

AN ABSTRACT OF THE THESIS OF

Wendy Lael Lofgren for the degree of Doctor of Education
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Title: AN ASSESSMENT OF TEACHER COMPETENCY IN CONSUMER EDUCATION/
ECONOMICS/PERSONAL FINANCE

Abstract approved: *Redacted for Privacy*
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The Purpose of the Study

One purpose of this study was to develop a valid and reliable instrument based on the Oregon Personal Finance Education Guide which would measure teacher competency in consumer education/economics/personal finance. A second purpose of this study was to assess the level of competency possessed by persons teaching consumer education/economics/personal finance in Oregon's public schools and to compare this competency according to the subject-matter backgrounds represented by the teachers.

Procedures

There were two procedural phases in this study. The first phase consisted of developing the competency assessment instrument and involved generating, validating, and pretesting items which were directly related to the five concepts outlined in the Oregon Personal Finance Education Guide.

The second phase of the study consisted of mailing the validated instrument to consumer education/economics/personal finance teachers in

Oregon's public schools and analyzing responses to determine the characteristics of the instrument and to test for differences in overall and concept area scores attained on the instrument between teachers in the four subject-matter groups. The population was made up of 320 teachers, including four samples of 80 each, with each sample representing a subject-matter background in business education, home economics, mathematics, or social studies. After the first mailing, a follow-up postcard reminder, and third complete mailing to non-respondents, 185 (57.81 percent) of the subjects responded with usable returns.

Findings

Item analysis data and reliability indices obtained for the instrument varied somewhat for each of the four subject-matter groups included in the study. Results indicated, however, that the developed instrument was an effective device for measuring teacher competency in consumer education/economics/personal finance in Oregon when used with a cross-section of teachers representing the subject-matter areas of business education, home economics, mathematics, and social studies.

A summarization of the scores attained on the instrument indicated that approximately two-thirds of the consumer education/economics/personal finance teachers in Oregon had deficiencies in knowledge in at least 30 percent of the material it is recommended they teach. Deficiencies existed in all five concept areas included in the Oregon Personal Finance Education Guide but varied between subject-matter groups.

Results of the analysis of variance and Newman-Keuls indicated that teachers in all four subject-matter groups were equally prepared to

teach comprehensive courses in consumer education/economics/personal finance based on the content outlined in the Oregon Personal Finance Education Guide. However, teachers with backgrounds in mathematics appeared better prepared to teach the money management aspects of consumer education/economics/personal finance than teachers with backgrounds in the other three subject-matter groups.

Recommendations

In view of the findings, it was recommended that inservice training sessions be organized to address the knowledge deficiencies discovered among consumer education/economics/personal finance teachers in Oregon and that preservice programs be evaluated and reorganized, if necessary, to ensure that the discovered areas of need are given attention. It was also recommended that separate programs be organized for each disciplinary area and/or that preservice and inservice programs be individualized to meet varying needs between subject-matter groups. A further recommendation was that responsibility for teaching comprehensive consumer education/economics/personal finance courses in Oregon's public schools be delegated to all of the subject-matter areas of business education, home economics, mathematics, and social studies rather than to only one or another of them. It was felt, however, that consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in mathematics should either be delegated responsibility for teaching the money management aspects of consumer education/economics/personal finance or be included in the instructional planning process.

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AN ASSESSMENT OF TEACHER COMPETENCY IN CONSUMER EDUCATION/ECONOMICS/PERSONAL FINANCE

I. INTRODUCTION

Background

American citizens have long been concerned with "getting their money's worth" and "driving a hard bargain." Throughout the development of our nation, however, the problems of managing one's resources and dealing effectively in the marketplace have become increasingly more varied and complex. Recently, Americans have had to contend with an energy crisis and with inflation. Monopolistic price-fixing, unethical business practices, and the sale of unsafe products and contaminated foods have made the task of everyday living even more difficult (Nader, 1974). The point has been reached where it is necessary for citizens to be protected against fraudulent, deceptive, and unsafe practices. Perhaps more importantly, the time has come when it is essential that citizens be both informed and competent in matters related to the operation of the marketplace and to the tasks of consuming and managing personal finances.

The need for citizens to be protected in the marketplace and informed about consumer matters has been recognized by the Federal government for some time now. In March 1962, President John F. Kennedy delivered a consumer message to Congress in which he set forth four now famous consumer rights: the right to safety, the right to choose, the right to be informed, and the right to be heard (Executive Office of the President, 1963). Initially, the rights served as a basis for

consumer action. Since then, they have formed the underlying rationale for the passage of hundreds of pieces of consumer-related legislation at all levels of government.

In January 1964, President Lyndon Johnson reaffirmed the four basic consumer rights advanced by President Kennedy and appointed a Special Assistant to the President for Consumer Affairs (Herrmann, 1974, p. 16; Aaker and Day, 1974, p. xvii; Davis, 1974, p. 54). Shortly thereafter, the Office of Consumer Affairs was established in the Department of Health, Education, and Welfare, with the Special Assistant acting as its director (Swagler, 1975, p. 182). The speed with which the present consumer movement or "age of consumerism" caught on and progressed is illustrated by an Office of Consumer Affairs publication titled Guide to Consumer Affairs. This guide lists 38 Federal departments and agencies which together provide over 100 specific services designed to aid American consumers (Office of Consumer Affairs, 1976). Published, moreover, by the Consumer Information Center of the General Services Administration (established by Presidential Order in 1970) is a catalog, Consumer Information, which lists approximately 250 Federal consumer publications, each available to the general public at little or no cost (Consumer Information Center, 1976).

As social pressures and priorities change, schools typically respond. Following the Presidential pleas on behalf of the consumer and the publication of works such as Ralph Nader's Unsafe at Any Speed (1965), many state departments of education began to develop and publish curriculum guides to aid in the teaching of consumer education/economics/personal finance and to establish guidelines for related teacher

certification. Helped along by the availability of Federal funds, particularly those allocated to local educational agencies under Part F of the Vocational Education Amendments of 1968 (Public Law 90-576), it is now not only acceptable in the educational community to be concerned with consumer education, it is quite fashionable (Johnston, 1973, p. 34; Armstrong and Uhl, 1971, p. 524).

There is certainly no doubting the continuing need for education related to consumer, economic, and personal finance matters. A national survey conducted in 1972-73 by a group entitled the National Assessment of Educational Progress (NAEP) that is administered by the Education Commission of the States revealed that 99 percent of America's 17-year-olds and 84 percent of young adults aged 26 to 35 could not balance a checkbook. Furthermore, many of them could not correctly compute their weekly take-home pay, accurately determine which package of food in a supermarket was the least expensive, or calculate how much they would have to pay to park for three and one-half hours in a parking lot (Branscombe, 1975, p. 21). As a result of his personal research, Ralph Nader concluded, moreover, that students knew little or nothing about the insurance and banking industries and that they were not proficient in handling their own money or in protecting their own health. He further concluded that they did not know how to enforce their consumer rights; where to go to have their grievances resolved or how to get information. But worst of all, in his view and in light of the progress which had been made in this educational area, was that students did not know what questions to ask to protect themselves and effectively manage their personal consumer and finance affairs (Nader, 1975, p. 37).

Statement of the Problem

In Oregon, public concern with the inability of high school graduates to understand and manage the consumer/economic/personal finance aspects of their lives began to be noticeably expressed during the late 1960's. Consumer debt studies which were conducted during this time by the Bureau of Business and Economics Research at the University of Oregon provided evidence supporting this concern. It came as no surprise when consumer literacy was identified as one of the seven critical areas of need for Oregon high school graduates in a statewide assessment conducted by the Oregon Board of Education under Title III of the Elementary and Secondary Education Act in 1969-70 (Kienzle, 1977a).

After three years of extensive assessment of the needs, including considerable input from leaders in business and industry, the Oregon Board of Education adopted, on September 22, 1972, new minimum state requirements for school graduation which included a mandate (O.A.R. 22:240-240E) that all Oregon high school graduates, beginning with the class of 1978, have instruction in and demonstrate competence as a "consumer of goods and services" (Oregon Board of Education, 1973). This mandate was included in the revised minimum standards for Oregon public schools which were adopted by the State Board of Education in December 1974 and field-tested in seven school districts during the 1975-76 school year. Favorable test data resulted in the inclusion of the consumer-related mandate as O.A.R. 581-22-226 in the "Minimum Standards for Public Schools" adopted on June 23, 1976 (Oregon Department of Education, 1976). The administrative rule states specifically that all graduates, beginning in 1978, must earn a minimum of one credit

(130 clock hours) in consumer education/economics/personal finance and that competence must be documented beginning not later than 1981 (p. 3).

Thus far, some work has been done in Oregon to assist local districts in establishing criteria for evaluating the consumer-related competence of students. In 1969, a statewide advisory committee for personal finance was appointed by the Oregon Board of Education and, as a result of their efforts, a Personal Finance Education Guide was developed, printed, and distributed in 1972. A revised edition was published in 1974. The focus of the guide is indicated by the program goals around which it was developed. They are as follows (Oregon Board of Education, 1973, pp. 19-21):

1. Students will be able to function responsibly in the interrelated roles of wage-earner and wage spender.
2. Students will possess the basic tools for reaching financial decisions which will encourage family stability and personal satisfaction.
3. Students will possess the basic skills and knowledge necessary to plan the use of credit in terms of present and future needs and income.
4. Students will be able to make wise decisions when purchasing goods and services.
5. Students will be able to function as responsible consumers in the marketplace.

In addition, and to determine how well students were prepared to handle specific consumer/economic/personal finance problems, a criterion-referenced test was developed by an interdisciplinary Consumer Education Committee at Oregon State University in 1973 (Oregon Department of Education and Oregon State University, 1973). Though not revised since, it does have potential for providing some further assistance in the area of student competency assessment.

The problem relative to consumer education/economics/personal finance instruction in Oregon public schools at this point relates to teacher preparation and designation of teaching roles. Although much has been done utilizing both preservice and inservice methods to prepare teachers in this area, there were, as of September 1976, 14 high schools representing approximately 250 students and 60 teachers (out of a total of approximately 250 high schools representing approximately 40,000 students and 1,000 teachers) that had no designated teachers to meet the requirement (Kienzle, 1977a). Moreover, among the schools that had designated responsibility for meeting the requirement, there appeared to be disagreement over which subject area(s) to which it should be designated. Instruction was often found to be somewhat indiscriminately interspersed throughout many of the traditional areas of study such as business education, home economics, mathematics, and social studies.

These problems may in some ways be attributable to a lack of certification standards in Oregon regulating who may or may not teach consumer education/economics/personal finance. Teachers are frequently assigned to teach classes by virtue of their availability or willingness rather than by virtue of their professional preparation. A survey tabulated in September 1976 by the State Specialist for Consumer Education and Personal Finance revealed that 44 percent of the identified consumer education/economics/personal finance teachers had subject-matter backgrounds in business education, 15 percent in home economics, 12 percent in mathematics, 19 percent in social studies, and 3 percent in miscellaneous subjects. Seven percent had unknown backgrounds (Kienzle, 1977a).

The problems referred to above have been recognized for some time now and beginning attempts have been made to deal with them. At an interinstitutional workshop, made possible through a grant from the American Council of Life Insurance and held November 11-12, 1976, an Interinstitutional Task Force was named to prepare and submit a recommendation for a subject-matter sub-endorsement for teachers of consumer education/economics/personal finance. Such a recommendation was prepared by the task force in cooperation with representatives of the state Personal Finance Education Advisory Committee on January 18, 1977. It was subsequently submitted and considered by the Teacher Standards and Practices Commissions on Vocational Education, Humanities, Social Studies, and Sciences. The result of the deliberations was the passage in June 1977 of a new general studies certification requirement for all elementary and secondary teachers rather than a sub-endorsement as such. This change will become effective in 1980 with degree granting institutions required to submit plans for making the change by July 1979 (Kienzle, 1977b).

In spite of the headway that had been made in the area of teacher certification by June 1977, a major need had still not been addressed. No reliable data were available regarding the consumer education/economics/personal finance competence possessed by teachers, regardless of subject-matter background, who were teaching or preparing to teach consumer education/economics/personal finance courses or units of study. Furthermore, no means was available by which that data could be collected. The implications were as follows: (1) though requirements for certification specify that course requirements can be waived by

"... demonstrating competencies the requirements are intended to develop" (Teacher Standards and Practices Commission, 1977, p. 91), there was no means of evaluating consumer education/economics/personal finance competency, (2) though teacher training must necessarily be predicated on some identified needs, there was no means of identifying consumer education/economics/personal finance needs, and (3) though public school instructional responsibilities are best allocated on the basis of professional preparation, there was no means of objectively determining the extent to which teachers from various disciplines had been prepared to teach consumer education/economics/personal finance. It was clear, after examining these issues, that much work needed to be done in this area.

Purpose of the Study

The purpose of this study was twofold. The first objective was to develop a valid and reliable instrument, based on the program goals outlined in Oregon's Personal Finance Education Guide (Oregon Department of Education, 1974), which would effectively measure teacher competency; knowledge of the consumer education/economics/personal finance concepts included in the guide as those which are necessary to assist students in attaining the overall consumer education/economics/personal finance goals. It was hoped that the instrument would be of assistance to both teacher educators and individuals responsible for evaluating "demonstrated competency;" to the former when designing and evaluating future preservice and inservice training programs and to the latter during the process of selecting or certifying teachers.

The second objective of the study was to conduct an actual assessment, using the validated instrument, of present teacher competency in the area of consumer education/economics/personal finance. An attempt was made first to determine the relative knowledge possessed by consumer education/economics/personal finance teachers in the five concept areas included in the Oregon Personal Finance Education Guide (Oregon Department of Education, 1974) and, second, to determine whether any differences existed by virtue of the teachers' subject-matter backgrounds. This was in order to provide information which would be useful to Oregon's four-year institutions of higher education in assessing the success of past efforts to prepare consumer education/economics/personal finance teachers at the preservice and inservice levels and to local education districts in designating teachers and/or teams of them to implement consumer education/economics/personal finance programs for students.

Significance of the Study

Indications are that the present "age of consumerism" can be expected to maintain its high position in the hierarchy of social concerns for the foreseeable future (Johnston, 1973). If this assessment is accurate, the educational community has no choice but to reflect this concern through continued and expanded involvement in consumer education/economics/personal finance. The objective of developing a more informed and effective citizenship with the competence needed to address consumer and personal financial concerns can be realized only if consumer education/economics/personal finance is taught by teachers

with adequate preparation. Much has been done in Oregon and in the nation as a whole to define and clarify the competencies which are needed by teachers to ensure that they have adequate preparation. It is essential, however, that some means also be available for measuring that competence in order to provide direction in planning and/or modifying preservice and inservice training programs. Such programs will be of little use if they do not address real, identified needs within the overall area of teacher preparation.

Although the assessment instrument produced for the purposes of this study is primarily concerned with measuring teacher competency in Oregon, the results will have nationwide implications. Inasmuch as the consumer education/economics/personal finance concepts covered in the Oregon Personal Finance Education Guide constitute (with minimum variation) a standard parcel of information, the items developed for the instrument should prove useful to teacher educators in other locations. The items and the instrument itself should also prove useful to state departments of education in other areas. A national study conducted at The Ohio State University in 1973 revealed that at least 20 states had no teacher certification standards for consumer education/economics/personal finance at that time. It seems likely that many will now be searching for alternative ways of measuring teacher competency (The Ohio State University Consumer Education Project Committee, 1973). Finally, since there is no evidence that any state has produced objective evidence to justify assigning public school instructional responsibility for consumer education/economics/personal finance to one or more specific subject-matter areas, many may well want to consider the

results of the study in evaluating their own status relative to this type of decision-making.

Terminology Pertinent to this Study

For the purpose of this study, the terms and meanings given here shall be used.

Assessment - the process of gathering information about teacher competency.

Consumer Education - a broad term encompassing any educational effort to prepare persons for participation in the marketplace by imparting the understandings, attitudes, and skills which will enable them to make rational and intelligent decisions in light of their personal values, their recognition of marketplace alternatives, and social, economic, and ecological considerations.

Competency - the possession of the cognitive knowledge and skills which underlie the five concepts related to consumer education/economics/personal finance set forth in the Oregon Personal Finance Education Guide.

Consumer Education/Economics/Personal Finance - a designation currently being used by the Oregon Department of Education to reflect the fact that "consumer education" encompasses more than just training for consumption per se.

Economics - that aspect of consumer education which deals with the study of the economy as it relates to the earning and use of personal resources.

Instrument - the device used to measure teacher competency. In

this study, an achievement test designed to measure knowledge and skills related to the five concepts included in the Oregon Personal Finance Education Guide.

Item - one of a number of true-false and multiple-choice questions used in the construction of the instrument.

Personal Finance - that aspect of consumer education which deals with how an individual earns and uses income while functioning as a worker and as a consumer.

II. REVIEW OF THE RELATED LITERATURE

Consumer Education

Definitions and Goals

Richard Morse, writing in the Journal of Home Economics, described consumer education as the "... one aspect of consumerism that is almost universally agreed upon to be needed." He noted, however, that "... there is no agreement as to what consumer education is ..." (1972, p. 41). In large measure, this is indeed the case, in the business community as well as in the educational. In the public sector creditors, for example, may well view consumer education as encouraging people to make their payments regularly. Savings institutions may alternately view consumer education as encouraging consumers to save and pay cash. In substantiating his belief, Morse (1972, p. 41) went further to state that "[t]he largest expenditures for consumer education are those that are self-serving, rewarding the sponser in sales spent through advertising to educate the consuming public."

In the educational community, views concerning what consumer education is or should be typically vary according to subject-matter specialty, with persons in different fields emphasizing slightly different aspects. Educators in the social studies field, for example, generally feel that consumer education should help students to use their resources to obtain their goals but feel that it should further, and perhaps more importantly, assist them in understanding the cumulative effect of consumer decisions on the community, the economy, and the environment (Baecher and Schwartz, 1974, p. 498). Business educators take

relatively the same tact, but place more emphasis upon the interrelationships that exist among the major components of the economy and upon economic analysis of the problems of society (Warmke, 1974, p. 608). Those with a background in mathematics place, as one might expect, greater emphasis on the computational skills needed to manage personal finances and to function effectively in the marketplace (Lewis, 1974). A national survey concerning consumer education topics taught in high schools by different departments revealed further that home economics educators tend to emphasize the consumption function, particularly with respect to clothing, household soft goods, and foods (Armstrong and Uhl, 1971, p. 529).

Clearly, there is no one definition of consumer education. One finds, rather, a combination of definitions which can be inferred directly and indirectly from the content being taught in the schools. Armstrong and Uhl (1971, p. 526) noted that consumer education is, in fact, both a teaching technique and a subject-matter. When consumer problems are used to illustrate disciplinary concepts and principles, it is a teaching technique. Calculating credit costs, for example, can make algebra more interesting for some students. Consumer education might alternately be the primary focus of the educational process, bringing appropriate disciplinary tools to bear on a consumer problem. The purchase of a new car, for example, may involve budgeting and finance principles, technical information, and specific shopping principles. Thus, consumer education may actually be a primary or a secondary educational goal.

Oregon Guidelines for Consumer Education

As is characteristic with many concepts, the terms used to describe them vary with the describer and with time. Oregon's approach is no different. When consumer education was first mandated, the term used to designate the Oregon curriculum guide was "Personal Finance Education" even though the mandate specified that all students will have instruction in and demonstrate competence as a "consumer of goods and services" (Oregon Department of Education, 1974, p. iii). Since that time, the mandate has been modified to read "[a]ll graduates ... must earn a minimum of one credit in consumer education/economics/personal finance ..." (Oregon Department of Education, 1976, p. 8).

Despite the terms used to describe it, Oregon recognizes virtually all of the aspects of this field of study discussed in the preceding section as being important. Examination of the Oregon Personal Finance Education Guide reveals that five major concepts are included, with program goals, performance indicators, and suggested evaluation techniques given for each. They are as follows (Oregon Department of Education, 1974):

Concept 1: Employment and Income - employment opportunities, obtaining a job, meeting responsibilities for job success, financial security and employment, employment organizations, employment laws - Federal and State.

Concept 2: Money Management - financial planning, banking and record keeping, savings, investments, insurance, legal documents.

Concept 3: Credit - availability of credit, using credit, sources of credit, kinds of credit, credit costs, consumer credit laws, credit records, solving credit problems.

Concept 4: Purchase of Goods and Services - factors affecting consumer purchases, the role of advertising, guidelines for shoppers, retail outlets and services.

Concept 5: Rights and Responsibilities in the Marketplace - the role of the consumer in the economy, rights and responsibilities of consumers and sellers, fraudulent and deceptive practices, sources of consumer assistance, consumer legislation.

Thus, much more is regarded as being important than the mere consumption of goods and services.

Teacher Competency and Certification

The Nature of Teacher Competency

For those who wish to practice in the teaching profession, teacher education, in all its forms, is generally the means whereby preparation takes place. Houston and Howsam (1972, p. 6) noted that this preparation, as in all professions, involves, on the one hand, the acquisition of knowledge and the ability to apply it and, on the other, the development of the needed repertoire of critical behaviors and skills. Insofar as the knowledge, behaviors, and skills can be identified, they thus become the competency objectives by which performance can be assessed. The current move toward "competency-based" teacher education programs throughout the United States is a direct result of efforts to identify

and assess these knowledges, behaviors, and skills (p. 3).

Teacher competency actually involves several factors, each requiring a different means of evaluation. Houston and Howsam (1972, p. 6) described these factors in terms of learning objectives and listed five: cognitive, performance, consequence, affective, and exploratory. The cognitive specify knowledge and intellectual abilities or skills that should be demonstrated, such as knowledge of specific subject-matter to be taught. Assessment of this element of competency is generally achieved through the use of written tests. The other elements of competency deal primarily with the act of teaching: ability to manage the learning environment, ability to elicit learner response, and ability to relate well with students and other professionals. Their assessment takes a variety of forms ranging from informal observation to the use of objective rating scales and student test data (Houston, 1974; Second Pi Lambda Theta Catena, 1967). This division of "competency" into categories has had long standing in educational theory though not always referred to in the same manner. Barr and his colleagues (1961, p. 21), for example, categorized the same elements of teacher competency 17 years ago but referred to them as ways of describing teacher effectiveness.

Teacher Certification

The relationship between competency-based teacher education and the certification of teachers is currently a thorny one. At present, no relationship necessarily exists between the quality or status of identification of needed teacher competencies within the many states

and the commitment of those states to competency-based teacher certification (Andrews, 1972, p. 144). Though three states (Florida, New York, and Washington) have taken a leadership role in the movement, most others, including Oregon, have committed themselves in only preliminary ways or have taken no action at all (p. 145). In the majority of instances, the practice is to utilize the approved-program approach. Essentially, this requires that an approved course of study be completed at an approved institution of higher education and that the individual obtain specific degree(s).

The means by which teachers are granted approval for certification in Oregon could be described as a compromise between the two approaches, competency-based and approved-program. Oregon rules for certification specify, for general and subject-matter endorsements, that applicants complete certain numbers of quarter hours of credit in various areas of study. But the rules also specify that "[a]pproved teacher education institutions may waive part or all of the approved program requirements on a course-by-course basis for individual candidates demonstrating competencies the requirements are intended to develop (Teacher Standards and Practices Commission, 1977, p. 91). In no instance in the guidelines, however, is any mention made of a standardized method by which persons can "demonstrate competency" for purposes of waiving course requirements.

