IDENTIFICATION OF ROLE AND FUNCTION FOR PROPOSED RESEARCH UTILIZATION SPECIALISTS IN VOCATIONAL-TECHNICAL EDUCATION

By

JIMMIE DEWAYNE OSBORN

Bachelor of Science
Colorado State University
Fort Collins, Colorado
1965

Master of Science
University of Nebraska
Lincoln, Nebraska
1969

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF EDUCATION
July, 1972

IDENTIFICATION OF ROLE AND FUNCTION FOR PROPOSED
RESEARCH UTILIZATION SPECIALISTS IN
VOCATIONAL-TECHNICAL EDUCATION

Thesis Approved:

Robert R. Price
Thesis Adviser

Lloyd Wagner

Conrad S. Shelley

Kenneth St. Clair

D. Durham
Dean of the Graduate College

ACKNOWLEDGEMENTS

The investigator wishes to express his appreciation for the advice and encouragement given him by the various members of the faculty of the Oklahoma State University. In particular he wishes to thank Dr. Robert R. Price, for his guidance and continuous encouragement throughout the graduate program and dissertation study.

Appreciation is also extended to Dr. Donald S. Phillips, Dr. James Kenneth St. Clair and Dr. Lloyd L. Wiggins, members of the investigator's graduate committee. Their suggestions and counsel were instrumental in the completion of this study.

Gratitude is expressed for the interest and cooperation of the respondents who provided the data in this investigation and to friends and colleagues whose professional advice and encouragement were invaluable.

The investigator wishes to express sincere appreciation to his wife, Lynne, and daughter, Stephanie, who have also been a source of encouragement, assistance, and inspiration throughout the graduate program and this study.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The Nature of the Problem

In recent years there has been an increase in the amount of information and data required for decisions related to programs of vocational and technical education. This has largely been due to the greater diversity of rapidly expanding programs at the secondary, post-secondary and adult education levels. The addition of programs to develop special sensitivity to the disadvantaged, the handicapped and the underemployed and unemployed have further complicated the circumstances. In order to facilitate the orderly process of decision making, it is essential that the administrator have at his fingertips many sources of information and many types and formulations of relevant data.

At the same time there has been a rapid increase in the amount of information and data which are available to decision makers in vocational and technical education. Researchers are constantly attempting to answer the ever increasing questions encountered by educational practitioners. Basic research has provided many clues to establishing a climate more favorable to learning. More programmatic kinds of research have delved deeply into the question of how those things which must be done in the classroom may be accomplished. This insistent, yet constant need to know on the part of the practitioners and

the often guarded and vague, even sometimes contradictory, answers available from the researcher must somehow be more fruitfully brought together. One development being given increasing attention and favor is that of establishing a position, perhaps called a research utilization specialist, who would be specifically trained to interpret, to process and to package what is known and what has been discovered about better educational procedures. To be of maximum benefit, this function must be developed into a form which is readily understandable and acceptable by the practitioner. The need to accomplish closer and more effective communication and articulation between research and development capabilities and their user publics for the improvement of education is an essential issue and challenge for the seventies.

Statement of the Problem

One of the ways by which educational institutions are determined to be successful is the degree to which they reflect the values, mores and goals of the society and culture from which they were created. Changes in society and culture occur rather slowly. For innovative educators the time lag which exists between the discovery of an improved method through research and the utilization of that discovery in the classroom is felt to be costly and unnecessary. This time lag, estimated to span from 15-25 years before complete implementation of a new idea, means that educational systems continue to suffer from this limitation at a time when improved methods are critically needed.

In recent years a number of educators have proposed that individuals can be effective in reducing the time lag between discovery and practice. If individuals are to be prepared to serve in this capacity

information about the tasks to be performed is essential. The problem of this study was the lack of information about the role and function of individuals who may serve as the intermediary between the researcher and the practitioner.

The central purpose of this study was to identify the roles and functions of proposed research utilization specialists, with such roles and functions being established largely as relevant to perceptions of state department and area vocational-technical school personnel.

Significance of the Study

In order for schools to be successful they must change to meet the needs of the population they serve. There is a need to put the significant findings of educational research and development into the hands of practitioners and those who make educational decisions for their communities. Information is needed for modifying existing programs as well as for implementing new ones, thereby facilitating more rapid adoption of tested educational innovations.

If the research utilization specialist is to be effective in reducing the time lag between a research discovery and its classroom implementation, he must be properly trained to do his job. This study will provide valuable hints as to how the research utilization specialist can best fill this role and the functions that he should perform.

Research Questions

1. What functions can be identified as most appropriate and important to be performed by a research utilization specialist in voca-

tional-technical education?

2. What roles can be identified as most appropriate and important for an individual to function effectively as a research utilization specialist in vocational-technical education?

3. What are the perceptions of selected state department personnel concerning the most appropriate and important functions and roles of a research utilization specialist?

4. How do the perceptions of the most appropriate and important roles and functions of a research utilization specialist differ among area vocational-technical school administrators, teachers and board members within Oklahoma and Nebraska?

5. How do the perceptions of area vocational-technical school administrators, teachers and school board members concerning the most appropriate and important roles and functions of a research utilization specialist differ between Oklahoma and Nebraska?

Assumptions of the Study

It was assumed that the national panel of judges, serving as a validating jury for the questionnaire, functioned in an unbiased manner; and their perceptions were very similar to those that would be made by any comparable group of national leaders in vocational and technical education. Consequently, they were assumed to be a representative group.

It was assumed that the responses recorded in this study, as made by State Department personnel, area vocational-technical school administrators, teachers and school board members were approximately the same as responses made by analogous groups of people which might be

made at a different time. It was assumed that there is a unique role emerging for a research utilization specialist to help bridge the gap between research and implementation.

It was assumed that all responses were voluntarily made by the respondents and that each respondent possessed the capability and the motivation to make an honest and unbiased response to the questionnaire.

Definition of Terms

Panel of Experts. Thirty national leaders in vocational-technical education were chosen by the investigator with the help of the investigator's doctoral committee members. They were used as a panel of judges in validating the instrument used in this study.

State Department Personnel. The eight state department personnel selected by the investigator to participate in the study which included the State Director of Vocational and Technical Education and the supervisors of the seven program areas within the State Department of Vocational and Technical Education in Oklahoma and Nebraska.

Area Vocational-Technical School Personnel. The administrators, teachers and school board members serving in that capacity during the fall semester, 1971, in Oklahoma and Nebraska.

Role. The norms and expectations, as perceived by the four groups comprising this study, defining the pattern of behavior of the role incumbent.

Function. The normal and specific contributions, as perceived by the four groups comprising this study, of a person in a particular role that contribute to the attainment of valued objectives.

Research Utilization Specialist. A person who may be employed by an area vocational-technical school and possess expertise in the areas of research and application of research findings to planning, implementing and maintaining vocational-technical programs.

Scope and Limitations of the Study

This investigation involved two somewhat separate studies coordinated into one. Specifically included were: (1) the validation of an instrument for identifying the appropriateness and importance of the role and functions of a research utilization specialist by a national panel of judges and (2) the rating of these criteria by four different groups, each directly associated with vocational-technical schools in Oklahoma and Nebraska. Each of these four groups were given the same questionnaire, previously validated by the national panel of judges. This facilitated determination of the perceptions of state and area school personnel regarding the appropriateness and importance of the role and functions of an effective research utilization specialist in area vocational-technical schools in Oklahoma and Nebraska.

The population selected included a national panel of judges, state department of vocational and technical education personnel, and area vocational-technical school administrators, board members and selected teachers in Oklahoma and Nebraska in the Fall of 1971. The selection of the participating states was based upon several factors: an expressed willingness to participate in the study; a diversity of program and instructional arrangements; and an administrator, teacher and school board population to provide adequate sampling. Data,

findings, results, and conclusions as presented were limited by and subjected to the scope and limitations of this study.

CHAPTER II

REVIEW OF THE LITERATURE

Pattern of Research

The educational research enterprise in the United States has developed as a university based, individually directed, theory oriented, experimentally committed, psycho-statistical, part-time, federally funded activity. While there is much to be said for this particular pattern, it is apparent that the pattern of American educational research poses particular problems that have prevented research from being a viable partner in the task of planned educational improvement (8).

Vocational education research under The Vocational Education Act of 1963 was directed entirely by the United States Office of Education, but each state was encouraged to participate through both federal grants and the use of state and local funds. Research Coordinating Units were established under federal grants in most of the states to stimulate research activity and provide coordination both within the states and nationally (15).

In the 1968 Amendments to The Vocational Education Act of 1963, Congress divided the federal research funds evenly between the United States Office of Education and the state boards for vocational education, and provided for the support of Research Coordinating Units from the states' share of those funds. It was an arrangement intended to

preserve the national network of communications and coordination established through Research Coordinating Units, the United States Office of Education, and the Ohio State and North Carolina National Centers, while shifting some of the funds to strictly state and local projects (15).

The Vocational Education Act of 1963 specified that ten per cent of the basic grants to the states for vocational education be used for research. In the 1968 amendments, Congress again set aside ten per cent of the basic grants to the states for research. However, the Appropriations Acts passed by Congress each year since 1967 have contained line items for vocational education research of substantially less than the ten per cent required by law (15). At the same time, the 1968 National Advisory Council on Vocational Education mentioned genuine concern at both State and Federal levels about the nature and value of research. The most frequent criticism was the lack of tangible evidence of its impact on vocational-technical programs (23). These circumstances have imposed a heavy burden upon the states for more carefully structured experimentation, and greatly improved dissimination and implementation systems.

Bowman (2) has defined research development as the systematic use of knowledge and understanding gained from research and directed to the production of useful materials, devices, systems and methods. Such work includes the design, testing and improvements of prototypes and processes. The culmination of the development process is represented by a product designed to accomplish some useful, defined purpose.

The failure to implement research is not only the responsibility

of the research community, but also of those teachers and administrators in local programs who tend to be suspicious of research. With some proclivity to be protective and anti-intellectual, many vocational educators tend to keep on functioning out of comfort and habit, rather than getting involved in candid assessments of what they are doing (14).

An Administrator's Workshop on Research and Evaluation, held in New Jersey in May, 1970, gave attention to the various factors that tend to inhibit the implementation of research findings or research activities at the local level. Among the deterrents identified were ones associated with custom and tradition; law and regulation; administrators and the administrative process; financial problems; the faculty and their bargaining association; the board of education; and the community (14). One of the recommendations stemming from this conference was the idea that implementation of local research calls for a commitment to research by building it into the budget and assigning personnel to carry it out. Another concept generated was that outside experts (researchers) and persons inside the system (practitioners) must work as a team. Neither group working without the other will get very far (14).

One of the basic deterrents to the more widespread application of research may reside in the real and imagined differences that exist between so-called "researchers" and "practitioners." The result is a lack of full utilization of educational research, in part because researchers "scratch where practitioners don't itch," in part because there are breaks in the structured flow of research results to the practitioners (17).

There has been little utilization of research by practitioners, due in part to the fact that research has not been cumulative to any marked degree. A practitioner who turns to research for help is likely to find a scarcity of data in his area of interest or he finds competing or conflicting data which leaves him in an uncertain position (8).

Research has not been programmatically oriented, so that major problem areas have not been systemmatically explored. Because of the existing funding patterns, the individual direction, and the part-time endeavor aspect, it has been difficult to achieve any other pattern than ad hoc project research. Great gaps in existing knowledge are the result (8).

Koening (13) pointed out that an advanced technological society expects immediate returns on its investments and that observation has tremendous relevance to research and development administrators who have to compete for funds. The observation also, if carried to its end-point, could further mean that research should establish a linking unit to its receiving public. Runkel (24) noted the same situation and formalized the concept by suggesting the establishment of a linking organization that performed this communicative function.

Gearing (5) points out that researchers, school personnel and members of a community, all have different priority systems. The critical contrast is between the long-term theoretical interest of the researcher and the short-term pragmatic interest of the school and the community.

Little improvement in vocational-technical education can occur unless practitioners are aware of alternative approaches to education.

Developing an awareness of innovative practices in vocational-technical education becomes one of the major goals of a dissemination system (23).

Applying research findings to viable programs of vocational and technical education requires channels for communication. Organizations should be structured to facilitate the interaction of component parts. The degree to which these parts are interrelated and the processes flow fluently from one part of the organization to another determines its overall efficiency and its effectiveness. Change in one part of the system has implications for other subparts (23).

Human cooperation is very central to educational change. In an effort of planned change, outlooks of the scientist, the practitioner and the value scholar must be involved. Therefore, not only must educational change be based upon facts and experimentation and scientific principles, but it must also be grounded in ethics. There are norms by which people not only ought to organize joint enterprise, but are required to organize a joint enterprise to be successful. Appropriate integrative behavior is a requirement if the process of educational change is to occur (12).

Avenues for Change

There are no adequate mechanisms to link the worlds of the researcher and the practitioner. Until recently, it has been assumed by practitioners that the development function was within the scope of the researcher, while the researcher felt that it was up to the practitioner to make practical applications from research. Of very recent origin is the concept that whole new specializations, both individuals and agencies, are required to carry out development

efforts (8).

The greatest potential for moving research into new directions may result from an investment in new training programs. Patterns for training educational researchers or for producing needed new middlemen are inadequate or non-existent. The psycho-statistical tradition of educational research has prevented the development of researchers in any other mold, and particularly against the training of new middlemen incumbents. While the demand for such personnel is sharply on the rise, present training institutions continue to be unresponsive to the need. To some extent this failure can be charged to the fact that not enough is known about the role requirements to project a training program for them. But it is also true that response has been slow because these new roles do not conform to the traditional research image nor to the interests of the universities in which much of the training will have to take place. New or revised programs could contain many elements not found in existing training situations. They could also, and perhaps most importantly, work to develop new attitudinal factors, e.g., according respectability to practical research efforts, and recognizing the legitimacy and utility of non-theoretical studies (8).

Klausmeier (12) quoting Silberman and Carter states that:

> . . . research per se does not result in the development of instructional products. Researchers produce reports and journal articles rather than viable well-engineered educational products. The researcher often holds the belief that he has completed his responsibility in translating research findings into practice when he disseminates information on his research. If the effectiveness of instruction were proportional to the volume and rate of new research papers, there would not be an instructional problem. Unfortunately, research and educational innovation are far from synnonymous. Nor can the educational researcher claim credit for recent instructional innovations. The

> moving of advanced topics down to earlier grade levels and the new curricular materials are the product of the subject matter scholar rather than the educational researcher. If research is to gain status in the educational world, the researcher will have to leave his theoretically satisfying areas and start working on successive experimental revisions of some instructional product.

