). Another competency outlined was the need to involve the learner so the he/she assumes increasing responsibility for his/her own learning (Ibid., p. 23).

Fleck describes a good teacher as:

"She arouses curiosity, generates ideas, permits students to express themselves, is supportive, and provides understanding and affection for students to find meaning in their own lives and gain insight into the lives and feelings of others. Furthermore, a stimulating teacher has the capacity to explain well, to instill in her students a desire for learning, and to encourage them to become independent learners" (Fleck, 1974:72).

The total evaluation process has two purposes: (1) to determine the level to which the objectives have been achieved, and (2) to help the teacher to know his/her pupils as individuals (Ahmann and Glock, 1964:6; Chadderdon, 1974:1). Evaluation must relate to the goals of instruction (Arny, 1953:13) or the desired pupil behavior (Ahmann and Glock, 1964:7).

There are six principles of evaluation that are generally accepted by authorities.

- (1) Evaluation is concerned with means and ends.
- (2) Evaluation is a continuous process.
- (3) Evaluation emphasizes the importance of the individual.
- (4) Evaluation is an integral part of the teaching-learning process.
- (5) Evaluation is a cooperative process.
- (6) Evaluation involves reconstruction.

(Fleck, 1974; Ahmann and Glock, 1964; Cross, 1973; Arny, 1953; Hatcher, 1973; and Mather, 1970).

Gronlund lists the roles of evaluation in improving learning as: (1) clarifying the goals of learning, (2)

understanding the learner, (3) motivating the learner, (4) increasing retention and transfer of learning, and (5) diagnosing and remedying learning difficulties (1971:470). The Indiana Home Economics Association reinforces this by likening evaluation to a continual circle, a constant process, never ending (1974:11).

Cross adapts the use of evaluation to home economics and identifies four specific ways that evaluation is a part of the learning-teaching process: identifying objectives, determining learning experiences, setting standards and introducing self-evaluation's importance in developing decision-making skills (1973:8). Hatcher asked, "How can we make our teaching more relevant to today's society" (1973:100)? Evaluation techniques can play an important role. Evaluation can be used to clarify the goals toward which a person is working (Indiana Home Economics Association, 1974:1).

The Domains of Learning

Evaluation should be in terms of objectives (Cross, 1973:23). The objectives have been classified into types of learning by Bloom, Hastings and Madaus; Bloom, Krathwohl and Masia; Simpson; and Harrow. The three types are cognitive, affective and psychomotor domains. Erickson feels that the taxonomies are very helpful in developing items in assessing the learning-teaching process (1977:57). Bloom defines the cognitive domain as containing objectives

which involve intellectual tasks related to recall and recognition of terms and facts. Therefore, they are difficult to state in behavioral terms because little action is demanded (Cross, 1973:27).

Chadderdon sets some criteria for the improvement of one's evaluation system. The most important criterion deals with the higher cognitive levels of behavior. She challenged teachers to require more than the recall of facts.

"Otherwise, the evaluation is not valid and the pupils are 'told' that learning facts is more important than learning to think and to apply what they learn. If higher levels of cognitive behavior are to be assessed, the student should be asked to: explain, illustrate, select a course of action, solve problems, recognize relationships, plan, create, design, compare, judge, and appraise" (1974:16).

Krathwohl and others classified the affective levels of behavior; they are concerned with changes in interests, attitudes, values, appreciation, and personal adjustment (1964:41). Erickson stated that Krathwohl's taxonomy provides an excellent guide for identifying and classifying occupational program objectives concerned with the desired affective behavior of each student, upon completion of the program of instruction (1977:58). He also states,

"The positive impact that occupational education programs have on developing appropriate attitudinal or affective behaviors is widely acknowledged but often overlooked when developing instructional objectives and assessing student attainment of those objectives" (Erickson, loc. cit.).

The cognitive domain has long been emphasized over the affective domain. Bloom points out that the cognitive domain is well defined, while the affective domain is a development of deductive and inductive habits of thought (1981:197). Tyler listed three reasons why the affective domain is often neglected. (1) The development of feelings, values and commitment has been thought the proper task of home and religion, not of the school. (2) An appropriate affect develops automatically from knowledge and experience with content and does not need special instruction. (3) It is an invasion of privacy (As quoted in Bloom, 1981:298,9). Bloom agrees with Tyler and adds to the list a feeling of hesitancy that often appears because teachers do not feel objectives in the affective domain can be achieved in a relatively short period of instructional time (1981:299).

Objectives for skills are the action parts of home economics for they are the essentials needed for the occupation whether inside or outside the home (Cross, 1973:32). The uniqueness of the "problem-solving approach" and the use of "hands-on experiences" to produce a product have placed more emphasis on the psychomotor domain. This domain was first classified in 1966 by Elizabeth J. Simpson, a home economist. There have been several other taxonomies presented, the most widely quoted seems to be one by Anita Harrow, written in 1972. In home economics

the label could be expanded to include both products and processes, for included in the skills listed would be those concerned with the processes of management of resources, operation of equipment and creation of a product (Cross, 1973:32, 33).