Nevertheless, as mentioned above, Oregon has moved in the direction of establishing certification requirements related to consumer education/economics/personal finance. The requirement, effective in 1980, is in the form of additional general studies for all elementary

and secondary teachers. A survey of teacher education and certification for consumer education conducted by The Ohio State University Consumer Education Project Committee in 1973 revealed that only half of the states had any certification standards for teachers of consumer education (p. 3) so this new requirement may begin to move Oregon in a favorable direction nationally.

Testing and Measurement

The Purpose of Testing

Although many definitions of "test" can be found, a commonly used one is that a test is a "... systematic procedure for measuring a sample of behavior" (Brown, 1976, p. 7). Basically, there are two types: maximal performance and typical performance (p. 13). The goal of maximal performance tests is to measure the limits of a person's abilities while the goal of typical performance is to assess usual or habitual reactions and behaviors.

Achievement tests are one form of maximal performance tests which are designed to measure the knowledge and skills present in a relatively circumscribed area or domain (Brown, 1976, p. 228). Though not the only possible means available for assessing their presence, objective paper-and-pencil tests are considered appropriate for measuring these knowledges and skills (p. 227). Since cognitive knowledge of a subject-matter is a recognized part of teacher competency and can be broken down into its component parts, it follows that teacher competency, used in this sense, can be assessed utilizing a form of written examination or test.

Most frequently, tests are used to supply data that can aid in making practical decisions, involving individuals or some hypothesis. In some situations, tests are used to provide descriptions of an individual or of a particular population of individuals (Brown, 1976; Chronbach, 1960; Gronlund, 1971). In both instances, any given test can be described as either a representation of behavior and/or as a predictor of behavior (Brown, 1976, pp. 19-22). The process of test development varies according to these designations. When a test is constructed for the purpose of representing behavior, test items are chosen by systematically sampling from a defined universe and evaluation consists of determining the adequacy of sampling. When a test is to be used as a predictor, the crucial step is empirically establishing that a relationship exists between the items and the behaviors being predicted (p. 21).

The Process of Test Construction

In order to ensure that tests attain their desired goals and purposes, authors in the field of testing and measurement specify general sequences to be followed during test construction. Although the exact processes vary, depending upon the type of test, the usual order of steps includes: specifying the purpose of the test, selecting the test format and writing the items, determining item validity, assembling the instrument and pretesting items, and determining reliability (Brown, 1976; Gronlund, 1971; Chronbach, 1960; Downie, 1958; Popham, 1967).

Specifying the Test Purpose. The first step in test construction, specifying the purpose of the test, involves translating statements

about the intended use of the test and the target population into operational terms. Basically, this requires the specification of both content and format (Brown, 1976, p. 22).

Content can be identified by a variety of methods. Broad areas of knowledge might be delineated or selected written materials specified. Any discussion of the measurement of knowledge, however, would be incomplete without mention of the work that has been done by Bloom (1956) in classifying the mental skills or processes that accompany the learning and use of cognitive knowledge. Well known in educational circles is Bloom's (1956) Taxonomy of Educational Objectives, Handbook I: Cognitive Domain which specifies six hierarchical types of cognitive ability. Test instruments which purport to measure knowledge must, he believes, take these differing skills into account as well as the selected content which is being tested.

The first (and lowest) cognitive process specified by Bloom (1956, p. 62) is knowledge, requiring that the test taker only recognize or recall terminology, facts, principles, sequences, or procedures. Comprehension, which requires knowledge, is measured by requiring the test taker to understand, recognize, interpret, illustrate, or exemplify knowledge without relating such knowledge to other ideas or materials (p. 82). An instrument measures application (use of knowledge and comprehension) by requiring respondents to utilize ideas, principles, or theories, in particular, to solve problems, make decisions, or reach conclusions (p. 120). The ability to analyze, the next higher cognitive process which requires use of the three lower, is measured by asking the respondent to reduce a communication to constituent parts showing a

clear organization of ideas (p. 144). Evaluation, the highest level of cognitive attainment, incorporating all levels below it, is measured by a device which requires the making of a judgement after applying sound criteria to appraise the value of such things as ideas, procedures, or methods (p. 185).

Following the identification of content and mental abilities to be tested is the second part of operationalizing the test purpose, determining the manner in which the items will be presented or the test format. A variety of alternatives are available with selection usually depending upon the content and mental processes to be tested, the characteristics of the target population, and practical considerations such as ease, objectivity, and feasibility of scoring (Brown, 1976, p. 24).

Selecting the Test Format and Writing the Items. With paper-and-pencil tests, three types of test items can be designed: alternative choice (multiple-choice, true-false, and matching), short-answer and completion, and essay. Much has been written by experts in the field both extolling and condemning the use of each type.

Multiple-choice items have often been criticized for testing only factual knowledge. Several authorities have demonstrated, however, that if properly designed, they can be used to test complex intellectual skills (Anderson, 1972; Bloom et al., 1971; Payne, 1974). Although good multiple-choice items are difficult and time-consuming to construct, they also allow for a broad sampling of the domain since a large number can be administered in a relatively short period of time.

Guidelines typical of those specified for writing multiple-choice items are as follows (Brown, 1976, p. 255):

1. Items should be written clearly, simply, and briefly, with all nonfunctional words eliminated.
2. The problem and all qualifying phrases should be presented in the stem of the item.
3. All distracters should be plausible yet clearly incorrect.
4. There should be only one correct response.
5. Alternatives should be homogeneous in form and grammatical structure yet clearly independent.
6. Each item should be independent. One item should not aid in answering another on the test.
7. Negatively stated items should be avoided when possible.
8. When controversial material is included, the authority whose opinion is used should be cited.
9. Irrelevant clues to the correct answer, such as response length, repetition of key words, common associations, and grammatical usage, should be avoided.
10. When alternatives fall in a logical arrangement, as alphabetically or by magnitude, they should be listed in that order.

True-false items, as those of the multiple-choice format, have been criticized for being applicable only in instances where factual content is to be tested. As Ebel (1972) has convincingly argued, however, they can also be effectively used to test applications and comprehension of principles. Although they are easily scored, relatively easy to construct, and allow for extensive sampling of the domain, there is general agreement that responses are probably nevertheless more affected by the item wording than are those with other formats (Brown, 1976; Ebel, 1972).

Characteristics of suggestions given for writing true-false items are the following (Brown, 1976, p. 257):

1. Items should be based on significant facts, concepts, or principles and should deal with only single ideas at one time.
2. The crucial element in the statement should be readily apparent rather than resting on a trivial detail or trick phrase.
3. No more than one qualifying phrase should be included in any one item.
4. Specific determiners which may give clues to the answer, words such as always, never, or sometimes, should be avoided.
5. When items refer to controversial material or to matters of opinion or value, the authority whose opinion is being used should be cited.
6. An approximately equal number of true and false items should be included in an instrument and steps taken to ensure that correct answers do not fall into a definite pattern.

Matching items can be regarded as a series of multiple-choice items covering a homogeneous content domain with the same set of alternatives serving for all items. At least two major considerations generally limit their usability (Brown, 1976; Chronbach, 1960; Ebel, 1971). The first is that since the use of the matching format necessarily involves devoting four or five items to a topic, disproportionate weighting will occur unless this great an emphasis is desired. Further, unless a matching item covers a single content area, the test taker can break the item into subsections, thus reducing the number of possible responses for any given stimulus.

Alternative-choice items require recognition of the correct response. In most situations, however, the same material could also be tested using a format that requires the test taker to supply the correct response. From the standpoint of measuring knowledge there is no

definitive evidence that either recall or recognition items are better. However, there is evidence to indicate that the reliability of a test made up of recall items is lower than that of a test made of recognition since scoring of recall items requires some decision-making on the part of the scorer (Brown, 1976, p. 258).

Essay questions, an extension of the short-answer type, are subject to the same limitations discussed above but perhaps more so. Because of this, they are generally regarded as subjective rather than objective in nature, the subjectivity relating to the process of scoring (Chronbach, 1960, p. 23). Though generally recognized as being superior for evaluating ability to organize, integrate, and evaluate knowledge, they are not usually used when time for scoring is a factor or when representative sampling of a specific content domain is desired (Brown, 1976, p. 260).

Determining Item Validity. Of major concern following the development of items for a test is the degree to which they possess validity; that is, do they in fact measure what they were designed to measure. Though there are several types, the validity in question with respect to items developed for achievement-type tests is of the content variety (Brown, 1976, p. 123).

Determination of content validity, unlike the other types, is a judgemental procedure, providing no quantitative index of validity. The accepted process involves submitting test items to an expert judge, or panel of them, and having them systematically compare the items to the postulated content domain (Brown, 1976, p. 125). If the test items appear to the judges to represent the domain adequately, the test items,

and the test composed of them, can be said to possess content validity.

Pretesting Items and Assembling the Instrument. It is recommended that items surviving the screening for validity next be combined into one or more forms of a pretest for administration to a sample of persons similar to those who will take the completed test (Brown, 1976, p. 25). This preliminary administration then allows the test constructor to analyze the items for possible weaknesses.

Item analyses typically performed after the first test administration are of three types: item difficulty, discrimination, and patterns of response to distracters (Brown, 1976; Indiana Home Economics Association, 1974; Nunnally, 1972; Mehrens and Ebel, 1967). Indices of item difficulty indicate what percentage of those individuals responding to an item have answered it correctly. It may be that an item which appears "easy" has an obvious answer or that one which appears "difficult" may be ambiguously stated (Brown, 1976, p. 279).

Brown (1976) notes that difficulty indices of 0.5 to 0.7 are considered best in terms of allowing for a maximization of the variance in test scores (p. 279). But he also notes that in some cases, it may be necessary and/or desirable to use easier or more difficult items, depending on the nature of the content to be tested, the test population, and/or the testing situation. An item may appear easy, for example, simply because those taking the test had learned the material thoroughly. Conversely, an item may appear difficult because those taking the test, for some reason, had not learned the material. Beekman (1977) stresses these factors in interpreting and using indices of item difficulty, too, and goes on to say that it is thus always necessary to

consider difficulty indices in conjunction with discrimination indices (p. 11). If an item discriminates well, difficulty may not be as great a concern as it would be otherwise.

Indices of discrimination provide an indication of how well items differentiate between respondents scoring higher and lower on a test. The procedure used is to calculate a correlation between each item and total test score using the point-biserial correlation (r_{pbis}) (Brown, 1976, p. 280). The test constructor can then determine whether or not there are any items which may be stated in such a way as to appear ambiguous (high scoring respondents consistently answer them incorrectly) or obvious (low scoring respondents consistently answer them correctly).

The question which arises after calculation of item discrimination indices centers around how big they should be. Though Brown (1976) suggests that r_{pbis} be .15 to .20 or higher (p. 280), there is a more efficient means of evaluating the satisfactoriness of these indices (Beekman, 1977, p. 12). The procedure is to convert each discrimination index to a Student's t and then subject it to a test of significance termed a t -test. The results are reported for each item as significance confidence levels, typically .01 or .05 (p. 12). A .01 confidence level indicates that an item will discriminate in 99 out of 100 cases while a .05 confidence level indicates it will discriminate in 95 out of 100 cases.

Patterns of response to distracters indicate whether or not the distracters are adequately attractive. Though it is possible to compute quantitative indices for them as for difficulty and discrimination, these are not usually used (Brown, 1976, p. 279).

Determining Reliability. Though somewhat less important than validity, reliability warrants serious consideration during the development of a measuring device (Gronlund, 1971, p. 100). Most indices of reliability are expressed as correlation coefficients and thus are called reliability coefficients (Brown, 1976, p. 68).

Several types of reliability estimates can be calculated depending upon which error sources are of greatest concern (Brown, 1976). When interest centers on determining consistency between scores on a test and on a retest, a coefficient of stability is calculated (p. 55). When interest lies in the correspondence between scores on two presumably equivalent forms of a test, the estimate used is a coefficient of equivalence (p. 55). A final type of reliability estimate focuses on consistency of performance over items comprising a test and is termed an indication of internal consistency or homogeneity. In essence, the attempt is to determine whether the items on a test measure the same trait or characteristic (pp. 55-56).

Though in the past it was not uncommon for authors in the testing and measurement field to specify exact levels of reliability which were considered "acceptable," such is not the case today. Most now emphasize that reliability estimates will vary according to the technique used to compute them, the situation in which the test was administered, and the sample to which it was administered (Brown, 1976, p. 77). Thus, reliability estimates should be examined in light of the nature of the decisions to be made upon them, and their seriousness (Gronlund, 1971, pp. 118-119).

Regardless of whether or not an "acceptable" level of reliability has been specified, a number of factors have been shown to affect reliability and must be considered when interpreting coefficients lest unsound conclusions be drawn. First, the length of the test can have a great influence. In general, the longer a test, the higher the reliability (Gronlund, 1971, p. 113). This is due to the fact that a longer test will provide a more adequate sample of the behavior being measured resulting in less distortion by chance factors such as guessing. Second, spread of scores can affect the magnitude of the coefficient. As variability increases, the coefficient will increase (Brown, 1976, p. 75). Related to this is the effect of test difficulty. If a test is too easy or too difficult, there will be a restricted spread of scores and a lower reliability coefficient (Gronlund, 1971, p. 115). Finally, objectivity is a significant factor in that test scoring itself, when influenced by judgement or opinion, could create discrepancies in total test scores (p. 117).

Related Methodological Studies

A review of the literature relating to the assessment of teacher competency in consumer education/economics/personal finance revealed a very few related methodological studies which had been completed. Of those that did exist, most were of limited usefulness.

Several years ago, Kell (1961) conducted a study in which she developed an instrument to measure teacher understandings in family finance. Focus was on the phases of family financial planning rather than on consumer education. Measurement centered on assessing broad

understandings rather than specific knowledges.

Thompson (1965) later concluded a study which involved constructing an instrument to measure consumer credit knowledges of high school seniors. A national jury was used to isolate the most important topics. Focus was placed exclusively on consumer credit.

Coulter's (1968) study of the cognitive attainments of college home management students, conducted three years after Thompson's, provided some assistance even though not directly related to measuring consumer knowledges. Much emphasis was given to the process of test construction.

Stanley (1975) recently completed a study which involved the development of a test to measure the consumer knowledge of secondary school students in Illinois. Much of the methodology contained in his work relates to factors of concern when measurement is directed toward secondary school persons but does provide a rationale for the use of a curriculum guide as a basis for specification of content to be measured.

McCall (1973) previously completed a similar study in which she developed an instrument to measure the status of consumer competencies of students at various kindergarten through twelfth grade developmental levels. Used to develop the test was a publication suggesting guidelines for consumer education grades kindergarten through twelve developed by the staff of the President's Committee on Consumer Interest in 1970. An exclusively true-false format was used which limited, to some degree, the types of content and mental processes that could be tested.

Research Questions

As indicated in Chapter I, this study had two major purposes. The first was to develop a valid and reliable instrument, based on the five concepts included in the Oregon Personal Finance Education Guide, which would effectively measure teacher competency in consumer education/economics/personal finance. The first research question was, therefore: What are the characteristics of the instrument which was designed to measure teacher competency in consumer education/economics/personal finance?

The second major purpose of this study was to conduct an actual assessment, using the validated instrument, of teacher competency in consumer education/economics/personal finance in Oregon. This purpose involved seeking answers to three further research questions which were suggested by the related literature and by the method by which responsibility for teaching consumer education/economics/personal finance was being assigned in Oregon's public schools.

A review of the literature indicated that no data were available regarding the training needs of persons who were presently teaching consumer education/economics/personal finance courses or units of study in Oregon. The second research question was, therefore: What is the actual level of competency of the consumer education/economics/personal finance teachers in the state of Oregon as measured by the assessment instrument?

Survey data indicated that teachers with backgrounds in business education, home economics, mathematics, and social studies were receiving the bulk of the consumer education/economics/personal finance

teaching assignments with business education teachers receiving over half of them and the other three subject areas the rest (Kienzle, 1977a). Therefore, the third research question was: Do any differences in overall competency exist between consumer education/economics/personal finance teachers in Oregon with different subject-matter backgrounds?

The following null hypothesis can be stated for this question:

H₀: There is no significant difference in total mean scores attained by consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in business education, home economics, mathematics, and social studies.

Further research indicated that differences did often exist in the emphasis placed on certain aspects of consumer education/economics/personal finance by educators in various subject-matter fields (Baecher and Schwartz, 1974, p. 498; Warmke, 1974, p. 708; Lewis, 1974; Armstrong and Uhl, 1971, p. 529). This suggested the fourth research question: Do any differences exist in competency in the consumer education/economics/personal finance areas between consumer education/economics/personal finance teachers in Oregon with different subject-matter backgrounds? The following null hypothesis can be stated for this question:

H₀: There is no significant difference in mean scores attained on the five consumer education/economics/personal finance concepts tested between consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in business education, home economics, mathematics, and social studies.

III. METHODOLOGY

Described below is the methodology which was used in this study. It was a two part process and is, for purposes of clarity, described in terms of phases. The first phase dealt with the preparation of the instrument and included the generation, validation, pretesting, and selection of the items for the instrument as well as the determination of reliability estimates for the concept areas incorporated in the final form of the instrument. The second phase dealt with the testing of the instrument and the assessment of teacher competency and included the collection and analysis of the data.

Phase I: Preparation of the Instrument

The first phase of the study consisted of preparing an instrument which would measure teacher competency in consumer education/economics/personal finance. "Competency," for the purposes of this study, and as indicated previously, was defined as possession of cognitive knowledge and skills related to the five basic concepts set forth in the Oregon Personal Finance Education Guide (Oregon Department of Education, 1974).

Generation of the Items

A bank of test items, consisting of 130 questions directly related to the five Oregon consumer education/economics/personal finance concepts (employment and income, money management, credit, purchase of goods and services, rights and responsibilities in the marketplace), was first generated using the various levels included in Bloom's cognitive taxonomy (1956). The items, shown in Appendix A, were written as

either true-false or multiple-choice, depending on the nature of the specific content which was being tested. Background information for the item generation was secured from two sources: (1) instruments which had previously been designed but which had become partially out of date or which had not been linked directly to the Oregon Personal Finance Education Guide and (2) related instructional, competency, and evaluation material. The instruments which were used included those developed by Charlotte McCall (1973) at Pennsylvania State University, by the Oregon Interdisciplinary Consumer Education Committee (Oregon Department of Education and Oregon State University, 1973), by individuals at Florida State University (1975), and by Richard S. Perry (1962).

Related materials included the Oregon Personal Finance Education Guide (Oregon Department of Education, 1974), the family finance and consumer competencies developed by Edward J. Metzen (1967) and by individuals at Temple University (1975), the cognitive objectives formulated by Gayle Royer (1972), published consumer, economic, and family finance texts (Cohen, 1975; Mansfield, 1974; Donaldson and Pfahl, 1966), and general published evaluation guides (Indiana Home Economics Association, 1974).

Validation of the Items

The type of validity at issue in the development of the test items was content validity. As indicated earlier, this is established by a judgemental, rather than quantitative, process. A group of experts was, therefore, asked to evaluate the bank of test items. These individuals, listed in Appendix B, were representatives of various institutions of higher education and the business community throughout the state of

Oregon and were also members of either the Oregon American Council of Life Insurance Interinstitutional Task Force or the Oregon Personal Finance Advisory Committee. Each member of the group was requested to indicate for each of the items (1) whether or not they truly tested the concepts and sub-concepts indicated ("yes" or "no") and (2) whether they should be omitted, retained, or retained with modification. Appendix C shows the request letters which were used, and Appendix D, the item validation form. Only those items which earned both "yes" and "retain" or "retain with modification" designations by a majority of the respondents (mean > .50) were retained. Following the validation, the items which were retained were checked against the guidelines given by Brown (1976) for item construction to assure technical accuracy from an item writing standpoint. One hundred and seven items survived the validation process and review for technical accuracy.

Pretesting of the Items

The 107 items which survived the initial screening were then combined to form the pretest shown in Appendix E. (Appendix F illustrates the correspondence between item numberings in the original item bank and on the pretest as well as the concepts represented by each item.) Items were arranged randomly in two sections according to item form, true-false and multiple-choice. The pretest was administered to a sample of persons similar to those who would be taking the completed test (Brown, 1976, p. 25). These consisted of 71 upper class undergraduate students nearing the completion of a course titled, "Home Management 341, Personal and Family Finance," at Oregon State University, spring term, 1977. In accordance with University regulations regarding the

protection of human subjects, the formal statement contained in Appendix G was read prior to the administration of the pretest. It indicated the purpose of the test and its proposed uses and emphasized that participation was voluntary, would not affect grades, and would be held strictly confidential.

Selection of the Final Items

The goal of the item selection process was to identify the ten questions from each of the five concept areas represented which best measured teacher competency in those areas. It was hoped that limiting the total number of items to 50, and thus shortening the time required to complete them, would improve the rate of response during the assessment phase of the study.

In order to select the best items, three types of item analyses were performed following administration of the pretest. These included item difficulty, item discrimination power, and patterns of response to distracters. Quantitative indices were derived for the first two types of analyses only since, though possible to compute when analyzing distracters, such indices are not usually used (Brown, 1976, p. 279). The ten items in each concept area which exhibited the "best" characteristics were selected for inclusion in the final 50-item instrument. These determinations are described below.

Item Difficulty. The formula which was used to compute difficulty indices for the items tested in this study was (Nunnally, 1972, pp. 186-187):

$$\text{Item Difficulty} = \frac{N_p}{N}$$

where: N_p = number of persons responding correctly
to the item

N = total number of persons responding

The difficulty indices for each of the 107 items pretested are given in Appendix H.

No attempt was made to use absolute levels of difficulty as a criterion for selecting items to be included in the final form of the instrument. The difficulty index for each item was instead evaluated in relation to the content which was being tested and the corresponding discrimination index (Beekman, 1977). Items which discriminated well but which had difficulty indices outside the 0.5 to 0.7 range sometimes recommended (Brown, 1976, p. 279) were thus at times accepted for inclusion if the nature of the content, in addition to the discrimination indices, also seemed to merit it. Table 1 illustrates the number and percentage of all items pretested that fell within each difficulty range. Table 2 illustrates the number and percentage of items included in the final 50-item instrument with various levels of difficulty. An index of .00 indicates that no respondent answered the item correctly while 1.00 indicates all respondents answered correctly. Of the items selected, 40 percent fell within 0.5 and 0.7 and 66 percent between 0.4 and 0.8.

Table 1. Difficulty of All Items Pretested
(Number and Percentage by Range)

Difficulty Range	Number of Items	Percentage of Items
.00 - .04	1	.93
.05 - .14	8	7.48
.15 - .24	12	11.21
.25 - .34	16	14.95
.35 - .44	17	15.89
.45 - .54	14	13.08
.55 - .64	11	10.28
.65 - .74	10	9.35
.75 - .84	7	6.54
.85 - .94	10	9.35
.95 - 1.00	1	.93
Total	107	100.00

Table 2. Difficulty of Pretested Items
Selected for Inclusion in the
Assessment Instrument
(Number and Percentage by Range)

Difficulty Range	Number of Items	Percentage of Items
.00 - .04	0	0.0
.05 - .14	0	0.0
.15 - .24	4	8.0
.25 - .34	8	16.0
.35 - .44	9	18.0
.45 - .54	10	20.0
.55 - .64	5	10.0
.65 - .74	5	10.0
.75 - .84	4	8.0
.85 - .94	5	10.0
.95 - 1.00	0	0.0
Total	50	100.0

Item Discrimination Power. The formula used to calculate the discrimination power of the items tested in this study was the point-biserial correlation, specifically designed for use when one set of data have been scored dichotomously and the other continuously (Mehrens and Ebel, 1967, p. 399):

$$r_{pbis} = \frac{(\bar{X}_p - \bar{X}_q)}{SD} \sqrt{pq}$$

$$\text{where: } \bar{X}_p = \text{mean right} = \frac{\sum xp}{np}$$

where: xp = score of person who chose correct response for this item

np = number of persons answering this item correctly

$$\bar{X}_q = \text{mean wrong} = \frac{\sum xq}{nq}$$

where: xq = score of person with incorrect response for this item

nq = number of persons with incorrect item response

p = proportion of persons with correct response to item (same as difficulty index)

q = proportion of persons with incorrect response (1 - p)

Discrimination indices were calculated twice during the selection process: first on all items pretested for use in initial screening and then on the 50 items selected. This was necessary as discrimination is partially a function of total test score (Mehrens and Ebel, 1967, p. 299). The t-values for each of the 107 items pretested are given in Appendix H as are the t-values when calculated using only the 50 items selected. Table 3 illustrates the number and percentage of all items pretested that discriminated at each confidence level. Table 4

Table 3. Discrimination Power of All Items Pretested (Number and Percentage by Confidence Level)

Confidence Level	Number of Items	Percentage of Items
.01	25	23.36
.05	19	17.76
Below .05	63	58.88
Total	107	100.00

Table 4. Discrimination Power of Pretested Items Selected for Inclusion in the Assessment Instrument (Number and Percentage by Confidence Level)

Confidence Level	Number of Items	Percentage of Items
.01	45	90.0
.05	3	6.0
Below .05	2	4.0
Total	50	100.0

illustrates the discrimination of those that were selected for inclusion. As can be seen, all items selected, with the exception of two, discriminated at the .05 confidence level or above, with 90 percent discriminating at the .01 level.

Patterns of Response to Distracters. Though a quantitative index was not computed for patterns of response to the various item distracters, responses were examined and used as an aid, along with difficulty and discrimination, in selecting the best possible items for inclusion in the final form of the instrument. In some cases, therefore, items

which discriminated well and/or had appropriate difficulty levels were used even though distracters may not have drawn the ideal two percent response rate which is sometimes recommended (Brown, 1976, p. 280). The patterns of response to the items pretested are given in Appendix H.

Determination of Reliability

Since interest during pretesting centered on the nature of the items comprising the test, the reliability index selected for use was that which provides an indication of the internal consistency (homogeneity) of the test items (Brown, 1976, p. 86). After selection of the 50 items for the final form of the instrument, separate indices were computed for each of the five concept areas, allowing for more accurate reliability estimates by increasing the homogeneity of the item sample (Beekman, 1977, addendum). Used was the Kuder-Richardson Formula 20 which is suitable for tests with dichotomously scored items of various levels of difficulty (Brown, 1976, p. 86).

$$K-R_{20} = \frac{k}{k-1} \left[\frac{s_x^2 \sum p_i q_i}{s_x^2} \right]$$

where: k = the number of items comprising the test

s_x^2 = the variance of the (total) scores on the test

p_i = the proportion of people passing an item

q_i = $1 - p_i$ = the proportion failing an item

The estimates obtained on the 50 items selected after pretesting are shown in Table 5. As can be seen, they appear to be quite low. This was to be expected for two reasons. First, test length greatly

Table 5. Reliability Coefficients (Kuder-Richardson Formula 20) Resulting from Pretesting for Each Concept on the Assessment Instrument (Ten Items Per Concept)

Concept	K-R ₂₀
1. Employment and Income	.155
2. Money Management	.630
3. Credit	.504
4. Purchase of Goods and Services	.392
5. Rights and Responsibilities in the Marketplace	.471

affects the magnitude of reliability, with longer tests generally producing higher estimates (Beekman, 1977, p. 12). Each of the estimates given here was calculated using only ten items. Second, the nature of the group being tested greatly affects the magnitude of reliability estimates, with more heterogeneous groupings producing higher coefficients (p. 12). The group used for the pretesting consisted of students who had all had nearly one term of instruction in the areas being tested and thus was more homogeneously composed than would be a similar-sized sample of the total student population.

Phase II: The Testing of the Instrument and the Assessment of Teacher Competency

Population and Sample

The population from which the sample for the study was drawn consisted of all persons employed as teachers of consumer education/economics/personal finance in Oregon's public schools and whose subject-matter backgrounds were known as of October 1977. Identification of

these persons was made using a roster obtained from the Oregon Department of Education. Four major subject-matter groups were present, and those whose subject areas could be clearly identified numbered 257 in business education, 96 in home economics, 81 in mathematics, and 147 in social studies. Eighty persons were randomly selected from each group using a table of random numbers (The Rand Corporation, 1955). The sample thus consisted of 31.13 percent of the identified business education group, 83.33 percent of the home economics, 98.77 percent of the mathematics, and 54.42 percent of the social studies.

Each person selected for participation in the study was asked to indicate their subject-matter background before returning their response. When given, these designations were then checked against those provided on the master teacher list.

To the 320 requests for participation, 192 responses were received. One hundred and eighty-five were usable with subject-matter classifications numbering 52 in business education, 50 in home economics, 45 in mathematics, and 38 in social studies. Two responses were received too late to be considered and one was omitted due to a subject-matter designation not included in this study. Five other responses consisted of indications of unwillingness to participate in the study with each of the persons noting that they were not currently teaching consumer education/economics/personal finance. Only five known requests were undeliverable. Table 6 further illustrates the returns.

Table 6. Number and Percentage of Teachers Responding to the Request for Participation in the Assessment by Each of the Four Major Subject Groups (80 Participants Were Originally Selected)

Group	Respondents		Percentage of Population
	Number	Percentage	
Business Education	52	65.00	20.23
Home Economics	50	62.50	52.08
Mathematics	45	56.25	55.56
Social Studies	38	47.50	25.85
Other*			
Total Usable**	185	57.81	31.84
*Other			
(Late)	2		
(Foreign Language)	1		
(Non-participating)	5	1.56	.86
**Total	193	60.31	33.21

Procedures

The instrument described in the previous section and shown in Appendix I was printed on colored paper for purposes of stimulating a larger response. (Appendix J illustrates the correspondence between item numberings on the pretest and on the final instrument as well as the concepts represented by each item.) Each was also stamped and self-addressed so no return envelope was needed (Wentling and Lawson, 1975, p. 183). The title used for the instrument, "Consumer Education/Economics/Personal Finance Survey," was designed to decrease teacher anxiety regarding "testing" and "competency."

The instruments, together with cover letters, were mailed to teachers on October 31, 1977. The cover letter, shown in Appendix K, explained the purpose of the request and assured teachers their

contribution would warrant the time spent on completing the instrument (Wentling and Lawson, 1975, p. 181). It also explained the procedures for completing and returning the instrument and attempted to further decrease anxiety by assuring confidentiality of response.

The description of procedures for completing the instrument consisted of two major requests. The first was that answers to true-false questions be recorded with the symbols + and 0. This was in order to prevent error which sometimes occurs when trying to interpret the handwritten letters T and F. The second request was that answers not be looked up before recording responses. What was wanted was a true indication of the knowledge teachers had on hand.

A method used to increase total response rate, in addition to those described above, was the follow-up of non-respondents. Instruments were coded for easier identification of those who had and had not responded. Two weeks were allowed to elapse after the first mailing. Those who had not responded by that time were mailed the follow-up postcard reminder shown in Appendix L. On November 29, 1977, duplicate instruments, together with the cover letter shown in Appendix M were mailed to those who had still not responded. No attempt was made to phone non-respondents due to the sensitive nature of the request. January 1, 1978 was used as the cut-off date for use of responses.

Precautions were again taken for protecting human subjects. No names were requested on the assessment instrument and, to avoid possible seizure and matching of codes with the list of participants, names of participants were kept in one file and codes in another. The lists were destroyed after the data were collected.

All responses were hand recorded on computer scoring (optical-scan) sheets and coded by subject area following their receipt. This procedure assured accuracy in terms of optical-scan markings and decreased total postage and score sheet costs.

Analysis of the Data

All the data collected for this study were analyzed through the services of the Oregon State University Computer Center. Two types of analyses were performed, one to address research questions one and two and one to address questions three and four.

The first type of analysis involved scoring responses to items on the returned instruments via the optical-scan method, performing the three common item analyses (item difficulty, item discrimination, and patterns of response to distracters) on the items, and determining reliabilities for each of the five concept sections included in the instrument. This allowed for a determination of the characteristics of the instrument (research question one) and the actual level of competency possessed by Oregon's consumer education/economics/personal finance teachers as measured by the instrument (research question two).

Research question number three was addressed by first computing the total mean scores and confidence intervals on the instruments. The one-way analysis of variance at the .05 level was then used to test for differences between total mean scores attained by persons in the four subject-matter groups represented. The model used was (Huntsberger and Billingsley, 1974, p. 245):

$$X_{ij} = \mu + \tau_i + e_{ij}$$

where: X_{ij} = the overall mean
 μ = a constant for all populations
 τ_i = effect of i^{th} group
 e_{ij} = error effect

The F statistic, which provides an index of the significance of the result of the analysis, was then compared with an F significance table (pp. 336-337).

Research question number four was also addressed using the one-way analysis of variance technique. In this case, the model was used to test for differences between mean scores attained on each of the concept areas represented in the assessment instrument by persons in the four subject-matter groups. Where a significant difference was found, multiple comparisons were made to see where the difference or differences appeared. Though several procedures were available, the Newman-Keuls was chosen as one which is recognized as being simple and straightforward (Anderson and McLean, 1974, p. 10). The procedure, given by Anderson and McLean (1974, pp. 10-12), involves ranking the means, preparing a table of differences of means from the largest difference to the smallest in all possible pairs, and then comparing the differences with a prepared list of least significant ranges.

IV. FINDINGS AND DISCUSSION

The findings presented in this chapter were based on responses recorded on the competency assessment instrument by teachers of consumer education/economics/personal finance in the state of Oregon who participated in the study. For purposes of reporting the findings, the chapter is divided into three sections. These include: characteristics of the instrument, level of teacher competency, and comparison of teacher competency. The last section presents a summary and discussion of the mean scores attained on the entire instrument and on the separate concept areas included in the instrument by teachers with different subject-matter backgrounds.

Characteristics of the Instrument

The information in this section describes the characteristics of the competency assessment instrument in terms of item difficulty, item discrimination power, patterns of response to distracters, and reliability when used with currently employed consumer education/economics/personal finance teachers in the state of Oregon. Item difficulty indices for each of the 50 items in the instrument are given in Appendix N for all teachers combined and Appendices O through R for each of the subject-matter groups represented. Table 7 summarizes the number and percentage of items falling within each difficulty range for all respondents.

As can be seen, the difficulty of 62 percent of the items fell within the 0.5 to 0.7 range recommended as acceptable by Brown (1976, p. 279). Eighty-four percent were between 0.4 and 0.8. The difficulty

Table 7. Number and Percentage of Items Administered to Consumer Education/Economics/Personal Finance Teachers by Difficulty Index (n = 185)

Difficulty Indices	Number	Percentage
Below .15	0	0.0
.15 - .24	1	2.0
.25 - .34	1	2.0
.35 - .44	1	2.0
.45 - .54	11	22.0
.55 - .64	8	16.0
.65 - .74	12	24.0
.75 - .84	10	20.0
.85 - .94	5	10.0
.95 - 1.00	1	2.0
Total	50	100.00

of each of the test items should, however, be evaluated in relation to their power to discriminate between persons having greater and lesser amounts of knowledge in each of the concept areas tested.

The t statistics of the point biserial correlation coefficients for each of the items (obtained by converting each correlation coefficient to a Student's t and then subjecting it to a significance test termed a t -test) are given in Appendix N for all teachers combined and Appendices O through R for each of the subject-matter groups. Two values are reported, those calculated using all 50 items on the test and those determined by correlating the item scores with the total scores obtained on the sub-part (concept area) to which each belonged. The latter values provide more valid information since each of the five sub-parts represents a different consumer education/economics/personal finance concept and can be viewed as a separate body of knowledge even though part of a larger common field of study (Beekman, 1977).

Table 8. Number and Percentage of Items Administered to Consumer Education/Economics/Personal Finance Teachers by Discrimination Confidence Levels (n = 185)

Confidence Level	Number	Percentage
.01	49	98.0
.05	0	0.0
Below .05	1	2.0
Total	50	100.0

Table 8 summarizes the number and percentage of items that discriminated at each confidence level when evaluated by sub-part for all teachers combined. Ninety-eight percent of the items were acceptable at the one percent confidence level. The remaining two percent, which fell below the .05 level, represented one item (number 28) on the instrument (see Appendix N). This item, which dealt with the prices in specialty shops versus chain stores (see Appendix I), was also the one item on the instrument which had a difficulty index above .95 (see Table 7).

The patterns of response to the multiple-choice items' distracters are given in Appendix N for all teachers combined and in Appendices O through R for each of the subject-matter groups. For all teachers combined, three of the nineteen multiple-choice items (numbers 34, 36, and 37) had one distracter that did not elicit the two percent response rate sometimes recommended (Brown, 1976, p. 280), and one of the items (number 42) had two distracters that did not meet this criterion. In no case, however, did any distracter not attract at least one response. It should be noted that each of the items in question discriminated at the .01 confidence level for all teachers combined, thus indicating that

the distracters not drawing the ideal response rate did not serve to lessen the effectiveness of the items' power to discriminate among the competencies of the respondents.

Application of the Kuder-Richardson Formula 20 to each of the five test sub-parts yielded reliability coefficients displayed in Table 9 for all respondents combined. Two factors may serve to explain the low coefficients obtained. These include the number of items representing each concept on the test and the nature of the test population. Both influenced the range of score distribution obtained. In general, as variability decreases, a correlation coefficient will decrease, and, as variability increases, a coefficient will increase (Brown, 1976, p. 75). Both the number of test items and the nature of the test population served to decrease variability in this case. The items comprising each of the test sub-parts numbered only ten. Moreover, the persons taking the test had all had at least some experience teaching consumer education/economics/personal finance and had, in addition, a restricted range of subject-matter backgrounds. They thus constituted highly homogeneous groups.

Table 9. Reliability Coefficients (Kuder-Richardson Formula 20) for Each Concept on the Assessment Instrument when used with All Consumer Education/Economics/Personal Finance Teachers (n = 185) (Ten Items Per Concept)

Concept	K-R ₂₀
1. Employment and Income	.212
2. Money Management	.346
3. Credit	.159
4. Purchase of Goods and Services	.273
5. Rights and Responsibilities in the Marketplace	.314

When viewed collectively, the results of the item analyses performed on the competency assessment instrument indicated that the instrument approached the ideal from a test effectiveness standpoint when used with a sample of all persons employed in Oregon's public schools as consumer education/economics/personal finance teachers as of October 1977. Though the "ideal" was not reached, it must be pointed out that there were mitigative factors involved in each aspect of the analyses. There are, for example, a variety of valid reasons for including items which fall outside the ideal 0.5 to 0.7 difficulty range on an assessment instrument (Brown, 1976, p. 279). In this case, items were constructed using the Oregon Personal Finance Education Guide as the point of reference. Thus, the possibility of varying the level of difficulty of many of the items was inherently restricted. Item discrimination power is, moreover, partially a function of item difficulty (p. 280). The possibility of alteration here was, therefore, also inherently restrictive. As indicated earlier, reliability indices were restricted too as a result of complications arising from the number of items which were included in the assessment instrument and the homogeneity of the test population which was used for purposes of determining the characteristics of the items.

Level of Teacher Competency

This section presents a summary of the scores attained by the consumer education/economics/personal finance teachers on the competency assessment instrument. Five tables are included which describe the percentage and cumulative percentage of teachers answering the items on

the instrument correctly and one table which identifies specific items with which the teachers had difficulty. Table 10 illustrates the distribution of total test scores and Tables 11 through 15 the distribution of scores by concept area. These data should, when viewed in conjunction with item difficulty levels given in Appendices O through R and summarized in Table 16, be useful to teacher educators in selecting areas of consumer education/economics/personal finance to address when planning and implementing preservice and inservice programs, particularly when time available for implementation is limited.

Table 10 clearly illustrates that there is a current need to provide inservice training for all consumer education/economics/personal finance teachers in the state of Oregon. As can be seen, only about eight percent of all the teachers answered 80 percent of the items on the total test correctly and only about one-third answered 70 percent correctly. In no instance did any teacher answer 90 percent of the items correctly. Stated alternately, approximately two-thirds of the consumer education/economics/personal finance teachers in Oregon have knowledge deficiencies in at least 30 percent of the material (over 90 percent deficiencies in at least 20 percent of the material and 100 percent deficiencies in at least 10 percent of the material) that, according to the Oregon Personal Finance Education Guide, it is recommended they teach.

Tables 11 through 15 illustrate the source of these deficiencies by concept area and by subject-matter group. As can be seen, about 50 percent of all teachers have deficiencies in one-third of the material covered in concept 1 (employment and income). About 40 percent have

Table 10. Percentage and Cumulative Percentage of Teachers Answering Items Correctly on the Total Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	Business Education		Home Economics		Mathematics		Social Studies		All Teachers	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	5.77	5.77	8.00	8.00	8.89	8.89	7.89	7.89	7.60	7.60
70	25.00	30.77	26.00	34.00	22.22	31.11	28.95	36.84	25.41	33.01
60	48.08	78.85	42.00	76.00	48.89	80.00	39.47	76.31	44.86	77.87
50	17.30	96.15	22.00	98.00	15.56	95.56	21.05	97.36	18.93	96.80
40	3.85	100.00	2.00	100.00	4.44	100.00	2.64	100.00	3.20	100.00
*n =	52		50		45		38		185	

Table 11. Percentage and Cumulative Percentage of Teachers Answering Items in Concept 1 (Employment and Income) Correctly on the Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	Business Education		Home Economics		Mathematics		Social Studies		All Teachers	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	1.92	1.92	2.00	2.00	0.00	0.00	2.63	2.63	1.62	1.62
90	5.77	7.69	8.00	10.00	6.67	6.67	5.26	7.89	6.49	8.11
80	25.00	32.69	14.00	24.00	13.33	20.00	13.16	21.05	16.76	24.87
70	21.15	53.84	26.00	50.00	22.22	42.22	36.84	57.89	25.95	50.82
60	21.15	74.99	12.00	62.00	20.00	62.22	23.68	81.57	18.92	69.74
50	9.62	84.61	24.00	86.00	15.56	77.78	7.89	89.46	13.59	83.33
40	11.54	96.15	8.00	94.00	17.78	95.56	10.54	100.00	12.89	96.22
30	3.85	100.00	6.00	100.00	4.44	100.00	0.00	100.00	3.78	100.00
*n =	52		50		45		38		185	

Table 12. Percentage and Cumulative Percentage of Teachers Answering Items in Concept 2 (Money Management) Correctly on the Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	<u>Business Education</u>		<u>Home Economics</u>		<u>Mathematics</u>		<u>Social Studies</u>		<u>All Teachers</u>	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	5.77	5.77	2.00	2.00	11.11	11.11	2.63	2.63	5.41	5.41
90	7.69	13.46	8.00	10.00	15.56	26.67	5.26	7.89	9.19	14.60
80	26.92	40.38	22.00	32.00	31.11	57.78	28.95	36.84	27.03	41.63
70	21.15	61.53	22.00	54.00	17.78	75.56	18.42	55.26	20.54	62.17
60	15.39	76.92	18.00	72.00	17.78	93.34	28.95	84.21	18.92	81.09
50	13.46	90.38	22.00	94.00	6.66	100.00	13.16	97.37	14.05	95.14
40	3.85	94.23	2.00	96.00	0.00	100.00	2.63	100.00	2.16	97.30
30	1.92	96.15	0.00	96.00	0.00	100.00	0.00	100.00	0.54	97.84
20	3.85	100.00	2.00	98.00	0.00	100.00	0.00	100.00	1.62	99.46
10	0.00	100.00	2.00	100.00	0.00	100.00	0.00	100.00	0.54	100.00
*n =	52		50		45		38		185	

Table 13. Percentage and Cumulative Percentage of Teachers Answering Items in Concept 3 (Credit) Correctly on the Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	Business Education		Home Economics		Mathematics		Social Studies		All Teachers	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	3.85	3.85	2.00	2.00	2.63	2.63	3.24	3.24	3.24	3.24
90	3.85	7.70	8.00	10.00	6.67	8.89	5.26	7.89	4.32	7.56
80	15.39	23.09	22.00	32.00	13.33	22.22	10.53	18.42	16.76	24.32
70	25.00	48.09	24.00	56.00	24.44	46.66	23.68	42.10	21.62	45.94
60	23.07	71.16	16.00	72.00	22.22	68.88	26.32	68.42	23.24	69.18
50	23.07	94.23	22.00	94.00	17.78	86.66	10.53	78.95	27.84	87.02
40	5.77	100.00	2.00	96.00	11.11	97.77	15.80	94.75	10.27	97.29
30	0.00	100.00	0.00	96.00	2.22	100.00	2.63	97.38	2.17	99.46
20	0.00	100.00	2.00	98.00	0.00	100.00	2.63	100.00	0.54	100.00
10	0.00	100.00	2.00	100.00	0.00	100.00	0.00	100.00	0.00	100.00
*n =	52		50		45		38		185	

Table 14. Percentage and Cumulative Percentage of Teachers Answering Items in Concept 4 (Purchase of Goods and Services) Correctly on the Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	Business Education		Home Economics		Mathematics		Social Studies		All Teachers	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	1.92	1.92	6.00	6.00	0.00	0.00	10.53	10.53	4.32	4.32
90	11.54	13.46	16.00	22.00	13.33	13.33	5.26	15.79	11.89	16.21
80	21.15	34.61	26.00	48.00	15.56	28.89	26.32	42.11	22.16	38.37
70	28.85	63.46	24.00	72.00	24.44	53.33	23.68	65.79	25.41	63.78
60	23.07	86.53	16.00	88.00	17.78	71.11	23.68	89.47	20.00	83.78
50	5.77	92.30	8.00	96.00	22.22	93.33	5.26	94.05	10.27	94.05
40	3.85	96.15	4.00	100.00	4.44	97.77	5.26	100.00	4.32	98.37
30	3.85	100.00	0.00	100.00	0.00	97.77	0.00	100.00	1.09	99.46
20	0.00	100.00	0.00	100.00	2.22	100.00	0.00	100.00	0.54	100.00
10	0.00	100.00	0.00	100.00	0.00	100.00	0.00	100.00	0.00	100.00

*n =

52

50

45

38

185

Table 15. Percentage and Cumulative Percentage of Teachers Answering Items in Concept 5 (Rights and Responsibilities in the Marketplace) Correctly on the Competency Assessment Instrument by Subject-Matter Group

Percent Correct Responses	Subject-Matter Specialty*									
	Business Education		Home Economics		Mathematics		Social Studies		All Teachers	
	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%	%	Cum.%
100	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.54
90	7.69	9.61	6.00	6.00	2.22	2.22	7.89	7.89	5.95	6.49
80	9.62	19.23	16.00	22.00	8.89	11.11	21.05	28.94	13.51	20.00
70	23.07	42.30	16.00	38.00	26.67	37.78	34.21	63.15	24.32	44.32
60	17.30	59.60	20.00	58.00	17.78	55.56	21.05	84.20	18.92	63.24
50	15.39	74.99	20.00	78.00	28.89	84.45	7.89	92.09	18.38	81.62
40	15.39	90.38	18.00	96.00	11.11	95.56	5.26	97.35	12.97	94.59
30	5.77	96.15	4.00	100.00	4.44	100.00	0.00	97.35	3.79	98.38
20	3.85	100.00	0.00	100.00	0.00	100.00	2.63	100.00	1.62	100.00
10	0.00	100.00	0.00	100.00	0.00	100.00	0.00	100.00	0.00	100.00

*n =

52

50

45

38

185

deficiencies in one-third of the material in concept 2 (money management). Approximately 54 percent have deficiencies in one-third of the material in concept 3 (credit). About 47 percent have deficiencies in one-third of the material in concept 4 (purchase of goods and services), and about 56 percent have deficiencies in one-third of the material in concept 5 (rights and responsibilities in the marketplace).

Though differences between subject-matter groups are illustrated in Tables 11 through 15, it is possible to more clearly define areas of need by examining the difficulty levels of the items on the instrument given in Appendices O through R for each of the groups. Table 16 identifies those items with which at least one-third of the teachers had difficulty (difficulty indices $< .66$) and the concepts and specific content represented by each.

As can be seen, there were 36 items on the test with which at least one-third of one of the four groups of teachers had difficulty. These included item numbers 2, 3, 4, 6, 7, 8, 10, 13, 15, 16, 17, 18, 20, 22, 24, 26, 29, 30, 31, 32, 34, 35, and 37 through 50. Fourteen of these items (numbers 2, 3, 6, 7, 8, 13, 15, 16, 18, 22, 24, 35, 43, and 50) were found to present difficulty for at least one-third of the teachers in all four of the groups. Of these, four items represented material in concept 1 (employment and income), one item material in concept 2 (money management), and three items each material in concepts 3 through 5 (credit, purchase of goods and services, and rights and responsibilities in the marketplace). The specific content which was included in each of these concept areas was as follows:

1. Employment and Income - laws related to age requirements for employment; laws governing hours of work; role of the Employment Standards Administration; use of the Dictionary of Occupational Titles.
2. Money Management - savings account earnings.
3. Credit - credit discrimination; Fair Credit Reporting Act; interest rates permitted by law.
4. Purchase of Goods and Services - product labeling; effect of reference groups on consumer purchases; effectiveness of advertising.
5. Rights and Responsibilities in the Marketplace - class action suits; role of the Food and Drug Administration; Oregon Consumer Protection Act.

It would seem advisable that these be designated priority areas of instruction for future preservice and inservice programs designed to aid Oregon's consumer education/economics/personal finance teachers in planning and implementing consumer education/economics/personal finance courses or units of study for students.

In addition to the items with which at least one-third of the teachers in all four subject-matter groups had difficulty, there were nine items with which at least one-third of the teachers in three of the groups had difficulty, four items with which at least one-third of the teachers in two of the groups had difficulty, and nine items with which at least one-third of the teachers in one of the groups had difficulty. Though there are too many variations to describe here, the reader will be able to identify the specific content and subject-matter

Table 16. Items With Which at Least One-Third of the Consumer Education/Economics/Personal Finance Teachers Had Difficulty by Subject-Matter Group

Number	Item Concept/Specific Content	Difficulty Index by Subject-Matter Specialty			
		Business Education	Home Economics	Mathematics	Social Studies
2	Purchase of Goods and Services (product labeling)	.40	.64	.31	.50
3	Credit (credit discrimination)	.48	.56	.47	.47
4	Employment and Income (employ- ment organizations)	.56	.62	*	*
6	Purchase of Goods and Services (effect of reference groups on consumer purchases)	.44	.60	.40	.61
7	Employment and Income (laws related to age requirements)	.46	.30	.44	.63
8	Rights and Responsibilities (class action suits)	.46	.56	.51	.63
10	Rights and Responsibilities (role of the Consumer Product Safety Commission)	.56	.52	.58	*
13	Employment and Income (laws governing hours of work)	.56	.58	.33	.50

continued

*difficulty index exceeds .66

Table 16. (continued)

Number	Item Concept/Specific Content	Difficulty Index by Subject-Matter Specialty			
		Business Education	Home Economics	Mathematics	Social Studies
15	Rights and Responsibilities (role of Food and Drug Administration)	.33	.28	.27	.26
16	Credit (Fair Credit Reporting Act)	.65	.66	.60	.63
17	Employment and Income (interview procedures)	.63	*	.58	*
18	Purchase of Goods and Services (effectiveness of advertising)	.44	.52	.47	.55
20	Purchase of Goods and Services (indifference curves)	*	.56	*	*
22	Employment and Income (role of Employment Standards Adminis- tration)	.58	.32	.56	.63
24	Employment and Income (use of <u>Dictionary of Occupational</u> <u>Titles</u>)	.52	.50	.38	.47
26	Credit (garnishment of wages and employment)	.58	*	*	.53
29	Employment and Income (use of <u>Occupational Outlook Handbook</u>)	*	*	.64	*

continued

Table 16. (continued)

Number	Item Concept/Specific Content	Difficulty Index by Subject-Matter Specialty			
		Business Education	Home Economics	Mathematics	Social Studies
30	Purchase of Goods and Services (warranty provisions)	.65	*	.56	.61
31	Rights and Responsibilities (characteristics of American economy)	.65	.64	.62	*
32	Employment and Income (employer- employee relations)	*	*	*	.66
34	Credit (credit card liability)	*	*	*	.55
35	Rights and Responsibilities (Oregon Consumer Protection Act)	.17	.16	.13	.32
37	Credit (calculation of revolving credit interest charges)	.60	.46	*	.55
38	Rights and Responsibilities (small claims court)	.63	*	.64	.58
39	Purchase of Goods and Services (<u>Consumer Reports</u>)	*	*	.56	*
40	Credit (reporting of unfavorable credit information)	.60	*	.56	.61
41	Credit (obtaining a loan)	*	*	.58	*
					continued

Table 16. (continued)

Number	Item Concept/Specific Content	Difficulty Index by Subject-Matter Specialty			
		Business Education	Home Economics	Mathematics	Social Studies
42	Money Management (life insurance)	*	.62	*	*
43	Credit (interest rates permitted by law)	.40	.42	.42	.39
44	Money Management (steps in developing a financial plan)	.46	*	.53	.47
45	Rights and Responsibilities (supply and demand)	*	.66	*	*
46	Credit (effect of reserve requirements on credit interest rates)	*	.56	.58	*
47	Money Management (housing expenditures)	.60	.64	*	.50
48	Money Management (tax return examination)	.40	.40	*	.45
49	Money Management (savings account insurance)	*	.40	*	*
50	Money Management (savings account earnings)	.52	.50	.64	.45

groups associated with each of these items by referring to Table 16. Teacher educators should find this information particularly useful when planning preservice and inservice programs in consumer education/economics/personal finance for persons with different subject-matter backgrounds. In some cases, it may be desirable to group students by subject area or, if that is not possible, to individualize instruction to meet specific training needs.

Comparison of Teacher Competency

This section presents the results of the analyses of variance used to determine whether differences existed between total mean scores attained by teachers in the four major subject-matter groups and between mean scores attained on the concept areas included in the instrument by teachers in the four major subject-matter groups.

Total Mean Scores

The null hypothesis tested for total mean score differences was as follows:

There is no significant difference in total mean scores attained by consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in business education, home economics, mathematics, and social studies.

The results of the analysis, given in Table 17, indicated that there was no significant difference ($F = 0.461$, $p > .05$) among mean scores attained by teachers in the four subject-matter groups. The null hypothesis for total mean scores was thus retained. These data would seem to suggest that teachers in each of the four subject-matter groups are equally prepared to teach comprehensive courses in consumer

Table 17. Analysis of Variance on Total Mean Scores of Teachers in the Four Subject-Matter Groups

Source	Sum of Squares	df	Mean Squares	F Ratio
Between Groups	26.0902	3	8.6967	.461*
Within Groups	3415.2935	181	18.8690	
Total	3441.3838	184		

*p > .05

education/economics/personal finance which are based on the content suggested by the Oregon Personal Finance Education Guide. Designating exclusive responsibility for teaching comprehensive consumer education/economics/personal finance courses to one or another of the four disciplines does not, therefore, seem to be advisable.

Concept Area Mean Scores

The null hypothesis tested for concept area mean score differences was as follows:

There is no significant difference in mean scores attained on the five consumer education/economics/personal finance concepts tested between consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in business education, home economics, mathematics, and social studies.

Mean scores, standard deviations, standard errors, and 95 percent confidence intervals for each of the subject-matter groups and each of the concept areas tested are given in Appendix S. The results of the analyses of variance are displayed in Table 18.

The analyses of variance indicated that teachers in the four subject areas did not differ significantly in concept 1 ($F = 1.069$), concept 3 ($F = 0.413$), concept 4 ($F = 2.252$), or concept 5 ($F = 2.336$) at

Table 18. Analyses of Variance on Concept Area Mean Scores of Teachers in the Four Subject-Matter Groups

Source	Sum of Squares	df	Mean Squares	F Ratio
<u>Concept 1</u>				
Between Groups	8.4032	3	2.8011	1.069
Within Groups	474.0508	181	2.6191	
Total	482.4541	184		
<u>Concept 2</u>				
Between Groups	31.1026	3	10.3675	3.923*
Within Groups	478.3568	181	2.6429	
Total	509.4595	184		
<u>Concept 3</u>				
Between Groups	3.2062	3	1.0687	0.413
Within Groups	468.3397	181	2.5875	
Total	471.5459	184		
<u>Concept 4</u>				
Between Groups	15.9420	3	5.3140	2.252
Within Groups	427.0093	181	2.3592	
Total	442.9514	184		
<u>Concept 5</u>				
Between Groups	18.6151	3	6.2050	2.336
Within Groups	480.8227	181	2.6565	
Total	499.4378	184		

*p < .05

the .05 confidence level. However, there was a significant difference ($F = 3.923$, $p < .05$) between the four subject-matter groups on concept 2 (money management), and the null hypothesis was rejected.

The Newman-Keuls test, which was used to test for the source of the significant differences between subject-matter groups on concept 2, revealed the subset placements given in Table 19. As can be seen, mathematics teachers scored significantly ($p < .05$) higher in this area than did teachers in the other three groups. Scores attained by business education, home economics, and mathematics teachers were statistically indistinguishable.

Table 19. Newman-Keuls Placement of Mean Scores Attained by Subject-Matter Groups on Concept 2 (Money Management)

Subset	Subject-Matter Group	Mean Score
1	Social Studies	6.8421
	Business Education	6.7885
	Home Economics	6.5600
2	Mathematics	7.6444

The findings given in Table 19 seem to suggest that mathematics teachers are better prepared to teach the money management aspects of consumer education/economics/personal finance as given in the Oregon Personal Finance Education Guide than are teachers in the other three subject-matter groups. Thus, though all four groups of teachers are equally prepared to teach comprehensive courses in consumer education/economics/personal finance, the data would seem to indicate that it would be advisable to designate responsibility for teaching money management units to mathematics teachers or at least assure that they are in some way involved in their planning at this time.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

The Problem Restated

This study had as its purpose two major objectives. The first was to develop a valid and reliable instrument, based on the Oregon Personal Finance Education Guide, which would effectively measure teacher competency in consumer education/economics/personal finance. The second was to assess the level of competency possessed by persons currently teaching consumer education/economics/personal finance courses or units of study in Oregon's public schools.

The first objective involved seeking answers to a question related to the characteristics of the assessment instrument. The characteristics were item difficulty, item discrimination, patterns of response to distracters, and reliability. The second objective involved seeking answers to three further questions. These were concerned with the actual level of competency possessed by consumer education/economics/personal finance teachers in Oregon, differences in overall competency between consumer education/economics/personal finance teachers in Oregon with different subject-matter backgrounds, and differences in competency in the five concept areas outlined in the Oregon Personal Finance Education Guide between consumer education/economics/personal finance teachers in Oregon with different subject-matter backgrounds.

Methodology

This study utilized upper class undergraduate students enrolled in a course titled "Home Management 341, Personal and Family Finance," at Oregon State University, spring term, 1977, for pretesting items during the development of the assessment instrument. Persons who were employed as teachers of consumer education/economics/personal finance in Oregon's public schools and whose subject-matter backgrounds were known as of October 1977 were used for determining the characteristics of the assessment instrument and measuring teacher competency. These teachers represented the subject-matter areas of business education, home economics, mathematics, and social studies.

From a roster provided by the Oregon Department of Education, a random sample of consumer education/economics/personal finance teachers was selected to represent each subject-matter area. Each sample consisted of 80 for a combined total of 320 subjects in the four areas. This represented 31.13 percent of the population with business education backgrounds, 83.33 percent of the population with home economics, 98.77 percent of the population with mathematics, and 54.42 percent of the population with social studies. After the first mailing, a follow-up postcard reminder, and third complete mailing to non-respondents, 185 (57.81 percent) of the teachers selected responded with usable returns.

There were two procedural phases in this study. The first phase involved developing the competency assessment instrument.

The second phase of the study consisted of mailing the instrument to consumer education/economics/personal finance teachers in Oregon's

public schools and recording responses on optical-scan sheets for analysis. No attempt was made to increase the number of returns by telephoning non-respondents due to the sensitive nature of the request for participation.

The analysis of the data was completed through the services of the Oregon State University Computer Center. Responses to items on the returned instruments were scored using the optical-scan facilities of the Center. Item analyses (item difficulty, item discrimination, and patterns of response to distracters) were performed on responses of all teachers combined and on responses of each of the four subject-matter groups and total test and sub-part reliabilities were calculated. The one-way analysis of variance and Newman-Keuls routines were also used.

Findings

Item analyses performed on the items included in the competency assessment instrument revealed that 62 percent of the items fell within the 0.5 to 0.7 difficulty range for all teachers combined and 84 percent within the 0.4 to 0.8 range. Ninety-eight percent of the items discriminated at the .01 confidence level and two percent below the .05 level when analyzed by test sub-part for all teachers combined. Only three of the 19 multiple-choice items included in the instrument had one distracter each that did not elicit the two percent response rate sometimes recommended, and only one of the items had two distracters that did not elicit this rate. Reliability indices obtained were quite low (.159 to .346) due to the small number of items representing each test sub-part (concept area) and the homogeneous nature of the test population. Item

analysis data and reliabilities varied somewhat for each of the four subject-matter groups included in the study.

A summarization of the scores attained on the competency assessment instrument indicated that approximately two-thirds of the consumer education/economics/personal finance teachers in Oregon had knowledge deficiencies in at least 30 percent of the material that, according to the Oregon Personal Finance Education Guide, it is recommended they teach. An examination of the difficulty of the items on the test for each of the four subject-matter groups revealed that deficiencies existed in each of the five concept areas for all groups of teachers but that these deficiencies, though sometimes similar, also sometimes differed for each of the subject-matter areas.

The analyses of variance among mean scores attained on the instrument yielded two important findings. The first was that no significant difference existed in overall scores attained on the competency assessment instrument between teachers in each of the four subject-matter groups. The second was that teachers with backgrounds in mathematics scored significantly higher in the money management concept area of consumer education/economics/personal finance as outlined in the Oregon Personal Finance Education Guide than did teachers with backgrounds in business education, home economics, or social studies.

Conclusions of the Study

The following conclusions were drawn from the findings of this study:

1. The instrument which was developed is an effective device for measuring teacher competency in consumer education/economics/personal

finance in Oregon when used with teachers representing a cross-section of subject-matter backgrounds in business education, home economics, mathematics, and social studies.

2. Consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in business education, home economics, mathematics, and social studies are equally prepared to teach comprehensive courses in consumer education/economics/personal finance as outlined in the Oregon Personal Finance Education Guide. However, consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in mathematics are currently better prepared to teach the money management aspects of consumer education/economics/personal finance as outlined in the Oregon Personal Finance Education Guide than are teachers with backgrounds in business education, home economics, and social studies.

3. Consumer education/economics/personal finance teachers in Oregon are less than competent in the subject-matter that, according to the Oregon Personal Finance Education Guide, it is recommended they teach.

Recommendations

Expansion of this Investigation

1. The instrument which was developed for this study had one item with a low discrimination index and a very low level of difficulty. In addition, four multiple-choice items had distracters that did not elicit the ideal two percent response rate when used with all teachers combined.

An attempt should be made to rewrite these items to improve their characteristics. The instrument should then be retested.

2. There were only ten items included in the assessment instrument in each of the five concept areas. Additional items should be produced using those which survived the validation in this study as a basis and then tested in order to provide a better sampling of the domains involved and to produce alternate forms of the same instrument.

3. The characteristics of the items in the assessment instrument varied for each of the subject-matter groups included in the study and were often not as desirable as when analyzed for all teachers combined. Each of the items in the instrument should, therefore, be reevaluated and possibly rewritten to improve their characteristics when used solely with specific subject-matter groups. The instrument should then be retested with each of these groups.

4. In this study, respondents could look up answers to items on the instrument before responding to them. The investigation should be replicated using alternative techniques, such as personal administration of the instrument, to control for this eventuality.

5. The evaluation of teacher competency in consumer education/economics/personal finance in this study was conducted using a paper-and-pencil test based on the cognitive knowledge outlined in the Oregon Personal Finance Education Guide. Possession of cognitive knowledge and the ability to apply it in real-life situations often differs, however. It may, therefore, be profitable to attempt to assess this competency by evaluating the extent to which teachers are able to apply consumer education/economics/personal finance-related knowledge in some

true-to-life situations.

6. The subject-matter groups used for purposes of determining the characteristics of the instrument and assessing teacher competency were restricted to business education, home economics, mathematics, and social studies. Since a new Oregon general studies certification requirement in consumer education/economics/personal finance for all elementary and secondary teachers will soon become effective, more teachers with other subject-matter backgrounds may also soon be assigned to teach consumer education/economics/personal finance courses or units of study in Oregon's public schools. This study should, therefore, be replicated taking into account other disciplinary areas which might likely be involved in teaching consumer education/economics/personal finance in the near future.

7. The Consumer Education/Economics/Personal Finance Survey should be administered to teachers in the four subject-matter groups included in the study (business education, home economics, mathematics, and social studies) who have not taught consumer education/economics/personal finance to determine whether or not the findings can be generalized to all teachers in those subject-matter areas.

8. The content which served as the basis for development of the assessment instrument and the population which was used to determine its characteristics were restricted to the state of Oregon. Other instruments should be developed to measure teacher competency in consumer education/economics/personal finance in other states and in the nation as a whole. Other state curriculum guides and summaries of them could be used as the basis for their development.

Preservice and Inservice Education

1. Inservice training sessions should be organized to provide instruction for all consumer education/economics/personal finance teachers in Oregon, giving priority to the following concepts and specific content:

Employment and Income - laws related to age requirements for employment; laws governing hours of work; role of the Employment Standards Administration; use of the Dictionary of Occupational Titles.

Money Management - savings account earnings.

Credit - credit discrimination; Fair Credit Reporting Act; interest rates permitted by law.

Purchase of Goods and Services - product labeling; effect of reference groups on consumer purchases; effectiveness of advertising.

Rights and Responsibilities in the Marketplace - class action suits; role of the Food and Drug Administration; Oregon Consumer Protection Act.

It should be noted that teachers may be competent at lower levels of difficulty in these content areas. It should also be noted that teachers may be less competent in more difficult aspects of the content areas indicated by other questions included in the instrument.

2. Preservice programs designed to prepare persons to teach consumer education/economics/personal finance should be evaluated and reorganized, if necessary, to ensure that the concepts and specific content outlined above are given attention.

3. Separate programs (both preservice and inservice) should be designed for persons with subject-matter backgrounds in business education, home economics, mathematics, and social studies and/or instruction should be individualized in general programs to provide for differences which exist in the consumer education/economics/personal finance instructional needs of persons in these four disciplinary areas.

School Administrators

1. Responsibility for teaching comprehensive consumer education/economics/personal finance courses in Oregon's public schools should not be delegated exclusively to one or another of the subject-matter areas of business education, home economics, mathematics, or social studies.

2. Consumer education/economics/personal finance teachers in Oregon with subject-matter backgrounds in mathematics should either be delegated responsibility for teaching the money management aspects of consumer education/economics/personal finance or in some way be involved in their planning at this time.

BIBLIOGRAPHY

- Aaker, David A. and George S. Day, "Introduction: A Guide to Consumerism," in Consumerism: Search for the Consumer Interest, David A. Aaker and George S. Day, eds., New York: The Free Press, 1974, pp. xvii-xxviii.
- Anderson, R. C., "How to Construct Achievement Tests to Assess Comprehension," Review of Educational Research, June, 1972, pp. 145-170.
- Anderson, Virgil L. and Robert A. McLean. Design of Experiments, A Realistic Approach. New York: Marcel Dekker, Inc., 1974.
- Andrews, Theodore E., "Certification," in Competency-Based Teacher Education, Progress, Problems, and Prospects, W. Robert Houston and Robert B. Howsam, eds., Chicago: Science Research Associates, Inc., 1972, pp. 143-170.
- Armstrong, Jan and Joseph N. Uhl, "Survey of Consumer Education Programs in the United States," Journal of Home Economics, October, 1971, pp. 524-530.
- Baecher, Charlotte and Anita K. Schwartz, "The Consumer: Another Forgotten American?," Social Education, October, 1974, pp. 498-505.
- Barr, A. S., et al. Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness, A Summary of Investigations. Madison, Wisconsin: Dembar Publications, Inc., 1961.
- Beekman, George. OSU Computer Center Test-Scoring Service Instructor's Handbook. Corvallis, Oregon: Oregon State University, April, 1977.
- Bloom, Benjamin S., ed. Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay Co., Inc., 1956.
- Bloom, B. S., J. T. Hasting, and G. F. Madaus. Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill Book Company, 1971.
- Branscombe, Art, "Checkout on Consumer Math," American Education, October, 1975, pp. 21-24.
- Brown, Frederick G. Principles of Educational and Psychological Testing. New York: Holt, Rinehart, and Winston, 1976.
- Chronbach, Lee J. Essentials of Psychological Testing. New York: Harper and Brothers, Publishers, 1960.
- Cohen, Jerome B. Personal Finance; Principles and Case Problems. Homewood, Illinois: Richard D. Irwin, Inc., 1975.

- Consumer Information Center, General Services Administration. Consumer Information. Washington, D.C.: U.S. Government Printing Office, Spring, 1976.
- Coulter, Kyle J. "Development of An Objective Test Measuring Cognitive Attainments of College Home Management Students." Master's thesis. Texas Technological College, 1968.
- Davis, Rose Moody, "Consumer Education: Who's Teaching It?" American Vocational Journal, May, 1974, p. 54.
- Donaldson, Elvin F. and John K. Pfahl. Personal Finance. New York: The Ronald Press Company, 1966.
- Downie, N. M. Fundamentals of Measurement: Techniques and Practices. New York: Oxford University Press, 1958.
- Ebel, R. L. Essentials of Educational Measurement. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.
- Executive Office of the President. First Report: Consumer Advisory Council. Washington, D.C.: U.S. Government Printing Office, 1963.
- Florida State University. "Consumer Education Evaluation." Produced as part of a project sponsored by the American Council of Life Insurance, 1975.
- Gronlund, Norman E. Measurement and Evaluation in Teaching. New York: The Macmillan Company, 1971.
- Herrmann, Robert O., "The Consumer Movement in Historical Perspective," in Consumerism: Search for the Consumer Interest, David A. Aaker and George S. Day, eds., New York: The Free Press, 1974, pp. 10-18.
- Houston, W. Robert, ed. Competency Assessment, Research, and Evaluation. A Report of a National Conference, University of Houston, March 12-15, 1974.
- ✓ Houston, W. Robert and Robert B. Howsam, eds. Competency-Based Teacher Education: Progress, Problems, and Prospects. Chicago: Science Research Associates, Inc., 1972.
- Huntsberger, David V. and Patrick Billingsley. Elements of Statistical Inference. Boston: Allyn and Bacon, Inc., 1974.
- Indiana Home Economics Association. Evaluation in Home Economics. West Lafayette, Indiana: University Book Store, 1974.
- Johnston, William L., "Consumer Education: Education for Living," Educational Leadership, October, 1973, pp. 34-36.

- Kell, Venetta B. "An Instrument for the Evaluation of Understandings in Family Finance." Doctoral dissertation. The University of Oklahoma, 1961.
- Kienzle, Marian. State Specialist for Consumer Education and Personal Finance, Oregon Department of Education, Salem, Oregon. Interview, February 16, 1977 (a).
- Kienzle, Marian. State Specialist for Consumer Education and Personal Finance, Oregon Department of Education, Salem, Oregon. Interview, September 20, 1977 (b).
- Lewis, Harry, "The Nature of the Consumer Mathematics Course," The High School Journal, December, 1974, pp. 86-93.
- Mansfield, Edwin. Economics: Principles, Problems, Decisions. New York: W. W. Norton and Company, Inc., 1974.
- McCall, Charlotte L. "Development of a Test for Assessing Competency in Consumer Education." Doctoral dissertation. Pennsylvania State University, 1973.
- Mehrens, William A. and Robert L. Ebel. Principles of Educational and Psychological Measurement: A Book of Selected Readings. Chicago: Rand McNally and Company, 1967.
- Metzen, Edward J., "Ratings of Consumer Competencies by Young Women and Consumer Education Experts," The Journal of Consumer Affairs, Summer, 1967, pp. 67-78.
- Morse, Richard L., "The Consumer Moves from Poison to Truth," Journal of Home Economics, April, 1972, pp. 39-42.
- Nader, Ralph, "Neglect of Consumer Education is Shortchanging Both Students and the Nation," Today's Education, September-October, 1975, pp. 37-39.
- Nader, Ralph, "The Great American Gyp," in Consumerism: Search for the Consumer Interest, David A. Aaker and George S. Day eds., New York: The Free Press, 1974, pp. 23-35.
- Nader, Ralph. Unsafe At Any Speed; The Designed-In Dangers of the American Automobile. New York: Grossman Publishers, 1965.
- Nunnally, Jim C. Educational Measurement and Evaluation. New York: McGraw-Hill Book Company, 1972.
- Office of Consumer Affairs, Department of Health, Education, and Welfare. Guide to Federal Consumer Services. Washington, D.C.: U.S. Government Printing Office, January 5, 1976.

- The Ohio State University Consumer Education Project Committee. Survey of Teacher Education and Certification for Consumer Education from State Departments of Education. Columbus: The Ohio State University, 1973.
- Oregon Board of Education. Oregon Graduation Requirements, Models and Guidelines for Social Responsibility Education, Section III. Salem: Oregon Board of Education, 1973.
- Oregon Department of Education. Elementary-Secondary Guide for Oregon Schools, Part I: Minimum Standards for Public Schools. Salem: Oregon Department of Education, 1976.
- Oregon Department of Education. Personal Finance Education Guide for Planning Secondary School Programs. Salem: Oregon Department of Education, 1974.
- Oregon Department of Education and Oregon State University. Consumer Finance Test. Developed by the Interinstitutional Consumer Education Committee, 1973.
- Payne, D. A. The Assessment of Learning: Cognitive and Affective. Lexington, Massachusetts: D. C. Heath and Company, 1974.
- Perry, Richard S. "Final Examination," prepared for the July, 1962 Workshop on Education in Family Finance. Unpublished, 1962.
- Popham, W. James. Educational Statistics: Use and Interpretation. New York: Harper and Row, Publishers, 1967.
- The Rand Corporation. A Million Random Digits with 100,000 Normal Deviates. Glencoe, Illinois: The Free Press, 1955.
- Royer, Gayle L. "Cognitive Objectives for Secondary Consumer Education Curricula." Doctoral dissertation. Purdue University, 1972.
- Second Pi Lambda Theta Catena. The Evaluation of Teaching. Washington, D.C.: Pi Lambda Theta, 1967.
- Stanley, Thomas O. "The Development of the Test of Consumer Competencies." Doctoral dissertation. Northern Illinois University, 1975.
- Swagler, Roger M. Caveat Emptor! An Introductory Analysis of Consumer Problems. Lexington, Massachusetts: D. C. Heath and Company, 1975.
- Teacher Standards and Practices Commission. Oregon Rules for Certification of Teachers, Specialists, and Administrators. Salem, Oregon: Oregon Department of Education, 1977.
- Temple University. Family Financial Planning: Competency Development. A project supported by the American Council of Life Insurance, 1975.

- Thompson, Norman S. "The Measurement of Consumer Credit Knowledges."
Doctoral dissertation. Colorado State College, 1965.
- Warmke, Roman, "Consumer Education: Goals and Realities," Educational Leadership, April, 1974, pp. 607-610.
- Wentling, Tim L. and Tom E. Lawson. Evaluating Occupational Education and Training Programs. Boston: Allyn and Bacon, Inc., 1975.

APPENDICES

APPENDIX A
ORIGINAL BANK OF TEST ITEMS GENERATED
(BY CONCEPT AND SUB-CONCEPT)

APPENDIX A

ORIGINAL BANK OF TEST ITEMS GENERATED
(BY CONCEPT AND SUB-CONCEPT)Concept 1: Employment and Income

Sub-concept: Employment Opportunities

1. The Occupational Outlook Handbook provides information on working conditions which can be expected in various types of occupations. (True)
2. The Dictionary of Occupational Titles is a valuable reference for persons seeking information about current employment opportunities. (False)
3. Personal ability should be a major consideration in selecting a career. (True)
4. The majority of job openings expected to become available between now and 1985 will most probably be open to persons who have not completed four full years of college. (True)
5. Labor statistics indicate that women professionals earn only about 65 percent of what men do. (True)

Sub-concept: Obtaining a Job

6. Credit ratings can have a significant effect on an individual's employability. (True)
7. Perseverance is frequently an important factor in securing a job. (True)
9. Prospective employees should avoid asking all the questions they might have during a first personal job interview. (False)

Sub-concept: Meeting Responsibilities for Job Success

9. There is evidence to support the belief that job success is as highly related to attitude as it is to competency. (True)
10. It would be highly unusual for an employer to expect an employee to be:
 - a. loyal to the company
 - b. self-supervisory
 - c. self-evaluative
 - *d. none of the above

Sub-concept: Financial Security and Employment

11. The amount of money deducted from an employee's earnings for Old Age and Survivors Insurance is only half of what is actually paid into his fund. (True)
12. The amount of money withheld for income taxes from an employee's earnings is determined by the statement made on a Withholding Exemption Certificate. (True)
13. Employers often offer employees fringe benefits in the form of paid union dues. (False)

Sub-concept: Employment Organizations

14. Professional organizations were originally founded to improve working conditions and income. (False)
15. The major purpose of a labor union is to establish and maintain job performance standards. (False)
16. Today, professional organizations are often influential in shaping certain kinds of legislation. (True)

Sub-concept: Employment Laws - Federal and State

17. Under federal and state law, employers may permit employees under the age of 18 to work up to 44 hours per week. (True)
18. The Employment Standards Administration of the U.S. Department of Labor is responsible for enforcing laws related to unemployment compensation. (False)
19. According to federal and state law, an individual must be at least 15 years old to secure a work permit. (False)

Concept 2: Money Management

Sub-concept: Financial Planning

20. The first step in developing a financial plan is to:
 - a. estimate fixed and flexible expenses
 - *b. determine personal and family economic goals
 - c. estimate total current income
 - d. estimate future income
21. Carol is planning to get an apartment of her own soon. Her net monthly salary is \$580. Financial planning experts would probably advise Carol to look for an apartment with a monthly rental rate under:
 - a. \$120
 - b. \$135
 - *c. \$145
 - d. \$160

22. Stan and Gloria would like to buy a home. Gloria is not employed outside the home and Stan's yearly gross income is \$15,000. A financial planning expert would probably recommend that they look for a house which is selling for under:
- a. \$15,500
 - *c. \$37,500
 - b. \$25,500
 - d. \$42,500
23. Bureau of Labor Statistics publications can be useful in determining the average annual cost of maintaining given levels of living in various parts of the United States. (True)

Sub-concept: Banking and Record Keeping

24. A net worth statement is an itemization of a family's total assets. (False)
25. The government is allowed, with exceptions for persons making fraudulent claims, how many years to examine tax returns?
- a. 2
 - c. 6
 - *b. 3
 - d. 10
26. When a tax return is audited by the Internal Revenue Service, the burden of proof lies:
- a. mainly with the government
 - *b. mainly with the taxpayer
 - c. equally with government and taxpayer
 - d. none of the above
27. A loss incurred in the sale or exchange of a family's principal residence can be deducted from their taxable income for that year. (False)
28. Neither certified checks nor cashier's checks can be stopped by stop payment orders. (True)

Sub-concept: Savings

29. The Federal Deposit Insurance Corporation protects each depositor in each of its member banks to an upper limit of:
- a. \$25,000
 - *c. \$40,000
 - b. \$30,000
 - d. \$50,000
30. Series H savings bonds pay interest by check every six months. (True)
31. The rate of interest paid on Series E savings bonds is lower in the later years than in the earlier years. (False)

32. Experts in the field of financial planning generally agree that an emergency savings fund should equal at least:
- a. one week's salary
 - b. one month's salary
 - c. two month's salary
 - *d. three month's salary
33. Susan and Paula have just opened new savings accounts with deposits of \$100 each. Their accounts are with two different banks but both pay an interest rate of 5 percent per annum. If both Susan and Paula make identical deposits and withdrawals during the coming year, each will receive the same amount of interest overall.
(False)
34. According to the "Rule of 72," \$5 deposited in a savings account at 6 percent interest would double in:
- a. 5 years
 - b. 6 years
 - c. 10 years
 - *d. 12 years

Sub-concept: Investments

35. In times of inflation, an investor could best protect his or her purchasing power by buying:
- a. corporate bonds
 - b. municipal bonds
 - *c. common stocks
 - c. all of the above
36. Steve Moody is earning a terrifically high income and is displeased with the amount of tax he must pay on it. In view of his feelings, he most probably would choose as an investment option:
- a. convertible bonds
 - *b. municipal bonds
 - c. preferred stock
 - d. debentures
37. Stock warrants are relatively short lived, whereas stock rights are good either for a period of years or indefinitely until exercised.
(False)
38. All broker-dealers registered with the Securities and Exchange Commission are automatically members of the Securities Investor Protection Corporation. (True)
39. Only one-half of an individual's net long term capital gains need be added to ordinary income for tax purposes. (True)
40. The Securities Exchange Act of 1934 gives the New York Stock Exchange the power to set minimum requirements for purchasing stock on margin. (False)

Sub-concept: Insurance

41. The type of life insurance policy which provides the largest amount of protection for the lowest immediate cost is:
 - a. straight life
 - b. endowment
 - c. limited payment life
 - *d. term
42. A coinsurance clause appearing in a standard fire insurance contract may mean, under certain circumstances, that the policyholder would be able to collect up to double the amount shown on the policy. (False)
43. Life insurance companies are closely regulated by federal statute. (False)
44. Uninsured motorist insurance covers bodily injury incurred by the policyholder and his or her family whether occupying their car or not. (True)
45. If a widow remarries at 60 or older, the benefits she is collecting on her former deceased husband's account could continue. (True)

Sub-concept: Legal Documents

46. A nuncupative will refers to one which has been:
 - *a. orally made by a person during a fatal illness
 - b. written entirely in the handwriting of the person making the will
 - c. altered in some way
 - d. challenged in a court of law by one or more persons
47. Bill and Mary Jones signed a contract yesterday in their home to have new storm windows put up. Today, they are having second thoughts. They do have the option to cancel the contract within 72 hours of signing it. (True)
48. The balloon contract is most commonly found in the financing of household furnishings. (False)
49. Most home mortgages today are referred to as straight mortgages. (False)

Concept 3: Credit

Sub-concept: Availability of Credit

50. The national organization of credit bureaus, Associated Credit Bureaus, Inc., defines "steady employment" for credit purposes as employment at one place of business for at least 3 years. (True)

51. Credit bureaus generally regard a two-figure (under \$100) checking account as an unfavorable indication of credit capacity. (True)
52. If the Federal Reserve Board were to increase legal reserve requirements, consumer credit interest rates would most probably:
- *a. rise
 - b. fall
 - c. rise, then fall
 - d. fall, then rise
53. A modification of the Consumer Credit Protection Act of 1968 permits victims of consumer credit discrimination to seek up to \$10,000 in punitive damages. (True)

Sub-concept: Using Credit

54. Tom and Theresa together have an annual net income of \$12,000. Credit experts would probably advise that they not incur any debt (other than home mortgage) in excess of:
- a. \$1,000 or 12% of annual income
 - *b. \$2,400 or 20% of annual income
 - c. \$6,000 or 50% of annual income
 - d. \$7,200 or 60% of annual income
55. There is evidence to support the statement that over 6 out of every 100 American families have overextended themselves in terms of credit use. (True)
56. To the seller, selling on credit usually means larger sales and greater profits. (True)
57. The majority of loans made in the United States each year are used to consolidate existing debts. (True)
58. Consumer credit studies indicate that the use of credit cards is directly related to level of family income. (True)

Sub-concept: Sources of Credit

59. The Fair Credit Reporting Act has made loan sharking a federal crime. (False)
60. Sally and Bill want to purchase a new dining room set. Sally does not work outside the home and Bill has only been at his present job 6 months. Two years ago, one of their cars was repossessed. They would probably find it easiest, at this time, to secure a loan from a:
- a. commercial bank
 - b. credit union
 - *c. consumer finance company
 - d. retail sales outlet

61. Mr. and Mrs. Dobbs would like to take a trip to Europe. They have no money set aside for the purpose and are considering taking out an unsecured loan. They would probably pay the least amount of interest if they borrowed the money from:
- a. their credit union
 - b. a finance company
 - c. a commercial bank
 - *d. the company that issued their life insurance

Sub-concept: Kinds of Credit

62. When a consumer purchase is made using installment credit, it is sometimes the case that the seller will retain legal title to or a security interest in the goods until final payment is made on the contract. (True)
63. Bank credit cards represent a form of closed-end credit. (False)
64. Twice as many American credit purchases are made using installment options as are made using noninstallment. (False)
65. Service credit refers to that extended by doctors, dentists, utility companies, repair shops, and so on. (True)
66. Retail establishments which accept bank credit cards pay a fee in order to do so. (True)

Sub-concept: Credit Costs

67. Dean and Jeanette borrowed \$100 from a local finance company. The terms of the contract specified that the amount be repaid over a period of 6 months. Their monthly payments were \$18. The annual percentage rate charged for this loan was:
- a. 6 percent
 - *c. 21 1/2 percent
 - b. 12 1/2 percent
 - d. 28 1/2 percent
68. The adjusted balance method of computing finance charges on open-end credit results in greater cost to the consumer than does the average daily balance method. (False)
69. Mary Stuart has a revolving charge account with Myer & Smith's. At the beginning of May she owed \$200. During May she paid \$100. Interest is computed on her account by the previous balance method at 1.5 percent per month. At the end of May, Mary will be assessed a finance charge of:
- a. \$1.50
 - *c. \$3.00
 - b. \$2.50
 - d. \$3.50

Sub-concept: Consumer Credit Laws

70. Under an amendment to the Truth in Lending Act, a credit card-holder can be held responsible for unauthorized credit card purchases on each card up to:
- | | |
|---------|----------|
| a. \$0 | *c. \$50 |
| b. \$25 | d. \$200 |
71. Under Oregon law, consumer finance companies may make loans up to an amount equal to:
- | | |
|------------|--------------|
| a. \$500 | *c. \$25,000 |
| b. \$2,000 | d. unlimited |
72. In Oregon, the maximum annual percentage rate which credit unions are allowed to charge on unpaid balances is:
- | | |
|----------------|---------------|
| a. 10 percent | c. 18 percent |
| *b. 12 percent | d. 36 percent |
73. In Oregon, pawnbrokers may charge a monthly interest rate on loans under \$300 of up to:
- | | |
|--------------|---------------|
| a. 1 percent | *c. 3 percent |
| b. 2 percent | d. 4 percent |
74. Usury laws limit the rates which may be charged for loans made by various types of lending establishments. (True)

Sub-concept: Credit Records

75. Any person who, based on a consumer's credit report, increases the charge for, or denies a consumer credit, must inform the consumer of this action and provide the name and address of the agency that furnished the report. (True)
76. The Fair Credit Reporting Act is enforced by the Bureau of Consumer Protection in the Federal Trade Commission. (True)
77. The Fair Credit Reporting Act provides that unfavorable credit information (except bankruptcies) may not be reported about an individual after:
- | | |
|-------------|-------------|
| a. 5 years | c. 10 years |
| *b. 7 years | d. 14 years |
78. Under the Fair Credit Reporting Act, consumers have the legal right to examine their credit bureau files at any time without charge. (False)
79. When making consumer credit reports, consumer reporting agencies are required by law to reverify all information which is not a matter of public record if it has been more than one month since the adverse information was received. (False)

Sub-concept: Solving Credit Problems

80. Bankruptcies remain on credit bureau reports for a period of:
- a. 10 years
 - *b. 14 years
 - c. 15 years
 - d. indefinitely
81. The Consumer Credit Protection Act prohibits employers from discharging employees for garnishment of earnings for any one indebtedness. (True)
82. Federal law provides that the amount of an individual's wages which may be subjected to garnishment may not exceed:
- a. 25 percent of weekly disposable earnings
 - b. 50 percent of weekly disposable earnings
 - c. weekly disposable earnings which exceed 30 times the federal minimum hourly wage
 - *d. the lesser of a or c
 - e. the lesser of b or c
83. Under federal law, once a person has declared bankruptcy, he or she may not file again for at least:
- a. 3 years
 - *b. 6 years
 - c. 10 years
 - d. 12 years

Concept 4: Purchase of Goods and Services

Sub-concept: Factors Affecting Consumer Purchases

84. A consumer who is concerned about the most efficient use of energy resources would probably choose, if the option was available, nuclear generated power over hydro-electric. (False)
85. It is quite common in oligopolistic businesses and industries for one or a few firms to set prices and for the rest to follow the lead. (True)
86. An external economy is said to occur when consumption or production by one person or firm results in uncompensated costs to another person or firm. (False)
87. An effluent fee is a fee a polluter must pay to the government for discharging waste. (True)
88. Indifference curves are useful in describing consumer preferences. (True)
89. Reference group membership tends to restrict consumer choice. (True)

90. Products placed on eye level shelves tend to sell better than those placed on top and bottom shelves. (True)

Sub-concept: The Role of Advertising

91. Even if sellers have data to show that advertising for their products is not effective in changing consumer buying behavior, it is still advantageous for them to advertise. (True)
92. As the price of a product increases, the effectiveness of advertising increases. (False)
93. As the price of a product or service increases, the quantity of information given out by the seller usually increases. (True)
94. Advertising, by definition, is biased. (True)
95. In general, the closer an advertising source to the profit, the more credible the information provided. (False)

Sub-concept: Guidelines for Shoppers

96. A 12-ounce package of Whistles cereal sells for 75 cents while a 15-ounce package sells for \$1.09. The 15-ounce package is the better buy. (False)
97. Federal Food and Drug Administration guidelines specify that virtually all food product labels must contain a listing of ingredients in order of increasing quantity. (False)
98. A "full" warranty means that a manufacturer must repair all parts of a defective product without charge. (True)
99. Consumers Union publishes a monthly magazine for buyers. The name of it is:
- a. Consumer News
 - b. Consumer Bulletin
 - c. Consumer Information
 - *d. Consumer Reports
100. Henry Bell wants to buy a new vacuum cleaner. He has narrowed his choice to four and estimated their qualities based on a scale of 100. The prices and quality ratings are:

	<u>Quality</u>	<u>Price</u>
#1	80	\$100
#2	85	\$110
#3	90	\$120
#4	95	\$125

The best buy, according to the scale is:

- *a. #1
- b. #2
- c. #3
- d. #4

Sub-concept: Retail Outlets and Services

- 101. Under Oregon law, all insurance salespersons must be licensed.
(False)
- 102. Relatively few national chain stores are found in low-income areas. (True)
- 103. Title insurance companies provide their customers with a legal defense service when problems arise surrounding true ownership of titles to property which have been insured. (True)
- 104. In general, prices in specialty shops tend to be lower than those in large chain stores. (False)
- 105. Stores that stay open 24 hours a day generally charge higher prices than those that do not. (True)
- 106. Door-to-door sales often have a very high mark-up on the products.
(True)

Concept 5: Rights and Responsibilities in the Marketplace

Sub-concept: The Role of the Consumer in the Economy

- 107. The American economy can be described as being purely capitalist in nature. (False)
- 108. The American economy is organized for the basic purpose of satisfying human wants of citizens of America. (True)
- 109. In a freely competitive economy, when the demand for a good decreases but the supply remains relatively constant, the price of the good will generally:
 - a. remain the same
 - b. increase
 - *c. decrease
 - d. increase, then decrease
- 110. The demand for a commodity is not likely to be affected by:
 - a. number of consumers
 - b. changes in per capita income
 - *c. prices of resources used in production
 - d. prices of other commodities
- 111. According to the U.S. Department of Agriculture, the income elasticity of demand for coffee is about 23 percent. If incomes rose by 1 percent, the demand for coffee would:
 - a. increase greatly
 - b. decrease greatly
 - c. decrease, then increase
 - *d. remain about the same

Sub-concept: Rights and Responsibilities of Consumers and Sellers

112. The now famous four basic consumer rights were first set forth by President Johnson in 1964. (False)
113. John recently purchased a used car from a dealer who assured him that the car was in top condition. This morning the brakes failed. One person riding with him said that other people have had similar problems with this particular car dealer. John's first course of action should be to report the incident to:
- a. the local Better Business Bureau
 - b. the Oregon Consumer Protection Division
 - c. the federal Consumer Product Safety Commission
 - *d. the car dealer
114. Cindy recently purchased a mechanical game for her 3-year-old son, Mike. The label indicated that it was designed for 5 to 10-year-olds but Cindy felt that her son was mature for his age. Subsequently, Mike got his fingers caught in the game and had to have stitches. Despite the label, Cindy can expect to have her money refunded by the retailer since the game did cause physical injury. (False)
115. The U.S. Product Safety Commission welcomes consumer complaints regarding hazardous goods and even provides a form for the purpose of voicing them. (True)

Sub-concept: Fraudulent and Deceptive Practices

116. A salesperson who shows a consumer features of an entire line of a product is engaging in:
- *a. honest business
 - b. the pigeon drop
 - c. bait and switch
 - d. lo-balling
117. In Oregon, the purpose of the small claims court is to decide cases involving up to:
- a. \$300
 - *b. \$500
 - c. \$1,000
 - d. \$1,500
118. In small claims court, if more than \$200 is sought in damages, the defendant has the right to demand a jury trial. (True)
119. On the state level, class action suits regarding consumer problems are complicated and often do not yield favorable results. (True)
120. If businesses violate the Oregon Consumer Protection Act, consumers may be awarded minimum damages of:
- *a. \$200
 - b. \$500
 - c. \$1,000
 - d. \$1,500

Sub-concept: Sources of Consumer Assistance

- 121. The Consumer Product Safety Commission has jurisdiction over matters related to motor vehicle safety. (False)
- 122. The federal Food and Drug Administration regulates advertising of food, drug, and cosmetic products. (False)
- 123. The federal agency which seeks to prevent unfair business practices is the:
 - a. Consumer Product Safety Commission
 - *b. Federal Trade Commission
 - c. National Bureau of Standards
 - d. Food and Drug Administration
- 124. In Oregon, the agency primarily concerned with promoting accurate measurement of all goods sold to the consumer by weight, measure, or volume is the:
 - a. Consumer Protection Division
 - b. Consumer Services Division
 - *c. Department of Agriculture
 - d. Department of Commerce
- 125. The Better Business Bureau has very limited legal authority in dealing with consumer complaints. (True)

Sub-concept: Consumer Legislation

- 126. The Energy Policy and Conservation Act of 1975 requires, beginning in 1977, automobile manufacturers to provide consumers with literature describing the fuel economy of all new cars sold. (True)
- 127. Under federal law, consumers currently may keep, without charge, any unordered merchandise which they receive in the mail. (True)
- 128. Under federal law, all drugs must be labeled according to their generic name. (True)
- 129. Pyramid sales clubs are prohibited under Oregon law. (True)
- 130. Price per pound labels found on fresh meats, poultry, seafood, and cheeses are mandatory under Oregon law. (True)

APPENDIX B
INDIVIDUALS VALIDATING THE TEST ITEMS

APPENDIX B

INDIVIDUALS VALIDATING THE TEST ITEMS

Dr. Josephine Turner
Home Management
Oregon State University
Corvallis, Oregon 97331

Dr. John R. Wish
College of Business Administration
University of Oregon
Eugene, Oregon 97403

Mrs. Marian Kienzle
Oregon Department of Education
942 Lancaster Drive
Salem, Oregon 97310

Dr. Debra Jo Slater
Extension Service
Oregon State University
Corvallis, Oregon 97331

Dr. Oscar Schaaf
College of Education
University of Oregon
Eugene, Oregon 97403

Mr. Rees Johnson, Attorney
975 SE Sandy Boulevard
Portland, Oregon 97214

Dr. Ajmer Singh
Oregon College of Education
Monmouth, Oregon 97361

Mr. Harry Strain, Executive Director
Consumer Credit Counseling, Inc.
P.O. Box 42155
Portland, Oregon 97242

Mr. Jack L. Taylor, Jr.
Business Administration
Portland State University
Portland, Oregon 97207

Mr. Ronald Getchell
U.S. Bank, Investment Dept. BB-7
P.O. Box 4412
Portland, Oregon 97208

APPENDIX C

LETTERS TO INDIVIDUALS VALIDATING THE TEST ITEMS

School of Education
Vocational-Technical
Education Division



Corvallis, Oregon 97331

March 7, 1977

To: Marian Kienzle
Oscar Schaaf
Ajmer Singh
Debra Jo Slater
Jack Taylor
John Wish

Recently, each of you received a letter from Dr. Jo Turner indicating that I had expressed interest in compiling items for an instrument that would assess teacher competency in CE/E/PF. As you know, I plan to use the instrument as part of the research I am doing for my doctoral degree at O.S.U. I hope, however, that my efforts will also assist you with your task; that is, generating a larger bank of items that can be used throughout the state in developing and assessing teacher workshops and/or graduate and undergraduate courses dealing with consumer education/economics/personal finance topics.

Enclosed are the items (listed on a reaction sheet) that I have developed so far. The basis for generation was the Oregon Personal Finance Education Guide. Each of the five major concepts covered in the guide are represented, with items specified for each sub-concept included within the concepts. On the reaction sheet, I have provided space for indicating a) whether or not the items accurately test the concepts and sub-concepts and b) what action should be taken regarding the items: omit, retain, or retain with modification. Part A deals primarily with overall content; is it an appropriate part of the indicated concept and sub-concept. Part B gets at the test item itself; is it worded clearly and unambiguously, is it accurate in terms of specific content. It may be that some items can be retained without alteration, others may be so bad that they need to be omitted entirely. Some may be acceptable with certain modification. Please indicate your determinations by checking the appropriate boxes on the form. Space has been provided below each item for your comments and modification recommendations.

Since it was not possible for me to cover all content that might be appropriately included within each of the five concepts, you may find some that has been left out but which you feel should be included.

If so, please feel free to add those items at the bottom of the pages or on the back.

I want to express my sincere appreciation to each of you for your help in this matter. I hope you will find my work equally beneficial in completing the task you have before you. Dr. Turner, as a member of my committee, will have the results of your reactions. As always, however, time is short. I hope to begin preliminary use of the items on April 1 so would be extremely grateful if you could return them to me by March 25. I have enclosed a return envelope.

Thanks again!

Sincerely,

Wendy Lofgren
Graduate Student

School of Education
Vocational-Technical
Education Division



Corvallis, Oregon 97331

March 9, 1977

To: Rees Johnson
Harry Strain Separate letters for each
Ronald Getchell

Dear Mr. Johnson, Strain, Getchell:

Thank you so much for agreeing to review the test questions I have developed as the beginning of my attempt to measure teacher competency in consumer education/economics/personal finance (CE/E/PF). This is a very important part of the research I am doing for my doctoral degree at Oregon State University and I really appreciate your help. It is my hope that the research will ultimately help teacher educators in designing new courses of instruction at the undergraduate and graduate levels and assist those involved in the process of teacher certification with measuring and documenting teacher competencies in CE/E/PF.

Enclosed are the test questions (listed on a reaction sheet) which I have developed so far. The basis for generation of the questions was the Oregon Personal Finance Education Guide with which you are undoubtedly familiar. Each of the five major concepts covered in the guide are represented with test questions listed for each sub-concept included within those concepts. On the reaction sheet, I have provided space for indicating (a) whether or not the questions accurately test (or measure) knowledge of the concepts and sub-concepts and (b) what action should be taken regarding the questions: omit, retain, or retain with modification. Part "a" deals primarily with overall content; is the item an appropriate representation of the concept and sub-concept listed above it. Part "b" gets at the test question itself; is it worded clearly and unambiguously, is it accurate in terms of specific content. It may be that some questions can be retained without alteration, others may be so bad that they need to be omitted entirely. Some may be acceptable with certain modification. Please indicate your determinations by checking the appropriate boxes on the form. Space has been provided below each item for your comments and modification recommendations.

Since it was not possible for me to cover all the content that might be appropriately included within each of the five concepts, you may find some content or material which has been left out but which you

feel should be tested. If so, please feel free to add additional test questions anywhere on the reaction form.

Again, I thank you for your assistance in this matter. Your practical day-to-day experiences should serve well in making the final measuring instrument truly valid. I also appreciate your willingness to return the completed form by March 25. I know how busy you must be. Enclosed is a stamped, self-addressed envelope. If you have any questions, please feel free to phone me at 752-3140.

Sincerely,

Wendy L. Lofgren
Graduate Student

APPENDIX D
ITEM VALIDATION FORM

Test Items for Evaluating Competence in
Consumer Education/Economics/Personal Finance

Concept/Sub-concept		Recommended Action		
		Omit	Retain	Ret w/ Mod
Concept: Employment and Income				
Sub-concept: Employment Opportunities				
1. The <u>Occupational Outlook Handbook</u> provides information on working conditions which can be expected in various types of occupations. (True)				
Comments:				
2. The <u>Dictionary of Occupational Titles</u> is a valuable reference for persons seeking information about current employment opportunities. (False)				
Comments:				
3. Personal ability should be a major consideration in selecting a career. (True)				
Comments:				
4. The majority of job openings expected to become available between now and 1985 will most probably be open to persons who have not completed four full years of college. (True)				
Comments:				
5. Labor statistics indicate that women professionals earn only about 65 percent of what men do. (True)				
Comments:				

S A M P L E

APPENDIX E
TEST USED FOR ITEM PRETESTING

APPENDIX E

TEST USED FOR ITEM PRETESTING

Consumer Test

Directions:

Section I consists of a series of statements which are either true or false. If a statement is true, fill in the space marked A on the answer sheet; if false, use the space marked B.

Section II consists of a series of multiple-choice questions. To record your responses, place the letter of the correct alternative (A, B, C, D, or E) for each question in the appropriately marked space on the answer sheet.

Section I

- *T/F 1. Labor statistics indicate that on the average women professionals earn about 65 percent of what men professionals earn.
- *T/F 2. The majority of job openings expected to become available between now and 1985 will most probably be open to persons who have not completed four full years of college.
- *T/F 3. Under the Fair Credit Reporting Act, consumers have the right to examine their credit bureau files at any time.
- T/F* 4. A coinsurance clause appearing in a standard fire insurance contract may mean, under certain circumstances, that the policyholder would be able to collect up to double the amount shown on the policy.
- T/F* 5. Federal Food and Drug Administration guidelines specify that virtually all food product labels must contain a listing of ingredients in order of increasing quantity.
- *T/F 6. Under federal law, consumers currently may keep, without charge, any unordered merchandise which they receive in the mail.
- *T/F 7. Federal law permits victims of consumer credit discrimination to seek up to \$10,000 in punitive damages.
- T/F* 8. Cindy recently purchased a mechanical game for her 3-year-old son, Mike. The label indicated that it was designed for 5 to 10-year-olds but Cindy felt that her son was mature for his age. Subsequently, Mike got his fingers caught in the game and had to have stitches. Despite the label, Cindy can expect to have her money refunded by the retailer since the game did cause physical injury.

- *T/F 9. A consumer who is concerned about the most efficient use of energy resources would probably argue for coal fired thermal electric plants over nuclear generated power.
- T/F* 10. A loss incurred in the sale or exchange of a family's principal residence can be deducted from their taxable income for that year.
- T/F* 11. Professional organizations (e.g. The National Education Association and The American Home Economics Association) were originally founded to improve working conditions and income.
- *T/F 12. The amount of money deducted from an employee's earnings for Old Age and Survivors Insurance (social security) is only one-half of what is actually paid into his or her fund.
- *T/F 13. Reference group membership tends to restrict consumer choice.
- *T/F 14. Retail establishments which accept bank credit cards may offer a discount to cash customers.
- T/F* 15. According to federal and state law, an individual must be at least 15 years old to secure a work permit.
- T/F* 16. There is no relationship between the price and complexity of a product or service and the quantity of information given out by the seller.
- *T/F 17. On the state level, class action suits regarding consumer problems are complicated and often do not yield favorable results.
- *T/F 18. Only 50 percent of an individual's net long term capital gains need to be included in income for tax purposes.
- *T/F 19. When a consumer uses installment credit, the seller may retain legal title to the titled goods until final payment is made on the contract.
- T/F* 20. According to federal law, employers may not use credit rating as a basis for refusing to hire an individual.
- *T/F 21. A representative from the XYZ Company was in a local neighborhood selling storm windows. Bill and Mary Jones talked with him and ended up signing a contract in their home to have new storm windows installed. They signed the contract yesterday but today they are having second thoughts. They do have the option to cancel the contract with 72 hours of signing it.
- T/F* 22. The Consumer Product Safety Commission has jurisdiction over matters related to motor vehicle safety.

- *T/F 23. An externality is said to occur when consumption or production by one person or firm results in uncompensated costs to another person or firm.
- T/F* 24. A 12-ounce package of Whistles cereal sells for 75 cents while a 15-ounce package sells for \$1.09. The 15-ounce package is the better buy.
- T/F* 25. Consumer credit studies indicate that the use of credit cards is most prevalent among families with incomes below \$10,000 per year.
- *T/F 26. "Bait-and-switch" is one form of advertising which is specifically prohibited under current law.
- T/F* 27. Under state law, employers may permit employees under the age of 18 and not enrolled in school to work up to 48 hours per week.
- *T/F 28. Even if a seller has data to show that advertising for his/her brand is not effective in changing consumer buying behavior in the short-run, it is still advantageous for them to advertise.
- T/F* 29. The federal Food and Drug Administration regulates advertising of food, drug, and cosmetic products.
- T/F* 30. Susan and Paula have just opened new savings accounts with deposits of \$100 each. Their accounts are with two different financial institutions which pay an interest rate of 5 percent per annum. If both Susan and Paula make identical deposits and withdrawals on the same days during the coming year, they should expect to receive the same amount of interest overall.
- T/F* 31. The Fair Credit Reporting Act has made loan sharking a federal crime.
- *T/F 32. Uninsured motorist insurance will cover bodily injuries suffered by a policyholder as the result of an auto-related accident whether they were occupying their car or not at the time of the accident.
- *T/F 33. The Fair Credit Reporting Act is enforced by the Bureau of Consumer Protection in the Federal Trade Commission.
- T/F* 34. Prospective employees should avoid asking a large number of questions during a first personal job interview.
- *T/F 35. In general, as the price of a product increases, the effectiveness of advertising in influencing consumer behavior increases.

- *T/F 36. In small claims court, if more than \$200 is sought in damages, the defendant has the right to demand a jury trial.
- *T/F 37. Usury laws limit the rates which may be charged for loans made by various types of lending establishments.
- *T/F 38. The Better Business Bureau has no legal authority in dealing with consumer complaints.
- *T/F 39. Title insurance companies provide their customers with a legal defense service when problems arise surrounding true ownership of titles to property which has been insured.
- T/F* 40. The adjusted balance method of computing finance charges on open-end credit results in greater cost to the consumer than does the average daily balance method.
- T/F* 41. Twice as many American credit purchases are made using installment options as are made using noninstallment.
- *T/F 42. Relatively few national chain stores are found in low-income areas.
- *T/F 43. The U.S. Consumer Product Safety Commission provides a toll-free telephone number for the purpose of voicing complaints regarding hazardous consumer goods.
- *T/F 44. Indifference curves are useful in describing consumer preferences.
- *T/F 45. An effluent fee is a fee a polluter must pay for discharging waste.
- *T/F 46. All broker-dealers registered with the Securities and Exchange Commission are automatically members of the Securities Investor Protection Corporation.
- *T/F 47. Stores that stay open 24 hours a day generally charge higher prices than those that do not.
- T/F* 48. Bank credit cards represent a form of closed-end credit.
- *T/F 49. There is evidence to support the statement that approximately 6 out of every 100 American families have overextended themselves in terms of credit use.
- T/F* 50. The rate of interest paid on Series E Savings Bonds is lower in the later years than in the earlier years.
- T/F* 51. The balloon contract is most commonly found in the financing of household furnishings.

- *T/F 52. Series H Savings Bonds pay interest by check every six months.
- *T/F 53. Neither certified checks nor cashier's checks can be stopped by stop payment orders.
- T/F* 54. A net worth statement is an itemization of a family's total assets.
- T/F* 55. The Employment Standards Administration of the U.S. Department of Labor is responsible for enforcing laws related to unemployment compensation.
- *T/F 56. Pyramid sales clubs are specifically prohibited under Oregon law.
- T/F* 57. The Dictionary of Occupational Titles is a valuable reference for persons seeking information about current employment opportunities.
- T/F* 58. The now famous four basic consumer rights were first set forth by President Johnson in 1964.
- *T/F 59. It is quite common in oligopolistic businesses and industries for one or a few firms to set prices and for the rest to follow the lead.
- *T/F 60. The Consumer Credit Protection Act prohibits employers from discharging employees for garnishment of earnings for any one indebtedness.
- *T/F 61. Price per pound labels found on fresh meats, poultry, seafood, and cheeses are mandatory under Oregon law.
- *T/F 62. If a widow remarries at 60 or older, the benefits she is collecting on her former deceased husband's account could continue.
- T/F* 63. Life insurance companies are closely regulated by federal statute.
- *T/F 64. Any person who, based on a consumer's credit report, increases the charge for, or denies a consumer credit, is legally required to inform the consumer of the action and provide the name and address of the agency that furnished the report.
- T/F* 65. The Securities Exchange Act of 1934 gives the New York Stock Exchange the power to set minimum requirements for purchasing stock on margin.

- T/F* 66. Stock warrants are relatively short lived, whereas stock rights are good either for a period of years or indefinitely until exercised.
- T/F* 67. In general, prices in specialty shops tend to be lower than those in large chain stores.
- T/F* 68. When making consumer credit reports, consumer reporting agencies are required by law to reverify all information which is not a matter of public record if it has been more than one month since adverse information was received.
- *T/F 69. Under federal law, all drugs sold must be labeled according to their generic name.
- *T/F 70. The Occupational Outlook Handbook provides information on working conditions which can be expected in various types of occupations.
- *T/F 71. A "full" warranty means that a manufacturer must repair all parts of a defective product without charge during the warranty period.
- *T/F 72. To the seller, selling on credit usually means larger sales and greater net profits.
- T/F* 73. The American economy can be described as being purely competitive in nature.

Section II

74. Henry Bell wants to buy a new vacuum cleaner. He has narrowed his choice to four and, based upon consumer reports, estimated their quality ratings (based on a scale of 100). The prices and quality ratings are:

	<u>Quality</u>	<u>Price</u>
#1	80	\$100
#2	85	\$110
#3	90	\$120
#4	95	\$125

The best buy, according to the scale (equal weighting of "quality" and "price" assumed) is:

- | | |
|--------|-------|
| *a. #1 | c. #3 |
| b. #2 | d. #4 |
75. It would not be unusual for an employer to expect an employee to be:
- | | |
|-------------------------|----------------------|
| a. loyal to the company | c. self-evaluative |
| b. self-supervisory | *d. all of the above |

76. Mr. and Mrs. Dobbs, who have just turned 30, would like to take a trip to Europe. They have no money set aside for the purpose and are considering taking out an unsecured loan. They would probably pay the least amount of interest if they borrowed the money from:
- a. their credit union
 - b. a finance company
 - c. a commercial bank
 - *d. the company that issued their cash value life insurance
77. John recently purchased a used car from a dealer who assured him that the car was in top condition. This morning the radiator exploded. One person riding with him said that other people have had similar problems with this particular car dealer. John's first course of action should be to report the incident to:
- a. the local Better Business Bureau
 - b. the Oregon Consumer Protection Division
 - c. the federal Consumer Product Safety Commission
 - *d. the car dealer
78. In times of inflation, a typical family (total income less than \$20,000/year) could best protect its purchasing power by placing excess income in:
- a. corporate bonds
 - b. municipal bonds
 - c. a savings account
 - *d. a home
 - e. none of the above
79. Under an amendment to the Truth in Lending Act, a credit cardholder may be held responsible for unauthorized credit card purchases on each card up to:
- a. \$0
 - b. \$25
 - *c. \$50
 - d. \$200
80. If businesses violate the Oregon Consumer Protection Act, private civil suits may be filed and consumers may be awarded minimum damages of:
- *a. \$200
 - b. \$500
 - c. \$1,000
 - d. \$1,500
81. Stan and Gloria would like to buy a home. Gloria is not employed outside the home and Stan's yearly gross income is \$15,000. A financial planning expert would probably recommend that they look for a house which is selling for under:
- a. \$15,500
 - b. \$25,500
 - *c. \$37,500
 - d. \$42,500

82. When a tax return is audited by the Internal Revenue Service, the burden of proof lies:
- a. mainly with the government
 - *b. mainly with the taxpayer
 - c. equally with government and taxpayer
 - d. none of the above
83. Mary Stuart has a revolving charge account with Myer & Smith's. At the beginning of May she owed \$200. During May she paid \$100. Interest is computed on her account by the previous balance method at 1.5 percent per month. At the end of May, Mary will be assessed a finance charge of:
- a. \$1.50
 - *c. \$3.00
 - b. \$2.00
 - d. \$3.50
84. In Oregon, the purpose of the small claims court is to decide cases involving up to:
- a. \$300
 - c. \$1,000
 - *b. \$500
 - d. \$1,500
85. Consumers Union publishes a monthly magazine for buyers and a supplement to it entitled Teaching Tools. The name of the magazine is:
- a. Consumer News
 - c. Consumer Information
 - b. Consumer Bulletin
 - *d. Consumer Reports
86. Experts in the field of financial planning generally agree that an emergency savings fund should equal at least:
- a. one week's salary
 - *c. three month's salary
 - b. one month's salary
 - d. one year's salary
87. In a competitive market, when the demand for a good decreases but the supply remains the same, the price of the good will generally:
- a. remain the same
 - *c. decrease
 - b. increase
 - d. increase, then decrease
88. The Fair Credit Reporting Act provides that unfavorable credit information (except bankruptcies) may not be reported about an individual after:
- a. 5 years
 - c. 10 years
 - *b. 7 years
 - d. 14 years
89. Sally and Bill want to purchase a new dining room set. Sally does not work outside the home and Bill has only been at his present job 6 months. Two years ago, one of their cars was repossessed. They would probably find it easiest, at this time, to secure a loan from a:

- a. commercial bank
 - b. credit union
 - *c. consumer finance company
 - d. savings and loan
 - e. none of the above
90. The type of life insurance policy which provides the largest amount of protection for the lowest cost is:
- a. straight life
 - b. endowment
 - c. limited payment life
 - *d. term
91. In Oregon, the maximum annual percentage rate which credit unions are allowed to charge on unpaid balances is:
- a. 10 percent
 - *b. 12 percent
 - c. 18 percent
 - d. 36 percent
92. The first step in developing a financial plan is to:
- a. estimate fixed and flexible expenses
 - *b. determine personal and family economic goals
 - c. estimate total current income
 - d. estimate future income
93. A salesperson who shows a consumer features of an entire line of a product is engaging in:
- *a. honest business
 - b. the pigeon drop
 - c. bait and switch
 - d. lo-balling
94. Steve Moody is earning a terrifically high income and is displeased with the amount of tax he must pay on it. In view of his feelings, he most probably would choose as an investment option:
- a. convertible bonds
 - *b. municipal bonds
 - c. preferred stock
 - d. debentures
95. Tom and Theresa together have an annual net income of \$12,000. Credit experts would probably advise that they not incur any debt (other than home mortgage) in excess of:
- a. \$1,000 or 12% of annual income
 - *b. \$2,400 or 20% of annual income
 - c. \$6,000 or 50% of annual income
 - d. \$7,200 or 60% of annual income
96. According to the U.S. Department of Agriculture, the income elasticity of demand for coffee is about .23 (23 percent). If incomes rose by 1 percent, the demand for coffee would:
- a. increase greatly
 - b. decrease greatly
 - c. decrease, then increase
 - *d. remain about the same

97. Sue Bliss has just been offered a job in Mill City, Washington. Before accepting or rejecting the job, she would like to find out how much it would cost her to live in Mill City. The best source of information she could consult would be:
- a. the Mill City Chamber of Commerce
 - b. one of the local labor unions
 - *c. the Bureau of Labor Statistics Handbook
 - d. Consumer Reports
98. If the Federal District Reserve Board directors were to increase legal reserve requirements, consumer credit interest rates would most probably:
- *a. rise
 - b. fall
 - c. rise, then fall
 - d. fall, then rise
99. Carol is planning to get an apartment of her own soon. Her net monthly salary is \$580. Financial planning experts would probably advise Carol to look for an apartment with a monthly rental rate under:
- a. \$120
 - b. \$135
 - *c. \$145
 - d. \$160
100. Dean and Jeanette borrowed \$100 from a local finance company. The terms of the contract specified that the amount be repaid over a period of 6 months. Their monthly payments were \$18. The annual percentage rate charged for this loan was:
- a. 6 percent
 - b. 12 1/2 percent
 - *c. 21 1/2 percent
 - d. 28 1/2 percent
101. The government is allowed, with exceptions for persons making fraudulent claims, how many years to examine tax returns?
- a. 2
 - *b. 3
 - c. 6
 - d. 10
102. In Oregon, pawnbrokers may charge a monthly interest rate on loans under \$300 of up to:
- a. 1 percent
 - b. 2 percent
 - *c. 3 percent
 - d. 4 percent
103. Under federal law, once a person has declared bankruptcy, he or she may not file again for at least:
- a. 3 years
 - *b. 6 years
 - c. 10 years
 - d. 12 years
104. The Federal Deposit Insurance Corporation protects each account in each of its member banks to an upper limit of:
- a. \$25,000
 - b. \$30,000
 - *c. \$40,000
 - d. \$50,000

105. Federal law provides that the amount of an individual's wages which may be subjected to garnishment may not exceed:
- a. 25 percent of weekly disposable earnings
 - b. 50 percent of weekly disposable earnings
 - c. weekly disposable earnings which exceed 30 times the federal minimum hourly wage
 - *d. the lesser of a or c
 - e. the lesser of b or c
106. In Oregon, the agency primarily concerned with promoting accurate measurement of all goods sold to the consumer by weight, measure, or volume is the:
- a. Consumer Protection Division
 - b. Consumer Services Division
 - *c. Department of Agriculture
 - d. Department of Commerce
107. According to the "Rule of 72," \$5 deposited in a savings account at 6 percent interest would double in:
- a. 5 years
 - b. 6 years
 - c. 10 years
 - *d. 12 years

APPENDIX F

CORRESPONDENCE BETWEEN ITEM NUMBERINGS
IN ORIGINAL ITEM BANK AND ON PRETEST
(WITH CONCEPTS REPRESENTED)

APPENDIX F

CORRESPONDENCE BETWEEN ITEM NUMBERINGS
IN ORIGINAL ITEM BANK AND ON PRETEST
(WITH CONCEPTS REPRESENTED)

Item Number on Pretest	Item Number in Original Item Bank	Concept Represented*
1	5	1
2	4	1
3	78	3
4	42	2
5	97	4
6	127	5
7	53	3
8	114	5
9	84	4
10	27	1
11	14	1
12	11	1
13	89	4
14	66	2
15	19	1
16	93	4
17	119	5
18	39	2
19	62	3
20	6	1
21	47	2
22	121	5
23	86	4
24	96	4
25	58	3
26	94	4
27	17	1
28	91	4
29	122	5
30	33	2
31	59	3
32	44	2
33	76	3
34	8	1

Continued

*Concept #1 - Employment and Income
 Concept #2 - Money Management
 Concept #3 - Credit
 Concept #4 - Purchase of Goods and Services
 Concept #5 - Rights and Responsibilities in the
 Marketplace

Item Number on Pretest	Item Number in Original Item Bank	Concept Represented
35	92	4
36	118	5
37	74	3
38	125	5
39	103	4
40	68	3
41	64	3
42	102	4
43	115	5
44	88	4
45	87	4
46	38	2
47	105	4
48	63	3
49	55	3
50	31	2
51	48	2
52	30	2
53	28	2
54	24	2
55	18	1
56	129	5
57	2	1
58	112	5
59	85	4
60	81	3
61	130	5
62	45	2
63	43	2
64	75	3
65	40	2
66	37	2
67	104	4
68	79	3
69	128	5
70	1	1
71	98	4
72	56	3
73	107	5
74	100	4
75	10	1
76	61	3
77	113	5
78	35	2
79	70	3
80	120	5
81	22	2

Continued

Item Number on Pretest	Item Number in Original Item Bank	Concept Represented
82	26	2
83	69	3
84	117	5
85	99	4
86	32	2
87	109	5
88	77	3
89	60	3
90	41	2
91	72	3
92	20	2
93	116	5
94	36	2
95	54	3
96	111	5
97	23	2
98	52	3
99	21	2
100	67	3
101	25	2
102	73	3
103	83	3
104	29	2
105	82	3
106	124	5
107	34	2

APPENDIX G

STATEMENT READ TO INDIVIDUALS
PARTICIPATING IN THE ITEM PRETESTING

APPENDIX G

STATEMENT READ TO INDIVIDUALS
PARTICIPATING IN THE ITEM PRETESTING

"Today I have a request for your help from Wendy Lofgren, a graduate student who is in the process of conducting the research for her degree at O.S.U. She is interested in finding out more about what knowledge teachers have in the area of consumer education/economics/personal finance so that colleges and universities in the state can better design courses and workshops to help teachers meet their needs. The test which I am about to pass out has been developed for the purpose of assessing this teacher knowledge. Wendy has asked if you would be willing to take this test, which is a preliminary form, so that she can determine how well the questions on the test have been written and decide whether or not they should be included on the final form of the instrument.

I stress at this point that a decision to take the test is completely voluntary. Participation or nonparticipation will in no way affect your grade for this course. All responses will remain completely anonymous. Wendy has asked, in fact, that your names not be written anywhere on the test.

The test format is a familiar one, true-false and multiple-choice. Instructions for indicating answers are provided at the top of the first page.

Are there any questions?

Who would be willing to take the test?"

APPENDIX H
RESULTS OF ITEM ANALYSIS ON PRETEST

APPENDIX H
RESULTS OF ITEM ANALYSIS ON PRETEST

Item Number	Difficulty Index ¹	t-Value Discrimination ²		Patterns of Response to Distracters ⁴					
		107 Items	50 Items ³	A	B	C	D	E	No
1	.80	-0.386							
2	.38	1.404	5.151**						
3	.85	0.415							
4	.65	0.812							
5	.52	2.110*	3.122*						
6	.56	0.935							
7	.52	2.575*	3.346**						
8	.65	-0.957							
9	.11	0.648							
10	.15	1.352							
11	.41	2.126*	3.399**						
12	.62	1.444	0.975						
13	.59	1.794	5.599**						
14	.56	1.752							
15	.28	2.346*	4.492**						
16	.59	-0.600							
17	.58	1.891	2.805**						
18	.15	2.951*							
19	.76	-1.226							
20	.28	-1.387							
21	.70	1.451	3.059**						
22	.48	1.486	2.839**						
23	.58	1.472							
24	.85	1.657	3.925**						
25	.72	1.135							
26	.75	4.300**	4.505**						
27	.51	1.280	2.915**						
28	.80	1.601	3.467**						
29	.20	2.169*	4.304**						
30	.20	0.818							
31	.20	1.383							
32	.37	0.973							

Continued

¹A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 = all persons answered correctly.

²** = .01 confidence level; * = .05 confidence level.

³t-Values for the 50 items selected for inclusion in the assessment instrument were calculated in 10-item groups representing the 5 concept areas.

⁴Patterns of response to distracters apply only to multiple-choice questions (numbers 74 - 107).

Item Number	Difficulty Index	t-Value Discrimination		Patterns of Response to Distracters					
		107 Items	50 Items	A	B	C	D	E	No
33	.75	3.366**	4.359**						
34	.72	0.096	3.814**						
35	.62	1.004	3.414**						
36	.68	0.827							
37	.75	2.723**							
38	.39	2.417*	3.461**						
39	.70	-0.599							
40	.39	3.027							
41	.14	1.228							
42	.58	1.680							
43	.87	-0.137							
44	.70	2.284*	3.735**						
45	.41	1.002							
46	.32	-0.147							
47	.89	0.549							
48	.39	1.136							
49	.89	0.938							
50	.55	2.037*	3.982**						
51	.25	2.215*							
52	.38	2.407*							
53	.28	1.383							
54	.31	2.304*							
55	.23	1.374	2.518*						
56	.52	2.687**	3.668**						
57	.31	1.759	3.511**						
58	.42	0.821							
59	.93	1.062	3.078**						
60	.48	3.124**	3.010**						
61	.97	-0.217							
62	.39	-0.569							
63	.20	1.193							
64	.72	2.689**	4.196**						
65	.21	1.947							
66	.28	0.882							
67	.89	2.199*	3.465**						
68	.07	-0.245							
69	.70	0.497							
70	.63	1.323	1.342						
71	.86	1.875	2.754**						
72	.85	2.092*							
73	.42	1.953	3.902**						
74	.10	1.104		7	9	11	39	1	4
75	.80	1.281	2.452*	7	1	4	57	0	2
76	.25	2.061*		32	7	10	18	0	4
77	.54	1.206		23	5	2	38	0	3
78	.28	4.158**	4.127**	7	16	15	20	4	9

Continued

Item Number	Difficulty Index	t-Value Discrimination		Patterns of Response to Distracters					
		107 Items	50 Items	A	B	C	D	E	No
79	.45	2.534*	2.898**	8	3	32	19	0	9
80	.28	2.135*	2.174*	20	18	12	5	0	16
81	.34	1.607		3	32	24	3	1	8
82	.86	3.327**	4.945**	1	61	4	0	1	4
83	.35	2.481*	4.110**	29	9	25	0	0	8
84	.46	2.010*	4.638**	18	33	9	4	0	7
85	.52	3.152**	3.122**	4	8	6	37	0	16
86	.54	0.783		0	17	38	6	0	10
87	.49	0.611		1	26	35	0	0	9
88	.37	3.109**	5.041**	10	26	11	0	0	24
89	.27	3.828**	4.203**	4	17	19	5	9	17
90	.25	3.471**	4.080**	17	3	5	18	0	28
91	.23	2.153*	3.157**	10	16	21	5	0	19
92	.44	3.033**	4.587**	9	31	14	2	0	15
93	.51	2.407*		36	5	8	6	0	16
94	.21	3.630**		6	15	20	1	0	29
95	.35	4.768**		9	25	6	1	0	30
96	.35	4.613**	6.112**	13	2	1	25	1	29
97	.20	4.033**		32	3	14	2	0	20
98	.42	4.448**	4.837**	30	6	4	3	0	28
99	.28	3.136**	6.049**	8	10	20	9	0	24
100	.04	-0.551		9	27	3	2	0	30
101	.45	3.261**	4.838**	1	32	10	7	0	21
102	.13	1.747		1	3	9	19	2	37
103	.11	3.548**		10	8	19	6	0	28
104	.30	4.501**	6.060**	8	0	21	9	0	33
105	.06	0.205		12	6	3	4	5	41
106	.14	1.779		16	7	10	9	0	29
107	.24	2.883**	3.894**	3	9	7	17	1	34

APPENDIX I
INSTRUMENT USED FOR THE ASSESSMENT

Major subject matter specialty:

CONSUMER EDUCATION/ECONOMICS/PERSONAL FINANCE SURVEY

DIRECTIONS: Section I consists of a series of statements which are either true or false. If a statement is true, place a + in the blank to the left of it; if false, use a 0. Section II consists of a series of multiple-choice questions. To record responses, place the letter of the correct alternative (A, B, C, D, or E) for each question in the blank to the left of the statement. Please Do Not Look Up Answers!

SECTION I (True = +, False = 0)

- _____ 1. The majority of job openings expected to become available between now and 1985 will most probably be open to persons who have not completed four full years of college.
- _____ 2. Federal Food and Drug Administration guidelines specify that virtually all food product labels must contain a listing of ingredients in order of increasing quantity.
- _____ 3. Federal law permits victims of consumer credit discrimination to seek up to \$10,000 in punitive damages.
- _____ 4. Professional organizations (i.e. The National Education Association and The American Home Economics Association) were originally founded to improve working conditions and income.
- _____ 5. The amount of money deducted from an employee's earnings for Old Age and Survivor's Insurance (Social Security) is only one-half of what is actually paid into his or her fund.
- _____ 6. Reference group membership tends to restrict consumer choice.
- _____ 7. According to federal and state law, an individual must be at least 15 years old to secure a work permit.
- _____ 8. On the state level, class action suits regarding consumer problems are complicated and often do not yield favorable results.
- _____ 9. A representative from the XYZ Company was in a local neighborhood selling storm windows. Bill and Mary Jones talked with him and ended up signing a contract in their home to have new storm windows installed. They signed the contract yesterday but today they are having second thoughts. They do have the option to cancel the contract within 72 hours of signing it.
- _____ 10. The Consumer Product Safety Commission has jurisdiction over matters related to motor vehicle safety.
- _____ 11. A 12-ounce package of Whistles cereal sells for 75 cents while a 15-ounce package sells for \$1.09. The 15-ounce package is the better buy.
- _____ 12. "Bait-and-switch" is one form of advertising which is specifically prohibited under current law.
- _____ 13. Under state law, employers may permit employees under the age of 18 and not enrolled in school to work up to 48 hours per week.
- _____ 14. Even if a seller has data to show that advertising for his/her brand is not effective in changing consumer buying behavior in the short-run, it is still advantageous for them to advertise.
- _____ 15. The federal Food and Drug Administration regulates advertising of food, drug, and cosmetic products.
- _____ 16. The Fair Credit Reporting Act is enforced by the Bureau of Consumer Protection in the Federal Trade Commission.
- _____ 17. Prospective employees should avoid asking a large number of questions during a first personal job interview.
- _____ 18. In general, as the price of a product increases, the effectiveness of advertising in influencing consumer behavior increases.
- _____ 19. The Better Business Bureau has no legal authority in dealing with consumer complaints.
- _____ 20. Indifference curves are useful in describing consumer preferences.

- _____ 21. The rate of interest paid on Series E Savings Bonds is lower in the later years than in the earlier years.
- _____ 22. The Employment Standards Administration of the U.S. Department of Labor is responsible for enforcing laws related to unemployment compensation.
- _____ 23. Pyramid sales clubs are specifically prohibited under Oregon law.
- _____ 24. The Dictionary of Occupational Titles is a valuable reference for persons seeking information about current employment opportunities.
- _____ 25. It is quite common in oligopolistic businesses and industries for one or a few firms to set prices and for the rest to follow the lead.
- _____ 26. The Consumer Credit Protection Act prohibits employers from discharging employees for garnishment of earnings for any one indebtedness.
- _____ 27. Any person who, based on a consumer's credit report, increases the charge for, or denies a consumer credit, is legally required to inform the consumer of the action and provide the name and address of the agency that furnished the report.
- _____ 28. In general, prices in specialty shops tend to be lower than those in large chain stores.
- _____ 29. The Occupational Outlook Handbook provides information on working conditions which can be expected in various types of occupations.
- _____ 30. A "full" warranty means that a manufacturer must repair all parts of a defective product without charge during the warranty period.
- _____ 31. The American economy can be described as being purely competitive in nature.
- _____ 32. In times of inflation, a typical family (total income less than \$20,000./year) could best protect its purchasing power by placing excess income in:
- A. corporate bonds
B. municipal bonds
C. a savings account
D. a home
E. none of the above
- _____ 33. Under an amendment to the Truth in Lending Act, a credit cardholder may be held responsible for unauthorized credit card purchases on each card up to:
- A. \$0.
B. \$25.
C. \$50.
D. \$200.
- _____ 34. If businesses violate the Oregon Consumer Protection Act, private civil suits may be filed and consumers may be awarded minimum damages of:
- A. \$200.
B. \$500.
C. \$1,000.
D. \$1,500.
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- A. mainly with the government
B. mainly with the taxpayer
C. equally with government and taxpayer
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- _____ 36. Mary Stuart has a revolving charge account with Myer & Smith's. At the beginning of May she owed \$200. During May she paid \$100. Interest is computed on her account by the previous balance method at 1.5 percent per month. At the end of May Mary will be assessed a finance charge of:
- A. \$1.50
B. \$2.50
C. \$3.00
D. \$3.50
- _____ 37. In Oregon, the purpose of the small claims court is to decide cases involving up to:
- A. \$500.
B. \$500.
C. \$1,000.
D. \$1,500.

SECTION II

- _____ 32. It would not be unusual for an employer to expect an employee to be:
- A. loyal to the company
B. self-supervisory
C. self-evaluative
D. all of the above

39. Consumers Union publishes a monthly magazine for buyers and a supplement to it entitled Teaching Tools. The name of the magazine is:
- Consumer News
 - Consumer Bulletin
 - Consumer Information
 - Consumer Reports
40. The Fair Credit Reporting Act provides that unfavorable credit information (except bankruptcies) may not be reported about an individual after:
- 5 years
 - 7 years
 - 10 years
 - 14 years
41. Sally and Bill want to purchase a new dining room set. Sally does not work outside the home and Bill has only been at his present job 6 months. Two years ago, one of their cars was repossessed. They would probably find it easiest, at this time, to secure a loan from:
- a commercial bank
 - a credit union
 - a consumer finance company
 - a savings and loan
 - none of the above
42. The type of life insurance policy which provides the largest amount of protection for the lowest cost is:
- straight life
 - endowment
 - limited payment life
 - term
43. In Oregon, the maximum annual percentage rate which credit unions are allowed to charge on unpaid balances is:
- 10 percent
 - 12 percent
 - 18 percent
 - 36 percent
44. The first step in developing a financial plan is to:
- estimate fixed and flexible expenses
 - determine personal and family economic goals
 - estimate total current income
 - estimate future income
45. According to the U.S. Department of Agriculture, the income elasticity of demand for coffee is about .23 (23 percent). If incomes rose by 1 percent, the demand for coffee would:
- increase greatly
 - decrease greatly
 - decrease, then increase
 - remain about the same
46. If the Federal District Reserve Board directors were to increase legal reserve requirements, consumer credit interest rates would most probably:
- rise
 - fall
 - rise, then fall
 - fall, then rise
47. Carol is planning to get an apartment of her own soon. Her net monthly salary is \$580. Financial planning experts would probably advise Carol to look for an apartment with a monthly rental rate under:
- \$120.
 - 135.
 - \$145.
 - \$160.
48. The government is allowed, with exceptions for persons making fraudulent claims, how many years to examine tax returns?
- 2
 - 3
 - 6
 - 10
49. The Federal Deposit Insurance Corporation protects each account in each of its member banks to an upper limit of:
- \$25,000.
 - \$30,000.
 - \$40,000.
 - \$50,000.
50. According to the "Rule of 72", \$5.00 deposited in a savings account at 5 percent interest would double in:
- 5 years
 - 6 years
 - 10 years
 - 12 years

TAPE HERE

FOLD



VOCATIONAL-TECHNICAL
EDUCATION DIVISION
CORVALLIS, OREGON 97331

WARREN N. SUZUKI
BATCHELLER HALL 200
OREGON STATE UNIVERSITY
CORVALLIS, OREGON 97331

FOLD

APPENDIX J

CORRESPONDENCE BETWEEN ITEM NUMBERINGS ON
THE PRETEST AND FINAL ASSESSMENT INSTRUMENT
(WITH CONCEPTS REPRESENTED)

APPENDIX J

CORRESPONDENCE BETWEEN ITEM NUMBERINGS ON
THE PRETEST AND FINAL ASSESSMENT INSTRUMENT
(WITH CONCEPTS REPRESENTED)

Item Number on Assessment Instrument	Item Number on Pretest	Concept Represented*
1	2	1
2	5	4
3	7	3
4	11	1
5	12	1
6	13	4
7	15	1
8	17	5
9	21	2
10	22	5
11	24	4
12	26	5
13	27	1
14	28	4
15	29	5
16	33	3
17	34	1
18	35	4
19	38	5
20	44	4
21	50	2
22	55	1
23	56	5
24	57	1
25	59	4
26	60	3
27	64	3
28	67	4
29	70	1
30	71	4
31	73	5
32	75	1
33	78	2
34	79	3

Continued

*Concept #1 - Employment and Income

Concept #2 - Money Management

Concept #3 - Credit

Concept #4 - Purchase of Goods and Services

Concept #5 - Rights and Responsibilities in
the Marketplace

Item Number on Assessment Instrument	Item Number on Pretest	Concept Represented
35	80	5
36	82	2
37	83	3
38	84	5
39	85	4
40	88	3
41	89	3
42	90	2
43	91	3
44	92	2
45	96	5
46	98	3
47	99	2
48	101	2
49	104	2
50	107	2

APPENDIX K

LETTER TO TEACHERS REQUESTING
PARTICIPATION IN THE ASSESSMENT

School of Education
Vocational-Technical
Education Division



Corvallis, Oregon 97331

October 28, 1977

Dear Fellow Educator:

Greetings!

How would you like to help teacher educators better plan pre-service, in-service, and graduate level courses in consumer education/economics/personal finance (CE/E/PF)? We are currently conducting a study at Oregon State University which should provide much of the information needed to do this and we need your help.

As you most probably know, an administrative rule was recently adopted by the Oregon Board of Education requiring that all high school graduates, beginning in 1978, earn a minimum of one credit in CE/E/PF. Since that time, teacher educators have become increasingly concerned about how best to help teachers prepare for the task of providing this instruction. Hard data on which to base decisions about course and workshop content are vitally needed since CE/E/PF teachers come from a variety of subject matter backgrounds.

Last year, we began working with a number of teacher educators in the state to devise a method by which the needed data could be collected. The instrument you will find enclosed is a product of that work. It was felt that if a large sample of CE/E/PF teachers could be persuaded to answer "on-hand knowledge" type of questions related to concepts included in the Oregon Personal Finance Education Guide without looking up answers, teacher educators would have a far better idea of how to structure course and workshop offerings so they would be meeting real needs.

This is where your help is vitally needed. As a teacher of CE/E/PF, you are one of a number of persons who have been selected to complete the instrument. We hope you will consider doing so. Our interest lies in recording responses of teachers as a group for the purpose of improving pre-service, in-service, and graduate education. Please be assured that we are not evaluating any one person's teaching "competency" or "proficiency." All responses will be held in strict confidence. The coding in the upper right-hand corner of the instrument is solely for determining whether or not the instrument has been completed and returned.

Directions for answering the questions on the instrument are provided at the top of the first page. Please note that there is also a space in the upper right-hand corner for indicating your subject matter specialty (i.e. Math, Business, Home Economics, Social Science, other specified). Please write in your subject area specialty there. In answering the questions which follow, please do not look up any answers before you do so. This would invalidate the study and make it impossible to provide teacher educators with the data they need. After you have indicated your subject matter specialty and answered the questions, fold the instrument on the dotted lines and tape the outside edges together. It has already been stamped and addressed. A rapid response will be greatly appreciated both by us and by teacher educators in the state who are trying to provide the best instruction possible.

If you have any questions or concerns, please feel free to phone (752-3140) or write (Oregon State University, Batcheller Hall 200, Corvallis, Oregon 97331).

Thank you so very much!

Sincerely,

Warren N. Suzuki
Assistant Professor

Wendy L. Lofgren
Graduate Research Assistant

APPENDIX L

POSTCARD USED FOR FIRST FOLLOW-UP

November 15, 1977

Oregon
State
University

Dear Fellow Educator:

A short time ago, a survey instrument was mailed to you for purposes of helping teacher educators better plan pre-service, in-service, and graduate-level courses in consumer education/economics/personal finance. We have not as yet received your completed instrument.

We recognize how busy you must be, but your help is vitally needed. Would you please take a few minutes to complete the instrument soon? Teacher educators who are trying to improve their course and workshop offerings will greatly appreciate your efforts.

Thanks so much for helping!

Sincerely,
Redacted for Privacy

Warren N. Suzuki *U*
Assistant Professor

APPENDIX M

LETTER USED FOR SECOND FOLLOW-UP

School of Education
Vocational-Technical
Education Division



Corvallis, Oregon 97331

November 28, 1977

Dear Fellow Educator:

Help!

Some time ago, a survey instrument designed to collect information needed by consumer education/economics/personal finance teacher educators was mailed to you. We have not yet received your completed instrument.

In hopes that you will still consider completing the instrument, another which is stamped and addressed is enclosed. Directions for answering the questions are provided at the top of the first page. As indicated in the directions, we are asking that you not look up answers before responding. Please also write in your subject matter area specialty (i.e., Business, Math, Home Economics, Social Science) in the space provided at the top of the first page before returning the instrument. Again, all information will be kept strictly confidential.

If you have any questions or concerns, please feel free to phone (752-3140) or write (Oregon State University, Batcheller Hall 200, Corvallis, Oregon 97331).

Thank you so much for your help!

Sincerely,

Warren N. Suzuki
Assistant Professor

Wendy L. Lofgren
Graduate Research Assistant

APPENDIX N

RESULTS OF ITEM ANALYSIS ON ALL TEACHER RESPONSES
TO THE COMPETENCY ASSESSMENT INSTRUMENT

APPENDIX N

RESULTS OF ITEM ANALYSIS ON ALL TEACHER RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT (n = 185)

Item Number	Concept ¹	Difficulty ²	t-Value Discrimination ³		Patterns of Response to Distracters ⁵					
			Total Test	Sub-Part ⁴	A	B	B	D	E	No
1	1	.79	2.481*	4.547**						
2	4	.46	2.310*	5.438**						
3	3	.50	0.605	4.600**						
4	1	.64	2.363*	6.189**						
5	1	.87	2.681**	3.404**						
6	4	.51	2.885**	8.373**						
7	1	.45	4.609**	8.370**						
8	5	.54	0.741	4.388**						
9	2	.91	2.477*	4.468**						
10	5	.59	3.520**	7.145**						
11	4	.93	2.934**	2.784**						

Continued

¹Concept 1 - Employment and Income; Concept 2 - Money Management; Concept 3 - Credit; Concept 4 - Purchase of Goods and Services; Concept 5 - Rights and Responsibilities in the Marketplace.

²A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 = all persons answered correctly.

³* = item discriminates at the .05 confidence level; ** = item discriminates at the .01 confidence level.

⁴Each sub-part contains 10 items.

⁵Patterns of response to distracters refer only to multiple-choice questions (items 32-50). Only items 33 and 41 had E as an option.

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters						
			Total Test	Sub-Part	A	B	C	D	E	No	
12	5	.87	2.049*	4.328**							
13	1	.50	1.769	4.490**							
14	4	.84	4.072**	6.382**							
15	5	.29	4.444**	7.113**							
16	3	.64	3.225**	6.138**							
17	1	.68	0.669	4.051**							
18	4	.49	0.799	4.969**							
19	5	.75	4.727**	6.524**							
20	4	.65	2.050*	5.949**							
21	2	.82	3.355**	6.218**							
22	1	.51	3.261**	6.288**							
23	5	.78	4.480**	4.476**							
24	1	.47	2.567*	5.574**							
25	4	.80	2.210*	4.661**							
26	3	.66	0.618	4.293**							
27	3	.83	2.174*	5.762**							
28	4	.96	0.812	0.899							
29	1	.73	1.531	4.601**							
30	4	.65	1.595	5.542**							
31	5	.67	3.886**	6.701**							
32	1	.71	2.397*	3.171**	37	4	6	132	0	6	
33	2	.75	3.262**	6.624**	8	7	19	139	8	4	
34	3	.72	1.549	5.060**	23	3	134	25	0	0	
35	5	.19	2.677**	3.115**	35	61	41	33	0	15	
36	2	.89	1.944	4.028**	5	164	13	2	0	1	
37	3	.58	3.408**	5.883**	64	8	108	3	0	2	
38	5	.65	1.939	5.770**	33	121	18	12	0	1	
39	4	.69	5.634**	6.415**	19	22	9	127	0	8	
40	3	.62	1.591	4.227**	58	115	5	4	0	3	
41	3	.69	4.143**	4.777**	3	33	127	5	15	2	

Continued

Item Number	Concept	Diffuculty	<u>t-Value Discrimination</u>		<u>Patterns of Response to Distracters</u>					
			Total Test	Sub-Part	A	B	C	D	E	No
42	2	.77	3.555**	5.260**	34	3	3	143	0	2
43	3	.41	3.643**	5.528**	15	76	80	11	0	3
44	2	.56	3.796**	5.073**	32	104	44	4	0	1
45	5	.76	3.253**	4.756**	23	4	8	141	0	9
46	3	.69	4.261**	3.086**	128	22	21	6	0	8
47	2	.61	2.370*	4.142**	34	17	112	22	0	0
48	2	.48	1.706	7.531**	9	89	61	24	0	2
49	2	.62	3.087**	6.569**	40	7	115	20	0	3
50	2	.53	3.223**	6.000**	8	16	49	98	0	14

APPENDIX O

RESULTS OF ITEM ANALYSIS ON BUSINESS EDUCATION TEACHERS' RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT

APPENDIX O

RESULTS OF ITEM ANALYSIS ON BUSINESS EDUCATION TEACHERS' RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT (n = 52)

Item Number	Concept ¹	Difficulty ²	t-Value Discrimination ³		Patterns of Response to Distracters ⁵					
			Total Test	Sub-Part ⁴	A	B	C	D	E	No
1	1	.83	1.812	2.724**						
2	4	.40	1.151	3.314**						
3	3	.48	-0.457	1.945						
4	1	.56	2.294*	4.514**						
5	1	.94	0.643	2.044*						
6	4	.44	-0.072	3.570**						
7	1	.46	1.336	4.657**						
8	5	.46	1.206	2.504*						
9	2	.88	1.143	3.217**						
10	5	.56	0.759	4.602**						
11	4	.94	3.522**	1.434						
12	5	.90	0.217	0.418						

Continued

¹Concept 1 - Employment and Income; Concept 2 - Money Management; Concept 3 - Credit;
Concept 4 - Purchase of Goods and Services; Concept 5 - Rights and Responsibilities in
the Marketplace.

²A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 =
all persons answered correctly.

³* = item discriminates at the .05 confidence level; ** = item discriminates at the .01
confidence level.

⁴Each sub-part contains 10 items.

⁵Patterns of response to distracters refer only to multiple-choice questions (items 32-50).
Only items 33 and 41 had E as an option.

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters						
			Total Test	Sub-Part	A	B	C	D	E	No	
13	1	.56	0.010	1.878							
14	4	.87	2.102*	4.388**							
15	5	.33	5.051**	4.811**							
16	3	.65	1.740	3.712**							
17	1	.63	0.172	1.738							
18	4	.44	1.989	2.630*							
19	5	.71	3.326**	4.823**							
20	4	.69	0.864	3.502**							
21	2	.85	1.848	2.934**							
22	1	.58	2.263*	5.994**							
23	5	.69	2.230*	1.777							
24	1	.52	1.408	2.438*							
25	4	.77	2.089*	2.902**							
26	3	.58	0.158	3.011**							
27	3	.85	-0.867	1.841							
28	4	.96	0.037	0.359							
29	1	.75	1.378	2.356*							
30	4	.65	-0.580	1.528							
31	5	.65	2.712**	4.978**							
32	1	.69	1.140	0.234	11	0	2	36	0	3	
33	2	.71	1.332	3.845**	2	3	6	37	2	2	
34	3	.75	0.500	2.599*	5	1	39	7	0	0	
35	5	.17	1.280	1.869	9	19	10	11	0	3	
36	2	.88	1.759	2.919**	0	46	4	1	0	1	
37	3	.60	1.950	3.971**	16	2	31	3	0	0	
38	5	.63	2.567*	4.128**	10	33	3	5	0	1	
39	4	.71	2.630*	3.080**	3	7	3	37	0	2	
40	3	.60	-0.827	2.008*	16	31	2	1	0	2	
41	3	.79	3.418**	2.240*	1	5	41	1	4	0	
42	2	.77	2.692**	1.324	9	1	0	40	0	2	

Continued

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
43	3	.40	0.193	1.144	3	21	23	4	0	1
44	2	.46	2.966**	4.103**	11	24	14	2	0	1
45	5	.83	1.287	3.231**	7	0	1	43	0	1
46	3	.79	2.109*	0.996	41	4	5	1	0	1
47	2	.60	1.674	2.468*	11	4	31	6	0	0
48	2	.40	1.753	4.278**	3	21	20	7	0	1
49	2	.71	2.307*	4.345**	7	3	37	5	0	0
50	2	.52	2.153*	3.579**	1	7	15	27	0	2

APPENDIX P

RESULTS OF ITEM ANALYSIS ON HOME ECONOMICS TEACHERS'
RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT

APPENDIX P

RESULTS OF ITEM ANALYSIS ON HOME ECONOMICS TEACHERS' RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT (n = 50)

Item Number	Concept ¹	Difficulty ²	t-Value Discrimination ³		Patterns of Response to Distracters ⁵					
			Total Test	Sub-Part ⁴	A	B	C	D	E	No
1	1	.78	2.001	3.518**						
2	4	.64	0.226	1.750						
3	3	.56	-0.689	1.587						
4	1	.62	1.556	3.631**						
5	1	.84	1.451	1.640						
6	4	.60	1.160	4.345**						
7	1	.30	4.562**	4.621**						
8	5	.56	-0.557	1.680						
9	2	.92	0.486	2.233*						
10	5	.52	2.501*	3.770**						
11	4	.96	1.700	2.321*						
12	5	.86	1.288	2.871**						

Continued

¹Concept 1 - Employment and Income; Concept 2 - Money Management; Concept 3 - Credit; Concept 4 - Purchase of Goods and Services; Concept 5 - Rights and Responsibilities in the Marketplace.

²A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 = all persons answered correctly.

³* = item discriminates at the .05 confidence level; ** = item discriminates at the .01 confidence level.

⁴Each sub-part contains 10 items.

⁵Patterns of response to distracters refer only to multiple-choice questions (items 32-50). Only items 33 and 41 had E as an option.

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
13	1	.58	0.717	1.843						
14	4	.84	2.542*	3.586**						
15	5	.28	1.995	3.697**						
16	3	.66	0.950	2.475*						
17	1	.74	1.022	3.168**						
18	4	.52	-0.098	2.509*						
19	5	.72	2.719**	1.694						
20	4	.56	1.559	3.333**						
21	2	.76	2.416*	4.992**						
22	1	.32	-0.299	2.284*						
23	5	.84	1.640	2.980**						
24	1	.50	0.976	3.425**						
25	4	.76	-0.664	1.761						
26	3	.72	-0.123	1.757						
27	3	.84	1.736	3.525**						
28	4	.94	0.076	-0.408						
29	1	.82	1.251	2.335*						
30	4	.76	2.975**	3.054**						
31	5	.64	1.980	3.487**						
32	1	.78	1.324	2.275*	8	2	0	39	0	1
33	2	.72	2.205*	3.557*	3	1	7	36	2	1
34	3	.76	1.812	2.344*	3	0	38	9	0	0
35	5	.16	2.097*	3.076**	8	18	12	8	0	4
36	2	.84	2.230*	2.946**	1	42	6	1	0	0
37	3	.46	2.245*	3.336**	23	2	23	0	0	2
38	5	.74	1.098	1.955	5	37	7	1	0	0
39	4	.74	2.932**	3.626**	5	5	1	37	0	2
40	3	.72	0.669	2.599**	12	36	1	1	0	0
41	3	.68	2.197*	4.105**	1	10	34	0	5	0
42	2	.62	1.995	3.409**	14	2	3	31	0	0

Continued

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
43	3	.42	2.426*	3.794**	7	21	19	3	0	0
44	2	.76	0.854	1.080	6	38	6	0	0	0
45	5	.66	1.448	2.612*	8	2	3	33	0	4
46	3	.56	1.700	1.767	28	8	8	2	0	4
47	2	.64	0.293	1.723	9	2	32	7	0	0
48	2	.40	-0.092	3.635**	5	20	14	10	0	1
49	2	.40	1.881	3.406**	17	3	20	10	0	0
50	2	.50	2.234*	2.741**	4	4	9	25	0	8

APPENDIX Q

RESULTS OF ITEM ANALYSIS ON MATHEMATICS TEACHERS'
RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT

APPENDIX Q

RESULTS OF ITEM ANALYSIS ON MATHEMATICS TEACHERS' RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT (n = 45)

Item Number	Concept ¹	Difficulty ²	t-Value Discrimination ³		Patterns of Response to Distracters ⁵					
			Total Test	Sub-Part ⁴	A	B	C	D	E	No
1	1	.82	0.600	1.519						
2	4	.31	0.664	2.578*						
3	3	.47	1.556	3.057**						
4	1	.69	0.167	2.613*						
5	1	.89	0.807	2.153*						
6	4	.40	3.357**	4.843**						
7	1	.44	1.907	3.214**						
8	5	.51	0.828	2.446**						
9	2	.91	1.612	1.710						
10	5	.58	1.788	2.328*						
11	4	.93	-0.233	0.243						
12	5	.78	1.321	2.905**						

Continued

¹Concept 1 - Employment and Income; Concept 2 - Money Management; Concept 3 - Credit;
Concept 4 - Purchase of Goods and Services; Concept 5 - Rights and Responsibilities in
the Marketplace.

²A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 =
all persons answered correctly.

³* = item discriminates at the .05 confidence level; ** = item discriminates at the .01
confidence level.

⁴Each sub-part contains 10 items.

⁵Patterns of response to distracters refer only to multiple-choice questions (items 32-50).
Only items 33 and 41 had E as an option.

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
13	1	.33	2.039*	2.727**						
14	4	.80	0.879	1.892						
15	5	.27	2.407*	3.641**						
16	3	.60	1.848	3.954**						
17	1	.58	0.314	2.698*						
18	4	.47	-1.683	1.761						
19	5	.80	1.334	2.750**						
20	4	.67	0.420	3.312**						
21	2	.87	0.897	1.189						
22	1	.56	1.969	2.043*						
23	5	.78	1.964	1.445						
24	1	.38	0.320	1.963						
25	4	.91	1.218	3.296**						
26	3	.80	1.242	1.664						
27	3	.80	1.427	3.049**						
28	4	.96	1.545	1.403						
29	1	.64	0.890	3.010**						
30	4	.56	1.656	4.131**						
31	5	.62	1.362	1.473						
32	1	.71	1.480	2.667*	11	2	0	32	0	0
33	2	.78	1.591	3.487**	1	1	4	35	3	1
34	3	.80	-0.087	1.414	4	1	36	4	0	0
35	5	.13	0.034	-0.673	6	15	11	6	0	7
36	2	.98	0.580	-0.248	0	44	1	0	0	0
37	3	.73	0.902	2.198*	10	2	33	0	0	0
38	5	.64	-0.210	3.372**	7	29	6	3	0	0
39	4	.56	3.386**	3.048**	8	5	3	25	0	0
40	3	.56	2.050*	2.075*	15	25	2	2	0	1
41	3	.58	1.788	1.806	1	11	26	3	3	1
42	2	.91	1.612	3.014**	4	0	0	41	0	0

Continued

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
43	3	.42	2.118*	3.012**	1	19	21	2	0	2
44	2	.53	1.996	3.369**	9	24	10	2	0	0
45	5	.76	1.229	1.888	6	0	2	34	0	3
46	3	.58	2.887**	1.399	26	8	5	3	0	3
47	2	.67	2.240*	1.975	6	6	30	3	0	0
48	2	.69	1.984	2.925**	0	31	9	5	0	0
49	2	.67	0.346	3.348**	10	0	30	4	0	1
50	2	.64	0.965	2.617*	0	3	10	29	0	3

APPENDIX R

RESULTS OF ITEM ANALYSIS ON SOCIAL STUDIES TEACHERS'
RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT

APPENDIX R

RESULTS OF ITEM ANALYSIS ON SOCIAL STUDIES TEACHERS' RESPONSES TO THE COMPETENCY ASSESSMENT INSTRUMENT (n = 38)

Item Number	Concept ¹	Difficulty ²	t-Value Discrimination ³		Patterns of Response to Distracters ⁵					
			Total Test	Sub-Part ⁴	A	B	C	D	E	No
1	1	.74	0.599	1.320						
2	4	.50	2.743**	2.060*						
3	3	.47	1.068	2.601*						
4	1	.71	0.304	1.442						
5	1	.79	2.478*	1.369						
6	4	.61	1.616	2.992**						
7	1	.63	1.523	4.075**						
8	5	.63	-0.272	1.603						
9	2	.95	1.789	1.451						
10	5	.76	1.722	2.270*						
11	4	.87	1.413	1.883						
12	5	.95	0.939	2.898**						

Continued

¹Concept 1 - Employment and Income; Concept 2 - Money Management; Concept 3 - Credit; Concept 4 - Purchase of Goods and Services; Concept 5 - Rights and Responsibilities in the Marketplace.

²A difficulty index of .00 = no person taking the test answered the item correctly; 1.00 = all persons answered correctly.

³* = item discriminates at the .05 confidence level; ** = item discriminates at the .01 confidence level.

⁴Each sub-part contains 10 items.

⁵Patterns of response to distracters refer only to multiple-choice questions (items 32-50). Only items 33 and 41 had E as an option.

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
13	1	.50	0.961	2.284*						
14	4	.87	2.638*	3.032**						
15	5	.26	-0.358	2.035*						
16	3	.63	1.849	2.091*						
17	1	.79	-0.556	-0.320						
18	4	.55	1.122	2.753**						
19	5	.79	1.661	4.029**						
20	4	.71	1.015	2.171*						
21	2	.82	1.311	2.604*						
22	1	.63	2.554*	2.670*						
23	5	.82	3.197**	3.117**						
24	1	.47	2.424*	3.057**						
25	4	.76	2.203*	2.845**						
26	3	.53	0.569	2.102*						
27	3	.82	2.237*	2.775**						
28	4	.97	-0.121	0.765						
29	1	.68	-0.351	1.302						
30	4	.61	-0.309	1.931						
31	5	.79	1.193	2.478*						
32	1	.66	0.961	1.690	7	0	4	25	0	2
33	2	.82	1.118	1.868	2	2	2	31	1	0
34	3	.55	1.272	3.294**	11	1	21	5	0	0
35	5	.32	1.367	0.811	12	9	8	8	0	1
36	2	.84	-0.612	0.017	4	32	2	0	0	0
37	3	.55	1.736	2.310*	15	2	21	0	0	0
38	5	.58	0.511	2.717*	11	22	2	3	0	0
39	4	.74	2.065*	2.192*	3	5	2	28	0	0
40	3	.61	1.616	1.655	15	23	0	0	0	0
41	3	.68	0.946	1.251	0	7	26	1	3	1
42	2	.82	0.743	1.868	7	0	0	31	0	0

Continued

Item Number	Concept	Difficulty	t-Value Discrimination		Patterns of Response to Distracters					
			Total Test	Sub-Part	A	B	C	D	E	No
43	3	.39	2.896**	2.999**	4	15	17	2	0	0
44	2	.47	2.081*	3.490**	6	18	14	0	0	0
45	5	.82	2.577*	1.417	2	2	2	31	0	1
46	3	.87	1.527	2.834**	33	2	3	0	0	0
47	2	.50	0.888	1.976	8	5	19	6	0	0
48	2	.45	0.099	2.470*	1	17	18	2	0	0
49	2	.74	1.433	1.488	6	1	28	1	0	2
50	2	.45	1.181	2.179*	3	2	15	17	0	1

APPENDIX S

MEAN SCORES AND CORRESPONDING STANDARD DEVIATIONS,
STANDARD ERRORS, AND 95 PERCENT CONFIDENCE INTERVALS
FOR EACH CONCEPT AREA INCLUDED IN THE COMPETENCY
ASSESSMENT INSTRUMENT BY SUBJECT-MATTER GROUP

APPENDIX S

MEAN SCORES AND CORRESPONDING STANDARD DEVIATIONS,
STANDARD ERRORS, AND 95 PERCENT CONFIDENCE INTERVALS
FOR EACH CONCEPT AREA INCLUDED IN THE COMPETENCY
ASSESSMENT INSTRUMENT BY SUBJECT-MATTER GROUP

Concept/Group	Mean	Standard Deviation	Standard Error	95% Confidence Interval
<u>Concept 1</u>				
Business Education	6.5192	1.6508	.2289	6.0596 to 6.9788
Home Economics	6.2800	1.7148	.2425	5.7927 to 6.7673
Mathematics	6.0444	1.6370	.2440	5.5526 to 6.5363
Social Studies	6.6053	1.4054	.2280	6.1433 to 7.0672
<u>Concept 2</u>				
Business Education	6.7885	1.8507	.2566	6.2732 to 7.3037
Home Economics	6.5600	1.7398	.2460	6.0656 to 7.0544
Mathematics	7.6444	1.4167	.2112	7.2188 to 8.0701
Social Studies	6.8421	1.3462	.2184	6.3996 to 7.2846
<u>Concept 3</u>				
Business Education	6.4808	1.4483	.2008	6.0776 to 6.8840
Home Economics	6.3800	1.6890	.2389	5.9000 to 6.8600
Mathematics	6.3333	1.5811	.2357	5.8583 to 6.8084
Social Studies	6.1053	1.7366	.2817	5.5345 to 6.6761
<u>Concept 4</u>				
Business Education	6.8846	1.5166	.2103	6.4624 to 7.3068
Home Economics	7.3200	1.4907	.2108	6.8964 to 7.7436
Mathematics	6.5556	1.6033	.2390	6.0739 to 7.0373
Social Studies	7.1842	1.5397	.2498	6.6781 to 7.6903
<u>Concept 5</u>				
Business Education	5.9423	1.8934	.2626	5.4152 to 6.4694
Home Economics	5.9800	1.6349	.2312	5.5154 to 6.4446
Mathematics	5.8667	1.4078	.2099	5.4437 to 6.2896
Social Studies	6.7105	1.4687	.2383	6.2278 to 7.1933