Some people believe that a stop-gap method of bridging the gap between the researcher and the practitioner may be filled by the university professor. They do not suggest that comprehensive programs and institutes for change, or applied development laboratories, or the creation of change agent positions in school systems are not desirable; indeed, they are sorely needed (26).

This position may be summed up by recalling a recent statement by David Fox who commented in the Urban Review that (26):

> I do not believe that researchers can maintain their traditional isolation from any implementation by arguing that their function is to evaluate in an objective way, leaving others the responsibility for implementation. We are working in such complex areas with such difficult problems of data interpretation that we must begin to insist upon the right to participate in the decision-making process when it involves the interpretation and the application of our own findings. We must recognize that we are studying an issue about which people are concerned. We have finally become social scientists in a vivid sense of the term. Since our problem and our data now have social, economic, and political implication, I feel that the intelligent researcher must insist upon being involved in the use of these data.

The gap between the "knowledge producer" and the "knowledge user" was well documented by Horvat who cited two important statements of Guba's (7):

> There is a tremendous gap between knowledge production and knowledge utilization that cannot be spanned either by the producer or by the utilizer himself, or even by these two acting in concert, at least in the typical situation. New mechanisms and agencies, using special

> techniques, are required to perform this bridging or linking function. Knowledge (in the form of theory or research findings) is at best only one of a number of input factors in any practical situation. No practical problem can be solved using knowledge alone--a whole host of economic, social, political, motivational, cultural, and other factors must be considered.

Guba (7) has proposed a model for change that the educational developer might have in mind. This national-wide system would be composed of five different parts. First, the utilization arm, whose task would be to depict local problems and needs, serve as an input to and accept inputs from other arms of the system and assist local professionals in local trial, and installation of problem solutions judged to have local utility. Secondly, the information arm, a resource center essential to a system for the stimulation of change. Its functions would include the development of problem specification packages, the development of information packages which relate to problems to be solved and provide outputs to other arms in the system. The third part, the research arm, to continue the production of basic research knowledge and to work heavily on the production of knowledge which is relevant to the solution of operating problems. Fourth, the development arm, to formulate a response solution including designing a response, producing components called for in the design, fabricating the components into a functioning system and field testing the fabricated system. Lastly, the diffusion arm whose functions are to inform the practitioner about available solutions and the nature of the problems which they are designed to alleviate, demonstrate to the practitioner the operating characteristics of available solutions and to assist in the training of personnel who actually operate the innovation.

Stanley (25) wrote of the need for a "school research designer"

who could identify operational problems, work with the staff of an educational research center to develop a research design covering the problems being encountered and implement the design. Others have projected a function of state departments of education from which a "research broker" role could be inferred. Under the model they proposed, state departments of education would secure competent research assistance for schools by identifying educational problems amenable to treatment through research, determining the agency or agencies which could best attack the problem and contracting with the agency or agencies to conduct the study (3).

Mager (19) speculated about development roles which he labeled the "instructional technologist." The skills and tasks Mager ascribed to this role included: (1) ability to derive and describe instructional goals in forms usable by the learner; (2) ability to identify environmental characteristics that facilitate or inhibit desired behavior changes; (3) ability to describe a wide variety of educational aids and devices and ability to evaluate these devices in terms of their contribution to given instructional goals; and (4) ability to construct criterion instruments by which the success of his efforts can be measured.

Miles (20) indicated a need for an "educational development specialist" whose role behaviors would be essentially those of an engineer. In the same paper, he suggested that a "field tester" was needed to assess the workability, consequences, and feasibility of a particular innovation at the preliminary or pilot state of development. Many persons have suggested the need for development of teams composed of specialists in non-teaching specialties. Emerging areas

may include: (1) "content research specialists;" (2) "media specialists;" (3) "systems specialists;" and (4) "engineers" (18).

Concerning diffusion roles Jung (11) suggested a position which he labeled a "trainer change agent" role. This position would perform such functions as (1) identifying needs for and providing training to school staffs and central administrators; (2) providing demonstrations of skills; (3) training staff in skills; (4) making support for training generally available; (5) arranging staff access to other training resources; and (6) coordinating administration, research and training as integrated parts of the systems' problem solving procedure.

Lippitt (16) called for establishment in local school systems of the "curriculum change agent" role. In his view the person filling this role would inform teachers of curriculum resources outside the school system, coordinate the adaptation of materials, train teachers in their use, and then service and nurture the innovative practice in the classroom. Others have speculated about the formation of regional educational service centers, the programs of which appear to infer the need for "local innovation stimulators" (1). To manage the overall diffusion process, there may be a need for a change manager who would administer a unit of the school system charged with stimulation, coordination, and control over the diffusion process in the school system (21).

Havelock (17) suggests that there may be critical individuals who can be termed "change agents," who are outside the consuming system, and that there might be other critical individuals inside. He feels that we are gradually moving toward a conception of a linking

role, or a knowledge linking role, a defined position within our social system which can be filled by a variety of individuals, but which maintains a link between potential consumers and expert resources, and does this self-consciously and perhaps even on a full-time basis.

A Look at the Future

Linking organizations offer great promise for the future. They may have a variety of structure, but most of the members must function primarily as members of the school district where self-renewal is to be engendered. They may be full-time or part-time personnel spending the remainder of their time teaching, counseling, or administering. The linking organization should be designed to transmit practice, not merely information and products. The primary purpose of the linking organization is organizational development to maximize self-renewal (24).

The establishment of committees or departments to prepare school organizations for innovation may make the transition to a changed mode of operation smoother. The committees would be primarily composed of school district personnel attempting new patterns of action. The district committees should be organized into larger clusters to insure effective communication among interdependent educational organizations, and other sources of innovative materials and training (24).

An educational linking institution should (1) anticipate or sense an area of concern among members of its target audience; (2) turn to the resource system and gather all the available informa-

tion on that subject; (3) select only the most salient elements, summarizing and drawing conclusions; (4) present this exhaustive review of the literature in an easily readable form; and (5) disseminate the document effectively, reaching the most influential members of the audience which is in need of the information. If the resource system does not have information available, the linker serves as a go-between in a sort of two-step feedback channel wherein he provides the researcher with guidance for further research efforts (4).

In the educational flow system many different labels have been attached to the research utilization specialist including linker, conveyer, packager, extension specialist, detail man, demonstrator, information retrieval specialist, consultant and change agent. In the most general terms, his function is the gathering, processing and distribution of educational knowledge (4).

The flow of knowledge from researchers to user is aided by knowledge linkers who activate the interpersonal network of communication within the target audience. The linker enters this network by contacting (through periodicals, mass media, conventions and directly) individuals in the audience who are more active than others (gate-keepers). Once gate-keepers have been identified, the linker, aware of the stages through which idea adopters must pass before accepting a new idea, must successfully communicate to them an understandable, attention-getting message which arouses personality needs and makes appropriate suggestions to meet these needs. This message is then passed on to the rest of the target audience by word of mouth. The linker must also actively solicit audience needs and apply them to research products, serving as a two-way force for facilitating

the flow of information (4).

The most frequently used information is the source closest and most accessible to the user, regardless of the perception of the quality of the information provided. Consequently, any system being developed must provide information which is accessible to practitioners of vocational education. Person-to-person communication is the preferred and most frequently used source among practice oriented groups (23).

An information dissemination system that dynamically interacts with information users concerns itself with dissemination activities, products and the utilization of information. Therefore, the user of information and his information needs must be central to the design of this system. Users of an information dissemination system should be identified and categorized early to facilitate further planning. Grouping of users who have common activities and problems would permit the development of products and dissemination techniques which would make the information system more efficient and effective (30).

The linking institution of tomorrow may be called upon to shape the educational future of this country. Why? Because they are really the only ones in a position to do it. They are central to the flow of information, in touch with those who need to know and those who can tell them. A linking institution is not to be a passive midpoint in the flow of educational knowledge, but rather an active force in sending to, and seeking from, all those others who make up the educational community. But a necessary first step for all is an understanding of the educational knowledge flow system, the adoption process and the research utilization specialist's role therein. With this a

critical evaluation of present performance and an assessment of potential contribution can be made with an eye toward the ideal (4).

An instructional program in vocational-technical education must be tailored to the needs of the individual school system. Consequently, it becomes the responsibility of the staff in the local educational agency to determine what innovative approaches to vocational-technical education are appropriate for their system (23).

The machinery for translating research findings into a program plan requires much coordinated effort and a clear delineation of responsibilities among individuals in an agency. Ways must be found to describe and identify the people capable of performing these translating functions, and developing procedures for facilitating the free flow of information within the agency and to its client schools (27).

This may not complete the team needed to renovate vocational programs, but it will hopefully eliminate some of the improvising of the past. Rigid response to new ideas through a truly innovative system may only result when teachers and research implementers are put together in a school system for the daily face-to-face, research input and problem feedback communication essential to change (27).

Research, like so many other areas or services to a school, must have a staff in order to fulfill its function. It is obvious that many schools are not aware of research and are doing very little to implement research findings because they have not employed any one to perform such a function (22). It may be more practical to view the local school as a consumer of research and development products and to place emphasis on strengthening conditions for training, adoption and implementation than to insist that each school district be responsible for

the continuum from research to operational practice (13). The need to bring closer communication and articulation between researcher and development capabilities and their user publics for the improvement of education is an essential issue for the seventies.

Role Perception and Development

Sutker (29) and others have defined role as consisting of norms and expectations defining a variety of activities to be carried out. It includes reciprocal relationships of a person in an organizational unit with other persons of that or other units relating to principle tasks, problems, and goals. Various types of situations, represented by a person in a position and persons in counter-positions set the prescriptions for the behavior and attributes of the role incumbent.

According to Turner (31), a role is a collection of patterns of behavior appropriate to a person occupying a particular status in society, a position in interpersonal relations, or identified with a particular value in society. Role refers to expected behavior and differs from the manner in which the role is actually enacted in a specific situation, which is role behavior or role performance.

Stogdill (28) states that the role a person can play in a group is determined by the extent to which his responsibility and authority are acknowledged by himself and others and by the extent to which others exercise responsibility and authority defined for his role. Gouldner (6) defines role as a set of expectations oriented toward people who occupy a certain position in a social system or group.

A role as defined by Hunt (10) represents the content of a position or the behavioral implications of occupying a position. Because

roles entail expectations for attitudes as well as for behavior, they also contribute to definitions of personal identity and thereby influence social interaction.

In most bureaucratic organizations, there exist auxiliary work activities which seem to be at the fringe of formal job descriptions. At its initial stage, these tasks are lacking in cohesiveness, boundaries and common purpose. Yet, if it is discovered that these extra additional duties contribute significantly to the attainment of the organizational purpose, the work will become institutionalized. This evolution process entails the routinizing of the tasks, naming of the job, setting of specific boundaries of authority and technical competency, and in some situations, the establishment of measurable objectives which the role incumbent should attain (9).

This seems to be the current situation in the area of research development in vocational-technical education. There is a unique role emerging for a research utilization specialist who will serve to bridge the gap between research and implementation.

Summary

Much can be said for the research enterprise in the United States. It is apparent, however, that particular problems have prevented research from being a viable partner in planned educational improvement. The lack of programmatic orientation, responsiveness to practical problems, flexible training programs, research utilization and linkage to the practical world has been the major contributing factor.

In order for improvement to occur alternative approaches must be attempted. Linking mechanisms between the researcher and practitioner

communities must be developed. New training programs with increased flexibility and new direction are needed. All avenues of change will require increased cooperation, communication and articulation between researchers and practitioners.

Currently, there seems to be a unique role emerging for a research utilization specialist in the area of research development in vocational-technical education. In order to bridge the gap between research and implementation, the flow of knowledge from researcher to user must be active and continuous. The linking function, performed by a research utilization specialist, may provide the essential service of gathering, processing, and distributing educational knowledge.

CHAPTER III

METHODOLOGY AND DESIGN

Introduction

The purpose of this chapter is to describe the methods and procedures used in conducting this study. It includes the method by which the participating populations were selected, the instrumentation, data collection and statistical procedures for the analysis of data.

This study grew out of a need to have more descriptive data on the appropriate role and function of a research utilization specialist in vocational and technical education. Initially, it was necessary to develop and validate an instrument for identifying the appropriateness and importance of selected roles and functions of a research utilization specialist. The instrument was used to obtain the perceptions of state department and area vocational-technical school personnel as to the appropriateness and importance of the validated items. A comparison of the perceptions of the identified roles and functions was made between area vocational-technical school administrators, teachers and school board members in Oklahoma and Nebraska.

Population of the Study

Thirty national leaders in vocational and technical education representing the areas of teacher education, administration and research were identified by the investigator and his doctoral committee

members to serve as the validating jury for the questionnaire (See Appendix A).

Eight Oklahoma and Nebraska state department personnel were selected to respond to the questionnaire. The personnel included the state directors of vocational and technical education and the state supervisors of the seven vocational and technical programs. The names of the people involved were obtained from the State Director of Vocational and Technical Education in Nebraska and Oklahoma.

At the area vocational-technical school level, administrators, teachers and school board members were involved in the study. The sample from the fifteen area school centers in Oklahoma and the seven area school centers in Nebraska included:

(1) The director and/or superintendent of the school and his administrative assistants.

(2) Fifteen teachers from each area school or the total number of teachers in the school if under fifteen.

(3) The area school board members.

A stratified random sampling procedure was used to select the teachers in schools with more than fifteen teachers. A list of teachers from each school was made and numbered consecutively. The numbers for each school were placed in containers and drawn one at a time. After a number had been drawn and recorded it was returned to the container before the next drawing was made. This was to insure that all numbers had the same probability of being drawn. Those teachers whose numbers were drawn constituted the teacher sample.

The list of area school administrators was obtained from state departments in each state. Names and addresses of board members and

a listing of the teachers were obtained from the state department in Oklahoma. In Nebraska board members' names and addresses as well as teachers were obtained from the area school directors.

In summary, the population included 30 national leaders in vocational and technical education, 16 state department officials in vocational and technical education and 69 administrators, 235 teachers and 74 school board members at the area school level.

Instrumentation

The instrument used in this study was initially developed by the investigator and included a listing of statements identified primarily from the review of literature. Statements so identified constituted possible functions and roles of a research utilization specialist. Refinement of the instrument was accomplished by incorporating suggestions from co-workers and the investigator's doctoral committee members. A final refinement was made by the research, planning and evaluation staff at the Oklahoma State Department of Vocational and Technical Education. After the refined instrument was thus established, it consisted of thirty-six statements concerning the functions and thirteen statements concerning the role of a research utilization specialist (See Appendix B).

A Likert-type five point scale was utilized for respondent ratings of each statement on the questionnaire. This was considered to be the most suitable and expedient means of securing individual perceptions of the appropriateness and importance of each item.

Data Collection

Data for the study were collected by mailing the questionnaire to selected participants. Questionnaires and a letter of explanation of the study were sent directly to the thirty national leaders. They were asked to rate the appropriateness and importance of the statements concerning the functions and roles of a research utilization specialist. They were given the opportunity to list additional functions and roles as well as make additional comments.

The validated instrument and a letter of explanation of the study were then sent to the eight state department officials in Oklahoma and Nebraska. This was done in order to obtain the perceptions of state level personnel relative to the appropriateness and importance of the statements concerning the functions and roles of a research utilization specialist. They were also given the opportunity to list any other functions and roles they felt were appropriate as well as to make additional comments.

The third mailing, to area vocational-technical school personnel, consisted of the questionnaire, a letter of explanation of the study and a cover letter from the state supervisor of area schools in Oklahoma, and the deputy assistant commissioner in Nebraska (See Appendix B). Questionnaires to the area school personnel indicated that they were to envision the research utilization specialist as being on the staff of the area vocational-technical school. The opportunity to list additional functions and roles as well as to make additional comments was given.

State department personnel, area school directors and board mem-

bers were mailed individual questionnaires. The remaining questionnaires were mailed to the area school directors in packets with an enclosed list of administrators and teachers to be sampled. Prior approval for this procedure was received from each area achool director.

The initial return of questionnaires from area school teachers and board members was below the 50 per cent level. Consequently, follow-up letters and questionnaires were mailed to them. This resulted in 91 additional returns. The final percentages of returned questionnaires from each group were: national panel, 96 per cent; state department personnel, 93 per cent; area school administrators, 92 per cent; teachers, 72 per cent; and school board members, 67 per cent.

Statistical Analysis

Raw data obtained from the returned questionnaires were recorded in tabular form for convenience of handling in subsequent collation and analysis. All respondents were asked to rate each item, using a rating scale of from one to five, with the larger the number indicating the greater the frequency of appropriateness and importance. Data collected through the questionnaires were tabulated as to the response made to each of the criteria by the participants in the study. The weighted mean response was determined by multiplying the number of responses within each category by the point value of each category and then dividing by the total number of responses to obtain the over-all weighted mean response.

Mean response scores were the only statistical treatment utilized

on the responses of the national panel and state department personnel. This was due to the fact that the national panel members were used to validate the instrument and state department personnel were sampled to obtain the perceptions regarding a research utilization specialist at that level.

At the area school level, further statistical treatment of the data was required in order to compare perceptions of the different groups sampled. Such information obtained was recorded in the form of frequencies which lend themselves to analysis by the Chi-square method. Chi-square, according to Siegel (1956), is a procedure for testing the significance of the divergence of one set of observed frequencies from another on the basis of the equal probability hypothesis.

The Chi-square method of statistical analysis is a non-parametric test which makes less stringent assumptions about the sample and results in conclusions which require fewer qualifications. A general requirement of the Chi-square test is that frequencies in each cell should not be too small. Walker and Lev (1953), suggest the following "practical rules of thumb for testing significance by use of the tables of areas under the Chi-square curve."

1. If there are 2 or more degrees of freedom and the expectation in each cell is more than 5, the Chi-square table assures a good approximation to the exact probabilities.

2. If there are 2 or more degrees of freedom and roughly approximate probabilities are acceptable for the test of significance, an expectation of only 2 in a cell is sufficient.

3. If there are 2 or more degrees of freedom and the expectation in all the cells but one is 5 or more, than an expectation of only one in the remaining cell is sufficient to provide a fair approximation to the exact probabilities.

4. If the logic of the problem permits, combine some of the

classes to increase the expectations in the cells when several cells have very small expectations.

For this study, cells were collapsed where appropriate to meet at least one criteria listed above. The major concern in the statistical analysis of data in this study was to determine the extent of agreement or non-agreement among respondents and to what extent such differences were significant. Those items with a significant difference at the .05 probability level or greater were presented as a group, and those items with a significant difference between the .05 and .10 probability level were presented as a group.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Research Questions

The objective of Chapter IV is to present and analyze the data relating to the research questions of this study. The presentation of this data includes the roles and functions which have been identified as appropriate and important by the national panel as well as the perceptions of selected state department personnel. A comparison of the perceptions of the appropriateness and importance of selected roles and functions of a research utilization specialist between area school administrators, teachers and board members within and between Oklahoma and Nebraska will be made.

Table I presents a summation of the responses of the national panel and selected state department personnel in Oklahoma and Nebraska relative to the appropriateness and importance of selected functions and roles of a research utilization specialist. The distribution of responses and weighted mean response scores for each questionnaire item are presented. Data in Tables II, III, IV, V, VI, VII, VIII, IX, and X are derived from the original information revealed in Table I.

TABLE I

RESPONSES OF THE NATIONAL PANEL AND SELECTED STATE DEPARTMENT PERSONNEL IN OKLAHOMA AND NEBRASKA AS TO APPROPRIATENESS AND IMPORTANCE OF SELECTED FUNCTIONS AND ROLES OF A RESEARCH UTILIZATION SPECIALIST

Item Number	National N/Response Category 1	2	3	4	5	Wtd. Mean Resp.	Oklahoma N/Response Category 1	2	3	4	5	Wtd. Mean Resp.	Nebraska N/Response Category 1	2	3	4	5	Wtd. Mean Resp.
FUNCTION:																		
1	0	0	3	11	15	4.41	1	1	1	5	0	3.25	0	0	2	4	1	3.85
2	1	13	6	8	1	2.83	0	1	3	2	2	3.62	1	1	3	1	1	3.00
3	1	7	13	6	2	3.03	0	1	2	3	2	3.75	0	0	3	2	2	3.85
4	1	1	5	11	11	4.03	0	1	1	3	3	4.00	1	0	2	4	0	3.28
5	2	7	7	3	10	3.41	0	0	1	3	4	4.37	0	1	2	3	1	3.57
6	0	0	5	5	19	4.48	0	0	3	4	1	3.75	0	2	4	0	1	3.00
7	0	2	9	13	5	3.72	0	4	1	3	0	2.87	0	1	5	0	1	3.14
8	0	1	5	10	13	4.21	0	0	1	3	4	4.37	0	0	3	3	1	3.71
9	4	8	13	3	1	2.62	0	3	3	1	1	3.00	0	1	4	2	0	3.14
10	1	8	6	11	3	3.24	0	1	2	5	0	3.50	0	1	4	2	0	3.14
11	4	3	14	6	2	2.97	0	2	3	3	0	3.12	0	2	4	1	0	2.85
12	1	3	11	8	6	3.52	0	1	4	2	1	3.37	0	1	5	1	0	3.00
13	1	3	7	11	7	3.69	2	3	1	2	0	2.37	0	1	3	2	1	3.42
14	0	3	5	11	10	3.97	0	0	2	4	2	4.00	0	0	3	4	0	3.57
15	0	5	10	7	7	3.55	0	1	1	5	1	3.75	0	0	2	4	1	3.85
16	1	4	6	7	11	3.79	0	0	2	4	2	4.00	0	0	4	1	2	3.71
17	0	0	2	11	16	4.48	0	1	2	1	4	4.00	0	2	1	0	4	3.85
18	0	0	5	9	15	4.34	0	0	1	3	4	4.37	0	1	1	1	4	4.14
19	0	1	7	12	9	4.00	0	1	1	5	1	3.75	0	1	3	2	1	3.42
20	1	5	9	13	1	3.28	0	2	3	2	1	3.25	0	1	5	1	0	3.00
21	1	4	11	9	4	3.38	0	1	3	3	1	3.50	0	2	4	0	1	3.00
22	0	0	2	4	23	4.72	0	0	0	2	6	4.75	0	0	1	3	3	4.28
23	2	5	9	7	6	3.34	1	1	1	3	2	3.50	0	1	3	2	1	3.42
24	1	6	7	8	7	3.48	0	2	1	4	1	3.50	0	4	2	0	1	2.71
25	0	4	14	6	5	3.41	0	1	2	4	1	3.62	0	2	5	0	0	2.71
26	0	1	7	13	8	3.97	0	1	4	2	1	3.37	0	2	3	1	1	3.14
27	1	3	6	12	7	3.72	0	0	2	5	1	3.87	0	0	4	3	0	3.42
28	2	9	10	6	2	2.90	1	2	2	2	1	3.00	1	3	2	1	0	2.42
29	0	4	6	10	9	3.83	0	1	1	5	1	3.75	2	0	2	2	1	3.00
30	1	2	12	10	4	3.48	0	2	2	4	0	3.25	1	2	4	0	0	2.42
31	0	2	10	6	11	3.90	1	0	4	3	0	3.12	0	0	4	2	1	3.12
32	0	1	3	12	13	4.28	0	0	0	4	4	4.50	0	1	2	1	3	3.85
33	0	2	3	13	11	4.14	0	0	1	4	3	4.25	0	2	3	0	2	3.28
34	1	4	7	9	8	3.66	1	2	1	4	0	3.00	0	1	3	2	1	3.42
35	0	4	6	9	10	3.86	0	0	2	4	2	4.00	0	0	2	3	2	3.42
36	0	2	3	10	14	4.24	0	0	0	3	5	4.62	0	2	2	0	3	3.57
ROLE:																		
1	7	7	11	3	1	2.44	1	4	2	1	0	2.37	3	3	1	0	0	1.71
2	7	8	7	5	2	2.55	2	2	3	1	0	2.37	1	1	4	1	0	2.71
3	2	1	14	12	0	3.24	1	3	3	1	0	2.50	1	2	4	0	0	2.14
4	0	0	1	6	22	4.72	0	0	1	3	4	4.37	0	1	0	1	5	4.42
5	1	0	1	10	17	4.45	0	0	0	4	4	4.50	0	0	0	3	4	4.57
6	0	1	4	11	13	4.24	0	1	0	6	1	3.87	0	1	2	2	2	3.71
7	1	1	7	13	7	3.83	0	0	1	4	3	4.25	0	0	1	5	1	4.00
8	1	2	6	9	11	3.93	0	0	1	4	3	4.25	0	1	2	2	2	3.71
9	0	0	3	9	17	4.48	0	0	0	6	2	4.25	0	1	1	3	2	3.85
10	2	6	10	5	6	3.24	1	1	0	0	6	4.12	0	3	2	2	0	2.85
11	0	0	2	12	15	4.45	0	0	0	4	4	4.50	0	0	1	4	2	4.14
12	1	0	4	13	11	4.14	0	0	2	4	2	4.00	0	0	2	3	2	4.00
13	4	6	11	4	4	2.93	2	1	2	3	0	2.75	3	3	1	0	0	1.71

Research Question 1

What functions can be identified as most appropriate and important to be performed by a research utilization specialist in vocational-technical education?

The research instrument was initially developed by the investigator and included a listing of statements that were possible functions of a research utilization specialist. This instrument was sent to thirty national leaders in vocational and technical education for validation. The panel members were asked to indicate their perception of the appropriateness and importance of each item on a Likert-type five point rating scale. The rating scale indicated the frequency of appropriateness and importance of each function in the following manner: Very Frequently = 5; Frequently = 4; Occasionally = 3; Seldom = 2; and Never = 1.

Questionnaires were returned by twenty-nine national panel members. Their responses to the items are shown in Table I. The Table indicates the distribution of the responses and a weighted mean response score for each statement.

Analysis of the weighted mean scores indicates that the items in Table II would be most appropriate and important. Analysis of mean scores obtained from the national panel indicates that the items in Table III would be least appropriate and important.

The national panel members were asked to list other functions they felt were appropriate and to make additional comments concerning the functions of a research utilization specialist. A summary of those

TABLE II

NATIONAL PANEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE MOST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
22	4.72	Be familiar with and oriented to state and national research information systems.
17	4.48	Inform teachers of possible solutions to particular problems as revealed in research studies.
6	4.48	Develop information packages of current and relevant information for teachers.
1	4.41	Anticipate areas of educational concern among local school personnel.
18	4.34	Assist in applying research findings to existing local programs.
32	4.28	Identify new and significant educational developments relating to existing programs.
36	4.24	Develop a library on educational research which will be accessible to local personnel.
8	4.21	Select, summarize, and draw conclusions from research information about problem areas as requested by teachers.
33	4.14	Assist the local school in keeping abreast of technological change through research.
4	4.03	Design responses to problem areas requested by local personnel.
19	4.00	Develop an extensive review of the literature in various areas in an easily readable and digestible form for local school personnel upon request or periodically.

comments follow. The investigator concluded that the comments were not consistent enough to merit a change in the questionnaire.

TABLE III

NATIONAL PANEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE LEAST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
9	2.62	Construct standard instruments to evaluate students, programs, and school performance.
2	2.83	Write program research proposals for state and federal funding.
28	2.90	Assist teachers in developing and describing instructional goals in a usable and understandable form, to the student learner.
11	2.97	Contract with other agencies to conduct research studies.

Members of the national panel felt that the functions of the research utilization specialist would basically depend upon (1) number of people served; (2) geographic area served; and (3) the budget. It was suggested that to function properly and usefully it may be necessary to have those who administer, review literature, and demonstrate. They felt that linking research and local schools was a very important, yet delicate, public relations problem. The research

utilization specialist must be an apt student of the "change process," that is, be familiar with the important variables in the diffusion and adoption process. Furthermore, he should study and determine the various opinion leaders in his state who are the administrative and academic "gatekeepers" of change, and how they can best be utilized in his change process goals. He would make use of scientific methods and be an important input to the research and development community on problem leads which should be treated by research. He should have a close relationship with research activities and innovations that are occuring in business, industry and the military.

Other functions suggested by the panel members were:

(1) Provide for exchange of progress reports among schools engaged in new programs.

(2) Initiate a plan for coordination of research data gathering and dissemination.

(3) Serve as the communications link between the areas of research and practice.

(4) Assign priority to users, problems and approaches.

(5) Supervise staff.

(6) Develop budgets.

(7) Control expenditures.

(8) Report substantive and fiscal results.

(9) Maintain and draw implications from records.

(10) Supervise the processing of documents.

Research Question 2

What roles can be identified as most appropriate and important for an individual to function effectively as a research utilization specialist in vocational and technical education?

The role portion of the research instrument was developed and validated in the same manner as the function portion of the instrument. Responses are shown in Table I. An analysis of the weighted mean scores of the national panel indicates that the roles shown in Table IV were most appropriate and important.

TABLE IV

NATIONAL PANEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE MOST APPROPRIATE AND IMPORTANT ROLE STATEMENTS

Item Number	Weighted Mean Response	Role Statements
4	4.72	A consultant
9	4.48	A synthesizer
11	4.45	An analyzer
5	4.45	A coordinator
6	4.24	A conveyer

An analysis of the weighted mean scores of the national panel indicates that the roles shown in Table V would be least appropriate and important.

TABLE V

NATIONAL PANEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE LEAST APPROPRIATE AND IMPORTANT ROLE STATEMENTS

Item Number	Weighted Mean Response	Role Statements
1	2.44	An administrator
2	2.55	A supervisor
13	2.93	A negotiator

The national panel members were asked to list other roles they felt were appropriate and to make additional comments concerning the role of a research utilization specialist. A summary of those comments follow. The investigator concluded that the comments were not consistent enough to merit a change in the questionnaire.

Some panel members felt that roles which place the research utilization specialist in a coordinator-consultant role were most critical. The research utilization specialist would be a representative for the research and development community and should attempt to inculcate in present and prospective teachers a proper attitude toward research and development results. A description of the role in levels of expertise was suggested, since the position might utilize assistants, interns and staff support aides. A good school background in teaching or administration was indicated as being an important experience for a research utilization specialist. Other suggested roles included: a

listener-prober, an evaluator, a disseminator and a change agent.

Research Question 3

What are the perceptions of selected state department personnel concerning the most appropriate and important functions and roles of a research utilization specialist?

Questionnaires were returned by eight Oklahoma state department personnel and by seven Nebraska state department personnel. Responses are shown in Table I. An analysis of the weighted mean scores indicates the following high rated functions in Tables VI and VII. The low rated functions are presented in Tables VIII and IX.

Additional functions of a research utilization specialist as indicated by state department personnel included:

1. Guidance and testing of students especially in aptitude and interests.
2. Publishing a list of the most outstanding research projects in the nation that would be appropriate in the area.
3. Seeking projects from local teachers in special interest groups.
4. Recruitment of capable and talented personnel into research.

It was indicated that flexibility and freedom to act were necessary aspects of carrying out the functions of a research utilization specialist.

The responses of state department personnel to the role of a research utilization specialist are presented in Table X.

TABLE VI

OKLAHOMA STATE DEPARTMENT PERSONNEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE MOST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
22	4.75	Be familiar with and oriented to state and national research information systems.
36	4.62	Develop a library on educational research which will be accessible to local personnel.
32	4.50	Identify new and significant educational developments relating to existing programs.
18	4.37	Assist in applying research findings to existing local programs.
8	4.37	Select, summarize and draw conclusions from research information about problem areas as requested by teachers.
5	4.37	Determine agencies who can best attack research problems.
33	4.25	Assist the local school in keeping abreast of technological change through research.
16	4.00	Work with a research coordinating unit staff to develop research design to solve problems encountered.
4	4.00	Design responses to problem areas requested by local personnel.
14	4.00	Test the applications of research information when implemented by local teachers.

TABLE VII

NEBRASKA STATE DEPARTMENT PERSONNEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE MOST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
22	4.28	Be familiar with and oriented to state and national research information systems.
18	4.14	Assist in applying research findings to existing local programs.
32	3.85	Identify new and significant educational developments relating to existing programs.
17	3.85	Inform teachers of possible solutions to particular problems as revealed in research studies.
15	3.85	Build the parts of research design into a functioning system at the local level.
3	3.85	Conduct student follow-up studies to determine present program effectiveness.
1	3.85	Anticipate areas of educational concern among local school personnel.
8	3.71	Select, summarize, and draw conclusions from research information about problem areas as requested by teachers.
16	3.71	Work with a research coordinating unit staff to develop research designs to solve problems encountered.
5	3.57	Determine agencies who can best attack research problems.

TABLE VIII

OKLAHOMA STATE DEPARTMENT PERSONNEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE LEAST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
13	2.37	Assist local teachers in the installation of new teaching methods and practices.
7	2.87	Isolate local educational problems and needs.
28	3.00	Assist teachers in developing and describing instructional goals in a usable and understandable form, to the student learner.
9	3.00	Construct standard instruments to evaluate students, programs and school performance.
34	3.00	Coordinate the adoption of new instructional materials and methods.
11	3.12	Contract with other agencies to conduct research studies.
31	3.12	Hold inservice training workshops for teachers on innovative practices.
30	3.25	Help local school personnel identify their educational needs.
20	3.25	Test curriculum processes and models that are implemented in local programs.
1	3.25	Anticipate areas of educational concern among local school personnel.

TABLE IX

NEBRASKA STATE DEPARTMENT PERSONNEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE LEAST APPROPRIATE AND IMPORTANT FUNCTION STATEMENTS

Item Number	Weighted Mean Response	Function Statements
28	2.42	Assist teachers in developing and describing instructional goals in a usable and understandable form, to the student learner.
30	2.42	Help local school personnel identify their educational needs.
25	2.71	Assist local teachers in experimental programs.
24	2.71	Compile bibliographies on specific educational topics on request of local personnel.
11	2.85	Contract with other agencies to conduct research studies.
29	3.00	Locate and order documents for the local information center.
21	3.00	Field test a constructed research system in a local program.
20	3.00	Test curriculum processes and models that are implemented in local programs.
12	3.00	Develop program specification packages that contemplate possible areas, methods and procedures when initiating new programs.
6	3.00	Develop information packages of current and relevant information for teachers.

TABLE X

STATE DEPARTMENT PERSONNEL RESPONSES INDICATING THEIR PERCEPTIONS OF THE MOST APPROPRIATE AND IMPORTANT ROLE STATEMENTS

Item Number	Oklahoma Weighted Mean Response	Nebraska Weighted Mean Response	Role Statements
5	4.50	4.57	A conveyer
11	4.50	4.14	An analyzer
4	4.37	4.42	A consultant
7	4.25	4.00	A developer
8	4.25	3.71	An innovator
9	4.25	3.85	A synthesizer
10	4.12	2.85	A researcher
12	4.00	4.00	A compiler
6	3.87	3.71	A coordinator
13	2.75	1.71	A negotiator
2	2.37	2.71	A supervisor
3	2.50	2.14	A teacher
1	2.37	1.71	An administrator

Additional roles of a research utilization specialist as indicated by state department peronnel included those of a creator and advisor.

Research Question 4

How do the perceptions of the most appropriate and important roles and functions of a research utilization specialist differ among area vocational-technical school administrators, teachers and board members within Oklahoma and Nebraska?

This phase of the study compares the responses of three groups of people at the area school level in Oklahoma and Nebraska. A Chi-square test was conducted to determine if significant differences occurred between the three groups within each state. Table XI and XII present a summation of the responses of area vocational-technical school administrators, teachers and school board members in Oklahoma and Nebraska relative to the appropriateness and importance of selected functions and roles of a research utilization specialist. The distribution of responses and weighted mean response scores are presented for each group to each questionnaire item. The Chi-square value, degrees of freedom and probability level are given for the three groups within Oklahoma and Nebraska and between counterpart groups between the two states. Significant differences in responses at the .05 and .05-.10 probability level are also indicated. Data in Tables XIII through XXVII are derived from the original information revealed in Tables XI and XII.

In Oklahoma the sample included 39 administrators, 155 teachers and 51 board members. The statements in Table XIII are those indicated in Table XI to have been significantly different at the .05 probability level between the three groups of area school personnel.

TABLE XI

RESPONSES OF AREA VOCATIONAL-TECHNICAL SCHOOL ADMINISTRATORS, TEACHERS AND SCHOOL BOARD MEMBERS IN OKLAHOMA AND NEBRASKA AS TO APPROPRIATENESS AND IMPORTANCE OF SELECTED FUNCTIONS OF A RESEARCH UTILIZATION SPECIALIST

		OKLAHOMA									NEBRASKA									BETWEEN STATES		
		N/Response Category									N/Response Category											
Item Number	Group[1]	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	Chi[6] Square Value	df	Probability Level
1	1	7	18	8	6	0	3.66				15	11	3	1	0	4.33				9.43	3	0.0238**
	2	26	73	33	12	11	3.58				15	39	14	8	4	3.56				1.21	4	0.8772
	3	10	24	14	3	0	3.80				4	12	5	1	1	3.73				2.61	4	0.6274
								9.97	8	0.2668							14.26	8	0.0746*			
2	1	15	11	9	4	0	3.94				11	10	5	3	1	3.90				1.81	4	0.7741
	2	30	49	59	12	5	3.56				12	37	23	3	5	3.60				7.41	4	0.1142
	3	13	14	20	2	2	3.66				5	8	7	2	1	3.60				1.39	4	0.8473
								10.0	8	0.2639							9.58	8	0.2954			

1. Group 1, Administrators; Group 2, Teachers; Group 3, School Board Members.
2. Frequency ratings. 5, very frequently; 4, frequently; 3, occasionally; 2, seldom; 1, never.
3. See page 29 for methodology used in computing weighted means.
4. For differences among the three groups in Oklahoma.
5. For differences among the three groups in Nebraska.
6. For differences between counterpart groups in Oklahoma and Nebraska.

* Significant at the .10 probability level.
** Significant at the .05 probability level.

TABLE XI (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
3	1	13	21	4	0	1	4.15				12	12	5	1	0	4.16				3.49	4	0.4810
	2	40	67	33	8	7	3.80				34	26	10	4	6	3.97				9.28	4	0.0537*
	3	18	22	8	2	1	4.05				7	11	4	0	1	4.00				1.45	4	0.8363
								7.52	8	0.4829							5.93	8	0.6564			
4	1	8	17	10	4	0	3.74				7	11	10	2	0	3.76				.86	3	0.8364
	2	28	52	50	16	9	3.47				17	18	34	5	6	3.43				5.21	4	0.2658
	3	7	16	20	6	2	3.39				2	9	10	1	1	3.43				1.61	4	0.8087
								5.48	8	0.7060							7.36	8	0.4990			
5	1	9	16	8	4	2	3.66				4	11	12	2	1	3.50				3.54	4	0.4743
	2	32	53	45	22	3	3.57				15	22	24	13	6	3.33				5.27	4	0.2599
	3	11	13	21	6	0	3.56				2	5	9	6	1	3.04				5.83	4	0.2112
								8.39	8	0.3964							7.15	8	0.5206			
6	1	14	12	10	1	2	3.89				7	12	9	2	0	3.80				3.61	4	0.4634
	2	54	53	38	8	2	3.96				31	22	18	6	3	3.90				3.04	4	0.5540
	3	9	23	15	4	0	3.72				4	9	9	1	0	3.69				.88	3	0.8318
								10.91	8	0.2058							9.07	8	0.3365			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
7	1	8	10	12	7	2	3.38				8	8	13	1	0	3.76				5.69	4	0.2227
	2	19	54	46	23	13	3.27				9	25	27	13	6	3.22				.65	4	0.9548
	3	7	19	18	6	1	3.49				7	7	6	1	2	3.69				5.66	4	0.2249
								6.06	8	0.6415							13.34	8	0.1001			
8	1	13	12	13	1	0	3.94				8	15	7	0	0	4.03				3.20	3	0.3617
	2	43	53	49	7	3	3.81				23	32	19	3	3	3.86				2.39	4	0.6674
	3	11	18	19	2	1	3.70				3	9	8	2	1	3.47				1.70	4	0.7927
								2.71	8	0.9505							7.05	8	0.5323			
9	1	6	11	14	4	4	3.28				5	9	11	4	1	3.43				1.30	4	0.8623
	2	15	33	63	31	13	3.03				11	23	25	10	11	3.16				6.45	4	0.1662
	3	6	18	23	3	1	3.49				4	8	5	5	1	3.39				6.68	4	0.1523
								12.99	8	0.1114							5.75	8	0.6772			
10	1	7	11	13	7	1	3.41				6	15	5	2	2	3.70				6.29	4	0.1769
	2	8	53	70	18	6	3.25				9	23	33	7	8	3.22				7.11	4	0.1290
	3	7	16	23	4	1	3.47				3	7	7	6	0	3.30				5.21	4	0.2659
								11.15	8	0.1927							16.14	8	0.0402**			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
11	1	2	5	18	10	4	2.76				5	6	12	4	3	3.20				4.19	4	0.3316
	2	14	38	59	29	15	3.04				6	18	26	18	12	2.85				2.37	4	0.6718
	3	1	10	24	12	4	2.84				2	4	9	6	2	2.91				2.09	4	0.7214
								7.23	8	0.5134							4.61	8	0.8000			
12	1	6	10	16	3	4	3.28				7	7	16	0	0	3.70				6.54	4	0.1606
	2	12	52	62	25	4	3.27				8	23	33	9	7	3.20				5.88	4	0.2073
	3	6	14	26	5	0	3.41				2	5	12	3	1	3.17				2.72	4	0.6096
								14.13	8	0.0778*							11.26	8	0.1864			
13	1	11	6	13	6	3	3.41				5	9	9	6	1	3.36				3.46	4	0.4855
	2	22	47	44	33	9	3.25				18	26	19	9	8	3.46				6.90	4	0.1397
	3	10	18	13	10	0	3.54				4	10	5	3	1	3.56				3.02	4	0.5572
								11.34	8	0.1825							4.64	8	0.7970			
14	1	7	12	15	4	1	3.51				6	11	8	4	1	3.56				1.10	4	0.8947
	2	15	55	55	18	12	3.27				11	36	21	7	5	3.51				3.99	4	0.4089
	3	6	22	17	6	0	3.54				3	9	9	1	1	3.52				3.37	4	0.4995
								8.10	8	0.4243							3.72	8	0.8817			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
15	1	8	10	10	10	1	3.35				6	13	9	2	0	3.76				**5.99**	4	0.1984
	2	20	52	54	19	10	3.34				9	27	27	10	7	3.26				**.52**	4	0.9681
	3	10	19	16	5	1	3.62				1	13	6	2	1	3.47				**4.35**	4	0.3612
								10.52	8	0.2296							9.26	8	0.3206			
16	1	13	8	15	3	0	3.79				10	12	5	3	0	3.96				**5.10**	3	0.1625
	2	29	52	56	13	5	3.56				16	28	25	7	4	3.56				**.88**	4	0.9252
	3	13	11	20	6	1	3.56				3	9	8	0	3	3.39				**9.33**	4	0.0526*
								8.36	8	0.3991							11.32	8	0.1836			
17	1	11	17	10	1	0	3.97				9	10	7	3	1	3.76				**3.43**	4	0.4907
	2	49	59	39	8	0	3.96				21	41	14	2	2	3.96				**8.79**	4	0.0656*
	3	17	21	9	3	1	3.98				5	11	5	1	1	3.78				**1.42**	4	0.8416
								5.82	8	0.6687							5.24	8	0.7337			
18	1	14	15	7	3	0	4.02				5	18	6	1	0	3.90				**4.52**	3	0.2093
	2	29	59	49	16	2	3.62				18	37	16	6	3	3.76				**5.77**	4	0.2160
	3	10	21	18	2	0	3.76				3	10	8	1	1	3.56				**2.63**	4	0.6238
								9.99	8	0.2650							5.78	8	0.6736			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
19	1	13	12	9	4	1	3.82				3	7	18	2	0	3.36				**11.25**	**4**	**0.0238****
	2	23	56	53	19	4	3.48				17	22	23	13	5	3.35				**5.41**	**4**	**0.2463**
	3	6	10	27	8	0	3.27				3	5	10	4	1	3.21				**2.59**	**4**	**0.6324**
								18.45	8	0.0182**							11.42	8	0.1780			
20	1	5	11	13	8	2	3.23				5	6	13	2	4	3.20				**4.64**	**4**	**0.3258**
	2	10	37	61	35	12	2.98				9	20	34	10	7	3.17				**4.53**	**4**	**0.3394**
	3	7	18	24	2	0	3.58				2	7	10	3	1	3.26				**4.65**	**4**	**0.3244**
								17.44	8	0.0258**							3.29	8	0.9152			
21	1	5	8	14	10	2	3.10				8	8	11	3	0	3.70				**5.75**	**4**	**0.2177**
	2	12	25	71	38	9	2.95				7	18	35	13	7	3.06				**3.62**	**4**	**0.4616**
	3	5	13	24	9	0	3.27				2	3	13	2	3	2.95				**8.95**	**4**	**0.0616***
								7.41	8	0.4942							12.63	8	0.1244			
22	1	22	10	7	0	0	4.38				18	10	2		0	4.53				**2.04**	**2**	**0.3622**
	2	52	62	32	8	1	4.00				39	27	10		4	4.21				**14.48**	**4**	**0.0061****
	3	17	20	11	3	0	4.00				4	13	6		0	3.91				**3.98**	**3**	**0.2629**
								9.26	8	0.3208							14.61	6	0.0235**			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

		OKLAHOMA									NEBRASKA									BETWEEN STATES		
		N/Response Category									N/Response Category											
Item Number	Group[1]	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	Chi[6] Square Value	df	Probability Level
23	1	4	15	13	6	1	3.38				5	6	9	8	2	3.13				**4.21**	**4**	**0.3785**
	2	29	43	41	31	11	3.30				6	25	20	22	7	3.01				**5.84**	**4**	**0.2104**
	3	9	14	16	12	0	3.39				0	3	9	9	2	2.56				**9.34**	**4**	**0.0524***
								8.50	8	0.3865							**13.57**	8	0.0930*			
24	1	12	9	9	7	2	3.56				3	5	12	9	1	3.00				**6.49**	**4**	**0.1638**
	2	23	48	55	24	5	3.38				6	25	20	22	7	3.01				**11.17**	**4**	**0.0246****
	3	4	10	24	13	0	3.09				0	3	9	9	2	2.56				**7.84**	**4**	**0.0962***
								17.66	8	0.0239**							**9.43**	8	0.3072			
25	1	7	15	12	4	1	3.58				6	6	16	1	1	3.50				**5.22**	**4**	**0.2645**
	2	18	48	58	25	6	3.30				11	20	34	12	3	3.30				**1.24**	**4**	**0.8724**
	3	4	13	26	7	1	3.23				1	6	11	4	1	3.08				**.80**	**4**	**0.9368**
								7.03	8	0.5340							**6.04**	8	0.6442			
26	1	6	12	13	7	1	3.38				2	9	15	4	0	3.30				**3.27**	**4**	**0.5157**
	2	17	35	61	32	10	3.10				9	20	33	11	7	3.16				**1.94**	**4**	**0.7498**
	3	8	14	19	10	0	3.39				1	3	12	6	1	2.86				**6.48**	**4**	**0.1649**
								6.32	8	0.6127							**8.26**	8	0.4083			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
27	1	8	15	12	4	0	3.69				2	14	10	2	2	3.40				**5.40**	**4**	**0.2475**
	2	18	46	64	20	7	3.30				10	26	30	9	5	3.33				**.79**	**4**	**0.9379**
	3	8	20	13	10	0	3.50				3	8	8	3	1	3.39				**3.25**	**4**	**0.5199**
								12.17	8	0.1428							2.82	8	0.9448			
28	1	4	11	17	4	3	3.23				4	12	7	3	4	3.30				**3.38**	**4**	**0.4985**
	2	23	37	44	39	12	3.12				13	24	18	14	11	3.17				**4.84**	**4**	**0.3031**
	3	5	16	18	10	2	3.23				2	11	6	3	1	3.43				**2.01**	**4**	**0.7375**
								8.51	8	0.3849							4.94	8	0.7656			
29	1	6	16	11	4	2	3.51				6	7	12	4	1	3.43				**2.77**	**4**	**0.5997**
	2	33	56	41	18	7	3.58				12	27	23	10	8	3.31				**3.80**	**4**	**0.4352**
	3	9	14	16	10	2	3.35				2	6	9	4	2	3.08				**1.86**	**4**	**0.7647**
								4.53	8	0.8073							4.68	8	0.7927			
30	1	3	15	13	7	1	3.30				6	6	12	3	3	3.30				**6.43**	**4**	**0.1676**
	2	21	42	56	24	12	3.23				12	22	26	13	7	3.23				**.37**	**4**	**0.9818**
	3	11	17	12	10	1	3.52				2	10	7	3	1	3.39				**2.96**	**4**	**0.5673**
								10.01	8	0.2640							5.34	8	0.7221			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
31	1	8	11	12	6	2	3.43				2	13	9	3	3	3.26				4.29	4	0.3679
	2	27	31	63	24	10	3.26				16	27	20	10	7	3.43				8.60	4	0.0709*
	3	9	14	19	9	0	3.45				2	7	11	2	1	3.30				4.41	4	0.3531
								5.88	8	0.6620							8.02	8	0.4320			
32	1	9	16	9	5	0	3.74				4	16	7	2	1	3.66				3.34	4	0.5044
	2	30	56	52	15	2	3.62				27	28	19	3	3	3.91				10.12	4	0.0380**
	3	7	21	19	4	0	3.60				4	11	6	1	1	3.69				3.39	4	0.4961
								4.67	8	0.7938							6.85	8	0.5540			
33	1	13	14	10	2	0	3.97				7	16	7	0	0	4.00				3.35	3	0.3416
	2	49	56	36	11	3	3.88				36	26	13	2	3	4.12				6.74	4	0.1487
	3	14	27	7	3	0	4.01				4	9	7	2	1	3.56				6.02	4	0.1960
								7.11	8	0.5260							14.48	8	0.0695*			
34	1	5	17	9	5	3	3.41				5	12	7	4	2	3.46				.25	4	0.9897
	2	31	53	45	20	6	3.53				15	30	20	9	6	3.48				1.99	4	0.7400
	3	7	20	19	5	0	3.56				4	9	6	3	1	3.52				3.10	4	0.5438
								7.80	8	0.4537							.51	8	0.9997			

Refer to page 47 for Table Key.

TABLE XI (CONTINUED)

		OKLAHOMA									NEBRASKA									BETWEEN STATES		
		N/Response Category									N/Response Category											
Item Number	Group[1]	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	Chi[6] Square Value	df	Probability Level
35	1	13	11	11	4	0	3.84				11	10	7	2	0	4.00				.61	3	0.8936
	2	25	54	49	20	7	3.45				22	16	31	7	4	3.56				8.92	4	0.0623*
	3	9	20	19	3	0	3.68				2	8	9	3	1	3.30				4.17	4	0.3838
								12.08	8	0.1468							10.08	8	0.2588			
36	1	13	15	7	4	0	3.94				11	7	9	3	0	3.86				2.33	3	0.5090
	2	30	61	45	16	3	3.63				23	26	20	8	3	3.72				3.73	4	0.4450
	3	13	17	16	4	1	3.72				2	9	9	2	1	3.39				2.99	4	0.5625
								5.92	8	0.6578							7.55	8	0.4791			

Refer to page 47 for Table Key.

TABLE XII

RESPONSES OF AREA VOCATIONAL-TECHNICAL SCHOOL ADMINISTRATORS, TEACHERS AND SCHOOL BOARD MEMBERS IN OKLAHOMA AND NEBRASKA AS TO APPROPRIATENESS AND IMPORTANCE OF SELECTED ROLES OF A RESEARCH UTILIZATION SPECIALIST

		OKLAHOMA									NEBRASKA									BETWEEN STATES		
		N/Response Category					Weighted[3]	Chi[4]			N/Response Category					Weighted[3]	Chi[5]			Chi[6]		
Item Number	Group[1]	5	4	3	2	1[2]	Mean Response	Square Value	df	Probability Level	5	4	3	2	1[2]	Mean Response	Square Value	df	Probability Level	Square Value	df	Probability Level
1	1	1	1	11	11	15	2.02				6	2	8	8	6	2.80				7.67	4	0.1033
	2	11	11	26	46	61	2.12				2	9	20	20	29	2.18				5.45	4	0.2428
	3	5	5	10	10	21	2.27				1	3	8	7	4	2.56				5.70	4	0.2215
								6.98	8	0.5398							14.87	8	0.0613*			
2	1	1	6	14	8	10	2.48				2	9	6	6	7	2.76				3.84	4	0.4292
	2	14	23	41	44	33	2.61				10	14	21	18	17	2.77				1.55	4	0.8191
	3	3	15	11	17	5	2.88				3	7	10	0	3	3.30				11.51	4	0.0213**
								13.14	8	0.1064							11.63	8	0.1676			
3	1	2	7	13	9	8	2.64				1	4	9	10	6	2.46				1.06	4	0.8999
	2	12	23	56	36	28	2.70				5	10	29	22	14	2.62				.77	4	0.9405
	3	5	3	21	18	4	2.74				0	5	9	5	4	2.65				8.23	4	0.0823*
								9.26	8	0.3201							3.83	8	0.8727			

Refer to page 47 for Table Key.

TABLE XII (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
4	1	20	11	7	0	1	4.25				18	9	3	0		4.50				1.76	3	0.6276
	2	65	53	31	5	1	4.13				43	28	7	2		4.40				6.35	4	0.1729
	3	26	20	5	0	0	4.41				11	7	4	1		4.21				3.33	3	0.3432
								8.95	8	0.3461							3.01	6	0.8095			
5	1	16	11	9	1	2	3.97				11	13	5	0	1	4.10				2.44	4	0.6593
	2	36	52	52	11	4	3.67				30	27	14	8	1	3.96				9.66	4	0.0460**
	3	11	21	15	4	0	3.76				4	11	3	4	1	3.56				5.60	4	0.2300
								10.13	8	0.2553							9.15	8	0.3293			
6	1	11	16	6	3	3	3.74				11	10	7	0	2	3.93				3.55	4	0.4723
	2	45	44	46	17	3	3.71				33	22	17	7	1	3.98				4.19	4	0.3820
	3	18	19	8	5	1	3.94				6	12	3	2	0	3.95				1.80	4	0.7746
								11.38	8	0.1805							11.24	8	0.1874			
7	1	14	12	11	1	1	3.94				10	15	4	1	0	4.13				4.16	4	0.3848
	2	49	50	39	11	6	3.80				29	23	17	9	2	3.85				2.25	4	0.6930
	3	14	19	17	0	1	3.88				7	7	7	2	0	3.82				5.19	4	0.2678
								6.78	8	0.5617							7.86	8	0.4482			

Refer to page 47 for Table Key.

TABLE XII (CONTINUED)

		OKLAHOMA									NEBRASKA									BETWEEN STATES		
		N/Response Category					Weighted[3]	Chi[4]			N/Response Category					Weighted[3]	Chi[5]			Chi[6]		
Item Number	Group[1]	5	4	3	2	1[2]	Mean Response	Square Value	df	Probability Level	5	4	3	2	1[2]	Mean Response	Square Value	df	Probability Level	Square Value	df	Probability Level
8	1	13	13	10	1	2	3.87				11	10	4	4	1	3.86				4.16	4	0.3854
	2	35	54	45	16	5	3.63				24	23	22	9	2	3.72				1.93	4	0.7509
	3	13	15	22	1	0	3.78				8	5	9	1	0	3.86				1.22	3	0.7511
								12.05	8	0.1482							6.16	8	0.6309			
9	1	13	8	14	3	1	3.74				7	14	7	1	1	3.83				5.69	4	0.2221
	2	25	42	58	24	6	3.36				16	21	26	13	4	3.40				1.00	4	0.9086
	3	4	22	24	0	1	3.54				1	8	10	4	0	3.26				9.92	4	0.0412**
								23.58	8	0.0028**							11.73	8	0.1629			
10	1	22	7	7	3	0	4.23				20	8	1	1	0	4.56				4.57	3	0.2049
	2	79	42	22	9	3	4.19				32	21	20	5	2	3.95				4.90	4	0.2969
	3	22	19	8	2	0	4.19				8	10	3	1	1	4.00				2.73	4	0.6073
								6.46	8	0.5970							13.60	8	0.0921*			
11	1	18	13	7	0	1	4.20				17	11	2	0	0	4.50				2.85	3	0.4173
	2	60	60	22	11	2	4.06				27	28	19	5	1	3.93				3.36	4	0.5011
	3	20	23	6	2	0	4.19				4	14	4	0	1	3.86				6.61	4	0.1567
								6.23	8	0.6227							17.42	8	0.0260**			

Refer to page 47 for Table Key.

TABLE XII (CONTINUED)

Item Number	Group[1]	OKLAHOMA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[4] Square Value	df	Probability Level	NEBRASKA N/Response Category 5	4	3	2	1[2]	Weighted[3] Mean Response	Chi[5] Square Value	df	Probability Level	BETWEEN STATES Chi[6] Square Value	df	Probability Level
12	1	18	15	4	0	2	4.20				15	11	3	1	0	4.33				2.91	4	0.5764
	2	54	61	31	8	1	4.02				19	29	23	9	0	3.72				7.20	4	0.1243
	3	13	23	12	3	0	3.90				3	7	7	5	1	3.26				8.17	4	0.0842*
								13.29	8	0.1017							19.92	8	0.0108**			
13	1	4	6	7	11	11	2.51				3	3	8	7	9	2.46				1.14	4	0.8872
	2	27	21	47	34	26	2.92				6	20	23	19	12	2.86				7.89	4	0.0946*
	3	4	9	12	16	10	2.62				0	1	7	10	5	2.17				4.87	4	0.3004
								9.20	8	0.3255							13.11	8	0.1074			

Refer to page 47 for Table Key.

TABLE XIII

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF OKLAHOMA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
19	.0182	Develop an extensive review of the literature in various areas in an easily readable and digestible form for local school personnel upon request or periodically.	Administrators
20	.0258	Test curriculum processes and models that are implemented in local programs.	School Board
24	.0239	Compile bibliographies on specific educational topics on request of local personnel.	Administrators

The role statement in Table XIV was indicated in Table XII to have been significantly different at the .05 probability level between the three groups of area school personnel.

TABLE XIV

ROLE STATEMENT THAT DIFFERED SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF OKLAHOMA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Role Statement	Group With Highest Weighted Mean Response
9	.0028	A synthesizer	Administrators

The function statement in Table XV was found to be significantly different at the .05-.10 probability level as indicated in Table XI. This difference was between the three groups of Oklahoma area school personnel.

TABLE XV

FUNCTION STATEMENT DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF OKLAHOMA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Function Statement	Group with Highest Weighted Mean Response
12	.0778	Develop problem specification packages that contemplate possible problem areas, methods and procedures when initiating new programs.	School Board

In Nebraska the sample included 30 administrators, 80 teachers and 23 board members. The statements in Tables XVI and XVII were indicated in Tables XI and XII to have been significantly different at the .05 probability level between the three groups of area school personnel in Nebraska.

TABLE XVI

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF NEBRASKA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
10	.0402	Produce component parts of useful research designs that may be utilized to evaluate programs, methods and procedures.	Administrators
22	.0235	Be familiar with and oriented to state and national research information systems.	Administrators

TABLE XVII

ROLE STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF NEBRASKA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Role Statements	Group With Highest Weighted Mean Response
11	.0260	An analyzer	Administrators
12	.0108	A compiler	Administrators

The statements shown in Tables XVIII and XIX are those found to be significantly different at the .05-.10 probability level as indicated in Tables XI and XII. The differences were between the three groups of

Nebraska area school personnel.

TABLE XVIII

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF NEBRASKA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
1	.0746	Anticipate areas of educational concern among local school personnel.	Administrators
23	.0930	Assist in teacher training to meet technological advances.	Administrators
33	.0695	Assist the local school in keeping abreast of technological change through research.	Teachers

TABLE XIX

ROLE STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN THE THREE GROUPS OF NEBRASKA AREA SCHOOL PERSONNEL

Item Number	Probability Level	Role Statements	Group With Highest Weighted Mean Response
1	.0613	An administrator	Administrators
10	.0921	A researcher	Administrators

Research Question 5

How do the perceptions of area vocational-technical school administrators, teachers and school board members concerning the most appropriate and important roles and functions of a research utilization specialist differ between Oklahoma and Nebraska?

This phase of the study compares the responses of the three counterpart groups of area school personnel between the states of Oklahoma and Nebraska. A Chi-square test was conducted to determine if significant differences occurred between each of the three groups between states.

The statements shown in Tables XX, XXI, XXII AND XXIII were those indicated in Tables XI and XII to have been significantly different at the .05 probability level.

TABLE XX

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN ADMINISTRATORS OF AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
1	.0238	Anticipate areas of educational concern among local school personnel.	Nebraska Administrators
19	.0238	Develop an extensive review of literature in various areas in an easily readable and digestible form for local school personnel upon request or periodically.	Oklahoma Administrators

TABLE XXI

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN TEACHERS IN AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
22	.0061	Be familiar with and oriented to state and national research information systems.	Nebraska Teachers
24	.0246	Compile bibliographies on specific educational topics on request of local personnel.	Oklahoma Teachers
32	.0380	Identify new and significant educational developments relating to existing programs.	Nebraska Teachers

TABLE XXII

ROLE STATEMENT DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN TEACHERS IN AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Role Statement	Group With Highest Weighted Mean Response
5	.0460	A coordinator	Nebraska Teachers

TABLE XXIII

ROLE STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05 PROBABILITY LEVEL BETWEEN SCHOOL BOARD MEMBERS OF AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Role Statements	Group With Highest Weighted Mean Response
2	.0213	A supervisor	Nebraska School Board
9	.0412	A synthesizer	Oklahoma School Board

The statements shown in Tables XXIV, XXV, XXVI, and XXVII are those indicated in Tables XI and XII to have been significantly different at the .05-.10 probability level. The responses are from the three groups of area school personnel in Oklahoma and Nebraska.

TABLE XXIV

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN TEACHERS IN AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
3	.0537	Conduct student follow-up studies to determine present program effectiveness.	Nebraska Teachers
17	.0656	Inform teachers of possible solutions to particular problems as revealed in research studies.	Same
31	.0709	Hold inservice training workshops for teachers on innovative practices.	Nebraska Teachers
35	.0623	Provide research data to budget makers.	Nebraska Teachers

TABLE XXV

FUNCTION STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN SCHOOL BOARD MEMBERS OF AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Function Statements	Group With Highest Weighted Mean Response
16	.0526	Work with a research coordinating unit staff to develop research designs to solve problems encountered.	Oklahoma School Board
21	.0616	Field test a constructed research system in a local program.	Oklahoma School Board
23	.0524	Assist in teacher training to meet technological advances.	Oklahoma School Board
24	.0962	Compile bibliographies on specific educational topics on request of local personnel.	Oklahoma School Board

TABLE XXVI

ROLE STATEMENT DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN TEACHERS IN AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Role Statement	Group With Highest Weighted Mean Response
13	.0946	A negotiator	Oklahoma Teachers

TABLE XXVII

ROLE STATEMENTS DIFFERING SIGNIFICANTLY AT THE .05-.10 PROBABILITY LEVEL BETWEEN SCHOOL BOARD MEMBERS OF AREA SCHOOLS IN OKLAHOMA AND NEBRASKA

Item Number	Probability Level	Role Statements	Group With Highest Weighted Mean Response
3	.0823	A teacher	Oklahoma School Board
12	.0842	A compiler	Oklahoma School Board

Additional functions and roles suggested by area vocational technical school personnel as well as additional comments are shown in Appendices C and D.

Summary

Research questions one, two and three were presented and analyzed by weighted mean responses. Mean scores were utilized to determine the perceptions of national and state leaders in vocational and technical education toward the most appropriate and important roles and functions of a research utilization specialist.

In research questions four and five, the Chi-square test was utilized to compare responses made by area school personnel within and between Oklahoma and Nebraska. Significant differences were found on nine function and five role statements within states. Responses to

thirteen functions and six roles were significantly different between states.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was concerned with the need for more descriptive data concerning the role and function of proposed research utilization specialists in vocational-technical education. Initially, the development and validation of an instrument for identifying the appropriateness and importance of selected roles and functions of research utilization specialists was necessary. The instrument was used in obtaining the perceptions of state department and area vocational-technical school personnel as to the appropriateness and importance of the validated items. A comparison was made of the perceptions of the appropriateness and importance of identified roles and functions among area vocational-technical school administrators, teachers and board members in Oklahoma and Nebraska, and between counterpart groups in the two states. Specifically, the study was an attempt to answer the following research questions:

1. What functions can be identified as most appropriate and important to be performed by a research utilization specialist in vocational-technical education?
2. What roles can be identified as most appropriate and important for an individual to function effectively as a research utilization specialist in vocational-technical education?

3. What are the perceptions of selected state department personnel concerning the most appropriate and important functions and roles of a research utilization specialist?
4. How do the perceptions of the most appropriate and important roles and functions of a research utilization specialist differ among area vocational-technical school administrators, teachers and school board members within Oklahoma and Nebraska?
5. How do the perceptions of area vocational-technical school administrators, teachers and school board members concerning the most appropriate and important roles and functions of a research utilization specialist differ between Oklahoma and Nebraska?

Thirty national leaders in vocational and technical education were selected to serve as a validating jury for the instrument. Sixteen selected state department of vocational and technical education personnel constituted the sample for obtaining the perceptions of the appropriateness and importance of the identified roles and functions of a research utilization specialist at the state level. Three hundred seventy-eight area vocational-technical school administrators, teachers and board members responded to the research instrument indicating their perceptions of the appropriateness and importance of the identified roles and functions.

In analyzing the data, mean response scores were used to identify the appropriateness and importance of role and function statements during the validation process as well as in determining the perceptions of selected state department personnel. The Chi-square test of significance of difference was utilized to compare the perceptions of area

vocational-technical school personnel within and between Oklahoma and Nebraska.

Findings

This study was concerned with the validation of an instrument for identifying the appropriateness and importance of selected roles and functions of a research utilization specialist and obtaining the perceptions of state department and area vocational-technical school personnel as to the appropriateness and importance of the validated items. The research findings of the study were:

1. National respondents functioning as a validating jury were in general agreement that the questionnaire items were appropriate and important for identifying the functions of an effective research utilization specialist in vocational and technical education.

2. In identifying the role of an effective research utilization specialist, the national panel indicated general agreement on the appropriateness and importance of the questionnaire items.

3. State department personnel tend to view the identified roles and functions to be appropriate and important. Nebraska personnel were found to consider that the most appropriate and important functions deal with local school problems, student follow-up, evaluation, research design, assisting teachers and coordinating the adoption of new materials. Oklahoma personnel, on the other hand, were found to recognize the most appropriate and important functions to be those more directly related to the areas of research, design and testing. The function pertaining to inservice training workshops for teachers on innovative practices was rated the same by both groups.

4. Several significant differences at the .05 probability level were found between area school personnel within states. In Nebraska, in all cases, administrators perceived that the most appropriate and important functions were those of producing component parts of useful research design for use in evaluation and being oriented to state and national research information systems. They perceived the role of analyzer and compiler as being more appropriate and important than did teachers and board members. In Oklahoma, administrators perceived the development of an extensive review of the literature and compiling bibliographies on specific topics as well as the role of synthesizer as being more appropriate and important than did teachers and board members. However, board members perceived the testing of curriculum processes and models implemented in local programs as being more appropriate and important than did administrators and teachers.

At the .05-.10 probability level, significant differences were found between area school personnel within states. Nebraska administrators perceived the functions of anticipating areas of educational concern among local school personnel and assisting in teacher training to meet technological advances as being more appropriate and important than did teachers and board members. They perceived the role of administrator and researcher as being more appropriate and important than did teachers and board members. However, teachers perceived the function of assisting the local school in keeping abreast of technological change through research, as being more appropriate and important than did administrators and board members. In Oklahoma, board members perceived the function of developing specification packages that contemplate possible areas, methods and procedures when initiating new

programs, as being more appropriate and important than did administrators and teachers.

5. When comparing area school counterpart groups between states several responses were significantly different at the .05 probability level. Nebraska administrators perceived the anticipation of educational concern among local school personnel as being a more appropriate and important function while Oklahoma administrators perceived the function of developing extensive reviews of literature in various areas as being more appropriate and important. Nebraska teachers perceived the familiarity with and orientation to state and national research information systems and the identification of new and significant educational developments relating to existing programs as being more appropriate and important than did Oklahoma teachers. However, Oklahoma teachers perceived the compilation of bibliographies on specific educational topics on request of local personnel as being more appropriate and important than did Nebraska teachers. Nebraska teachers perceived the role of coordinator as being more appropriate and important than did Oklahoma teachers, while Nebraska board members perceived the role of supervisor as being more appropriate and important than did Oklahoma board members. Oklahoma board members perceived the role of synthesizer as being more appropriate and important than did Nebraska board members.

Several significant differences at the .05-.10 probability level were found when comparing area school counterpart groups between states. Nebraska teachers perceived the functions of (1) conducting student follow-up studies to determine present program effectiveness; (2) informing teachers of possible solutions to particular problems as

revealed in research studies; (3) holding inservice training workshops for teachers on innovative practices and (4) providing research data to budget makers as being more appropriate and important than did Oklahoma teachers. Oklahoma board members perceived the functions of (1) working with a research coordinating staff to develop research designs to solve problems encountered; (2) field testing a constructed research system in a local program; (3) assisting in teacher training to meet technological advances; and (4) compiling bibliographies on specific educational topics on request of local personnel as being more appropriate and important than did Nebraska board members. Oklahoma teachers perceived the role of negotiator as being more appropriate and important than did Nebraska teachers. Oklahoma board members perceived the roles of teacher and compiler as being more appropriate and important than did Nebraska board members.

Conclusions

Realizing that this study is an attempt to establish a base point from which to work toward the establishment of a well defined job role and function, it appears that the most appropriate and important functions and roles which have been identified indicate broad areas of concern for this job position. Based on the weighted mean scores it appears that various functions and roles are more appropriate and important than others as perceived by the national panel.

Nebraska state department personnel indicated that the more appropriate and important functions of a research utilization specialist were in the areas of supervising and assisting with problems of a local school nature and conveying the problems and results among local

staff members. They perceived the most appropriate and important roles to be in the areas of consulting, coordinating, developing, analyzing and compiling. Oklahoma State department personnel perceived that the research utilization specialists more appropriate and important functions were closely associated with research, research design and testing. They perceived the most appropriate and important roles to be in the areas of coordinating, analyzing, consulting, developing, innovating and synthesizing.

Analysis of area vocational-technical school data from Nebraska indicates that Nebraska administrators perceived the production of research design components, orientation to research information systems, anticipation of local educational concerns and assisting in teacher training as being more appropriate and important than did teachers and board members. Teachers perceived the assisting of local schools in keeping abreast of technological change through research as being more appropriate and important than did administrators and board members. Administrators perceived the roles of analyzer, compiler, administrator and researcher as being more appropriate and important than did teachers and board members.