It is difficult to separate the domains. Dennis Herschback points out that nearly all psychomotor skills include cognitive as well as affective elements (Bloom, 1981:60). Cross suggest that a system of primary and secondary objectives can be used.

"A primary objective can lead to a secondary objective in a series of activities. Knowledge is gained before a task is undertaken; a task or series of activities is summarized in stating generalizations and principles; attitudes or values result from either of these processes; interests that have been identified point to needed knowledge and skills" (1973:33,4).

The desired instructional outcome will determine which of the domains should be emphasized when constructing procedures and techniques for measuring attainment of instructional objectives involving two or more domains (Erickson, 1978:60). Regardless of the domain used, the importance of home economics teachers being able to maintain the appropriate relationship between their instructional objectives and the evaluation procedures and techniques they use to assess student attainment of course objectives cannot be overemphasized (Ibid., 56).

Evaluation and Student Participation

Historically it has been the teachers' responsibility to do all of the evaluation of the student's work, but recently recognition has been given to the value of active pupil participation in more ways than just being the taker of tests. Many authors reviewed placed a great deal of importance on student participation in the evaluation process (Cross, 1973:13; Hatcher, 1973:216; Fleck, 1974:367; Gronlund, 1976:432; Mather, 1970:265). Hatcher felt that evaluation becomes highly significant when a student is given an opportunity to evaluate (him) herself (1973:230). Spitze and Griggs stated that "when learners can utilize self-evaluation techniques they are more able to identify their own needs and to take initiative in learning" (1976:10). They also stated that if evaluation procedures provide the learner with knowledge of objectives and evaluation results, his/her motivation and achievement are likely to be enhanced (Spitze and Griggs, loc. cit.).

Aleene Cross' reasons for self-evaluation by students coincide with Spitze and Griggs'. The development of a feeling of psychological security, or the removal of a feeling of fear is a common theme in discussions of student participation. The fact that participation makes learning more significant to the student is illustrated in the increased motivation that comes from personal satisfaction. Cross stated that evaluation helped the student to classify

and accept the instructional objectives of a course (1973:54).

Gronlund agrees that self-rating by the pupil and a conference with the teacher has a number of possible benefits. It can help the pupil understand better the objectives of the course, recognize more clearly the progress he/she is making toward the objectives, diagnose more effectively his/her own particular strengths and weaknesses, and develop increased skill in self-evaluation. He feels that the special insight the teacher gains from the opportunity to see how each pupil views his/her own learning and development in relation to the goals of the course will aid in better teaching (1971:432).

Mather stated that "Evaluation helps the learner most when it is cooperative, done with him, not to him" (1970:264). By participating in his/her own evaluation, the student is reinforced as to his/her own self-worth. Fleck stated that any evaluation must stress the importance of the individual. The student has less fear of failure, when he/she is allowed to participate rather than just observe (1974:365). However, preplanning by the teacher is necessary. The teacher should develop one's own objectives for the class (Chadderdon, 1974:3). These objectives should be a guide; students can add, delete, or modify it (Hatcher, 1973:422). Cross also recommends that

students participate in the development of instruments for self-evaluation (1973:60).

Army disagrees with Cross and Hatcher and states that while student should participate in the evaluation process, it is not necessary for students to construct the devices they use. The important thing is for the student to have experience in evaluation, in order to develop his/her judgement (1953:191).

The Indiana Home Economics Association stated in Evaluation In Home Economics:

"Together with the cooperative aspect, self-appraisal of progress makes for growth and self-direction. As pupils learn to compete with themselves rather than with others, they learn to positively judge their progress on the basis of their achievements rather than on their failures. When an individual shares in the evaluation process, he (she) becomes more aware of his (her) needs and it follows that he (she) understands his (her) capabilities more. Self-evaluation promotes self-understanding. Participation in the evaluation process supplies the learner with intrinsic motivation. Motivation coming from within is more effective than extrinsic motivation" (1974:1).

The self-evaluation process makes it easier for the student to recognize the importance of what is learned. Gronlund feels that self-evaluation directs learning by causing the pupils to think more carefully about the qualities to strive for in performance or product (1971:432). Home Economics Teacher Evaluators in Iowa declared that involving learners so that they assume

increasing responsibility for their own learning is a competency of teaching (Iowa State, 1978:23).

Students need to learn how to evaluate their own progress toward goals if they are to become self-actualizing adults. Also they are more likely to be motivated to learn if they can see their progress and their learning needs (Chadderdon, 1974:23). Helping students to see progress toward accepted goals, to determine strengths, and to discover how much there is to learn are positive means of motivation. This implies a meaningful teacher-pupil relationship, working together for common goals (Ibid., 2). The relationship of teacher and pupil is extremely important in self-evaluation. Instead of the teacher trying to trap or catch the pupil making the mistake, ideally it is the two working together to discover progress and areas where learning needs to go further. Teachers are successful in establishing the mutually helpful relationship when they are providing an atmosphere that allows a pupil to admit the need for further learning. When grades and competition are emphasized, it is difficult, if not impossible, to have effective pupil participation in evaluation (Ibid., 24).

Spitze used an adaptation of Verner's scale to illustrate the teacher who wishes his/her teaching to be most effective. He/she will choose those techniques which provide:

