Principles for vocational education : validation of statements of beliefs selected from the literature and research
by Louise Jean Keller

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Montana State University
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Abstract:
This study was undertaken to determine a set of belief statements, when validated, would serve as principles for vocational education. The Assumption was made that beliefs expressed by vocational leaders and appearing in the literature are often the principles which guide and shape education decisions. The major purposes of the study were to: 1) identify from the literature statements of beliefs, and 2) seek validation of these selected statements. The instrument selected for validating the statements of beliefs was a modified version of the Q-sort technique, referred to in the study as a card-sort. As a result of two pre-tests the final instrument for validation included: 91 statements of beliefs printed on separate cards, and a degree of agreement scale for sorting the statements. The respondents sorted the statements as to: "strongly agree," "agree," "no opinion," "do not agree," or "strongly disagree." The respondents selected for validating these statements of beliefs were State Supervisors for vocational education from Colorado, Idaho, Montana, Utah,r and Wyoming. These states comprise the United States Office of Education's Region VIII. There was a ninety-two percent return.

The responses were tabulated and a regional composite mean of degree of agreement was determined for each statement. The responses were analyzed as to nine categories of statements of beliefs: Curriculum, Definitions, Evaluation, Guidance, Leadership, Organization and Administration, People Served, Teacher Education, and Trends. A total of 2,093 statement responses were received and 84.18 percent of these responses fell into the "strongly agree" and "agree" categories. Only 8.75 percent of the responses fell into the "do not agree" and "strongly disagree" categories.

The conclusion can be drawn that there are identifiable beliefs on which a specific reference group can agree. Several of the statements which received "agree" or "strongly agree" responses only are briefly stated: 1) Curriculum content is based on occupational analyses; 2) Programs are built around people; 3) Occupational preparation is not limited to classroom instruction; 4) Evaluation of vocational education considers both the product and the process; 5) Follow-up studies of graduates and drop-outs are evaluative tools for program effectiveness; 6) Vocational guidance includes assistance in vocational planning, appraisal, placement, follow-up, and collecting and disseminating occupational information; 7) Dissemination of information is vital to the progress of vocational education; 8) Vocational education is buttressed by research and innovation; 9) Programs for vocational education are a blend of practical experience and academic preparation. These common beliefs are generalized principles which serve as: (a) a decision-making guide, (b) a means for evaluating present practices, and (c) provide directives for future actions.

PRINCIPLES FOR VOCATIONAL EDUCATION-- VALIDATION OF STATEMENTS OF BELIEFS SELECTED FROM THE LITERATURE AND RESEARCH

by

Louise Jean Keller

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree

of

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ABSTRACT

This study was undertaken to determine a set of belief statements, when validated, would serve as principles for vocational education. The assumption was made that beliefs expressed by vocational leaders and appearing in the literature are often the principles which guide and shape education decisions. The major purposes of the study were to: 1) identify from the literature statements of beliefs, and 2) seek validation of these selected statements.

The instrument selected for validating the statements of beliefs was a modified version of the Q-sort technique, referred to in the study as a card-sort. As a result of two pre-tests the final instrument for validation included: 91 statements of beliefs printed on separate cards, and a degree of agreement scale for sorting the statements. The respondents sorted the statements as to: "strongly agree," "agree," "no opinion," "do not agree," or "strongly disagree." The respondents selected for validating these statements of beliefs were State Supervisors for vocational education from Colorado, Idaho, Montana, Utah, and Wyoming. These states comprise the United States Office of Education's Region VIII. There was a ninety-two percent return.

The responses were tabulated and a regional composite mean of degree of agreement was determined for each statement. The responses were analyzed as to nine categories of statements of beliefs: Curriculum, Definitions, Evaluation, Guidance, Leadership, Organization and Administration, People Served, Teacher Education, and Trends. A total of 2,093 statement responses were received and 84.18 percent of these responses fell into the "strongly agree" and "agree" categories. Only 8.75 percent of the responses fell into the "do not agree" and "strongly disagree" categories.

The conclusion can be drawn that there are identifiable beliefs on which a specific reference group can agree. Several of the statements which received "agree" or "strongly agree" responses only are briefly stated: 1) Curriculum content is based on occupational analyses; 2) Programs are built around people; 3) Occupational preparation is not limited to classroom instruction; 4) Evaluation of vocational education considers both the product and the process; 5) Follow-up studies of graduates and drop-outs are evaluative tools for program effectiveness; 6) Vocational guidance includes assistance in vocational planning, appraisal, placement, follow-up, and collecting and disseminating occupational information; 7) Dissemination of information is vital to the progress of vocational education; 8) Vocational education is buttressed by research and innovation; 9) Programs for vocational education are a blend of practical experience and academic preparation. These common beliefs are generalized principles which serve as: (a) a decision-making guide, (b) a means for evaluating present practices, and (c) provide directives for future actions.

CHAPTER I

INTRODUCTION

This study was concerned with the identification and validation of a set of statements expressed in the literature which could serve as principles for vocational education. Principles provide the logical and interlocking structure for decision-making, according to leaders in vocational education. Lowell A. Burkett, Executive Director of the American Vocational Association urged every vocational educator to be thoroughly familiar with the basic principles of vocational education [American Vocational Journal, March, 1968, p.5].

The literature since 1910 refers to the underlying principles of vocational education; research reviewers for the Center for Research and Leadership Development in Vocational and Technical Education, The Ohio State University, found little evidence of studies directed specifically at principles for vocational education [Lanham and Trythen, 1966, p. 8; Chadderdon and Fanalow, 1966, p. 1]. Melvin L. Barlow [1967, p. 9], Professional Director for President Lyndon Johnson's Advisory Council on Vocational Education, expressed the opinion that it was time for vocational educators to identify the principles of vocational education.

> Basic to all activity are the foundation principles...nowhere in our literature do we have a very succinct delineation of these principles. They are of our early record and to date no one has taken the time or trouble to separate them from this record.

A principle, according to the Dictionary of Education [1959, p. 412] is a generalized statement, a belief, a proposition, or concept which has a

decision-making influence. Roy W. Roberts [1957, p. 571], in the last chapter of his book defines a principle:

> A principle is defined as a fundamental consideration or basic rule which serves as a means of evaluating present practices or a guide to future action. When established, principles constitute areas of general agreement among individuals qualified in the field with which the principles are concerned.
>
> Principles of vocational education are derived from past experiences and judgments that have proved to be satisfactory and efficient. Many of the accepted principles of vocational education grew out of the deliberations on Federal aid for vocational education conducted prior to the passage of the Smith-Hughes Act, and some of these are incorporated in the basic vocational education laws. Other principles have been derived from time to time as experience has demonstrated a need and established a pattern.

Principles are statements of beliefs which express a synoptic idea or view regarding vocational-technical education.

The problem involved the identification of statements of beliefs expressed by vocational leaders in the literature and research, and the validation of these statements of beliefs by a reference group responsible for vocational decisions in education. This study began with some basic assumptions that gave direction to the entire effort:

1. Beliefs, expressed by leaders in the literature and research, may serve as principles for vocational education.

2. Common beliefs are identifiable in vocational education and can be validated to serve as principles for vocational education.

3. Statements of beliefs: (a) should reflect successful past experiences that have been constant and identifiable with vocational education; and (b) should reflect present and future needs of people in our society. These are the "imperatives" that exist in the literature and research [Park, 1967, p. 242].

I. THE PROBLEM

Statements of the Problem. The problem of identifying statements of beliefs, which could serve as principles for vocational education, required the selection of the literature and research to be reviewed for possible statements of beliefs; and, the selection of a validation instrument which would elicit from a group of respondents a degree of agreement regarding each statement of belief.

Limitation of the Study. The population for this study was limited to twenty-five State Supervisors of Vocational-technical Education in the United States Office of Education's Region VIII: Colorado, Idaho, Montana, Utah, and Wyoming. This group represented an important reference group in vocational education. State supervisors of vocational education are given the authority and responsibility through the Federal Rules and Regulations [Administration of Vocational Education, Rules and Regulations, Revised 1966, Section 104.11] to organize and administer vocational education programs in a state. This authority also permits the control and supervision of all state and federal funds for vocational education. This group, according to Merton [1957, p. 282] set and maintain standards

for others. The degree to which State Supervisors of vocational education agree on principles of vocational education is of major importance to the total vocational efforts in a state and region.

II. DEFINITIONS OF TERMS

A number of terms have been used in this study which are often subject to different interpretations. These terms have been restated in this section for clarification. Most of the definitions were drawn from educational dictionaries or recognized vocational education sources.

A. Categories of Statements of Beliefs. The categories of statement of beliefs used in this study represented descriptive terms used to explain the synoptic ideas expressed in a set of statements taken from the literature and research. Nine categories were used and are briefly described below:

1. Curriculum. This category contained those statements of beliefs concerned with synoptic ideas relative to curriculum content, instructional methodology, and types of learning experiences.
2. Definitions. Those statements of beliefs which described or defined various aspects of vocational education were classified in this category.
3. Evaluation. This category pertained to the recommendations and procedures, within the statements of beliefs, for reviewing periodically the activities and programs of vocational education.

4. Guidance. This category represents those beliefs which expressed the need, purpose, and role of vocational guidance and counseling.

5. Leadership. Those statements of beliefs which dealt with the need and means of developing vocational leadership in America were grouped in this category.

6. Organization and Administration. The statements of beliefs which described or explained the structure of vocational education at various levels were grouped in this category.

7. People Served. The statements of beliefs classified under this category indicated that vocational education serves all levels of education, elementary through postsecondary and all the citizens who need and desire such training.

8. Teacher Education. The preparation of individuals for the role of vocational teachers and administrators describes this category.

9. Trends. Statements of beliefs which expressed a desire for change in vocational education or represented what Park [1967, p. 242] called educational imperatives, were classified as "trends" in vocational education.

B. Occupational Services. That division of the State Board for Vocational Education responsible for the leadership, research, and development of specific vocational and technical education programs.

C. Principle. A generalized statement, proposition, or concept which serves as a decision-making guide; an attitude, or belief which exercises a directing influence [Dictionary of Education, 1959, p. 412]. A fundamental consideration or basic rule which serves as a means of evaluating present practices or a guide to future actions [Roberts, 1965, p. 526].

D. Q-sort technique. A questionnaire which utilizes a card-sorting technique for ascertaining given responses [Schill, 1961; and, Crawford, 1967].

E. State Supervisor. The individual entrusted with the responsibility of directing and supervising the activities of a specific occupational service, and is directly under the Director of the State Board for Vocational Education.

F. Statement of Belief. A set of synoptic ideas which present a general or total view stated or declared as a principle for vocational education.

Synoptic Ideas. An organizing or thematic concept, one that presents a general or total view.

G. Technical education. Specialized education for occupations ordinarily requiring two years of preparation beyond high school, which emphasizes the science, mathematics, and laboratory procedures related to the occupations for which the students are preparing [Hamlin, 1967, p. 20].

H. Validation. An act or response which confirms in some manner the relative degree of agreement to a set of belief statements.

I. Vocational education. The name applied to man's pursuit in acquiring experience which will enable him to enter and advance within the

occupational structure of society [Vocational Education in the Next Decade, Proposals for Discussion, January 4, 1961].

III. PROCEDURES

Two major procedures were used in this study: The first procedure involved a review of the literature and research concerning vocational education which had been published since 1910. The purpose of the literature and research review was three fold: 1) to determine what had been published, 2) establish a system for data management, and 3) to select from the accumulated data those statements of beliefs which represented a synoptic overview of vocational education as principles for vocational education. The second major procedure involved the construction of a questionnaire which would validate these selected statements of beliefs.

IV. DESIGN OF THE STUDY

The schema for this study required a series of operational steps. These were: 1) selection of the statements of beliefs, 2) construction of the validation instrument, 3) administration of a card-sort questionnaire, and 4) the analysis of the data obtained in the returns.

Selection of the Statements of Beliefs. The statements were taken from the literature and research written by individuals recognized as leaders in education, especially in vocational education. The criteria used for selecting statements of beliefs were also based on the criteria

recommended by Larten Camien, J. C. Flanagan, Joe Park, and Hilda Taba. After a general review of the data sources a system for review and data management was established. This system appears in Appendix A.

A total of 264 statements of beliefs were originally selected and recorded on 5 x 8 cards. The statements were reviewed and those cards expressing similar beliefs were placed together. This procedure permitted each statement to be compared. Duplications regarding specific beliefs were eliminated and statements which were found not to be clear or sound in two pre-tests were also eliminated. The final 91 statements of beliefs when analyzed revealed distinct patterns of belief which were generalized as nine descriptive categories: Curriculum, Definitions, Evaluation, Guidance, Leadership, Organization and Administration, People Served, Teacher Education, and Trends.

Construction of the Validation Instrument. The instrument selected for collecting responses to the 91 statements of beliefs was a modified version of the Q-sort technique [Schill, 1961; Schill and Arnold, 1965; Crawford, 1967], referred to here as a card sort. The Q-sort technique is a questionnaire type of survey which prints the questions or statements on separate cards. The respondents or reactors are then requested to make a prescribed response to the question or statement.

The pre-tests were conducted before the final validation. The respondents were asked to sort cards or statements of beliefs according to a degree of agreement scale: "Strongly Agree," "Agree," "No Opinion," "Do Not Agree," or "Strongly Disagree." The agreement scale permitted an

arithmetic mean for each statement to be computed. An average of 1.0 meant total agreement while an average of 5.0 meant total disagreement.

Administration of the Card-Sort Questionnaire. The finalized 91 card-sort statements of beliefs, including an instruction sheet and answer sheet, were mailed to the group selected to validate the statements. The validation group was composed of State Supervisors of Vocational Education in Colorado, Idaho, Montana, Utah, and Wyoming. These five states comprise the United States Office of Education's Region VIII. The above material can be seen in Appendix C.

Analysis of the Data. The validation procedures in this study referred to an act or response which confirmed in some manner the relative degree of agreement to a statement of belief. As the answer sheets were returned, the responses were recorded to show the frequency or distribution of responses according to the "degree of agreement" [Appendix D].

This frequency provided both a state and regional mean to be computed. The regional composite means provided the technique for rank ordering all ninety-one statements of beliefs. The state mean was computed and ranked within categories to permit individual states to compare their responses with other states included in this study. The categories also provided a vehicle for analyzing the 2,093 individual responses on a regional basis.

V. SUMMARY

This study began with the probing question: What are the principles of vocational education? An assumption was made that beliefs expressed by vocational leaders are often the principles which guide and shape educational decisions. The major purposes of this study were to: 1) identify from the literature and research statements of beliefs, and 2) seek validation of these selected statements. The population sample represented an important policy-making froup in the organizational and administration scheme of vocational education in five states. The validation procedure sought to identify those statements of beliefs on which the respondents "agreed" or "strongly agreed." These statements are assumed to be a set of principles for vocational education.

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature and research in vocational-technical education served three purposes: 1) to establish the need for the study, as seen in Section I of this Chapter; 2) to review the research studies utilizing the Q-sort technique, as seen in Section II; and, 3) to review the research and literature from which statements of beliefs would be selected, as seen in Section III. These three purposes represent the major chapter subheadings.

I. NEED FOR THE STUDY

The need or rationale for this study was based on these three factors: 1) Existing research indicated a lack of identifiable principles of vocational education. These studies were limited primarily to specific occupational service areas. 2) The leaders in vocational education since 1910 have referred to the importance of identifying principles for vocational education; and, 3) Surveys indicated a course entitled "Principles of Vocational Education" was recommended or required by States for vocational teacher-certification. These three factors are briefly elucidated below.

The National Commission on Teacher Education and Professional Standards in 1962 stated in the formal conference report: "...we need to learn how to identify and measure basic philosophical beliefs and educational beliefs." The latest issue of Review and Synthesis in Research,

from the Educational Research Information Center (ERIC) for Vocational and Technical Education located at The Ohio State University, indicates "relatively few formal studies of this nature (principles and philosophy) have been carried on previous to or since 1960" [Chadderdon and Fanslow, 1966, p. 1]. The following leaders in vocational education have recognized the importance of identifying common beliefs or principles of vocational education [Snedden, 1916, p. 21; Walsh, 1960, p. 9; Barlow, 1967, p. 8; and Burkett, 1968, p. 5]. "Little has been done to separate these principles from the literature and research which exists in vocational education" [Barlow, 1967, p. 9]. It was stated many years ago by Edna P. Amindon [1939, p. 9], Chief of Home Economics in the United States Office of Education: "...any area will be as comprehensive in scope, purpose, and possibilities as the principles that are responsible for its development."

The need for identifying principles is further aggrandized by the fact that a professional course entitled: "Principles and/or Philosophy of Vocational Education" is required or recommended for vocational teacher-certification in many states. Walsh [1958] in a doctoral study entitled Qualifications, Preparation and Competencies of Trade and Industrial Teachers, found the majority of the states requiring such a course for Trade and Industrial teacher-certification. Leaders in the same occupational area met at Stout State College in 1960 and the participants listed "Principles and Philosophy of Vocational Education" as one of the most important teacher-training courses.

A survey of State Vocational Education Supervisors in seven states, comprising the United States Office of Education's Region VI, confirmed that sixty-eight percent of the State Supervisors for Agriculture, Distributive, Business and Office, Home Economics, and Trade and Industrial Education require or recommend a professional course regarding "Principles of Vocational Education" for State vocational teacher-certification. This study was conducted by the investigator and the instrument and findings appear in Appendix B.

It was generalized that if vocational leaders saw a need for identifying principles for vocational education; if the number of research studies were limited to a specific occupational service area; if states require or recommend a course related to principles of vocational education; and, if the literature does contain statements which might be drawn together to serve as principles for vocational education; then the assumption could be made that such a study was pragmatic.

Lindesmith and Strauss [1956, p. 52] in Social Psychology contend:

> ...that if human beings are to be organized into a group, there must be certain amount of understanding, agreement, and shared knowledge as to common aims, and values--that is, there must be "consensus" among group members.

The identification of principles for vocational education, according to Dr. Aleene Cross [1967, p. 49]:

> ...could be the starting point for future joint endeavors to expand vocational education. It could also be the basis

> for inservice training activities, for group discussions at summer conferences, and for class discussion in philosophy of vocational education courses.

II. REVIEW OF THE RESEARCH STUDIES UTILIZING THE Q-SORT TECHNIQUE

Two major studies in vocational education, both funded by the United States Office of Education, provided the attribution for the development of the research design and the questionnaire instrument. In 1965 John Schill and Joseph Paul Arnold completed a research study entitled Curricula Content for Six Technologies, at the University of Illinois. This study identified the competencies and the content which are common to six technical occupations. The investigators were successful in isolating and getting accepted, from a panel of jurors, ninety-nine occupational commonalities.

The ninety-nine statements constructed by the investigators were printed on cards and the Q-sort technique was utilized for evaluating the statements. In the summary of the report the investigators [Schill and Arnold, 1965, p. 94] stated:

> The technique of having individuals respond to a set of cards has a number of advantages over the rating form which is more typically used. The most obvious of these are the opportunity to compare all the items with each other in the process of responding and the opportunity to make assessments of the relatedness of items without being committed to a given response until all items have been inspected and reviewed.

A second study utilizing a similar research design was written by Lucy C. Crawford, Associate Professor at Virginia Polytechnic Institute,

Blacksburg, Virginia. The study was divided into two parts and the original research was funded under Section 4(c) of the Vocational Education Act of 1963. The title of the study was A Philosophy of Distributive Education, A Report of the First Step in the Research Project: A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education. The purpose of the study was to construct basic belief statements regarding Distributive Education. The statements were drawn from the literature, research, professional speeches, conference notes, etc. The final statements were mailed in card form to a committee of consultants for validation. The respondents were asked to sort the cards into five piles based on a belief agreement scale. Ninety-six statements formed the "basic beliefs" in Distributive Education. Under the heading "implications" Mrs. Crawford [1967, p. 37] remarked:

> These findings have implications for all phases of the distributive education program and should have a bearing on other vocational fields as well.

The study completed by Crawford was the model for this particular study. Mrs. Crawford made available some of the unpublished material developed by her and Mr. H. W. Sanders prior to the final study. Other valuable references concerning the Q-sort technique appeared in the September 1961, California Journal of Educational Research, and the 1960 December issue of the Journal of Experimental Education.

III. REVIEW OF THE RESEARCH AND LITERATURE FOR SELECTING STATEMENTS OF BELIEF

The review of the research covered a period from 1950 to the present. The literature review encompassed the years 1910 to the present. Many of the accepted principles of vocational education grew out of the deliberations on Federal aid prior to the passage of the Smith-Hughes Act of 1917 [Roberts, 1957, p. 571]. Because of the voluminous source data available, a system for review and data management was developed. A detailed outline of the system can be seen in Appendix A. The system was composed of two major divisions: A. The Research Review and B. The General Literature Review. Each major division was subdivided into a data classification schema as outlined below:

A. The Research Review
   1. Agricultural Education
   2. Business and Office Education
   3. Distributive Education
   4. Home Economics Education
   5. Trade and Industrial Education
   6. Others, e.g.: Adult Education, Technical Education

B. The General Literature Review
   1. Periodicals
   2. Conference Reports

3. Speeches

4. Books and United States Government Publications

The review of the research and literature, and described below, follows this major outline.

A. The Research Review

As stated previously, the research review revealed little had been done to identify specific principles for vocational education except in specific occupational services. These studies, however, served two purposes. The research gave direction in the construction of the research design and several of the studies provided source data for the statements of beliefs. The review follows the six classifications previously listed, with an additional category for research not directly related to the six classifications.

1. Agricultural Education Research did not reveal specific research studies related to principles for vocational education. A joint committee from the United States Office of Education and the American Vocational Association developed a research project entitled Objectives for Vocational and Technical Education in Agriculture [1966]. Several of the statements made in this published report were used in the final card-sort. The most noticeable change in Agricultural Education research was the number of studies conducted to show that Agricultural Education now includes vocational preparation for occupations in the nonfarm businesses and

industries servicing agriculture [Beam, 1962; Clark, 1962; James, 1962; Thompson, 1962; and Phippe, 1962 and 1956]. Beam's [1962] analysis of the social-economic trends affecting vocational agriculture was found applicable to other areas of vocational education. Gadda [1964] and Beamer [1956] proposed an evaluation and reconstruction of the undergraduate or pre-service teacher education programs in agriculture.

2. Business and Office Education Research, according to Lanham and Trytten [1966, pp. 7-8], research reviewers for the Vocational Research Center at The Ohio State University, indicated educators in this occupational service area took for granted the principles of vocational education. Their assessment of the research and literature indicated the dominating trend with regard to philosophy and principles of vocational education is toward the integration of vocational and general education. This review was also reflective of the literature and national conference speeches. Charles R. Long [1968, pp. 15-17] in a recent dissertation compared the Vocational Education Act of 1963 to Business Teacher Educational programs in selected colleges and universities. Several of the conclusions drawn by Dr. Long were considered in the original card-sort instrument.

3. The Distributive Education Research considered pertinent to this study was conducted by Lucy Crawford. Her study, previously mentioned, identified ninety-six statements of beliefs regarding Distributive Education. Several of these statements were incorporated in the card-sort for this study. Other research studies in Distributive Education which provided valuable data for the research design were the studies completed by

Willis [1954], Kessell [1957], Warmke [1961], Samson [1964], and Palmer [1967].

4. In Home Economics Education Research McConnell [1965] explored the implications of selected philosophies of education for home economics. Brennan [1965] analyzed the beliefs and practices of Michigan and Pennsylvania Home Economics teachers related to certain generalizations in teacher-education. Lea [1963] was concerned with beliefs concerning higher education courses for home economics teachers in Oregon. Hostetler [1961] sought to define certain social, economic, and technical trends which affect home economics teachers and education. Briggs [1960] adapted a research inventory instrument and a questionnaire to assess beliefs regarding home economics. A study similar to Crawford's study in Distributive Education was completed by Luenhning [1954] to construct competencies for homemaking teachers in California. The changing role of women in the economy and related wage-earning programs in home economics were researched by Blunier [1963], Fisher [1963], and Britain [1965].

5. The Trade and Industrial Research reviewed by Bruce W. Tuckman and Carl J. Schaefer revealed a number of major conclusions from the research. Chase [1963] contended eighty percent of youth are "learning to be unemployable." The comment was based on the rationale that only twenty percent of the youth graduate from college prepared to earn a living. Righthand [1964] suggested the extension of vocational programs to cover more students. McDowell [1965] found that course offerings in vocational education should be more flexible, counseling extended, and

training should be provided for out-of-school youth and adults, and the public should be "wooed and won over to the course" of vocational education. Sweany [1966] recommended planned, continuous evaluation of vocational programs at all levels. Harris [1965] argued that vocational education should be a blend of the intellectual and the practical and also contended that separation of vocational education from the general and academic education will only obscure the goal of the learner and create second-class citizens. Regarding curriculum, Olivo [1964] recommended that vocational curricula be built along five dimensions. The first was vertical coordination, which is similar to the cluster concept of Maley and Frantz [1965]. The common elements of a family of occupations form the basis for curriculum. Horizontal articulation was the second dimension which requires job analysis to identify common or related elements across the different disciplines of the total educational program. The third dimension deals with employment opportunities or the manpower statistical dimension. The fourth and fifth involves research and experimentation in vocational education curricula.

6. Other Research was made of the publications from the Center for Research and Leadership Development in Vocational and Technical Education at The Ohio State University. The reviews covered such material as ARM [Abstracts of Research and Related Material in Vocational and Technical Education] and the Review and Synthesis of Research in Agricultural, Business and Office, Distributive, Home Economics, Industrial Arts, Trade and Industrial, and Technical Occupational Education. A significant

preliminary research study by Jacob J. Kaufman [1968] at Pennsylvania State University is entitled: "An Analysis of the Comparative Costs and Benefits of Vocational Versus Academic Education in Secondary Schools." Kaufman expressed concern that a large number of students in both the academic and vocational curricula find the requirements for entrance too rigid and the courses are not relevant to their needs.

Two recent studies concerned with vocational guidance has been initiated by Gribbons [1967] at Regis College, Weston, Massachusetts, to explore "career development." The institute for Performance Technology of the American Institute for Research published several research studies funded by the United States Office of Education. One publication was entitled Toward a Concept of Integrated Vocational Education. Three statements of beliefs were taken from this particular research which deals with an integrated vocational educational program from kindergarten through the fourteenth year of school. An important aspect of the research dealt with maximizing individual learning in vocational education and the behaviors associated with effectively choosing and forging a career. A position paper was presented by James W. Altman at the American Vocational Association Convention in 1965 concerning the Institutes research in vocational education.

A review of the adult education research indicated concern regarding adequate vocational training opportunities for this segment of our population. Marshall [1967] contends most of the programs that exist for adults are designed for middle-class persons. Burden [1967] sees the problem of

fitting programs to the needs of the adult student; finding a suitable curriculum; fitting the instruction to the background of the learner; and finding time in the school day to work on curriculum development, diagnosis, and prescription.

A study concerned with principles for in-service education for teachers appeared in The Dissertation Abstracts [American Doctoral Dissertation]. Though the study was not directly related to vocational education, several of the statements, validated by the investigator Maximiniano Aspiras Velasquez, were added to the statements of beliefs.

B. The General Literature Review

The review of the literature was systematized into five subdivisions: Periodicals, Conference Reports, Speeches, Books and United States Government Publications. The general literature review covered a period from 1910 to 1968.

1. Periodicals. The review of periodicals extended over a ten year period and was concerned with all aspects of vocational education. Only the material considered for the original 264 statements of beliefs are discussed.

"Evaluative Principles for Vocational Agriculture," an article by Alfred Krebs listed a series of principles applicable to all vocational education in the December, 1967 issue of the American Vocational Journal. Marks and Beaumont [1962] prepared a report for the National Conference of Leaders in Distributive Education. It covered the role of teacher

education and included: 1) objectives and philosophy of teacher education, 2) developing distributive education, 3) the curriculum in teacher education, and 4) advance professional programs. This article is considered the most comprehensive publication on distributive teacher education to date.

Johnson, Lowe, Smith, and Stringer published an article entitled: "Our Educational Beliefs," which appeared in the Journal of Home Economics. This group first sought to identify the educational beliefs which home economics education authorities accepted as important. Analysis of the data indicated that thirty of the beliefs were considered very important by at least seventy-five percent of these home economics educators. However, the beliefs were concerned with Home Economics in the secondary schools. Van Horn [1964] called for work experience during the pre-service education of our vocational home economic teachers. Dr. Elizabeth Simpson, past president of the American Vocational Association, focused several articles on the vocational purpose of home economics [1964 and 1965].

Foundation principles of Trade and Industrial Education were discussed by Barlow [1967] in the Journal of Industrial Teacher Education. Dr. Barlow's comments served as the introductory rationale for this study. A rather new concept in vocational education can be drawn from a proposal by the Los Angeles City Schools entitled: "Point of View--Elementary School Industrial Arts."

The periodicals covered various aspects of Vocational-technical education other than the specific occupational services. The National Council of Local Administrators, through their two publications

Council-Gram and Letter-Gram, provided views regarding vocational administration and supervision. Trapnell [1967, pp. 26-27], presented a "Structure of State Staff and Its Relationship to Program Effectiveness" in the December, 1967 issue of the American Vocational Journal.

New curriculum designs for vocational education have been proposed by Bolger [1964], Altman [1965], Morgon [1967], and Morgon and Bushnell [1967]. The concept of a systems approach and organic curriculum is appearing more frequently in the vocational literature. Work experience as an integral part of the schools curriculum was enunciated by Lindsay [1968]. McDonald [1966] made an appeal for a new concept of vocational education. Education, according to McDonald, is related to three basic referents: 1) people, 2) things, and 3) data. Regardless of an individual's activity, he related in some degree to these referents. Agan [1967] called for an interdisciplinary approach to vocational education.

A number of national vocational education leaders have been concerned with cost-benefit factors and the necessity for periodic national reviews of vocational education. Barlow [1967] raised the question "Why a National Review?" and listed several important principles to consider. Harlin [1967] defined evaluation in terms which are applicable for all occupational services in vocational education. Hull [1967] was concerned with evaluative criteria for measuring pupil attainment in vocational tasks.

Adult education articles have been concerned with preparing adults for rapid change [Coates, 1966; Hendrickson and Barnes, 1967] and the exclusion of the adult and other students from vocational education

preparation [Derbyshire, 1966; Smith, 1966]. Basic education (literacy training), as well as vocational education, was expressed as an issue in adult education by Marshall [1967], Neff [1968], and Pearce [1968].

Vocational guidance and counseling is a growing concern due to the expansion of vocational education services [Sharp, 1963; Ash, 1967; Foster, 1967; Swain and Bottoms, 1968]. Wilensky [1961] saw a "career" as an orderly work history of an individual. Each job prepares the individual for the next. Vocational guidance, according to Wilensky [1961] and Altman [1965] included: education about the world of work, vocational awareness, vocational identification, and career development.

The beliefs expressed by the leaders regarding "disadvantaged youth" and the need for vocational education programs to assist these individuals were enunciated by Ginzberg [1963], Sparks [1967], and Larson [1968]. The social and economic problems in the society are the impinging forces on vocational education and some of these forces were traced by Heller [1961] and Willers [1968].

The most comprehensive discussion on the philosophical foundations and issues facing vocational education appeared in the March, 1968 issue of the American Vocational Journal. A glimpse at what changes can be anticipated in the future, especially at the state and local levels, can be found in the summary report by the Task Force on Vocational-Technical Education published by the Education Commission of the Fifty States.

2. Conference Reports. National and regional conferences provide vocational educators and administrators a source for current beliefs and directives in vocational and technical education. An important conference and significant to this study dates back to January 10, 1916. The Commissioner of Education for Massachusetts, Dr. David Snedden, appeared before the National Society for the Promotion of Industrial Education. His introductory remarks are still relevant for this decade:

> The chief work to be done during the next ten years in the further development of vocational education may be considered under these heads: (a) the critical examination and evaluation of the numerous education beliefs which, in large part, determine the scope, direction, and character of contemporary experiments, in vocational education; (b) the formulation of a body of tested principles as to aims, administration, and methods of sound vocational education; and (c) the elaboration of detailed programs of vocational school organization and work.

Another source of basic beliefs regarding vocational educatinn was found in the formal report of the National Leadership Development Conference in Trade and Industrial Education [1960]. The addresses by John P. Walsh, James R. Eddy, Merle E. Strong, et al. contributed significantly to the statements of beliefs. Walsh in the opening address enunciated the "sixteen theorems" or statements of beliefs developed early in the 1900's by Charles A. Prosser.

A conference sponsored by the United States Office of Education at the Center for Vocational and Technical Education, The Ohio State University resulted in a compilation of speeches by outstanding educators. These

speeches were published under the conference report: Guidance in Vocational Education, Guidelines for Research and Practice--A National Interdisciplinary Seminar [1966]. A number of statements of beliefs were taken directly from this report. For example, Duane M. Nielsen from the United States Office of Education's Bureau of Research, expressed the belief that vocational educators and counselors need to understand how a person forms his concepts of work, the kinds of things which motivate people toward various work-related situations, and the ways in which the individual derives his satisfaction from them. Louis A. McElroy called for a coordinated program of vocational counseling beginning in the elementary school. He believed through organized counseling youngsters could be assisted in discovering their interests and abilities in order to help students develop career strategies. The reports emphasized the need for an interdisciplinary approach for solving many of the social and economic problems in our society. Work choice is a reflection of an individuals's attitude and shaped by his environment, according to Willis [1964].

Teacher-educators attending the Central Region Distributive Education Teacher Education Conference at the State College of Iowa in 1962 believed pre-service education required by future vocational educators could be classified as the acquisition of: fundamental knowledge, professional knowledge, technical knowledge, and occupational competence.

The most basic belief statements for home economics were found in

the report by the Philosophy and Objectives Committee of the American Home Economics Association in 1959. The Association began in 1964 to identify the "Competences Needed by a Beginning Teacher of Home Economics and the Concepts and Generalization to be Developed in Professional Home Economics Education Courses." From various conference reports by this group, synoptic ideas relative to this study were considered.

3. Speeches. Benjamin W. Willis, then General Superintendent of Schools, Chicago, Illinois, in a speech given before the American Vocational Association in 1964, made the statement that vocational education had not been the agency for preparing workers for the labor market. He urged educators to reconstruct the philosophy of education because the job of the school could not be purely academic. Positive programs of skill development for the greatest number was needed.

Mary Marks, Distributive Education Specialist from the United States Office of Education, appearing before the Pacific Region Distributive Education Conference in 1963 states: "...we have yet to define a goal of cooperation and establish a climate of understanding that will encourage vocational services to work together." Robert E. Taylor, director for the Vocational Education Research and Leadership Development Center at The Ohio State University enunciated the belief that vocational education can be the link between social needs and social improvement.

David S. Bushnell [Research Bureau, United States Office of Education] addressing the Vocational Education Research Association at the annual meeting of the American Vocational Association on December 6, 1966 at

Denver, Colorado presented several premises which are currently appearing in the professional literature:

> One premise I would like to argue is that with the changing skill requirements and the shifting job opportunities, we cannot expect our youngsters in our vocational programs to respond adequately if they are trained too narrowly.
>
> Secondly, I think we can expect that with the shift from production oriented occupations to service occupations there is going to be or need to be more emphasis on communication skills, cognitive skills, social skills, as well as the manipulating skills.
>
> A third premise I would like to argue for is: many of the entry level occupations will be changing, therefore, it is important that we provide the youngsters with the skills that will let them find jobs. However, it is not enough to give them just that, they must have the kind of basic learning skills and adaptability that will lead them hopefully through a number of jobs that will be stable within the community.
>
> Fourth, in the past we have had a tendency to separate general education and vocational education, but in so doing we penalize both groups. The college bound or professional bound group suffer because they do not know what the institutional processes are like in this free enterprise economy, they really don't grasp what the business world is all about. Vocational students, on the other hand, often do not have the opportunity to develop basic learning skills that will make them competitive and adaptable.

4. Books and United States Government Publications. Since 1960 a number of professional associations have formed national committees to review and make recommendations regarding various aspects of vocational-technical education. Some of these reports, published in paperback form,

provided educators with current beliefs as to the future role of vocational-technical education in America. The National Association of Secondary-School Principals published "Vocational Education, Time for Decision," in The Bulletin, 1965. The American Council on Education commissioned Grant Venn to write Man, Education, and Work [1964]. A report on the current scene in vocational education was written by Dale C. Draper for the National Committee on Secondary Education of the National Association of Secondary School Principals. The title of the paperback was Education for Work.

In 1956 the United States Office of Education published a bulletin entitled Public Vocational Education Programs--this was later revised and was reprinted by VOCATIO [December, 1967, p. 8]. In this report twelve "Essentials for Vocational Programs" were characterized. In 1963 the Panel of Consultants on Vocational Education presented to the United States Department of Health, Education, and Welfare, the Office of Education, a report which contained five sections. The report is better known as Education for a Changing World of Work. Various writers contributed significant articles on the economic and social background of vocational education. The consultants felt little had been done by vocational educators to help the people in need of help--the unskilled, poorly educated, older workers, and the high school dropouts. The writers called for greater participation of vocational educators in total community planning in order to solve the socio-economic problems which exist.

President John Kennedy appointed a Panel of Consultants on Vocational Education which has been viewed as a milestone in the redirection of vocational education. President Lyndon Johnson in November, 1966 appointed The Advisory Council on Vocational Education which was a continuation of the former committee. The Council consists of twelve members. Dr. Melvin L. Barlow was appointed the professional director. The first publication entitled The Bridge Between Man and His Work [March, 1968] was used extensively for selecting statements of beliefs. The first section of the report described the changing social and economic environment "which has elevated formal preparation for employment to a critical level in public policy." The second section reviewed the background and objectives of the Vocational Education Act of 1963. The next section described the current status of vocational education. This was followed by some basic concepts for career development. The last section contained "recommendations for the improvement of the 1963 Act and for the administration of new and changing concepts of education for employment."

The latter publication--The Bridge Between Man and His Work--represents excerpts from the March, 1968 United States Senate report: Notes and Working Papers Concerning the Administration of Programs Authorized Under Vocational Education Act of 1963.

The historical development or philosophical discourse on vocational education can be found in the books which date back to the turn of the century. In 1910 Sneeden, Weeks, and Cubberley expressed the belief that Vocational Education is an integral part of all education. The title of the book was Vocational Education--Its Theory, Administration, and Practice

and in the preface the authors stated:

> It is of the utmost importance that educators in all fields, --teachers in kindergartens and in elementary and high schools, and principals and superintendents, --as well as interested layman, should familiarize themselves with the social demands which are forcing and shaping the developments of vocational education, and with the issues and concrete proposals that are now daily coming to the front in connection with that development.

A number of the beliefs expressed by the above authors were considered in the formation of the Smith-Hughes Act of 1917. This act established the Federal Board for Vocational Education and the annual reports of this board provided cues to the early philosophy and principles of vocational education.

Other valuable sources for statements of beliefs regarding vocational education were found in the writings and addresses of Dr. David Spence Hill. In Chapter II of his 1920 book entitled Introduction to Vocational Education, he devoted the material to discussing the meanings of vocational education. Some of the principles stated in this chapter are no longer relevant, yet much of the terminology associated with vocational education can be traced to this early book. A fine discourse on vocational education was also written by Franklin J. Keller in 1948 entitled Principles of Vocational Education. Roy W. Roberts [1957 and 1965] presents several principles for vocational education in the last chapter of his book entitled Vocational and Practical Arts Education: History, Development and Principles.

IV. SUMMARY

The review of the research indicated a lack of studies concerned with identifying principles for vocational education. The studies regarding philosophy and principles were limited primarily to specific occupational service areas. The general literature from 1910 to the present referred to the importance of identifying principles for vocational education. Also, surveys indicated a course entitled "Principles of Vocational Education" was recommended or required for vocational teacher-certification.

The literature review provided the source material for selecting statements of beliefs expressed by vocational leaders. In summary form some major issues or imperatives may be inferred from the general literature and research review:

1. There seems to be a growing awareness that vocational education is not a separate discipline within education.

2. Programs and courses in vocational education need to be expanded.

3. The traditional programs prepare a small proportion of the labor market employees.

4. Vocational curricula needs to be more flexible. Instructional methods and materials need to be developed which are flexible and motivating and allow an individual to progress at his own rate and time schedule.

5. Adequate facilities are needed for vocational education.

6. Vocational education should be for all who need it. Vocational

educators have been accused of not serving the people who need their help the most, which include the dropouts, poorly educated, older workers, and the unskilled.

7. Counseling and guidance services need to be expanded and serve both youth and adults.

8. An elaborate educational system must be planned which will allow an individual to be involved in some type of educational experience most of his life. Such a concept requires a new type of planning at all levels.

9. Vocational education is seen as a continuous process of personal growth and development. Vocational education begins when the child becomes aware of different roles in the society.

10. There is a shortage of vocational education leaders.

11. Educational institutions preparing vocational teachers and administrators need to be aware of the shortage of qualified vocational personnel. These institutions must consider the new involvement of its leaders in community, state, and regional planning.

CHAPTER III

PROCEDURES FOR THE SELECTION OF STATEMENTS OF BELIEFS AND VALIDATION

Two major procedures were used in this study. The first procedure involved a review of the literature which had been published since 1910 in order to select statements of beliefs on vocational education, this was completed in the last Chapter. The second procedure involved the: 1) selection of the statements of beliefs, as seen in Section I of this Chapter; 2) construction of the validation instrument, discussed in Section II; and, 3) the procedures for validating the statements of beliefs were delineated in Section III.

I. SELECTION OF THE STATEMENTS OF BELIEFS

There are no simple rules or criteria for identifying statements of beliefs. Flanagan [1954] saw the problem as more subjective than objective and the results as inferences and subject to all the limitations. Two factors were considered in relationship to objectivity: 1) the statements were taken from the literature written by individuals recognized as leaders in education, especially in vocational education; and, 2) the criteria used for selecting statements of beliefs were arbitrarily selected but based on the opinions of Larten Camien, J. C. Flanagan, Joe Park, and Hilda Taba.

Park [1967, p. 242] believed a principle must reflect past successful experiences and beliefs that have been constant and identifiable with vocational education. Also, the statements must reflect present and

future needs of the people in our society; these he called the "imperatives." Hilda Taba [1962, p. 10] believed principles should reflect the nature and the structure of the discipline being considered. Camien [1958, p. 1] stated principles must be sufficiently theoretical, practical, and allow for elaboration by philosophic discussion and scientific investigation. Flanagan [1954] saw the quality and usability of the final product as the significant criteria.

The extensive, profound, and voluminous amount of material written on the subject of vocational education since 1910, as stated in the last chapter, required a schema for identifying and handling the source data. After a general review of the data sources, a system for review and data management was established. This system appears in Appendix A. The review system established and delimited the source materials for review and provided a filing system for handling the recorded data. Based on the criteria delineated above and the utilization of the data source review system, statements reflecting a belief were recorded on 5 x 8 index cards. At the close of the literature research review there was a total of 264 statements of beliefs.

II. CONSTRUCTION OF THE VALIDATION INSTRUMENT

The instrument selected for collecting responses to the statements of beliefs was a modified version of the Q-sort technique. Q-sort technique, often called a card-sort, is a questionnaire printed in card form [Sheldon and Sorenson, 1960].

Schill and Arnold [1965], and Crawford [1967] in the construction of belief statements for their particular studies found the problem of language inherent in the writing of card-sort statements. The total abatement of this problem, according to Flanagan [1954], is not possible. The statements used in this study were in most instances left in their original form except for the addition of two words at the beginning of each statement: "I believe..."

The above studies also found it necessary to reduce their card-sort to a reasonable number of card statements. These studies found it usually requires one hour for a respondent to complete a 100 card-sort questionnaire based on a statement word-count of approximately 30 words. Crawford's study involved 96 statements and the average word count per statement was 25. Schill and Arnold reduced their statements to 99 cards with an average of 26 words per statement. In each case it took the respondents approximately one hour to complete the card-sort questionnaire. The 264 statements of beliefs in this study had an average word-count of 46 words.

The first task in developing the card-sort questionnaire was to establish a technique for analyzing the cards for duplication of beliefs with the idea that some of the statements could be eliminated from the card-sort. Each card was read and a brief categorical description which best described the statement was written at the top of the card. The cards were read again within categories. Statements of beliefs expressing the same ideas were removed. The results of this procedure reduced the

original number of statements of beliefs to 94 cards, arranged in nine general categories: Curriculum, Definitions, Evaluation, Guidance, Leadership, Organization and Administration, People Served, Teacher Education, and Trends. The categories proved to be a useful device. Categories not only permitted the comparison of statements in order to reduce the card-sort to a reasonable number but later provided a means of analyzing and drawing conclusions from 2,093 statement responses.

Once, the number of statements were reduced to 94, the statements were printed on index cards and arranged in the card-sort according to categories. For example, the first 25 cards dealt with statements of beliefs regarding curriculum. Though the cards were arranged in the card-sort by categories the names of the categories were not printed on the cards. Each card did have an identification number--printed in the right corner and a coded reference source in the lower left corner. An example of this arrangement appears in Figure I. The illustrated card was No. 49 in the card-sort. The source reference bears a coded number (48) at the bottom of the card. The list of coded references appear in Appendix F.

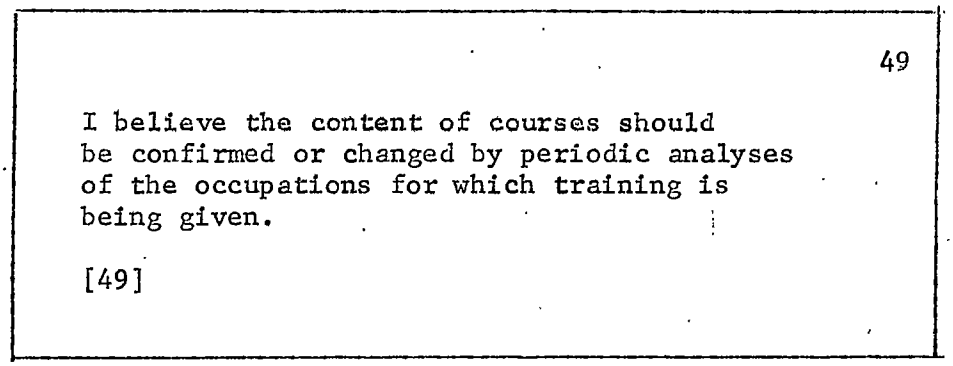


FIGURE 1

CARD NO. 49 FROM THE 91 CARD-SORT, STATEMENTS OF BELIEFS IN VOCATIONAL EDUCATION

Once the 94 statements of beliefs regarding vocational education had been selected and printed on cards, an agreement scale and procedure for sorting the cards were developed. This latter procedure was based on Crawford's 1967 study. The agreement scale assigned numeric values on a 5-point scale and permitted an arithmetic mean for each statement to be computed. An average of 1.0 meant total agreement while an average of 5.0 meant total disagreement. After the respondent read each statement of belief regarding vocational and/or technical education, he was directed to sort the card into one of the five stacks:

STACKS	1	2	3	4	5
	Strongly Agree	Agree	No Opinion	Do Not Agree	Strongly Disagree

This agreement scale forces a respondent to make some degree of agreement response. The purpose of this study was to identify those statements of beliefs on which the respondents agreed. The assumption that beliefs are often the principles of people which shape educational decisions [Park, 1967, p. 233].

The next task in the construction of the validation instrument was the construction of: 1) a letter of introduction, 2) an instruction sheet, and 3) an answer sheet. The letter of introduction explained briefly the purpose of the study. The instruction sheet directed the respondents to read each statement of belief regarding vocational education and indicate his agreement, with each statement, by sorting the cards according to the agreement scale printed on the instruction form. If the reactor disagreed with a particular statement because of wording, he was asked to reword the statement on the back of the card and return it with the answer sheet. The instruction sheet further stated that the reactor could rearrange the cards as often as he desired. When the reactor was satisfied with the sorting arrangement he was then directed to record the results on the answer sheet.

The answer sheet was constructed with two columns. The first column listed the card numbers, one through ninety-four. Opposite each card number the reactors were asked to list his degree of agreement to the statement. For example, if statement No. 49 appeared in stack one "strongly agree", he would place "1" opposite Card No. 49 on the answer sheet.

Once the statements of beliefs had been identified, and the Q-sort instrument constructed the next procedure was a pre-test. A trial test was conducted to verify the clarity and comprehensibleness of the statements and to evaluate the instructional directives for the card-sort. The pre-test was composed of graduate students enrolled at Montana State University for the summer. The students selected for the pre-test were qualified vocational teachers in secondary schools and junior colleges. Ten graduate students were asked to complete the card-sort questionnaire. The group was presented an instruction sheet and 94 cards to sort according to the agreement scale. The graduate students were observed and times. The average time required to complete the 94 card-sort was fifty minutes.

After the trial test, the individuals were interviewed. Several changes resulted from this procedure. Three statements of beliefs were removed from the card-sort because of language difficulties. The pre-test group recommended the words "as it ought to be" should be added to one sentence in the instruction sheet, causing it to be read: "Each card represents a statement of belief regarding vocational and or technical education as it ought to be." The major change was in the card-sort a arrangement. The cards had been sequenced as to categories. Though the categories were not printed on the cards, the pre-test participants were aware of the arrangement after reading several of the statements and the reactors began comparing one statement to another. This arrangement tended to elicit a negative response from the person completing the instrument. The cards were rearranged so distinct categories were not apparent. The

instrument was again tested with another group of graduate students. This time these biases did not appear. The final nine categories and number of statements of beliefs in each category appear in Table I.

TABLE I

CATEGORIES AND NUMBER OF STATEMENTS OF BELIEFS TAKEN FROM THE LITERATURE AND RESEARCH

Categories	Number of Cards
Curriculum	24
Definitions	10
Evaluation	4
Guidance	10
Leadership	5
Organization and Administration	12
People Served	4
Teacher Education	13
Trends	9
Total	91

III. THE VALIDATION PROCEDURES

The population selected for the validation procedure was limited to twenty-five vocational education State Supervisors from Colorado, Idaho, Montana, Utah, and Wyoming. These States comprise the United States Office of Education's Region VIII and the state supervisors represented an important reference group [Chapter I, p. 10]. These states were also continguous to Montana and Montana State University, the area of direct educational concern and involvement for the investigator.

Each State Director for vocational education was contacted by telephone. The study was described and the assistance of his State Supervisors of Agriculture, Distributive, Business and Office, Home Economics, Trade and Industrial Education was requested for valiading the statements of beliefs. This initial contact made it possible to mail to the Directors all five card-sort packets for distribution to the supervisors. Each card-sort packet contained: an introductory letter; ninety-one statements of beliefs printed on 3 1/2 x 4 1/4 inch cards; an instruction sheet; an answer sheet; and a self-addressed, airmail/special delivery, stamped envelope for returning the answer sheet. The materials contained in the packet can be seen in Appendix C.

The initial contact with the State Directors was considered important because the Q-sort questionnaire required considerable amount of time to be completed. Twenty-three out of twenty-five possible answer sheets were returned, making a ninety-two percent return. The number and percentage of Q-sort returns from the respondents can be seen in Table II.

TABLE II

NUMBER AND PERCENTAGE OF Q-SORT RETURNS FROM RESPONDENTS REGARDING STATEMENTS OF BELIEFS IN VOCATIONAL EDUCATION

States	Total Number of Respondents	Number of Returns	Percent
Colorado	5	5	
Idaho	5	5	
Montana	5	5	
Utah	5	3	
Wyoming	5	5	
Totals	25	23	92%

IV. SUMMARY

The purposes of this study were to identify and validate statements of beliefs for vocational education which might serve as principles for vocational education. A total of 264 statements of beliefs were selected from the literature. The criteria used in the selection was based on the written opinions of Flanagan [1954], Camien [1958], Taba [1962], and Park [1967]. The instrument selected for validating the statements of beliefs, expressed by vocational leaders, was a modified version of the Q-sort technique. In an attempt to reduce the number of statements, the card statements were read and a brief descriptive notation was placed on each card which best described the statement of belief. This procedure

permitted similar belief statements to be brought together for analysis. The number of statements were reduced to 94.

An agreement scale, based on the scale developed by Crawford [1967] was constructed. The agreement scale permitted the respondent to sort each statement as to a degree of agreement. The instrument was pre-tested and the card-sort was reduced to 91 cards. Twenty-five State Supervisors were asked to respond to each of the 91 statements of beliefs by sorting the cards into one of the five degree of agreement stacks:

STACKS (Degree of Agreement)

1	2	3	4	5
Strongly Agree	Agree	No Opinion	Do Not Agree	Strongly Disagree

Twenty-three of the State Supervisors completed the card-sort questionnaire with a ninety-two percent return.

CHAPTER IV

ANALYSES AND INTERPRETATIONS OF THE CARD-SORT RESPONSES

The respondents, using the card-sort technique, assigned numeric values on a 5-point scale to each statement of belief. An average of 1.0 meant the respondent "strongly agreed" with the statement of belief while a 5.0 meant the respondent "strongly disagreed" with the statements. Twenty-three out of twenty-five respondents completed the card-sort questionnaire. Two respondents returned a total of six cards with special notations, however, all the cards had been sorted by the respondents as to a degree of agreement. The notations did not change the meaning of the statements, therefore, the six responses were considered in the final compilation. There was a total of 2,093 individual responses.

The purpose of the validation, as discussed in Chapter III, was to identify those statements of beliefs on which the respondents "agreed." The assumption was made that beliefs are often the principles of people which shape educational decisions [Park, 1967, p. 233]. The statistical procedure for ascertaining the statements of beliefs on which the respondents "agreed" was determined by multiplying the number of responses times the degree of agreement assigned by the respondents. A composite regional mean was then determined by dividing this sum by twenty-three, the total number of respondents. This computed regional mean for each statement permitted the rank order of the statements by regional composite mean from 1.0 to 5.0 [Appendix E].

An additional statistical treatment was considered essential for two reasons. First, just as it was necessary to categorize the original 264

cards for analysis in order to reduce the size of the card-sort, it was again necessary to group the responses together by the nine categories for further analysis and interpretations. Secondly, the State Supervisors responding to the card-sort questionnaire requested a copy of the study. In order for the respondent to compare his belief responses and for each state to be compared with other states in the region, a state mean was computed. The statements of beliefs with the state mean were rank-ordered by category for each state as well as by region [Tables IV through XII]. Also, the frequency of responses given to each of the ninety-one statements of beliefs with the state and regional composite mean were placed in table form and appear in Appendix D. Analyses and interpretations of the card-sort responses are further elucidated in Section I which describes the degree of agreement given to the statements of beliefs. Section II of this Chapter interprets the responses as to specific categories.

I. STATISTICAL TECHNIQUES FOR MEASURING AND ANALYZING THE RESPONSES

Statements on Which the Respondents Agreed. The purpose of the validation was to ascertain those statements of beliefs on which the State Supervisors of Vocational Education in Colorado, Idaho, Montana, Utah, and Wyoming agreed. Since each statement called for a numeric response on a 5-point scale, the statistical procedure required the computation of a composite regional mean for each statement. As the answer sheets were returned, the responses were recorded to show the 5-point frequency or distribution of responses according to the degree of agreement scale [Appendix D]. When all the answer sheets for a particular state had been

received, the total responses to a given statement were tabulated and a state mean computed. The regional composite mean was determined by computing the responses according to the degree of agreement scale and then dividing the sum of all the responses for a given statement by twenty-three, the total number of respondents reacting to the statement. The regional composite mean permitted the rank order of statements.

Table III indicates that 724 responses, out of a possible 2,093 responses, were ranked in the "strongly agree" category by the 23 respondents. A total of 1,038 responses, almost fifty percent of the total responses, were sorted into the "agree" stack.

TABLE III

TOTAL NUMBER OF RESPONSES AND PERCENTAGES AS TO DEGREE OF AGREEMENT BY STATES AND REGION

State	1 Strongly Agree	2 Agree	3 No Opinion	4 Do Not Agree	5 Strongly Disagree
Colorado	175 38.46%	203 44.62%	33 7.25%	33 7.25%	11 2.42%
Idaho	196 43.08%	208 45.71%	23 5.06%	28 6.15%	0 0
Montana	82 18.02%	278 61.10%	36 7.91%	42 9.23%	17 3.74%
Utah	80 29.30%	162 59.34%	12 4.40%	15 5.49%	4 1.47%
Wyoming	191 41.98%	187 41.10%	44 9.67%	24 5.27%	9 1.98%
Total Responses [2093]	724	1038	148	142	41
Regional Percentages	34.59%	49.59%	7.07%	6.79%	1.96%

When the statements were ranked according to regional composite mean the respondents had "agreed" or "strongly agreed" on 55 of the 91 statements of beliefs [See Appendix E for the rank order of the statements of beliefs by regional composite mean]. There was almost as many "do not agree"

as there were "no opinion" responses. Appendix D shows the frequency of responses given to each of the 91 statements of beliefs by the individual states. All the statements of beliefs, as to card-sort order, can be seen in Appendix E.

II. ANALYSIS AND INTERPRETATION OF RESPONSES BY CATEGORY

In order to further analyze the responses in relationship to the statements of beliefs, the findings were examined within the nine aforementioned categories. The categories are as follows: 1) Curriculum, 2) Definitions, 3) Evaluation, 4) Guidance, 5) Leadership, 6) Organization and Administration, 7) People Served, 8) Teacher Education, and 9) Trends.

Curriculum. Twenty-four statements of beliefs were categorized under the heading of curriculum. Fourteen of the statements received a regional composite mean of 1.48 to 2.0 [Appendix E shows the rank order of all statements of beliefs]. These fourteen statements are briefly described below and represent the basic tenets or principles on which the respondents agreed. The following statements are listed in rank order:

1. Occupational preparation is not limited to a classroom or school shop. [Card No. 79]

2. Occupational programs are based on periodic analyses. [Card No. 49]

3. Vocational programs should be designed for each individual. [Card No. 67]

4. The vocational objective in the junior high school should expose

students to a full range of occupational choices. [Card No. 5]

5. Programs for specific occupations must be developed and maintained with the cooperation of the various occupational groups concerned. [Card No. 16]

6. Records should be kept for each student to show his progress and achievement. [Card No. 33]

7. Youth organizations, for high school and postsecondary students should be an integral element in the learning process. [Card No. 45]

8. There is a minimum of productive ability which an individual must possess in order to secure and retain employment in a given occupation. [Card No. 8]

9. Vocational-technical education curricula must permit each student to progress as far as he is able. [Card No. 41]

10. The length of teaching periods and the total hours of instruction are determined by the requirements of the occupation and the needs of the learner. [Card No. 74]

11. An occupational objective is an individual's current goal. [Card No. 15]

12. Various vocational occupational services should cooperate in planning programs for occupations which cut across fields. [Card No. 84]

13. Vocational curriculum development involves defining the breadth and depth of specific learning experiences fundamental to specific occupations. [Card No. 27]

14. Manpower and labor statistics must constantly be translated into revised programs and curricula. [Card No. 87]

The twenty-four curriculum statements are rank ordered by State and region in Table IV. The statement which ranked first within the curriculum category and twelfth in the total rank order by region, with a composite mean of 1.48 was Card No. 79. Card No. 79 expressed the belief that "occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory." This statement was taken from the March 1968 United States Office of Education report entitled The Bridge Between Man and His Work and the United States Office of Education Bulletin No. 1 on Rules and Regulations.

TABLE IV

THE RANK ORDER OF CURRICULUM STATEMENTS OF BELIEFS BY STATE AND REGION VIII

Card No.	Curr. Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
79	1	4	8	1	10	9	1.48	12
49	2	8	5	5	4	6	1.52	14
67	3	2	6	6	17	2	1.52	15
05	4	5	1	4	2	10	1.57	19
16	5	6	3	14	5	3	1.70	30
33	6	16	4	8	6	1	1.70	31
45	7	15	11	2	14	5	1.70	33
08	8	1	2	19	3	14	1.74	34
41	9	7	12	11	7	4	1.74	38
74	10	10	7	12	18	12	1.78	43
15	11	11	15	20	1	11	1.96	51
34	12	13	9	10	11	16	1.96	55
27	13	12	10	16	13	15	2.00	56
87	14	14	19	13	12	19	2.00	62
53	15	9	16	17	15	20	2.09	69
64	16	17	14	18	16	7	2.09	71
69	17	3	18	23	9	8	2.09	72
81	18	21	21	7	19	13	2.13	75
55	19	19	17	9	20	21	2.22	77
57	20	23	13	3	8	23	2.26	79
35	21	18	20	15	23	18	2.35	81
18	22	20	22	21	21	22	2.65	85
24	23	22	23	22	22	17	2.70	86
25	24	24	24	24	24	24	3.65	90

The curriculum statement which ranked the lowest, Card No. 25, had a 3.65 mean value and was one of Dr. C. A. Prosser's early theorems of vocational education: "For every occupation there is a body of content which is peculiar to that occupation, and which practically has no functioning value in any other occupation" [Walsh, 1960, p. 9]. The

organizational structure for vocational education was originally based on this idea. Specific or separate occupational services were created because the instructional content was different.

Definitions. Most of the respondents agreed with the ten statements related to definitions of vocational-technical education as seen in Table V. These ten statements can be found in card-sort order in Appendix C or according to regional rank order in Appendix E.

TABLE V

THE RANK ORDER OF DEFINITION STATEMENTS OF BELIEF BY STATES AND REGION VIII

Card No.	Definitions Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
09	1	1	5	1	1	3	1.43	7
77	2	3	1	4	4	5	1.52	16
28	3	8	2	2	6	1	1.57	20
91	4	5	4	5	5	2	1.57	22
65	5	6	8	6	2	9	1.96	53
75	6	7	6	10	3	7	2.00	60
85	7	4	3	9	7	4	2.00	61
19	8	2	9	8	8	6	2.09	67
56	9	9	7	3	10	8	2.26	78
86	10	10	10	7	9	10	2.43	83

The first five statements listed above in Table V are card numbers: 09, 77, 28, 91, and 65. These were in the "strongly agree" and "agree" classifications and are described briefly:

1. The means and goals of vocational education reflect the economic

and social conditions. [Card No. 9]

2. Vocational education is an "investment." [Card No. 77]

3. The concept of work is a major factor in adult life. [Card No. 28]

4. Vocational education does not deprive an individual of cultural enrichment but embraces many economic, social, and esthetic values which conserve and develop human resources. [Card No. 91]

5. Vocational education is the name applied to man's pursuit in acquiring experience which will enable him to enter and advance within the occupational structure of society. [Card No. 65]

Statement 86 received a 2.43 value on the agree of agreement scale and ranked last in the definitions category. Altman [1965], addressing the Research Division of the American Vocational Association, referred to the dilemma which exists when educators differentiate between "training" and "education." Card No. 86 proposed a definition for the two troublesome words: The term "training" refers to specific skill development while "education" refers to the total vocational efforts. This latter statement received a low mean value of 2.43.

Evaluation. There was general agreement as to the four statements of beliefs in this category. None of the statements ranked below 2.13.

1. Periodic follow-up studies of graduates and drop-outs are essential. [Card No. 72]

2. Both the process and the product of vocational education must be evaluated. [Card No. 63]

3. The evaluative criteria and program objectives in vocational-technical education are interrelated. [Card No. 60]

4. National reviews of vocational education are essential. [Card No. 76]

The rank order and regional composite means for the evaluation category appear in Table VI.

TABLE VI

THE RANK ORDER OF EVALUATION STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Evaluation Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
72	1	3	4	1	1	2	1.57	21
63	2	1	1	2	3	1	1.61	24
60	3	2	3	3	2	3	1.96	52
76	4	4	2	4	4	4	2.13	74

Guidance. Eleven of the twenty-three respondents reacted negatively to Card No. 51 which expressed the belief that "behaviors associated with effectively choosing and forging a career belong to the vocational education domain." One respondent returned the card with the following notation: "Vocational education can't stand alone, we need help of general educators." This reaction perhaps indicates the reason for the responses given to this particular statement of belief. Table VII presents the rank order of the ten guidance statements of beliefs. The five statements on which the respondents highly agreed emphasized:

1. Vocational guidance includes assistance in vocational planning, appraisal, placement, follow-up, and collecting and disseminating occupational information. [Card No. 14]

2. A student should have an occupational interest, if he is to give his best effort in learning vocational-technical skills and knowledges and in making occupational adjustments. [Card No. 23]

3. The learning levels in vocational education are: (a) education about the world of work, (b) vocational awareness, (c) vocational identification, (d) career development. [Card No. 4]

4. Vocational educators and counselors need to understand how a person forms his concepts of work, the kinds of things which motivate people toward various work-related situations, and the ways in which the individual derives his satisfaction from them. [Card No. 32]

5. Vocational guidance must create within a student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic career aspiration levels. [Card No. 43]

The complete rank order of guidance statements of beliefs appear on the next page in Table VII.

TABLE VII

THE RANK ORDER OF GUIDANCE STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Guidance Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
14	1	2	2	1	1	2	1.35	4
23	2	1	3	5	2	1	1.43	9
04	3	3	1	3	9	5	1.70	28
32	4	4	6	2	3	6	1.74	35
43	5	5	5	4	4	7	1.78	40
39	6	9	4	7	7	4	2.00	59
47	7	6	9	6	8	8	2.04	65
82	8	8	8	8	6	9	2.04	66
58	9	7	7	9	5	3	2.09	70
51	10	10	10	10	10	10	3.04	89

Leadership. There are a diversity of responses to the statements of beliefs in this category. From this category came the first and last statements of beliefs according to the total rank order. The first statements in the total rank order according to Regional Composite mean rank was statement or Card No. 11 with a mean value of 1.17. The statement was taken from the report published by the 1962 National Vocational Education Panel of Consultants to the President of the United States: "Positions of leadership in vocational education at the local, state, and federal levels must be given the responsibility, authority, and salary sufficient to recruit and hold the best qualified persons in these positions." Taken from the same report was the statement which ranked last according to the total regional mean rank: "The selection and training of

administrative and supervisory staff is the responsibility of Federal government cooperating with State governments." Seventy-eight percent of the respondents did not agree or strongly disagreed with the latter statement of belief. The negative reaction to this statement needs further investigation. The other three statements on which the respondents strongly agreed as seen in Table VIII were:

1. The strength of the American Vocational Association lies in the State Associations which form the National organization. [Card No. 1]

2. There is a shortage of trained local administrators at all levels. [Card No. 66]

3. Laws, like money, are enabling factors. They merely provide the opportunity. The imagination and creative force of our total community will have to go to work upon the challenge which lies within the possible programs themselves. [Card No. 54]

The rank order by States and Region for all five statements appear in Table VIII below.

TABLE VIII

THE RANK ORDER OF LEADERSHIP STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Leader-ship Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
11	1	1	1	2	1	1	1.17	1
01	2	3	2	3	3	2	1.52	13
66	3	4	4	1	4	3	1.65	26
54	4	2	3	4	2	4	1.78	41
61	5	5	5	5	5	5	4.00	91

Organization and Administration. The respondents as a group responded favorably to the statements of beliefs in this category. Six out of twelve statements of beliefs regarding organization and administration of vocational education fall above 2.0 mean. Card No. 46, which expresses the belief that the organizational pattern of the United States Office of Education and the State Board for Vocational Education should be congruous had a mean value of 2.87. The frequency of response distribution for this particular statement is given in Figure 2.

["I believe the organizational pattern of the United States Office of Education and the State Boards for Vocational Education should be congruous"]

Degree of Agreement:	Strongly Agree	Agree	No Opinion	Do Not Agree	Strongly Disagree
Frequency of Responses:	4	7	4	4	4
Percent of Responses:	----47.8%-----			----34.7%------	

FIGURE 2

FREQUENCY OF RESPONSES TO CARD NO. 46

The United States Office of Education before 1961 was organized with the concept of occupational services. Since then several major reorganizational plans have been implemented, today this type of organizational pattern does not exist. This is not true at the state level. The organizational pattern, in most states, is still built around occupational services and since 1960 these services have expanded in size and new occupational services have been added. The responses may indicate the respondents did not believe similar organizational patterns were necessary

because the present organizational arrangement was satisfactory to them. The divergent views in Figure II indicate a concensus of agreement does not exist.

Several of the statements which received a "strongly agree" rank are listed below. Table IX will provide additional data.

1. The public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvement, it must provide for constant evaluation and reporting of problems and accomplishments. [Card No. 7]

2. Funds should be provided for the dissemination of information to local schools. Therefore, the State Plan should provide for such services. Such information to include, for example, curriculum guides, federal advisory reports, statistical information relative to labor statistics, etc. [Card No. 2]

3. Each local community or school district should have a community plan for vocational and technical education. [Card No. 12]

4. The administration of vocational education will be efficient to the extent that it is elastic and fluid rather than rigid and standardized. [Card No. 70]

5. State divisions of vocational-technical education should provide the inspiration and impetus for local innovation as well as concern for regulatory responsibilities. [Card No. 17]

The complete rank order appears below in Table IX.

TABLE IX

THE RANK ORDER OF ORGANIZATION AND ADMINISTRATION STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Org. & Adm. Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
07	1	1	4	2	2	1	1.35	3
02	2	6	1	1	7	2	1.48	10
12	3	3	8	3	4	3	1.70	29
70	4	2	3	4	6	7	1.78	42
17	5	4	7	5	3	9	1.83	44
50	6	8	2	8	11	4	1.87	47
30	7	9	6	10	5	6	2.00	57
34	8	5	11	12	1	8	2.04	64
42	9	10	5	11	9	11	2.17	76
26	10	11	10	6	10	5	2.30	80
21	11	7	12	9	8	10	2.43	82
46	12	12	9	7	12	12	2.87	88

People Served. Most of the respondents agreed with the statements of beliefs in this category which are:

1. At every level from the elementary school through postsecondary, adult and remedial programs, there will be those with special needs as defined by the 1963 Vocational Education Act. For both humanitarian and economic reasons, persons with special needs deserve special help. [Card No. 6]

2. A permanent continuing process of vocational education should serve all persons in all communities regardless of their prior vocational aspiration. [Card No. 83]

3. Vocational education should stretch its dimensions to reach those for whom a minimum education is the only hope for dignity and economic freedom, and those who enjoy technical talents. [Card No. 73]

4. Vocational education should be available to all citizens though their ultimate goal may be a professional position. [Card No. 71]

One factor was noticed when the above statement, Card No. 71] was analyzed by State responses. All the respondnets in one State disagreed with this particular statement. Although the responses were negative, the responses did agree or concur with the federal rules and regulations. The United States Office of Education's Rules and Regulations, Bulletin No. 1, Section 104.13, p. 15 reads: "All students receiving vocational instruction in preparatory classes under the State plan will have an occupational objective which is a matter of record." The rules also clearly state that funds will not be made available for occupations requiring a baccalaureat or higher degree. Many educators agree that a young person, especially in a preparatory type class, cannot state realistically his occupational objective. A number of interesting studies have been conducted recently that suggest career choice during the years when much of vocational education takes place is very unstable [Flanagan, 1965; Eninger, 1965].

Preparatory programs receiving federal and state funds must have each student declare his occupational objective which becomes "a matter of record." The implementation of this regulation has created controversy over what constitutes a relevant and realistic occupational objective.

For example, a student's long-range or ultimate goal may be a professional occupation. In order to reach the goal, the student may have to work for a number of years in an occupation which requires specific vocational competencies. Therefore, do vocatinnal educators consider the student's ultimate objective, which may never be reached, or the present or immediate occupational objective? The approch taken by states in the fulfillment of this requirement appears to be different, thus creating at national, regional, state, and local conferences some relevant discussions. Fifteen of the respondents agreed with the statement that vocational education should be available to all citizens though their ultimate goal may be a professional position. However, one respondent had no opinion, while eight did not agree with this belief.

In the same category, People Served, Card No. 6 had a 1.48 mean value. Only one respondent reacted negatively to the statement: "That at every level from the elementary school through postsecondary, adult and remedial programs, there will be those with special needs as defined by the 1963 Vocational Education Act. For both humanitarian and economic reasons, such persons need special help." Table X, on the next page, gives an overview of the ranks for each of the four statements related to People Served.

TABLE X

THE RANK ORDER OF PEOPLE SERVED STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	People Served Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
06	1	1	1	2	1	1	1.48	11
83	2	3	2	3	2	3	1.96	54
73	3	2	3	4	3	4	2.13	73
71	4	4	4	1	4	2	2.52	84

Teacher Education. All the twenty-three respondents either "agreed" or "strongly agreed" with the thirteen statements of beliefs regarding teacher education. Five of the statements ranked within the top fifteen percent of the rank order of all statements. The five statements implied:

1. Teachers should have teaching experience in a vocational program under the supervision of an experienced, well-qualified vocational teacher. [Card No. 40]

2. All prospective teachers, administrators, and counselors should be encouraged to complete a professional foundations course in vocational education. [Card No. 40]

3. In-serve education should be cooperatively formulated by all who are concerned with and affected by such education. [Card No. 3]

4. Vocational teacher-education includes the acquisition of: Fundamental Knowledge, Professional Knowledge, Technical Knowledge, and Occupational Competence. [Card No. 22].

5. Vocational teachers and administrators must participate regularly in in-service educational programs. [Card No. 68]

Seventy-eight percent of the respondents believed that educational institutions should provide for coordinated work experience for all prospective vocational teachers during the pre-service educational experiences. The total rank order of the thirteen statements of beliefs regarding Teacher Education appear in Table XI.

TABLE XI

THE RANK ORDER OF TEACHER EDUCATION STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Teacher Educ. Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
13	1	3	1	1	1	1	1.22	2
40	2	1	6	5	4	5	1.39	5
03	3	2	4	2	2	8	1.43	6
22	4	4	2	4	3	2	1.43	8
68	5	7	3	8	6	4	1.52	16
80	6	9	10	3	7	13	1.52	18
48	7	11	8	9	5	3	1.65	25
37	8	5	5	7	10	9	1.70	32
44	9	6	7	11	12	11	1.87	46
62	10	8	9	10	11	12	1.91	49
31	11	10	13	6	9	10	2.00	58
88	12	13	12	13	8	7	2.00	63
52	13	12	11	12	13	6	2.09	68

Trends. There were nine statements of beliefs regarding trends. The first eight fell into the "agree" classification. These statements are discussed as follows:

1. Occupational preparation begins in the elementary schools with a realistic picture of the world of work. [Card No. 20]

2. Community planning for more effective and efficient vocational-technical education for all its citizenry is essential. [Card No. 78]

3. Vocational education, academic, and general education cannot be separated. Vocational education is a basic objective of all education and must be a basic element of each person's education. [Card No. 36]

4. Vocational education is a continuous process and opportunity for individuals to continue their education should be provided. [Card No. 38]

5. Vital ancillary services are needed to support vocational educators. [Card No. 90]

6. Vocational education should be used to make general education concrete and understandable. [Card No. 29]

7. Improved systems for classifying and communicating the needs of business and industry is needed. [Card No. 59]

8. Curriculum materials needs to be developed which will permit an individual to progress at his own rate, enroll on any day of the year, and leave and enter at ease. [Card No. 89]

Card No. 20 with a mean rank of 1.61 received only one negative response. If occupational preparation begins in the elementary schools, then this statement represents a new dimension for vocational education.

The significance of this statement means greater articulation of learning activities from kindergarten through the postsecondary schools. The elementary teacher becomes an important partner and must be included in the planning for vocational education.

Card No. 10 draws special attention because of divergent reactions to that statement. The frequency of response distribution for this statement is given in Figure 3.

["I believe vocational education is a unified program, not a number of separate programs identified as vocational agriculture, home economics, trade and industries, distributive education, etc."]

Degree of Agreement:	Strongly Agree	Agree	No Opinion	Do Not Agree	Strongly Disagree
Frequency of Responses:	4	7	4	6	2
Percent of Responses:	---47.8%-----			---34.7%--------	

FIGURE 3

FREQUENCY OF RESPONSES TO CARD NO. 10

This statement of belief was taken directly from the latest report published by the United States Office of Education entitled The Bridge Between Man and His Work [March, 1968]. One may generalize that an interdisciplinary dialogue would be difficult when belief divergence exists. The total rank order of the ten statements of beliefs regarding trends appear on the next page in Table XII.

TABLE XII

THE RANK ORDER OF TREND STATEMENTS OF BELIEFS BY STATES AND REGION VIII

Card No.	Trends Rank	Rank by States					Regional Composite	
		Colorado	Idaho	Montana	Utah	Wyoming	Mean	Rank
20	1	1	6	7	1	1	1.61	23
78	2	4	1	4	8	6	1.65	27
36	3	6	4	2	3	3	1.74	36
38	4	3	5	3	6	4	1.74	37
90	5	2	2	8	2	7	1.74	39
29	6	5	9	1	5	2	1.87	45
59	7	7	7	5	7	5	1.91	48
89	8	9	8	6	4	8	1.91	50
10	9	8	3	9	9	9	2.78	87

III. SUMMARY OF STATISTICAL TREATMENT

The data obtained in this study were analyzed by computing the regional composite mean for each statement in order to determine the degree of agreement. The statements were then ranked ordered according to these composite means. Over fifty-five of the statements received an "agree" to "strongly agree" value. The statements of beliefs were then ranked within specific categories for analysis and interpretations. The major generalization or interpretations from the reported findings appear in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was undertaken to determine a set of belief statements, which when validated, would serve as principles for vocational education. The assumption was made that beliefs expressed by vocational leaders and appearing in the literature and research are often the principles which guide and shape educational decisions. Principles, thus, conceived, are a body of beliefs which serve as a guide or frame of reference for present and future action.

In this Chapter, four sections finalize the total efforts of the study: 1) A brief overview of the problem is presented in Section I; 2) A summary of the major findings are presented in Section II; 3) The drawing of conclusions are based on these major findings, as seen in Section III; 4) Specific recommendations complete Section IV of this Chapter.

I. AN OVERVIEW OF THE PROBLEM

The literature published since the turn of the century refer to the underlying vocational principles as the basic philosophical foundations on which all vocational education is based. This corresponds to the question which initiated the study, "What are some of these principles of vocational education?" The review of the research revealed that little had been done to identify these principles for vocational education. The studies were concerned with vocational objectives, principles, and philosophy for specific occupational services. It was not apparent in the

available literature that there was a succinct delineation of principles. In order to arrive at a solution to the problem there were two primary questions: 1) What literature should be considered in the review for identifying and selecting statements which might serve as vocational principles?; and, 2) What type of instrument could be constructed which would validate the beliefs, expressed by vocational leaders, as principles for vocational education?

A system for review and data management was established [Appendix A]. The literature review covered a period from 1910 to the present. The research review encompassed a period from 1950 to the present. Only a few research studies existed regarding principles, philosophy, or objectives, of vocational education before the 1950's. The reviews considered the publications by the United States Office of Education, Books, Conference Reports, Speeches, and specific publications in Agriculture, Distributive, Business and Office, Home Economics, Trade and Industrial, and Technical Education.

Criteria for selecting statements of beliefs were based on the writings and directives of Flanagan [1954], Camien [1958], Taba [1962], and Park [1967]. The statements were the expressed beliefs of recognized leaders in education and especially in vocational education.

A total of 264 statements of beliefs were originally selected or extrapolated from the literature and research and printed on individual cards. The statements when systematized developed into nine categories.

The categorical organization made it possible to: 1) analyze the cards for clarity, scope, and soundness, and 2) to make comparisons for duplication of expressed beliefs. The number of statements were reduced to ninety-four cards through this procedure.

The instrument selected, for collecting responses for each statement of belief, was a modified version of the Q-sort technique, referred to in this study as a card-sort. The instrument was pre-tested on the campus of Montana State University with a group of vocational educators enrolled for the 1968 summer session. As a result of the pre-test several changes were made in the procedures for administering the instrument and three statements were deleted from the card-sort. The final instrument included ninety-one statements of beliefs, a degree of agreement scale with a 5-point numeric value. The reactors were asked to sort the statements as to: "Strongly Agree," "Agree," "No Opinion," "Do Not Agree," or "Strongly Disagree." This agreement scale permitted an arithmetic mean for each statement to be computed. An average of 1.0 meant total agreement while an average of 5.0 meant total disagreement. An introductory letter, instruction sheet, and answer sheet accompanied the above instrument [Appendix C].

The population selected for validating the statements of beliefs were the five state supervisors of various occupational services in the five states comprising the United States Office of Education's Region VIII: Colorado, Idaho, Montana, Utah, and Wyoming. These were also the states

contiguous to Montana and the area of direct educational concern and involvement for the investigator.

The purpose of the validation procedure was to identify those statements of beliefs on which the reactors "Agreed" or "Strongly Agreed." A basic assumption was made at the beginning of the study that beliefs on which people agree may serve as principles for vocational education. Park [1967, p. 233] concluded that beliefs of people are often the unwritten principles which shape educational decisions.

II. SUMMARY OF THE MAJOR FINDINGS

The following are the major findings of this study and are presented in outline form:

A. There were twelve statements which received "Agree" or "Strongly Agree" responses only. These twelve statements were taken from the literature published since 1956. Eleven of the statements appeared in the literature after 1963. These statements represented seven of the nine categories and are listed below in rank order. The statements had a mean range of 1.17 to 1.70.

1. Positions of leadership in vocational education at the local, state, and federal levels must be given the responsibility, authority, and salary sufficient to recurit and hold the best qualified persons in these positions. [Leadership, Card No.11]

2. The public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research, and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvement it must provide for constant evaluation and reporting of problems and accomplishments. [Organization and Administration, Card No. 7]

3. Vocational guidance includes assistance in vocational planning, appraisal, placement, follow-up, and collecting and disseminating occupational information. [Guidance, Card No. 14]

4. Vocational teacher-education includes: the acquisition of: Fundamental Knowledge, Professional Knowledge, Technical Knowledge, and Occupational Competence. [Teacher Education, Card No. 22]

5. Funds should be provided for the dissemination of information to local schools. Therefore, the State Plan should provide for such services. Such information to include, for example, curriculum guides, federal advisory reports, statistical information relative to labor statistics, etc. [Organization and Administration, Card No. 2]

6. Occupational preparation need not and should not be limited

to the classroom, to the school shop, or to the laboratory. [Curriculum, Card No. 79]

7. The content of courses should be confirmed or changed by periodic analyses of the occupations for which training is being given. [Curriculum, Card No. 49]

8. It is essential that each youngster should have the benefit of an educational program designed to suit his capacities, to enlarge his scope of occupational opportunities, and to develop him to the limit of his potentialities. [Curriculum, Card No. 67]

9. Periodic follow-up studies of graduates and drop-outs are essential to the evaluation of the effectiveness of the vocational education programs. [Evaluation, Card No. 72]

100. Both the process and the product of vocational education must be evaluated. [Evaluation, Card No. 63]

11. Greater cooperative effort should be considered by the community in planning for more effective and efficient vocational-technical education for all its citizenry. [Trends, Card No. 78]

12. The expansion of vocational education requires an expansion of the teacher education program. This in itself will require

the best thought and closest cooperation. There must be in this program of teacher education for vocational programs a balanced blend of practical experience and academic preparation. [Teacher Education, Card No. 37]

B. When the statements were rank ordered, according to a regional composite mean of degree of agreement, the respondents had "agreed" or "strongly agreed" with approximately 55 of the 91 statements, with a mean range from 1.17 to 1.96. These statements can be seen in rank order in Appendix E.

C. Over 69 percent of the respondents "did not agree" or "strongly disagreed" with the following two statements:

1. For every occupation there is a body of content which is peculiar to that occupation, and which practically has no functioning value in any other occupation. [Curriculum, Card No. 25]

2. The selection and training of administrative and supervisory staff is the responsibility of the Federal Government cooperating with State government. [Leadership, Card No. 61]

The above statements dealing with curriculum content was one of C. A. Prosser's early theorems regarding vocational education [Walsh, 1960]. The latter statement regarding the selecting and training of administrators is a recent expression of belief.

D. All the reactors from Montana had no opinion regarding statement No. 84 which was taken from Crawford's 1967 national study regarding statements of beliefs in distributive education. The statement read: "I believe the various vocational services should cooperate with each other in planning programs for those occupations which cut across fields, each service providing the instruction in which it specializes."

E. Ten of the 23 respondents or approximately 43 percent had "no opinion" regarding statement No. 35: "I believe occupations should also be studied in terms of role relationships and role expectations."

F. Thirty-nine percent or nine of the respondents "did not agree" with statement No. 24. "I believe vocational programs should be based on the number of persons needing training, not on the number of jobs available in the community."

III. CONCLUSIONS

The following conclusions are based on the summary of the major findings outlined above in Section II.

A. There were twelve of the statements which received "agree" or "strongly agree" responses only. The conclusions can be:

1) these are the major principles for vocational education; 2) that the efforts of the United States Office of Education through its national and regional leadership seminars and ERIC publications have had an unifying effect on vocational thought; 3) also, the many publications regarding vocational education have focused on these imperatives since the passage of the Vocational Education Act of 1963. These twelve statements are summarized below in order of importance or regional rank and are expressed as twelve imperatives for vocational education:

1. Leaders are needed in vocational education, but they must be given the responsibility, authority, and salary sufficient to recruit and hold the best qualified persons.

2. A public system for vocational education must be supported by research; pre-service and in-service programs for teachers, counselors, and administrators; adequate facilities and equipment.

3. Vocational guidance involves more than the dissemination of occupational information. Guidance services must include job placement, follow-up of all graduates and school drop-outs, and the assistance in all levels of educational planning from the elementary through adult education.

4. Vocational teacher-education must provide for the acquisition and demonstration of technical and occupational competencies.

5. Funds should be allocated by the state for the dissemination of a wide variety of information to the local educational programs.

6. Occupational preparation need not be confined to the classroom.

7. Job-analysis must be the rationale for vocational course content.

8. A vocational program should be designed for each individual learner.

9. Graduate and drop-out follow-up surveys should be established.

10. Both the product and process of vocational education should be evaluated periodically.

11. Greater cooperative planning between the school and the various community agencies and organizations is needed for an expanded, effective, and efficient vocational education program.

12. Teacher education programs will need to be evaluated and services expanded to meet the growing needs of vocational education.

B. The findings supported the assumption that there are identifiable beliefs on which a reference group can agree. Those statements which received a mean rank above 2.0 bear serious consideration by vocational educators. The 55 statements of beliefs with a mean range from 1.17 to 1.96 can be viewed as directives for vocational educators. These 55 statements can be seen in rank

order in Appendix E.

C. Sixty-nine percent of the respondents "did not agree" with Charles A. Prosser's early theorem which reads "For every occupation there is a body of content which is peculiar to that occupation, and which practically has no functioning value in any other occupation." The curriculum and administrative organizational structure in each state is based on the premise that every field or service has a fundamental core or basic knowledges and skills; which must be mastered, if an individual is to be occupationally competent. Presupposedly, it is the unique body of content which has been the rationale for structuring such instructional areas as Agriculture, Distributive, Business and Office, Home Economics, and Trade and Industrial Education. A conclusion which might be drawn from the responses is the awareness of educators that occupational structures are changing and individuals should not be trained too narrowly. Perhaps, the concept of occupational clusters or common elements essential to more than one job has had an affect on the thinking of vocational leaders.

D. All the respondents from Montana had "no opinion" regarding cooperative planning by various occupational services for planning those occupational training programs which cut across various fields. An inference for this response could be that

the various vocational services in Montana are still in the growth and expansion stage within the given occupational areas and the limited funds for vocational education, may not encourage promotion of emerging occupations which cross various service areas.

E. Ten of the 23 respondents or approximately 43 percent had no opinion regarding the statement that occupations should also be studied in terms of role relationships and role expectations. What is suggested here is the desirability of learning to analyze an occupation in sociological terms. Preparation for the world of work involves preparing for a certain pattern of relationships or interactions with other persons. Research studies have been shown [Kahn, Wolfe, Quin, Snoek, Rosenthal, 1964] that role conflict is an experience common in many jobs. The response may indicate the terms used in the statement were not fully understood by the respondents.

F. There must be occupational openings and opportunities for employment otherwise the training received by an individual has little value. This factor probably accounted for nine of the respondents or 39 percent of the state supervisors of vocational education disagreeing with statement No. 24 "Vocational programs should be based on the number of persons needing training not on the number of jobs available in the community."

IV. RECOMMENDATIONS

The following recommendations are based on the overall findings of this study.

A. The twelve statements of beliefs on which all the respondents "agreed" or "strongly agreed" are recommended as the principles for vocational education. A principle was defined by Roberts [1957, p. 571] as "a fundamental consideration or basic rule which serves as a means of evaluating present practices or as a guide to future action. When established, principles constitute areas of general agreement among individuals qualified in the field with which the principles are concerned."

B. Though the respondents tended to agree with 55 of the 91 statements of beliefs, agreement with a set of statements does not always result in uniform practices. The actual implementation of these 55 statements as principles for vocational education would require some major educational changes. Therefore, these statements which appear in rank order in Appendix E should studied carefully for educational implications.

C. Institutions of higher education should evaluate their total efforts in vocational education. The new postsecondary vocational programs, the greater involvement of vocational teachers and administrators in the social and economic problems

of the community, represent some of the new challenges faced by colleges and universities preparing vocational personnel.

D. Teacher-educators responsible for pre-service and in-service education could use the statements and findings as a major source of material for vocational courses, such as "Principles of Vocational Education." The reference sources represent a rather extensive overview of vocational education. The list of references may be of value to teacher-educators.

E. The card-sort statements could be used by various vocational groups as a starting point for group discussions at summer conferences and interdisciplinary group meetings.

F. Each statement of belief has both a theoretical and a practical use. Users of the card-sort statements may wish to elaborate extensively on each statement.

G. A respondent may benefit from comparing his responses with others in the state and region.

H. A national study of this nature would be beneficial. Further comparative studies are recommended. Research workers in other regions and/or states may wish to validate the statements of beliefs and compare findings.

APPENDIXES

APPENDIX A

APPENDIX A

A REVIEW SYSTEM FOR DATA MANAGEMENT

The following source materials were reviewed and specific statements and/or synoptic ideas were recorded on 5 x 8 index cards. The following outline was used for the review as well as the filing system.

1.0 Research

1.1 Publications from The Center for Vocational and Technical Education [ERIC] at The Ohio State University:

1.11 Agricultural Education
1.12 Business and Office Education
1.13 Distributive Education
1.14 Home Economics Education
1.15 Trade and Industrial Education
1.16 Technical Education
1.17 ARM: Abstracts of Research and Related Material in Vocational and Technical Education
1.20 Research Studies funded by the U. S. Office of Education
1.30 Research Studies in Education [Review of abstracts, microfilm, hardbound copies] selected from:
1.31 Phi Delta Kappa, Inc. publications
1.32 Dissertation Abstracts [American Doctoral Dissertations]

2.0 Literature

2.1 Periodicals

2.11 Vocational Education [general]
2.12 Agricultural Education
2.13 Business and Office Education
2.14 Distributive Education
2.15 Home Economics Education
2.16 Trade and Industrial Education [and Technical]
2.18 Others

2.2 Government Publications

2.21 Federal Laws
2.22 U. S. Office of Education Publications
2.23 U. S. Department of Labor Publications
2.24 Congressional Publications

APPENDIX A

2.3 Books

2.4 Conference Reports, Bulletins, and Speeches

2.5 Miscellaneous

APPENDIX B

APPENDIX B

QUESTIONNAIRE TO DETERMINE THE PROFESSIONAL COURSES REQUIRED OR RECOMMENDED BY STATES IN THE U. S. OFFICE OF EDUCATION'S REGION VI: IOWA, KANSAS, MINNESOTA, MISSOURI, NEBRASKA, NORTH DAKOTA, AND SOUTH DAKOTA.

A survey conducted by the investigator in the U. S. Office of Education's Region VI was initiated to determine those professional courses required or recommended for vocational teacher-certification. A letter and questionnaire were mailed to the State Supervisors of Agriculture, Business and Office, Distributive, Home Economics, Trade and Industrial Education in Iowa, Kansas, Minnesota, Nebraska, North Dakota, and South Dakota. The response of the inquiry was one-hundred percent. Sixty-eight percent of the State Supervisors require or recommend a course entitled: Principles and/or philosophy of Vocational Education for vocational teacher-certification.

APPENDIX B

TABLE XIII

NUMBER OF STATE SUPERVISORS IN THE U. S. OFFICE OF EDUCATION'S REGION VI [Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota] THAT REQUIRE OR RECOMMEND A PROFESSIONAL COURSE ENTITLED: PHILOSOPHY OR PRINCIPLES OF VOCATIONAL EDUCATION FOR VOCATIONAL TEACHER-CERTIFICATION

Occupational Service	N U M B E R O F Supervisors Contacted	Returns	State Supervisors that require or recommend course	
Agricultural Education	7	7	5	
Business and Office Education *	7	7	4	
Distributive Education *	7	7	6	
Home Economics Education	7	7	4	
Trade and Industrial Education	7	7	5	
TOTALS	35	35	24	68%+

*Note - Three states have the same supervisors for Business and Office Education as they do for Distributive Education. However, the State Supervisors completed separate questionnaires for each occupational service.

The respondents were also asked to supply course outlines or syllabi for the courses required or recommended for vocational teacher-certification. Only three State Supervisors indicated that such materials were available. Though sixty-eight percent of the supervisors require or recommend a course on Principles of Vocational Education the only principles considered were those written by Roy W. Roberts in his book entitled: Vocational and Practical Arts Education--History, Development, and Principles [1957 and 1965]. The last chapter in the book is devoted to

APPENDIX B

twenty-seven principles for vocational education "grouped for convenience into three divisions--organization, administration, and instruction." This particular textbook appeared to be the basic reference used for eaching principles of vocational education.

APPENDIX B

Date

_____
_____
_____

Dear_____:

As part of a study on vocational teacher-education curricula, your help is needed. The title of the study is: Analysis, Synthesis and Evaluation of Synoptic Ideas in Selected Vocational Teacher-Education Curricula.

The attached questionnaire seeks: (1) to determine the title of specific courses you require or recommend for vocational teacher certification in your division or service, and (2) it requests your help in obtaining course outlines and/or syllabi for these courses.

Many states have a number of teacher-educators and it is impossible to determine the best source for curriculum information. However, since you work closely with teacher-educators, perhaps you have in your files curriculum materials. All information and material content will be handled confidentially; and reference will not be made to a particular individual, course of study, state, or college. If necessary, the curriculum materials will be returned.

Enclosed is a short questionnaire and a self-addressed, stamped envelope. The study should provide indices for vocational curriculum in institutions of higher education. I will be glad to share the findings of the study with you. Your time and help is appreciated.

Sincerely yours,

Miss Louise J. Keller

Enc. 2

MAILING ADDRESS: Montana State University
Commerce Department
Bozeman, Montana 59715

[A facsimile, not the original questionnaire]

QUESTIONNAIRE

Directions: Please list the titles of all the professional courses in vocational teacher-education you require or recommend for vocational certification in your division. List these courses and opposite each course provide the following information:

A. Course titles

B. Are the courses required, recommended for undergraduate or graduate students?

C. How many institutions in your state offer these courses?

D. In which school or department are the courses offered?

E. Can you furnish course outlines/syllabi?

APPENDIX C

APPENDIX C

INTRODUCTORY LETTER

To: State Supervisors in Vocational-Technical Education

From: Miss Louise J. Keller
[Director of Vocational Education - Colorado State College]

Subject: Basic Beliefs Concerning Vocational Education
[A dissertation study - Montana State University]

A study in which you have a vital part is enclosed. The study is entitled: "Principles for Vocational Education--Analysis, Synthesis, and Validation of Basic Belief Statements."

The statements concerning basic beliefs in vocational education have been taken from the literature and research and printed on a set of cards. Your reaction to the statements will determine some of the underlying principles of vocational-technical education.

You, an acknowledged leader in vocational-technical education, are asked to participate in this study. The results should provide indices for: curriculum construction, policies, and practices in vocational-technical education. For this reason, you will be sent a copy of the final study.

The statements, with directions for noting your reactions, are enclosed. Of course, your responses will be held in strict confidence. Your thoughtful and prompt response will be sincerely appreciated. An enclosed self-addressed, airmail envelope is provided for returning the answer sheet.

Please return no later than August 3 to:

Miss Louise J. Keller
Commerce Department
Montana State University
Bozeman, Montana 59715

APPENDIX C

INSTRUCTION SHEET for Basic Beliefs Concerning Vocation Education

You have been given a deck of 91 small cards. Each card has a statement of belief regarding vocational and/or technical education as it ought to be. Indicate your agreement, with each statement, by sorting the cards into FIVE STACKS.

Stack 1	Stack 2	Stack 3	Stack 4	Stack 5
STRONGLY AGREE	AGREE	NO OPINION	DO NOT AGREE	STRONGLY DISAGREE

Next, place the cards in the stack that most nearly describes your reaction to the statement. Rearrange as often as you like. When you are satisfied with your sorting, record your answers on the ANSWER SHEET. Check your answer sheet to be sure all cards have been sorted into one of five stacks.

If you should disagree with the statements, because of wording, please reword the statement on the back of the card and return this card with your answer sheet.

RETURN ONLY THE COMPLETED ANSWER SHEET [and any cards you have revised]

APPENDIX C

ANSWER SHEET

Directions: Note that each card has a number in the upper right hand corner of the card, for example: 01, 02, etc. This number corresponds to the number in the columns headed Card Number. Please place the number of the stack in which you placed a card opposite the card number. For example, if you placed #16 in stack 4, locate #16 under the column card number and write 4 opposite this number.

Card No.	Stack No.	Card No.	Stack No.	Card No.	Stack No.	Card No.	Stack No.	Card No.	Stack No.	Card No.	Stack No.
01		16		31		46		61		76	
02		17		32		47		62		77	
03		18		33		48		63		78	
04		19		34		49		64		79	
05		20		35		50		65		80	
06		21		36		51		66		81	
07		22		37		52		67		82	
08		23		38		53		68		83	
09		24		39		54		69		84	
10		25		40		55		70		85	
11		26		41		56		71		86	
12		27		42		57		72		87	
13		28		43		58		73		88	
14		29		44		59		74		89	
15		30		45		60		75		90	
										91	

MAIL TO:

Miss Louise J. Keller
Commerce Department
Montana State University
Bozeman, Montana 59715

APPENDIX E Statements of Beliefs

The following statements of beliefs represent the 91 cards mailed to State Supervisors of Vocational-Technical Education in Colorado, Idaho, Montana, Utah, and Wyoming. The card number appears in the upper right-hand corner. Below each statement is printed the category designation and the reference source in brackets. However, this latter information did not appear on the cards mailed to the respondents. The references for the statements of beliefs are located in Appendix F.

01 I believe the strength of the American Vocational Association lies in the state associations which form the national organization. LEADERSHIP [59]	02 I believe funds should be provided for the dissemination of information to local schools. Therefore, the State Plan should provide for such services. Such information to include, for example, curriculum, guides, federal advisory reports, statistical information relative to labor statistics, etc. ORGANIZATION AND ADMINISTRATION [39]
03 I believe in-service education should be cooperatively formulated by all who are concerned with and affected by such education. TEACHER EDUCATION [53]	04 I believe there are learning levels in vocational education: (1) education about the world of work, (2) vocational awareness, (3) vocational identification, and (4) career development. The term "career" refers to an orderly work history, one in which each job is preparatory to the next job, and the succeeding is either at the same or higher level GUIDANCE AND COUNSELING [56]

05

I believe the junior high should direct its vocational objectives toward economic orientation. The objective should be exposure to the full range of occupational choices which will be available at a later point and full knowledge of the relative advantages and the requirements of each.

CURRICULUM [51]

06

I believe that at every level from the elementary school through post-secondary, adult and remedial programs, there will be those with special needs as defined by the 1963 Vocational Education Act. For both humanitarian and economic reasons, persons with special needs deserve special help.

PEOPLE SERVED [51]

07

I believe the public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvement, it must provide for constant evaluation and reporting of problems and accomplishments.

ORGANIZATION AND ADMINISTRATION [51]

08

I believe for every occupation there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally nor socially effective.

CURRICULUM [31]

09

I believe the means and goals of vocational-technical education should reflect the economic and social conditions of the present and the likely trends of the future.

DEFINITIONS [49]

10

I believe vocational education is a unified program, not a number of separate programs identified as vocational agriculture, home economics, trade and industry, distributive education, etc.

TRENDS [51]

11 I believe positions of leadership in vocational education at the local, state, and federal levels must be given the responsibility, authority, and salary sufficient to recruit and hold the best qualified persons in these positions LEADERSHIP [47]	12 I believe each local community or school district should have a Community Plan for vocational and technical education. ORGANIZATION AND ADMINISTRATION [26]
13 I believe vocational student teachers should have teaching experience in a vocational program under the supervision of an experienced, well-qualified vocational teachers. TEACHER EDUCATION [10]	14 I believe vocational guidance includes assistance in vocational planning, appraisal, placement follow-up, and collecting and disseminating occupational information. GUIDANCE AND COUNSELING [35]
15 I believe an occupational objective is an individual's current goal and serves as a directive force or guide for the learner and the educational institution. CURRICULUM [18, 27]	16 I believe programs for specific occupations must be developed and maintained with the cooperation of the various occupational groups concerned. CURRICULUM [31, 48]

17 I believe state divisions of vocational-technical education should provide the inspiration and impetus for local innovation as well as concern for regulatory responsibilities. ORGANIZATION AND ADMINISTRATION [21]	18 I believe it is essential that vocational-technical education programs emphasize fundamental skills and knowledges in more than occupational area. Such capacity for adaptation is vital in view of the fact that most students will go through occupational lives characterized by constant learning of new tasks, skills, and knowledges. CURRICULUM [30]
19 I believe vocational education is often the link between social needs and social improvement. DEFINITIONS [41]	20 I believe occupational preparation should begin in the elementary schools with a realistic picture of the world of work. Its fundamental purposes should be to familiarize the student with his world and to provide him with the intellectual tools and rational habits of thought to play a satisfying role in it. TRENDS [51]
21 I believe an adequate system of occupational preparation will provide residential facilities wherever the absence presents an obstacle to anyone in need of education and training. ORGANIZATION AND ADMINISTRATION [51]	22 I believe vocational teacher-education includes the acquisition of: Fundamental Knowledge, Professional Knowledge, Technical Knowledge, and Occupational Competence. TEACHER EDUCATION [46]

23 I believe a student should have an occupational interest if he is to give his best effort in learning vocational-technical skills and knowledges and in making occupational adjustments. GUIDANCE AND COUNSELING [10]	24 I believe vocational programs should be based on the number of persons needing training, not on the number of jobs available in the community. CURRICULUM [51]
25 I believe for every occupation there is a body of content which is peculiar to that occupation, and which practically has not functioning value in any other occupation. CURRICULUM [31]	26 I believe funds should be provided to assist local communities in research efforts directly associated with vocational and technical education. ORGANIZATION AND ADMINISTRATION [36]
27 I believe vocational curriculum development involves defining the breadth and depth of specific learning experiences fundamental to specific occupations. CURRICULUM [14, 36, 54, 55]	28 I believe the concept of work is a major factor in adult life in our society. From his work the individual derives not only his income but also many of his personal satisfactions and his status in the social groups with which he has contact. DEFINITIONS [29]

29

I believe vocational preparation should be used to make general education concrete and understandable; general education should point up the vocational implications of all education. Curriculum materials should be prepared for both general and vocational education to emphasize these relationships.

TRENDS [51]

30

I believe the State Plan, State Policy, and State Guidelines should be cooperatively and democratically formulated by all who are concerned with and affected by such plans and policies.

ORGANIZATION AND ADMINISTRATION [36]

31

I believe vocational-technical education needs a hierarchy of trained people for its varied programs, for example, media specialists, curriculum consultants, para-professional teachers, etc.

TEACHER EDUCATION [6]

32

I believe vocational educators and counselors need to understand how a person forms his concepts of work, the kinds of things which motivate people toward various work-related situations, and the ways in which the individual derives his satisfaction from them.

GUIDANCE AND COUNSELING [29]

33

I believe individual records should be kept by vocational educators in cooperation with the student as evidence of progress and competencies achieved.

CURRICULUM [10]

34

I believe a Department of Education and Manpower Development should be established at the Cabinet level in the Executive branch of the federal government.

ORGANIZATION AND ADMINISTRATION [51]

35

I believe occupations should also be studied in terms of role relationships and role expectations.

CURRICULUM [22]

36

I believe vocational education, academic, and general education cannot be separated. Vocational education is not a separate discipline within education, but it is a basic objective of all education and must be a basic element of each person's education.

TRENDS [51]

37

I believe the expansion of vocational education requires an expansion of the teacher education program. This in itself will require the best thought and closest cooperation. There must be in this program of teacher education for vocational programs a balanced blend of practical experience and academic preparation.

TEACHER EDUCATION [57]

38

I believe vocational education should provide a continuum of educational opportunity that allows individuals to refine or redirect their occupational objectives.

TRENDS [10]

39

I believe vocational guidance must be concerned with the employed adult and help him continue to grow both as an individual and as a member of society.

GUIDANCE AND COUNSELING [9, 37]

40

I believe all prospective teachers, administrators, and counselors should be encouraged to complete a professional foundations course in vocational education.

TEACHER EDUCATION [54]

41

I believe a basic objective for the vocational-technical education curricula is to permit each student to progress as far as he is able. This means a very serious effort should be made to provide maximum freedom for individual learning or this objective cannot be realized.

GUIDANCE [1]

42

I believe there is a direct relationship between organizational structure of a federal, state, and local departments of education and program effectiveness in vocational education.

ORGANIZATION AND ADMINISTRATION [3, 43]

43

I believe vocational guidance as a broad concept must create within a student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic career aspiration levels.

GUIDANCE AND COUNSELING [7]

44

I believe vocational education will be effective to the extent that the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach.

TEACHER EDUCATION [31]

45

I believe youth organizations for high school and post secondary school students, should be an integral element in the learning process.

CURRICULUM [32]

46

I believe the organizational pattern of the U. S. Office of Education and the State Boards for Vocational Education should be congruous.

ORGANIZATION AND ADMINISTRATION [59]

47 I believe vocational education must help students cope with the changing labor market through developing career strategies. GUIDANCE AND COUNSELING [7]	48 I believe the in-service training of vocational education personnel should include both group and individual instruction. TEACHER EDUCATION [10]
49 I believe the content of courses should be confirmed or changed by periodic analyses of the occupations for which training is being given. CURRICULUM [48]	50 I believe the basic foundation for an effective state program in vocational education is a comprehensive State Plan which includes the policies to be followed in maintaining, extending, and improving programs in vocational technical education. ORGANIZATION AND ADMINISTRATION [45]
51 I believe the behaviors associated with effectively choosing and forging a career belong to the vocational education domain. GUIDANCE AND COUNSELING [1]	52 I believe the educational institution should provide for coordinated work-experience for all prospective vocational teachers during the pre-service educational experience. TEACHER EDUCATION [20, 52]

53

I believe lower-entry occupations must be identified and established in order to enable students with special needs to compete in the job market.

CURRICULUM [38[

54

I believe laws, like money, are enabling factors. They merely provide the opportunity. The imagination and creative force of our total community will have to go to work upon the challenge which lies within the possible programs themselves.

LEADERSHIP [57]

55

I believe there is a set of basic vocational capabilities (skills and knowledges) that have educational implications for all learners planning to move successfully in the world of work. Such a statement implies that these vocational capabilities can be translated into a cluster or core of experiences.

CURRICULUM [1]

56

I believe vocational guidance is a process of helping the individual to examine his life experiences in order that his decisions and actions are clear and purposeful.

DEFINITIONS [42]

57

I believe occupational preparation in the high school should not be limited to a specific occupation. Given the uncertainties of a changing economy and the limited experiences upon which vocational choices must be made, instruction should not be overly narrow but should be around significant families of occupations or industries which promise expanding opportunities.

CURRICULUM [51]

58

I believe through organized counseling we could assist in discovering the interests and abilities of youngsters in the elementary and encourage their development.

GUIDANCE AND COUNSELING [25]

59 I believe as new occupational fields emerge and the nature of the industrial order becomes increasingly complex, it becomes more important that those responsible for vocational curriculum construction, training, and counseling have access to improved systems for the classification of occupations. TRENDS [4]	60 I believe program evaluation criteria and program objectives in vocational-technical education are interrelated. EVALUATION [24]
61 I believe the selection and training of administrative and supervisory staff is the responsibility of the Federal Government cooperating with State governments. LEADERSHIP [11]	62 I believe professional organizations in vocational education help foster in-service growth through stimulation of common professional interests and common goals. TEACHER EDUCATION [47]
63 I believe both the process and the product of vocational education must be evaluated. EVALUATION [17]	64 I believe classroom instruction correlated with supervised work experience is one possible method for serving the interests and developing the potential of some of the people. Although the cooperative method lends itself well to individualized instruction for maximum development of each student, the basis for selectivity in cooperative courses should be realistic appraisal in terms of probable job success. CURRICULUM [23]

65

I believe vocational education is the name applied to man's pursuit in acquiring experiences which will enable him to enter and advance within the occupational structure of society.

DEFINITIONS [50]

66

I believe there is a shortage of trained vocational administrators at all levels.

LEADERSHIP [44]

67

I believe it is essential that each youngster should have the benefit of an educational program designed to suit his capacities, to enlarge his scope of occupational opportunities, and to develop him to the limit of his potentialities.

CURRICULUM [30]

68

I believe vocational teachers and administrators must participate regularly in in-service programs.

TEACHER EDUCATION [50]

69

I believe vocational education will be efficient to the extent that the environment in which the learner is trained is a replica of the environment in which he must subsequently work.

CURRICULUM [31, 48]

70

I believe the administration of vocational education will be efficient to the extent that it is elastic and fluid rather than rigid and standardized.

ORGANIZATION AND ADMINISTRATION [31]

71 I believe that vocational education should be available to all citizens though their ultimate goal may be a professional position. PEOPLE SERVED [50]	72 I believe periodic follow-up studies of graduates and drop-outs are essential to the evaluation of the effectiveness of the vocational education programs. EVALUATION [10]
73 I believe vocational education should stretch its dimensions to reach those for whom a minimum education is the only hope for dignity and economic freedom, and those who enjoy technical talents. PEOPLE SERVED [49]	74 I believe the length of teaching periods and the total hours of instruction are determined by the requirements of the occupation and the needs of the learner. CURRICULUM [48]
75 I believe vocational and technical education is a planned program, under public supervision and control, designed to prepare youth and adults for gainful employment in recognized occupations. DEFINITIONS [47]	76 I believe national reviews of vocational education are essential. By this process the status and trends of the vocational education program can be determined. EVALUATION [2]

77 I believe that vocational education is clearly classifiable as an "investment." DEFINITION [2]	78 I believe greater cooperative effort should be considered by the community in planning for more effective and efficient vocational-technical education for all its citizenry. TRENDS [8, 26]
79 I believe occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory. CURRICULUM [51]	80 I believe the teacher-training program should improve teachers' ability to identify what a student knows, how he feels, and how he learns. TEACHER EDUCATION [13]
81 I believe business and industry have the competence to do many parts of the vocational-technical training needed in the United States. CURRICULUM [47]	82 I believe "work choice" is an expression of the individual's attitude towards himself as well as an expression of the opportunities offered him. GUIDANCE AND COUNSELING [57]

83 I believe a permanent continuing process of vocational education should serve all persons in all communities regardless of their prior educational achievement, level of ability, aptitude, or vocational aspiration. PEOPLE SERVED [28]	84 I believe the various vocational services should cooperate with each other in planning programs for those occupations which cut across fields, each service providing the instruction in which it specializes. CURRICULUM [10]
85 I believe vocational education should serve the needs of both the individual learner and the community. DEFINITION [10]	86 I believe that the term "training" refers to specific skill development while "education" refers to the total vocational efforts. DEFINITION [15, 50]
87 I believe manpower and labor statistics must be constantly translated into revised programs and curricula. CURRICULUM [34]	88 I believe the vocational teacher-education programs should enhance teachers' ability in guiding youth and adults in all aspects of their development: mental, physical, social, cultural, as well as vocational. TEACHER EDUCATION [26]

89

I believe instructional techniques, materials, and learning tools should be developed that will permit individuals to progress at their own rate of ability, enroll on any day of the year, and leave and enter at ease.

TRENDS [1, 12]

90

I believe many vital ancillary services are needed to support the vocational teacher as he attempts to meet the needs of the learner and the demands of the employing community.

TRENDS [5]

91

I believe vocational education does not deprive the individual of the cultural enrichment and character building but embraces many economic, social, and esthetic values which conserve and develop our human resources.

DEFINITION [5, 19, 40]

APPENDIX D

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	1		1		1.8	
	Idaho	4	1				1.2	
1	Mont.	2	3				1.6	1.52
	Utah	1	2				1.6	
	Wyo.	3	2				1.4	
	Colo.	2	3				1.6	
	Idaho	3	2				1.2	
2	Mont.	3	2				1.4	1.48
	Utah		3				2.0	
	Wyo.	4	1				1.2	
	Colo.	4	1				1.2	
	Idaho	4	1				1.2	
3	Mont.	2	3				1.6	1.43
	Utah	2	1				1.3	
	Wyo.	3	1		1		1.8	
	Colo.	2	2		1		2.0	
	Idaho	4	1				1.2	
4	Mont.	2	3				1.6	1.69
	Utah		2	1			2.3	
	Wyo.	3	1	1			1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	4	1				1.2	
5	Mont.	2	2	1			1.8	1.57
	Utah	2	1				1.3	
	Wyo.	3	1		1		1.8	
	Colo.	3	2				1.4	
	Idaho	3	1	1			1.6	
6	Mont.	2	2		1		2.0	1.48
	Utah	2	1				1.3	
	Wyo.	5					1.0	
	Colo.	4	1				1.2	
	Idaho	3	2				1.4	
7	Mont.	1	4				1.8	1.35
	Utah	2	1				1.3	
	Wyo.	5					1.0	
	Colo.	5					1.0	
	Idaho	3	2				1.4	
8	Mont.		3		2		2.8	1.74
	Utah	2	1				1.3	
	Wyo.	2	2		1		2.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	2				1.4	
	Idaho	2	3				1.6	
9	Mont.	4	1				1.2	1.43
	Utah	2	1				1.3	
	Wyo.	3	1	1			1.6	
	Colo.	1	3	1			2.0	
	Idaho	3	1	1			1.6	
10	Mont.		2	1	2		3.0	2.78
	Utah				2	1	4.3	
	Wyo.		1	1	2	1	3.6	
	Colo.	4	1				1.2	
	Idaho	5					1.0	
11	Mont.	3	2				1.4	1.17
	Utah	2	1				1.3	
	Wyo.	5					1.0	
	Colo.	3	2				1.4	
	Idaho	2	2		1		2.0	
12	Mont.	1	4				1.8	1.70
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	1	1			1.6	
	Idaho	5					1.0	
13	Mont.	3	2				1.4	1.22
	Utah	3					1.0	
	Wyo.	5					1.0	
	Colo.	2	3				1.6	
	Idaho	4	1				1.2	
14	Mont.	3	2				1.4	1.35
	Utah	2	1				1.3	
	Wyo.	4	1				1.2	
	Colo.	2	2	1			1.8	
	Idaho	1	3	1			2.0	
15	Mont.		3		2		2.8	1.96
	Utah	3					1.0	
	Wyo.	1	4				1.8	
	Colo.	3	1	1			1.6	
	Idaho	3	2				1.4	
16	Mont.		4		1		2.4	1.70
	Utah	1	2				1.6	
	Wyo.	3	2				1.4	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	2				1.4	
	Idaho	2	2	1			1.8	
17	Mont.		5				2.0	1.82
	Utah	2	1				1.3	
	Wyo.	2	1		2		2.4	
	Colo.	1	2	1		1	2.6	
	Idaho	1	2		2		2.6	
18	Mont.	1	1	1	2		2.8	2.65
	Utah		2		1		2.6	
	Wyo.	1	2		2		2.6	
	Colo.	3	2				1.4	
	Idaho		4	1			2.2	
19	Mont.		3	1	1		2.6	2.09
	Utah		2	1			2.3	
	Wyo.	1	3	1			2.0	
	Colo.	3	2				1.4	
	Idaho	1	4				1.8	
20	Mont.	1	3			1	2.4	1.61
	Utah	2	1				1.3	
	Wyo.	5					1.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	1	4				1.8	
	Idaho		2	1	2		3.0	
21	Mont.		3	1	1		2.6	2.43
	Utah		2	1			2.3	
	Wyo.		3	1			2.4	
	Colo.	2	3				1.6	
	Idaho	5					1.0	
22	Mont.	1	4				1.8	1.43
	Utah	2	1				1.3	
	Wyo.	3	2				1.4	
	Colo.	3	2				1.4	
	Idaho	4	1				1.2	
23	Mont.		4	1			2.2	1.43
	Utah	2	1				1.3	
	Wyo.	5					1.0	
	Colo.	1	1		3		3.0	
	Idaho		3		2		2.8	
24	Mont.		3		2		2.8	2.70
	Utah		2		1		2.6	
	Wyo.	1	3		1		2.2	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	1			3	1	3.6	
	Idaho		2	1	2		3.0	
25	Mont.		2		1	2	3.6	3.65
	Utah				2	1	4.3	
	Wyo.			1	3	1	4.0	
	Colo.		3	1	1		2.6	
	Idaho		4	1			2.2	
26	Mont.	1	3			1	2.4	2.30
	Utah		1	2			2.6	
	Wyo.	2	2	1			1.8	
	Colo.	1	4				1.8	
	Idaho	2	3				1.6	
27	Mont.		4			1	2.6	2.00
	Utah		3				2.0	
	Wyo.	1	3	1			2.0	
	Colo.	1	3		1		2.2	
	Idaho	4		1			1.4	
28	Mont.	3	2				1.6	1.57
	Utah	1	2				1.6	
	Wyo.	4	1				1.2	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	2	1			1.8	
	Idaho	1	2	1	1		2.4	
29	Mont.	1	3	1			2.0	1.87
	Utah		3				2.0	
	Wyo.	4	1				1.2	
	Colo.	1	3	1			2.0	
	Idaho	3	1	1			1.6	
30	Mont.	1	2		2		2.6	2.00
	Utah	1	2				1.6	
	Wyo.	2	2		1		2.0	
	Colo.	1	3	1			2.0	
	Idaho	2	2		1		2.0	
31	Mont.	1	3	1			2.0	2.00
	Utah		3				2.0	
	Wyo.	2	2		1		2.0	
	Colo.	1	3	1			2.0	
	Idaho		5				2.0	
32	Mont.	3	2				1.4	1.74
	Utah	1	2				1.6	
	Wyo.	3	1	1			1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	1	3		1		2.2	
	Idaho	3	2				1.4	
33	Mont.		5				2.0	1.70
	Utah	1	2				1.6	
	Wyo.	4	1				1.2	
	Colo.	3	2				1.4	
	Idaho		4	1			2.2	
34	Mont.		3		1	1	3.0	2.04
	Utah	3					1.0	
	Wyo.	2	2			1	2.2	
	Colo.	1	1	3			2.4	
	Idaho		4	1			2.2	
35	Mont.		3	2			2.4	2.35
	Utah		1	2			2.6	
	Wyo.	1	2	2			2.2	
	Colo.	3	1		1		1.8	
	Idaho	4			1		1.6	
36	Mont.		5				2.0	1.74
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	4	1				1.2	
37	Mont.		5				2.0	1.70
	Utah		3				2.0	
	Wyo.	1	4				1.8	
	Colo.	2	3				1.6	
	Idaho	2	3				1.6	
38	Mont.	1	3	1			2.0	1.74
	Utah		3				2.0	
	Wyo.	2	3				1.6	
	Colo.	1	3			1	2.4	
	Idaho	2	3				1.6	
39	Mont.		3	1	1		2.6	2.00
	Utah		3				2.0	
	Wyo.	3	2				1.4	
	Colo.	5					1.0	
	Idaho	4	1				1.2	
40	Mont.	1	4				1.8	1.39
	Utah	2	1				1.3	
	Wyo.	3	1	1			1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	1	4				1.8	
41	Mont.		4	1			2.2	1.74
	Utah	1	2				1.6	
	Wyo.	3	2				1.4	
	Colo.	2	2		1		2.0	
	Idaho	3	2				1.4	
42	Mont.		3	1		1	2.8	2.17
	Utah		2	1			2.3	
	Wyo.	1	3			1	2.4	
	Colo.	1	3	1			2.0	
	Idaho	2	3				1.6	
43	Mont.		5				2.0	1.78
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	
	Colo.	4			1		1.6	
	Idaho	4	1				1.2	
44	Mont.	2	1		2		2.4	1.87
	Utah		2	1			2.3	
	Wyo.	1	3	1			2.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	1	3	1			2.0	
	Idaho	2	3				1.6	
45	Mont.	2	3				1.6	1.70
	Utah		3				2.0	
	Wyo.	3	2				1.4	
	Colo.	1		2	1	1	3.2	
	Idaho	2	2		1		2.0	
46	Mont.	1	3			1	2.4	2.87
	Utah				2	1	4.3	
	Wyo.		2	2		1	3.0	
	Colo.	1	3	1			2.0	
	Idaho		4		1		2.4	
47	Mont.		4	1			2.2	2.04
	Utah		3				2.0	
	Wyo.	3	1	1			1.6	
	Colo.	1	3	1			2.0	
	Idaho	4	1				1.2	
48	Mont.	1	2	2			2.2	1.65
	Utah	2	1				1.3	
	Wyo.	3	2				1.4	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	3	2				1.4	
49	Mont.	1	5				1.8	1.52
	Utah	2	1				1.3	
	Wyo.	3	2				1.4	
	Colo.	1	4				1.8	
	Idaho	4	1				1.2	
50	Mont.	1	2	1	1		2.4	1.87
	Utah		2		1		2.6	
	Wyo.	3	1	1			1.6	
	Colo.	1	2	1	1		2.4	
	Idaho	1			4		3.4	
51	Mont.		1	1	1	2	3.8	3.04
	Utah		2		1		2.6	
	Wyo.		3		2		2.8	
	Colo.	2	2			1	2.2	
	Idaho	1	4				1.8	
52	Mont.	1	3			1	2.4	2.09
	Utah	1		1	1		2.6	
	Wyo.	3	1	1			1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	1	3	1			2.0	
53	Mont.		4			1	2.6	2.09
	Utah		3				2.0	
	Wyo.		4	1			2.2	
	Colo.	2	3				1.6	
	Idaho	1	4				1.8	
54	Mont.	1	3	1			2.0	1.78
	Utah	2	1				1.3	
	Wyo.	1	3	1			2.0	
	Colo.	1	3			1	1.4	
	Idaho	1	3	1			2.0	
55	Mont.	1	3	1			2.0	2.22
	Utah		2	1			2.3	
	Wyo.		4		1		2.4	
	Colo.		3	1	1		2.6	
	Idaho	1	3	1			2.0	
56	Mont.	1	3	1			2.0	2.26
	Utah		2		1		2.6	
	Wyo.		4	1			2.2	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	1	1		2	1	3.2	
	Idaho	1	4				1.8	
57	Mont.	2	3				1.6	2.26
	Utah	1	2				1.6	
	Wyo.	1	2		1	1	2.8	
	Colo.		4	1			2.2	
	Idaho	1	3	1			2.0	
58	Mont.		2	1	1	1	3.2	2.09
	Utah	1	2				1.6	
	Wyo.	4	1				1.2	
	Colo.	1	4				1.8	
	Idaho	1	4				1.8	
59	Mont.		4	1			2.2	1.91
	Utah		3				2.0	
	Wyo.	2	2	1			1.8	
	Colo.	3	2				1.4	
	Idaho	1	4				1.8	
60	Mont.		3	1	1		2.6	1.96
	Utah		3				2.0	
	Wyo.	2	2		1		2.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENT OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.			2	2	1	3.8	
	Idaho		1		4		3.6	
61	Mont.			1	3	1	4.0	4.00
	Utah				2	1	4.3	
	Wyo.			1	1	3	4.4	
	Colo.	2	2	1			1.8	
	Idaho	2	3				1.6	
62	Mont.	1	3		1		2.2	1.91
	Utah		3				2.0	
	Wyo.	1	3	1			2.0	
	Colo.	4	1				1.2	
	Idaho	1	4				1.8	
63	Mont.	1	4				1.8	1.61
	Utah		3				2.0	
	Wyo.	3	2				1.4	
	Colo.	1	2	1	1		2.4	
	Idaho	1	4				1.8	
64	Mont.		4			1	2.6	2.09
	Utah		3				2.0	
	Wyo.	2	3				1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN.
	Colo.	1	4				1.8	
	Idaho		5				2.0	
65	Mont.		4	1			2.2	1.96
	Utah	2	1				1.3	
	Wyo.	1	3		1		2.2	
	Colo.	2	2	1			1.6	
	Idaho	3	1		1		1.6	
66	Mont.	5					1.0	1.65
	Utah	1	1		1		2.3	
	Wyo.	3	1	1			1.6	
	Colo.	3	2				1.4	
	Idaho	3	2				1.4	
67	Mont.	1	4				1.8	1.52
	Utah		3				2.0	
	Wyo.	4	1				1.2	
	Colo.	2	3				1.6	
	Idaho	5					1.0	
68	Mont.	1	3	1			2.0	1.52
	Utah	1	2				1.6	
	Wyo.	3	2				1.4	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	2				1.4	
	Idaho		5				2.0	
69	Mont.			2	3		3.6	2.09
	Utah	1	2				1.6	
	Wyo.	3	1	1			1.6	
	Colo.	1	3		1		2.2	
	Idaho	4	1				1.2	
70	Mont.	1	4				1.8	1.78
	Utah	1	2				1.6	
	Wyo.	2	1	2			2.0	
	Colo.				4	1	4.2	
	Idaho		3	1	1		2.6	
71	Mont.	2	3				1.6	2.52
	Utah		3				2.0	
	Wyo.	2	2				2.0	
	Colo.	3	2				1.4	
	Idaho		5				2.0	
72	Mont.	2	3				1.6	1.57
	Utah	2	1				1.3	
	Wyo.	3	2				1.4	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENT OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	STRONGLY AGREE	AGREE	NO OPINION	DO NOT AGREE	STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho		5				2.0	
73	Mont.		4			1	2.6	2.13
	Utah	1	2				1.6	
	Wyo.		2	3			2.6	
	Colo.	3	1	1			1.6	
	Idaho	3	2				1.4	
74	Mont.	1	3		1		2.2	1.78
	Utah		3				2.0	
	Wyo.	2	2	1			1.8	
	Colo.	3	1		1		1.8	
	Idaho	2	3				1.6	
75	Mont.		2	1	2		3.0	2.00
	Utah	2	1				1.3	
	Wyo.	1	3	1			2.0	
	Colo.		4	1			2.2	
	Idaho	3	1	1			1.6	
76	Mont.		3	1	1		2.6	2.13
	Utah		3				2.0	
	Wyo.		4	1			2.2	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENT OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	3	2				1.4	
	Idaho	5					1.0	
77	Mont.	3		1	1		2.0	1.52
	Utah	2	1				1.3	
	Wyo.	2	2	1			1.8	
	Colo.	2	3				1.6	
	Idaho	4	1				1.2	
78	Mont.		5				2.0	1.65
	Utah		3				2.0	
	Wyo.	2	3				1.6	
	Colo.	3	2				1.4	
	Idaho	3	2				1.4	
79	Mont.	3	2				1.4	1.48
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	
	Colo.	1	4				1.8	
	Idaho	2	3				1.6	
80	Mont.	2	3				1.6	1.52
	Utah	2	1				1.3	
	Wyo.	1	3	1			2.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENT OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.		3	1	1		2.6	
	Idaho	1	2	1	1		2.4	
81	Mont.	2	2	1			1.8	2.13
	Utah		3				2.0	
	Wyo.	1	4				1.8	
	Colo.	1	3		1		2.2	
	Idaho	1	3		1		2.2	
82	Mont.	4				1	1.8	2.04
	Utah	1	2				1.6	
	Wyo.		4	1			2.2	
	Colo.	3		1	1		2.0	
	Idaho	2	3				1.6	
83	Mont.		4		1		2.4	1.96
	Utah	2	1				1.3	
	Wyo.		4	1			2.2	
	Colo.	2	3				1.6	
	Idaho	3	2				1.4	
84	Mont.			5			3.0	1.96
	Utah	1	2				1.6	
	Wyo.	1	3	1			2.0	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	3				1.6	
	Idaho	3	2				1.4	
85	Mont.			3	1	1	3.6	2.00
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	
	Colo.	1	2	1		1	2.6	
	Idaho	2	1		2		2.4	
86	Mont.	1	3		1		2.2	2.43
	Utah		2	1			2.3	
	Wyo.	1	1	2	1		2.6	
	Colo.	1	4				1.8	
	Idaho	2	1	2			2.0	
87	Mont.		4	1			2.2	2.00
	Utah	1	2				1.6	
	Wyo.		4	1			2.2	
	Colo.	1	2	1	1		2.4	
	Idaho	1	4				1.8	
88	Mont.		4		1		2.4	2.00
	Utah	1	2				1.6	
	Wyo.	2	3				1.6	

FREQUENCY OF RESPONSES GIVEN TO EACH OF THE NINETY-ONE STATEMENTS OF BELIEFS WITH STATE AND REGIONAL COMPOSITE MEAN

CARD NUMBER	STATE	1 STRONGLY AGREE	2 AGREE	3 NO OPINION	4 DO NOT AGREE	5 STRONGLY DISAGREE	STATE COMP. MEAN	REG. COMP. MEAN
	Colo.	2	2		1		2.0	
	Idaho	1	4				1.8	
89	Mont.		4	1			2.2	1.91
	Utah	1	2				1.6	
	Wyo.	1	4				1.8	
	Colo.	3	2				1.4	
	Idaho	3	2				1.4	
90	Mont.		4		1		2.4	1.74
	Utah		3				2.0	
	Wyo.	3	1	1			1.6	
	Colo.	2	3				1.6	
	Idaho	4		1			1.4	
91	Mont.		5				2.0	1.57
	Utah	2	1				1.3	
	Wyo.	3	2				1.4	

APPENDIX E

APPENDIX E

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN*	STATEMENT	CARD NUMBER	CATEGORY
1.17	I believe positions of leadership in vocational education at the local, state, and federal levels must be given the responsibility, authority, and salary sufficient to recruit and hold the best qualified persons in these positions.	11	LEADERSHIP
1.22	I believe vocational student teachers should have teaching experience in a vocational program under the supervision of an experienced, well-qualified vocational teacher.	13	TEACHER EDUCATION
1.35	I believe vocational guidance includes assistance in vocational planning, appraisal, placement, follow-up, and collecting and disseminating occupational information.	14	GUIDANCE
1.35	I believe the public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvement, it must provide for constant evaluation and reporting of problems and accomplishments.	07	ORGANIZATION AND ADMINISTRATION

*Respondents reacted to statements of belief on a 5-point scale: 1-strongly agree; 2-agree; 3-no opinion; 4-do not agree; 5-strongly disagree.

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.39	I believe all prospective teachers, administrators, and counselors should be encouraged to complete a professional foundations course in vocational education.	40	TEACHER EDUCATION
1.43	I believe in-service education should be cooperatively formulated by all who are concerned with an affected by such education.	03	TEACHER EDUCATION
1.43	I believe the means and goals of vocational-technical education should reflect the economic and social conditions of the present and the likely trends of the future.	09	DEFINITIONS
1.43	I believe vocational teacher-education includes the acquisition of: Fundamental Knowledge, Professional Knowledge, Technical Knowledge, and Occupational Competence.	22	TEACHER EDUCATION
1.43	I believe a student should have an occupational interest if he is to give his best effort in learning vocational-technical skills and knowledges and in making occupational adjustments.	23	GUIDANCE
1.48	I believe funds should be provided for the dissemination of information to local schools. Therefore, the State Plan should provide for such services. Such information to include, for example, curriculum guides, federal advisory reports, statistical information relative to labor statistics, etc.	02	ORGANIZATION AND ADMINISTRATION

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.48	I believe that at every level from the elementary school through the post-secondary, adult and remedial programs, there will be those with special needs as defined by the 1963 Vocational Education Act. For both humanitarian and economic needs deserve special help.	06	PEOPLE SERVED
1.48	I believe occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory.	79	CURRICULUM
1.52	I believe the strength of the American Vocational Association lies in the state associations which form the national organization.	01	LEADERSHIP
1.52	I believe the content of courses should be confirmed or changed by periodic analyses of the occupations for which training is being given.	49	CURRICULUM
1.52	I believe it is essential that each youngster should have the benefit of an educational program designed to suit his capacities, to enlarge his scope of occupational opportunities, and to develop him to the limit of his potentialities.	67	CURRICULUM
1.52	I believe vocational teachers and administrators must participate regularly in in-service programs.	68	TEACHER EDUCATION
1.52	I believe that vocational education is clearly classifiable as an "investment."	77	DEFINITIONS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.52	I believe the teacher-training program should improve teachers' ability to identify what a student knows, how he feels, and how he learns.	80	TEACHER EDUCATION
1.57	I believe the junior high school should direct its vocational objectives toward economic orientation. The objective should be exposure to the full range of occupational choices which will be available at a later point and full knowledge of the relative advantages and the requirements of each.	05	CURRICULUM
1.57	I believe the concept of work is a major factor in adult life in our society. From his work the individual derives not only his income but also many of his personal satisfactions and his status in the social groups with which he has contact.	28	DEFINITIONS
1.57	I believe periodic follow-up studies of graduates and drop-outs are essential to the evaluation of the effectiveness of the vocational education programs.	72	EVALUATION
1.57	I believe vocational education does not deprive the individual of the cultural enrichment and character building but embraces many economic, social, and esthetic values which conserve and develop our human resources.	91	DEFINITIONS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGION
COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.61	I believe occupational preparation should begin in the elementary schools with a realistic picture of the world of work. Its fundamental purposes should be to familiarize the student with his world and to provide him with the intellectual tools and rational habits of thought to play a satisfying role in it.	20	TRENDS
1.61	I believe both the process and the product of vocational education must be evaluated.	63	EVALUATION
1.65	I believe the in-service training of vocational education personnel should include both group and individual instruction.	48	TEACHER EDUCATION
1.65	I believe there is a shortage of trained vocational administrators at all levels.	66	LEADERSHIP
1.65	I believe greater cooperative effort should be considered by the community in planning for more effective and efficient vocational-technical education for all its citizenry.	78	TRENDS
1.70	I believe there are learning levels in vocational education: (1) education about the world of work, (2) vocational awareness, (3) vocational identification, and (4) career development. The term "career" refers to an "orderly" work history, one in which each job is preparatory to the next job, and the succeeding is either at the same or higher level.	04	GUIDANCE

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.70	I believe youth organizations for high school and post-secondary school students, should be an integral element in the learning process.	05	CURRICULUM
1.70	I believe each local community or school district should have a Community Plan for vocational and technical education.	12	ORGANIZATION AND ADMINISTRATION
1.70	I believe programs for specific occupations must be developed and maintained with the cooperation of the various occupational groups concerned.	16	CURRICULUM
1.70	I believe individual records should be kept by vocational educators in cooperation with the student as evidence of progress and competencies achieved.	33	CURRICULUM
1.70	I believe the expansion of vocational education requires an expansion of the teacher education program. This in itself will require the best thought and closest cooperation. There must be in this program of teacher education for vocational programs a balanced blend of practical experience and academic preparation.	37	TEACHER EDUCATION

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.74	I believe for every occupation there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally nor socially effective.	08	CURRICULUM
1.74	I believe vocational educators and counselors need to understand how a person forms his concepts of work, the kinds of things which motivate people toward various work-related situations, and the ways in which the individual derives his satisfaction from them.	32	GUIDANCE
1.74	I believe vocational education, academic, and general education cannot be separated. Vocational education is not a separate discipline within education, but it is a basic objective of all education and must be a basic element of each person's education.	36	TRENDS
1.74	I believe vocational education should provide a continuum of educational opportunity that allows individuals to refine or redirect their occupational objectives.	38	TRENDS
1.74	I believe a basic objective for the vocational-technical education curricula is to permit each student to progress as far as he is able. This means a very serious effort should be made to provide maximum freedom for individual learning or this objective cannot be realized.	41	CURRICULUM

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.74	I believe many vital ancillary services are needed to support the vocational teacher as he attempts to meet the needs of the learner and the demands of the employing community.	90	TRENDS
1.78	I believe vocational guidance as a broad concept must create within a student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic career aspiration levels.	43	GUIDANCE
1.78	I believe laws, like money, are enabling factors. They merely provide the opportunity. The imagination and creative force of our total community will have to go to work upon the challenge which lies within the possible programs themselves.	54	LEADERSHIP
1.78	I believe the administration of vocational education will be efficient to the extent that it is elastic and fluid rather than rigid and standardized.	70	ORGANIZATION AND ADMINISTRATION
1.78	I believe the length of teaching periods and the total hours of instruction are determined by the requirements of the occupation and the needs of the learner.	74	CURRICULUM
1.83	I believe state divisions of vocational-technical education should provide the inspiration and impetus for local innovation as well as concern for regulatory responsibilities.	17	ORGANIZATION AND ADMINISTRATION

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.87	I believe vocational preparation should be used to make general education concrete and understandable: general education should point up the vocational implications of all education. Curriculum materials should be prepared for both general and vocational education to emphasize these relationships.	29	TRENDS
1.87	I believe vocational education will be effective to the extent that the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach.	44	TEACHER EDUCATION
1.87	I believe the basic foundation for an effective state program in vocational and technical education is a comprehensive State Plan which includes the policies to be followed in maintaining, extending, and improving programs in vocational-technical education.	50	ORGANIZATION AND ADMINISTRATION
1.91	I believe as new occupational fields emerge and the nature of the industrial order becomes increasingly complex, it becomes more important that those responsible for vocational curriculum construction, training, and counseling have access to improved systems for the classification of occupations.	59	TRENDS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.91	I believe professional organizations in vocational education help foster in-service growth through stimulation of common professional interests and common goals.	62	TEACHER EDUCATION
1.91	I believe instructional techniques, materials, and learning tools should be developed that will permit individuals to progress at their own rate of ability, enroll on any day of the year, and leave and enter at ease.	89	TRENDS
1.96	I believe an occupational objective is an individual's current goal and serves as a directive force or guide for the learner and the educational institution.	15	CURRICULUM
1.96	I believe program evaluation criteria and program objectives in vocational-technical education are interrelated.	60	EVALUATION
1.96	I believe vocational education is the name applied to man's pursuit in acquiring experiences which will enable him to enter and advance within the occupational structure of society.	65	DEFINITIONS
1.96	I believe a permanent continuing process of vocational education should serve all persons in all communities regardless of their prior educational achievement, level of ability, aptitude, or vocational aspiration.	83	PEOPLE SERVED

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
1.96	I believe the various vocational services should cooperate with each other in planning programs for those occupations which cut across fields, each service providing the instruction in which it specializes.	84	CURRICULUM
2.00	I believe vocational curriculum development involves defining the breadth and depth of specific learning experiences fundamental to specific occupations.	27	CURRICULUM
2.00	I believe the State Plan, State Policy, and State guidelines should be cooperatively and democratically formulated by all who are concerned with and affected by such plans and policies.	30	ORGANIZATION AND ADMINISTRATION
2.00	I believe vocational-technical education needs a hierarchy of trained people for its varied programs, for example, media specialists, curriculum consultants, para-professional teachers, etc.	31	TEACHER EDUCATION
2.00	I believe vocational guidance must be concerned with the employed adult and help him continue to grow both as an individual and as a member of society.	39	GUIDANCE
2.00	I believe vocational and technical education is a planned program, under public supervision and control, designed to prepare youth and adults for gainful employment in recognized occupations.	75	DEFINITIONS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
2.00	I believe vocational education should serve the needs of both the individual learner and the community.	85	DEFINITIONS
2.00	I believe manpower and labor statistics must be constantly translated into revised programs and curricula.	87	CURRICULUM
2.00	I believe the vocational teacher-education programs should enhance teachers' ability in guiding youth and adults in all aspects of their development: mental, physical, social, cultural, as well as vocational.	88	TEACHER EDUCATION
2.04	I believe a Department of Education and Manpower Development should be established at the Cabinet level in the Executive branch of the federal government.	34	ORGANIZATION AND ADMINISTRATION
2.04	I believe vocational education must help students cope with the changing labor market through developing career strategies.	47	GUIDANCE
2.04	I believe "work choice" is an expression of the individual's attitude towards himself as well as an expression of the opportunities offered him.	82	GUIDANCE
2.09	I believe vocational education is often the link between social needs and social improvement.	19	DEFINITIONS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
2.09	I believe the education institution should provide for coordinated work-experience for all prospective vocational teachers during the pre-service educational experience.	52	TEACHER EDUCATION
2.09	I believe lower-entry occupations must be identified and established in order to enable students with special needs to compete in the job market.	53	CURRICULUM
2.09	I believe through organized counseling we could assist in discovering the interests and abilities of youngsters in the elementary and encourage their development.	58	GUIDANCE
2.09	I believe classroom instruction correlated with supervised work experience is one possible method for serving the interests and developing the potential of some of the people. Although the cooperative method lends itself well to individualized instruction for maximum development of each student, the basis for selectivity in cooperative courses should be realistic appraisal in terms of probable job success.	64	CURRICULUM
2.09	I believe vocational education will be efficient to the extent that the environment in which the learner is trained is a replica of the environment in which he must subsequently work.	69	CURRICULUM

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENT	CARD NUMBER	CATEGORY
2.13	I believe vocational education should stretch its dimensions to reach those for whom a minimum education is the only hope for dignity and economic freedom, and those who enjoy technical talents.	73	PEOPLE SERVED
2.13	I believe national reviews of vocational education are essential. By this process the status and trends of the vocational education program can be determined.	76	EVALUATION
2.13	I believe business and industry have the competence to do many parts of the vocational-technical training needed in the United States.	81	CURRICULUM
2.17	I believe there is a direct relationship between organizational structure of a federal, state, and local departments of education and program effectiveness in vocational education.	42	ORGANIZATION AND ADMINISTRATION
2.22	I believe there is a set of basic vocational capabilities (skills and knowledges) that have educational implications for all learners planning to move successfully in the world of work. Such a statement implies that these vocational capabilities can be translated into a cluster or core of experiences.	55	CURRICULUM
2.26	I believe vocational guidance is a process of helping the individual to examine his life experiences in order that his decisions and actions are clear and purposeful.	56	DEFINITIONS

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENTS	CARD NUMBER	CATEGORY
2.26	I believe occupational preparation in the high school should not be limited to a specific occupation. Given the uncertainties of a changing economy and the limited experiences upon which vocational choices must be made, instruction should not be overly narrow but should be built around significant families of occupations or industries which promise expanding opportunities.	57	CURRICULUM
2.30	I believe funds should be provided to assist local communities in research efforts directly associated with vocational and technical education.	26	ORGANIZATION AND ADMINISTRATION
2.35	I believe occupations should also be studied in terms of role relationships and role expectations.	35	CURRICULUM
2.43	I believe an adequate system of occupational preparation will provide residential facilities wherever the absence presents an obstacle to anyone in need of education and training.	21	ORGANIZATION AND ADMINISTRATION
2.43	I believe that the term "training" refers to specific skill development while "education" refers to the total vocational efforts.	86	DEFINITIONS
2.52	I believe that vocational education should be available to all citizens though their ultimate goal may be a professional position.	71	PEOPLE SERVED

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENTS	CARD NUMBER	CATEGORY
2.65	I believe it is essential that vocational-technical education programs emphasize fundamental skills and knowledges in more than one occupational area. Such capacity for adaptation is vital in view of the fact that most students will go through occupational lives characterized by constant learning of new tasks, skills, and knowledges.	18	CURRICULUM
2.70	I believe vocational programs should be based on the number of persons needing training, not on the number of jobs available in the community.	24	CURRICULUM
2.78	I believe vocational education is a unified program, not a number of separate programs identified as vocational agriculture, home economics, trade and industries, distributive education, etc.	10	TRENDS
2.87	I believe the organizational pattern of the U. S. Office of Education and the State Boards for Vocational Education should be congruous.	46	ORGANIZATION AND ADMINISTRATION
3.04	I believe the behaviors associated with effectively choosing and forging a career belong to the vocational education domain.	51	GUIDANCE
3.65	I believe for every occupation there is a body of content which is peculiar to that occupation, and which practically has not functioning value in any other occupation.	25	CURRICULUM

RANK ORDER OF STATEMENTS OF BELIEFS BY REGIONAL COMPOSITE MEAN

REGIONAL COMPOSITE MEAN	STATEMENTS	CARD NUMBER	CATEGORY
4.00	I believe the selection and training of administrative and supervisory staff is the responsibility of Federal Government cooperating with State governments.	61	LEADERSHIP

APPENDIX F

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APPENDIX G

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