Analysis of area vocational-technical school data from Oklahoma indicates that administrators perceived that developing an extensive review of the literature and compiling bibliographies on specific topics were more appropriate and important functions than did teachers and board members. They also perceived the role of synthesizer to be more appropriate and important than did teachers and board members. Board members perceived the testing of curriculum processes and models implemented in local programs, and the development of specification

packages that contemplate possible areas, methods and procedures when initiating new programs as being more appropriate and important than did administrators and teachers.

In comparing area school counterpart groups between states, Nebraska administrators perceived the anticipation of local educational concerns as being a more appropriate and important function while Oklahoma administrators perceived the development of extensive reviews of literature as being more appropriate and important. Nebraska teachers perceived that familiarity with state and national research systems, identification of new and significant educational developments, conducting student follow-up studies, informing teachers of possible solutions to particular problems, holding inservice training workshops for teachers and providing research data to budget makers were more appropriate and important functions than did Oklahoma teachers. However, Oklahoma teachers perceived the compilation of bibliographies on request of local personnel as being more appropriate and important than did Nebraska teachers. Nebraska teachers perceived the role of coordinator as being more appropriate and important than did Oklahoma teachers. Oklahoma teachers perceived the role of negotiator as being more appropriate and important than did Nebraska teachers.

Oklahoma board members perceived the functions of working with a research coordinating staff, field testing constructed research systems, assisting in teacher training and compiling bibliographies on request of local personnel as being more appropriate and important than did Nebraska board members. Oklahoma board members perceived the roles of synthesizer, teacher and compiler as being more appropriate and important than did Nebraska board members. However, Nebraska

board members perceived the role of supervisor as being more appropriate and important than did Oklahoma board members.

Recommendations

The researcher recommends that vocational and technical education personnel make a cooperative and concerted effort to adequately define the functions and roles of a research utilization specialist in order to partially eliminate confusion among other educational personnel concerning his areas of responsibility. It is recommended that a study to more specifically define the roles and functions of a research utilization specialist be made. The broad general areas identified as appropriate and important in this study may serve as the base from which to increase specificity.

A study of vocational and technical education students is needed to determine their perceptions of the appropriate roles and functions needed to be an effective research utilization specialist. Also needed is the development of alternative methods and/or instruments for evaluating the appropriate roles and functions necessary for an effective research utilization specialist.

Further Implications

During the process of this investigation at least two research utilization specialists have been employed in Oklahoma area vocational-technical schools. This may serve as an indication of the need for an educational link between the researcher at the state and university level and the local practitioner, i.e. administrator, supervisor and teacher in the local area school. The results of this investigation

may prove beneficial to the practicing research utilization specialist as well as to those who may be contemplating such an endeavor. This investigation has allowed local area school teachers, board members and administrators to express their perceptions of the most appropriate and important roles and functions of a research utilization specialist. Allowance for the expression of these perceptions may well be the first step in overcoming some of the gaps in communication, gaps in the flow of knowledge, which have seriously curtailed the efficient utilization of research findings in previous years. It is the conviction of the investigator, that a somewhat specific set of roles and functions should accompany the research utilization specialist to his new job. This would serve to maximize his efficiency and effectiveness as well as allowing those with whom he works to have valid role and function expectations which will contribute to the attainment of valued objectives.

SELECTED BIBLIOGRAPHY

(1) Barton, Roger L. and Martha Russel Tiller. "The Need to Relate Title III Projects to Other Federal Programs." Theory Into Practice, Vol. 6 (June, 1967), p. 143.

(2) Bowman, Harry L. "The Product Development Process." Atlanta, Georgia: Southeastern Education Laboratory (June, 1969) (Microfiche ED 036 498).

(3) Campbell, R. F. and G. E. Sroufe. "The Emerging Role of State Departments of Education." Strengthening State Departments of Education. Eds. R. F. Campbell, G. E. Sroufe and D. H. Layton. Chicago: Midwest Administration Center, University of Chicago (1967), p. 86.

(4) Farr, Richard S. "Knowledge Linkers and the Flow of Educational Information." Stanford, California: Stanford University, ERIC Clearinghouse on Educational Media and Technology (September, 1969) (Microfiche ED 032 438).

(5) Gearing, Fredrich O. "Training Anthropologists for Educational Research." Albany, New York: State University of New York, Research Foundation (November, 1970) (Microfiche ED 045 610), pp. 48-49.

(6) Gouldner, Alvin W. "Cosmopolitans and Locals: Toward an Analysis of Latent Social Roles." The Sociology of Organizations Basic Studies. Eds. Oscar Grusky and George A. Miller. New York: The Free Press, 1970.

(7) Guba, Egon C. "A Model of Change for Instructional Development." Bloomington, Indiana: National Institute for the Study of Educational Change (June, 1968) (Microfiche ED 028 497), pp. 19-31.

(8) Guba, Egon C. "The Place of Educational Research in Educational Change." Bloomington, Indiana: National Institute for the Study of Change (June, 1967) (Microfiche ED 028 496), pp. 14-22.

(9) Halpin, Andrew W. Theory and Research in Administration. New York: Macmillan Company, 1966.

(10) Hunt, Raymond G. "Role and Role Conflict." Current Perspectives in Social Psychology. Eds. Edwin P. Hollander and Raymond G. Hunt. Third Edition. New York: Oxford University Press, 1971.

(11) Jung, Charles C. "The Trainer Change-Agent Role Within a School System." Change in School Systems. Ed. Goodwin Watson. Washington: National Training Laboratories, NEA, 1967, p. 103.

(12) Klausmeier, Herbert J. "Maximizing Opportunities for Development and Experimentation." In Learning In The Schools. Madison, Wisconsin: University of Wisconsin, Madison Campus, Research and Development Center (December, 1967) (Microfiche ED 010 214).

(13) Koenig, Adolph J. "Educational Research and Development: Implications for Research Management from a National Perspective," Washington: American Educational Research Association (March, 1970) (Microfiche ED 045 008) pp. 10-11.

(14) Law, Gordon F. "Deterrents to Research Utilization." American Vocational Journal, Vol. 45, No. 5 (October, 1970), p. 11.

(15) Lee, Arthur M. "Call for a National Research Policy." American Vocational Journal, Vol. 46, No. 5 (May, 1971), pp. 50-53.

(16) Lippitt, Ronald. "Processing of Curriculum Change." Curriculum Change Direction and Process. Ed. Robert R. Leeper. Washington: Association for Supervision and Curriculum Development, NEA, 1966, p. 55.

(17) Lippitt, Ronald and Ronald Havelock. "Needed Research on Research Utilization Implications for Educational Diffusion." East Lansing, Michigan: National Conference on Diffusion of Educational Ideas (June, 1968) (Microfiche ED 026 535).

(18) Loughary, John W. "Preparation of Educators in the Age of Computers and New Media." Man-Machine Systems in Education. New York: Harper and Row, 1966, p. 216.

(19) Mager, Robert F. "The Instructional Technologist." Educational Technology, Vol. 7 (May 15, 1967), pp. 1-2.

(20) Miles, Matthew B. "Emerging Research Utilization Roles in Education." Preparing Research Personnel For Education. Eds. David L. Clark and Blaine R. Worthen. Bloomington, Indiana: Phi Delta Kappa (1967), pp. 7-13.

(21) Miles, Matthew B. "Some Properties of School Systems as Social Systems." Change in School Systems. Ed. Goodwin Watson. Washington: National Training Laboratories. NEA (1967) pp. 25-26.

(22) Noall, Sandra. "Educational Research Information Centers." Mountain States Regional Workshop on Research in Vocational and Technical Education. Report on Research Training Programs (July 1966).

(23) Research Coordinating Unit. Research Handbook for Vocational-Technical Education. Stillwater, Oklahoma: Oklahoma State University (1969).

(24) Runkel, Phillip J. "Linking Organizations to Maintain Organizational Development and Transmit Innovation." Reprints and Occasional Papers Series. Eugene, Oregon: Oregon University, Center for Advanced Study of Educational Administration (October, 1970) (Microfiche ED 043 972), pp. 3-4.

(25) Stanley, Julian. "Preparing Educational Research Specialists for School Systems." Phi Delta Kappan, Vol. 48 (November, 1966), pp. 110-114.

(26) Steinhoff, Carl R. and Robert G. Owens. "Impact of Research Findings and Recommendations in Urban School Districts: A Case Analysis." New York: City University of New York, Division of Teacher Education (February, 1968) (Microfiche ED 042 231), pp. 2-10.

(27) Stevenson, William W. "Vocational Research: A Coming of Age." American Vocational Journal, Vol. 45 (March, 1970), pp. 38-39.

(28) Stogdill, Ralph M. "Individual Behavior and Group Achievement." Organizations and Human Behavior: Focus on Schools. Eds. Fred D. Carver and Thomas J. Sergiovanni. New York: McGraw-Hill Inc., 1969.

(29) Sutker, Solomon, John C. Egermeir, and J. Paschal Twyman with the assistance of Carol A. Jensen, Charles H. Kaiser, and Kenneth J. Kiser. An Exploratory Analysis of the Roles and Role Conflicts of Vocational Teachers in Oklahoma. Stillwater, Oklahoma: Oklahoma State University, Research Foundation (September, 1967).

(30) Taylor, Celianna I. and Joel H. Magisos. Guide for State Vocational Technical Education Information Dissemination Systems. Columbus, Ohio: The Ohio State University, The Center for Vocational and Technical Education (1971).

(31) Turner, Ralph H. "Role-Taking, Role Standpoint, and Reference-Group Behavior." The American Journal of Sociology, Volume 61 (January, 1956).

APPENDIX A

NATIONAL PANELISTS

Dr. Walter M. Arnold
American Vocational Research Corporation
1510 H Street, N.W.
Washington, D.C. 20005

Dr. Melvin Barlow
Director, Division of Vocational Education
University of California at Los Angeles
Los Angeles, California 90024

Dr. Gene Bottoms
Associate State Director of Vocational Education Leadership-Guidance
Georgia State Department of Education
State Office Building
Atlanta, Georgia 30334

Dr. Lloyd Briggs
Vocational Education Training Branch
Bureau of Educational Personnel Development
U. S. Office of Education, Room 3621, ROB # 3
7th and D Streets, S.W.
Washington, D.C. 20202

Mr. Robert J. Brown
Deputy Associate Manpower Administrator
U. S. Training and Employment Service, Manpower Administration
U. S. Department of Labor
Department of Labor Building
Fourteenth Street and Constitution Avenue
Washington, D.C. 20210

Dr. James Christiansen
Associate Professor of Agricultural Education
Texas A & M University
College Station, Texas 77843

Dr. John K. Coster
Director, Center for Occupational Education
North Carolina State University
Raleigh, North Carolina 27607

Dr. C. J. Cotrell
Specialist, Center for Research and Leadership Development Training
1900 Kenny Road
Ohio State University
Columbus, Ohio 43210

Dr. Harold Cushman
Teacher Education, Agricultural Education
New York State University
3435 Main Street
Buffalo, New York 14214

Dr. Don Davies
Associate Commissioner for Educational Personnel Development
United States Office of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

Dr. Mary Ellis
Director, Technical Education Research Center
2401 Virginia Avenue, N.W.
Washington, D.C. 20037

Dr. Rupert N. Evans
Professor of Vocational and Technical Education
College of Education
Urbana, Illinois 61820

Dr. Carl F. Lamar
Assistant Superintendent for Vocational Education
Division of Vocational Education
State Department of Education
State Office Building
Frankfort, Kentucky 40601

Dr. Gordon F. Law
Associate Professor of Education
Rutgers University
New Brunswick, New Jersey 08900

Dr. Arthur M. Lee
Director of Arizona Research Coordinating Unit
1333 Camelback Road
Phoenix, Arizona 85013

Dr. Joel Magisos
The Center for Vocational and Technical Education
Information Services
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

Dr. Joseph F. Malinski
Director of Program Planning and Development in Vocational
and Technical Education
Minnesota State Department of Education
Division of Vocational Technical Education
Centennial Office Building
St. Paul, Minnesota 55101

Dr. James F. McNamara
Research Associate, Research Coordinating Unit
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

Dr. A. J. Miller
Coordinator of Development and Training
Research and Evaluation Department
Center for Vocational and Technical Education
1900 Kenny Road
Ohio State University
Columbus, Ohio 43210

Dr. T. R. Miller
Associate Professor of Agricultural Education
Tompkins Hall
North Carolina State University
Raleigh, North Carolina 27602

Dr. Leon Minear
Regional Commissioner
Department of Health, Education, and Welfare
Federal Office Building
19th and Stout Streets
Denver, Colorado 80202

Dr. Jerome Moss, Jr.
Co-Director, Minnesota Research Coordinating Unit
University of Minnesota
Minneapolis, Minnesota 55455

Dr. Carl W. Proehl
Florida State Director of Vocational, Technical and Adult Education
Florida State Department of Education
Knott Building
Tallahassee, Florida 32304

Dr. Bruce Reinhart
Department of Education
University of California at Los Angeles
Los Angeles, California 90032

Dr. Edwin L. Rumpf
Chief, Development Branch
Division of Vocational and Technical Education
United States Office of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

Dr. Elizabeth J. Simpson
Research Associate, Division of Comprehensive and Vocational Research
The National Center for Educational Research and Development
U. S. Office of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20201

Dr. Gordon I. Swanson
Professor of Agricultural Education
College of Education
University of Minnesota
Minneapolis, Minnesota 55455

Dr. Robert E. Taylor
Director, The Center for Research and Leadership Development in
Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

Dr. Grant Venn
Associate Commissioner for Adult, Vocational and Library Programs
Office of Education
U. S. Department of Health, Education, and Welfare
400 Maryland Avenue, S.W.
Washington, D.C. 20201

Dr. Ralph J. Woodin
Chairman, Department of Agricultural Education
208 Agricultural Administration Building
Ohio State University
Columbus, Ohio 43210

APPENDIX B

THE INSTRUMENT AND LETTERS OF TRANSMITTAL USED FOR COLLECTION OF DATA

The Instrument

Name _____

Administrator ☐

Teacher ☐

School Board Member ☐

As a recognized leader in Vocational-Technical Education you have perceptions of what functions a research utilization specialist should perform. Please indicate your perception of the appropriateness and importance of each item for identifying the functions of an effective research utilization specialist by placing a circle around the corresponding number. You are to assume that the research utilization specialist would be a member of the Area Vocational-Technical School staff.

The effective research utilization specialist would:	Very Frequently	Frequently	Occasionally	Seldom	Never
1. Anticipate areas of educational concern among local school personnel.	5	4	3	2	1
2. Write program research proposals for state and federal funding.	5	4	3	2	1
3. Conduct student follow-up studies to determine present program effectiveness.	5	4	3	2	1
4. Design responses to problem areas requested by local personnel.	5	4	3	2	1

		Very Frequently	Frequently	Occasionally	Seldom	Never
5.	Determine agencies who can best attack research problems.	5	4	3	2	1
6.	Develop information packages of current and relevant information for teachers.	5	4	3	2	1
7.	Isolate local educational problems and needs.	5	4	3	2	1
8.	Select, summarize, and draw conclusions from research information about problem areas as requested by teachers.	5	4	3	2	1
9.	Construct standard instruments to evaluate students, programs, and school performance.	5	4	3	2	1
10.	Produce component parts of useful research designs that may be utilized to evaluate programs, methods, and procedures.	5	4	3	2	1
11.	Contract with other agencies to conduct research studies.	5	4	3	2	1
12.	Develop problem specification packages that contemplate possible areas, methods, and procedures when initiating new programs.	5	4	3	2	1
13.	Assist local teachers in the installation of new teaching methods and practices.	5	4	3	2	1
14.	Test the applications of research information when implemented by local teachers.	5	4	3	2	1
15.	Build the parts of research design into a functioning system at the local level.	5	4	3	2	1
16.	Work with a research coordinating unit staff to develop research designs to solve problems encountered.	5	4	3	2	1
17.	Inform teachers of possible solutions to particular problems as revealed in research studies.	5	4	3	2	1

		Very Frequently	Frequently	Occasionally	Seldom	Never
18.	Assist in applying research findings to existing local programs.	5	4	3	2	1
19.	Develop an extensive review of the literature in various areas in an easily readable and digestible form for local school personnel upon request or periodically.	5	4	3	2	1
20.	Test curriculum processes and models that are implemented in local programs.	5	4	3	2	1
21.	Field test a constructed research system in a local program.	5	4	3	2	1
22.	Be familiar with and oriented to state and national research information systems.	5	4	3	2	1
23.	Assist in teacher training to meet technological advances.	5	4	3	2	1
24.	Compile bibliographies on specific educational topics on request of local personnel.	5	4	3	2	1
25.	Assist local teachers in experimental programs.	5	4	3	2	1
26.	Identify and categorize users of research materials in the local area.	5	4	3	2	1
27.	Identify educational problems suitable to treatment.	5	4	3	2	1
28.	Assist teachers in developing and describing instructional goals in a usable and understandable form, to the student learner.	5	4	3	2	1
29.	Locate and order documents for the local information center.	5	4	3	2	1
30.	Help local school personnel identify their educational needs.	5	4	3	2	1

		Very Frequently	Frequently	Occasionally	Seldom	Never
31.	Hold inservice training workshops for teachers on innovative practices.	5	4	3	2	1
32.	Identify new and significant educational developments relating to existing programs.	5	4	3	2	1
33.	Assist the local school in keeping abreast of technological change through research.	5	4	3	2	1
34.	Coordinate the adoption of new instructional materials and methods.	5	4	3	2	1
35.	Provide research data to budget makers.	5	4	3	2	1
36.	Develop a library on educational research which will be accessible to local personnel.	5	4	3	2	1

Please list any other functions that you feel are important.

Additional Comments:

Please indicate your perception of the appropriateness and importance of the following items for identifying the role of an effective research utilization specialist.

The effective research utilization specialist would act as:	Very Frequently	Frequently	Occasionally	Seldom	Never
1. An administrator	5	4	3	2	1
2. A supervisor	5	4	3	2	1
3. A teacher	5	4	3	2	1
4. A consultant	5	4	3	2	1
5. A conveyer	5	4	3	2	1
6. A coordinator	5	4	3	2	1
7. A developer	5	4	3	2	1
8. An innovator	5	4	3	2	1
9. A synthesizer	5	4	3	2	1
10. A researcher	5	4	3	2	1
11. An analyzer	5	4	3	2	1
12. A compiler	5	4	3	2	1
13. A negotiator	5	4	3	2	1

Please list any other roles that you feel are important.

_____

_____

_____

Additional Comments:

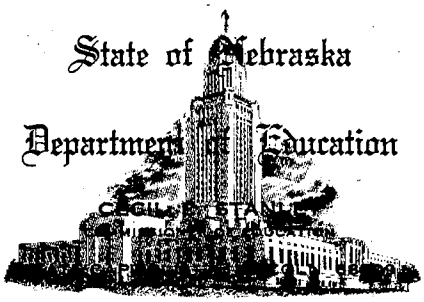
_____

_____

_____

I would like a copy of the composite results of this study. ☐

Letters of Transmittal



VOCATIONAL DIVISION

233 SOUTH 10th ST.
LINCOLN, NEBRASKA 68508

October 26, 1971

TO: Area Vocational-Technical School Administrators, Board Members, and Teachers

Jim Osborn was the teacher of vocational agriculture in the Arnold Nebraska High School from 1965-70. He attended high school in Benkelman, Nebraska, received his Bachelor of Science Degree from Colorado State University and his master's degree from the University of Nebraska. Jim is currently interning as an administrative assistant in the Oklahoma State Department of Vocational and Technical Education.

As you will notice, Jim is a doctoral student at Oklahoma State University and a member of the EPDA 552 program from Nebraska. I believe the title of his proposed dissertation indicates his study could be beneficial to all of us. I urge you to take the time to answer the questionnaire he is sending to you. Your cooperation will be greatly appreciated.

Sincerely,

Roy W Equall

ROY EQUALL
Deputy Assistant Commissioner
for Vocational Education

RE:rt

Votech OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

October 25, 1971

To: Area Vocational-Technical School Administrators, Board Members, and Teachers

Jim Osborn, an Administrative Assistant in the State Department of Vocational and Technical Education, has served part of his internship in our office. He is very interested in the area school concept.

As you will notice, Jim is a doctoral student at OSU and a member of the EPDA 552 program from Nebraska. I believe the title of his proposed dissertation indicates his study could be beneficial to all of us. I urge you to take the time to answer the questionnaire as submitted to you by Jim Osborn. Your cooperation will be greatly appreciated.

Sincerely,

Dale A. Hughey

Dale A. Hughey, State Coordinator
Area Vocational-Technical Education

PP/XAL-01/13

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

January 13, 1972

On November 27 questionnaires were mailed to you by Jim Osborn concerning the identification of the role and function of a research utilization specialist. The questionnaires were to be distributed to specified people on your staff. We appreciate the fine response from administrators, but at this time Jim has received a limited number of questionnaires from teachers. We are attaching a list indicating responses we have received to this date.

This is a study the State Department of Vocational and Technical Education is vitally interested in. We urge you to contact your teachers who have not returned the questionnaires and encourage them to complete the questionnaires and return them to Mr. Osborn.

Thank you for your cooperation.

Sincerely,

Bill Stevenson
Assistant State Director
Head, Division of Research,
Planning, and Evaluation

Enclosure

WWS/XFB-01/12

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE. • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

September 28, 1971

Dear

As you are certainly aware, at present there exists a costly and unnecessary time lag, estimated to span from 15-25 years, between the discovery of an improved method through research and the utilization of that discovery in the classroom.

In the realm of vocational and technical education there appears to be a unique job position emerging in the area of research development. It seems at this point, that the activities of this position would be concerned with fulfilling a "linking" function between researchers and the local schools.

Recognizing your position as a national leader in vocational-technical education, I would greatly appreciate your participation in the validation of an instrument concerning the use of a research utilization specialist as he might be envisioned as functioning to bridge this gap between educational research and educational practice.

This study will attempt to identify specific areas of competencies this position might require and to determine if different groups of people have different perspectives of this job position. It is hoped that this study will assist vocational educators in the logical establishment of training programs and job positions for research utilization specialist.

I am currently a doctoral student at Oklahoma State University, and a member of the EPDA 552 program from Nebraska. My proposed dissertation is entitled "Identification of Role and Function for Proposed Research Utilization Specialists in Vocational-Technical Education."

Your cooperation in answering this questionnaire would be of great assistance and sincerely appreciated. If you desire a copy of the composite results of this study, please indicate on the attached questionnaire.

Sincerely,

Jim Osborn
Administrative Intern

Enclosure

JO/XAT-01/12

APPENDIX C

ADDITIONAL COMMENTS BY AREA VOCATIONAL-TECHNICAL SCHOOL PERSONNEL CONCERNING THE FUNCTION OF A RESEARCH UTILIZATION SPECIALIST

This person should take problems as presented to him by educators, research until he finds suitable answers, and make them available to educators.

Information on federal legislation being proposed as a source of new money for additional programs as well as brick and mortar money, must be brought to the attention of the local administration in the very early stages so plans may be made to get involved.

The major function of this specialist should be to gather and disseminate information. The utilization of this information should be at the discretion of the teacher and/or the administration.

A very close tie to the employment needs of the area as related to course offerings and new programs.

Anticipate future needs of industry--anticipate future manpower needs--develop means to determine the need for future retraining.

Aid in basic interpretations of federal and state guidelines for operations of schools.

Must be able to work effectively with all levels of staff in an organization.

A research utilization specialist must be supportive to administration and supervision.

Compile a complete list of previous research and catalog the material for school personnel. This service could be used to serve an entire school system.

One who listens--not one who presses one's own ideas to change others--one who is available upon request.

Contact employers and forecast curricula changes to ensure employability of graduates. Prepare a bibliography

of audio-visual aids to new methods and content.

I think a person working in this area would have to have experience teaching in an area school. The problems encountered there are different.

It seems from my observations that we have a sufficient number of personnel in administrative positions at the present time. A research specialist could be integrated into the present administration set-up with a considerable savings to the taxpayer.

Assist in job placement for students.

Assist in job placement for graduating personnel at local, state, and federal level.

A research assistant would add more expense than would be warranted and would provide just one more chance for an academic brain to escape from the classroom to high wages.

Question number nine is very important and would be most helpful but would take a great deal of subject matter knowledge, actual teaching experience, and a vast amount of work--so most people hired to fill this position would not be capable of doing so or would not want to spend the necessary time to do so.

Developing a library, I would consider the most important.

Working very closely with learning laboratories.

A sales pitch that never failed to get students to enroll in an educational program that had this person employed.

This person in this capacity should be virtually exempt from other administrative duties that could tend to take up the time needed to effectively function in the role outlined.

Seems as though this would be an excellent opportunity for a research specialist, to work with and beside teachers to create pilot classes of different theories and techniques. As in the business field, it is ever changing. A specialist of research to supervise, consult, coordinate, and encourage teachers to keep up with the times and willing to change themselves with the times.

Meet with management and societies promoting the use of employees trained in their field--in short sell our programs.

Conduct surveys with industry to establish the need of certain vocational skills and knowledge.

Teacher-industry cooperation--Area employment research.

Make material available that is new to the staff of a school particularly in the instructional area. Keeping instructors abreast of what has been recently developed. Assist the instructor in updating his program.

Coordinate programs and help teachers to provide meaningful general education type courses when required.

Make himself available for and technically competent to appear before governmental units involved in new legislation and budgeting problems.

Coordinate effectiveness of programs offered and the graduate students as to their effectiveness in industry.

I believe that a research utilization specialist would be most useful as an 'internal consultant' on the staff of the superintendent or director. His function would be to keep the superintendent or director informed on the needs for new programs of instruction and changes needed in existing ones.

Research must chart the course for vo-tech education in order that we will not saturate the fields of training, or train past the obsolescent point.

I feel this position will only be another administrative job for any school. Many of your questions are duties which should be a part of an assistant administrator's job. Administrative costs will soon become a big, too big, liability to a school district. I feel we must recognize the over abundance of administrative people a school system can soon have.

Be a contact person with state and federal legislators. Keep the public informed of work being done and needs for finance.

I view research specialist in the realm of data preparation and compilation applicable to classroom teachers, the administration and the local community.

Field of Public relations--keep up with up-to-date methods.

Much research must be done to find what methods and procedures should be used to effectively train the broad range of capability differences in people. All must come out of their training with the highest possible employment acceptability, and room made in the training program for rate of accomplishment of material.

We need leadership to encourage change when needed promptly and effectively.

He should be a 'doer'--an expeditor in moving improved technological methods from industrial development to the vo-tech teacher and thereby to the student in the shortest possible time.

Most important is a constant reevaluation of existing programs to be sure we are accomplishing what we feel is our function for the students of all ages and societies needs. Constant alertness to the changing needs of business and industry.

APPENDIX D

ADDITIONAL COMMENTS BY AREA VOCATIONAL-TECHNICAL SCHOOL PERSONNEL CONCERNING THE ROLE OF A RESEARCH UTILIZATION SPECIALIST

He must report to and be responsible to the superintendent and school board. He must become thoroughly knowledgeable about area needs, backgrounds, of area student body and prospective programs planned by the state vo-tech department.

A member of a planning and instructional team. 'Head of a department' status with major responsibility in recommending.

Liaison representative between industrial needs and school curriculum design.

Teacher training supervisor.

This job would require an individual that could operate in that area that fringes between the administration on the one hand and the instructional staff on the other. The difficulty being on the limitation of authority and cooperative consultation.

Coordinate programs between high school and vo-tech schools.

Liaison between teachers and industry.

This role should be filled from the ranks of high-level teachers able to identify, analyze, and utilize.

This person should have no administrative function but rather engage in supportive and coordinating activity. Also he should teach occasional classes to maintain rapport with the teaching staff.

This person would fill an administrative role but certainly not in a 'dictatorial' manner.

Possibly a role in industry, on a working level so you could learn how new ideas and systems become everyday practice.

This should be a position directly available to the teachers as a resource for actual classroom teaching--not another position to 'fatten up' the already existing bureaucracy.

I can see one fear--instead of doing a meaningful job--this could be twisted as a way of justifying state programs or proving teachers incompetent through a so-called obsolete curriculum.

It would be difficult for a person not in health professions to function in some of the roles listed as related to the health program.

Program salesman--public relations.

If this specialist is a person that keeps the instructor informed and up to date on the latest materials and methods in his field--the researcher would be of great help.

Working as a supervior or administrator would do much to overcome the ineffectiveness of working with students in the most need of the benefits of this research, because of a fear among students, especially those who need help the most.

Possibly as even a counselor--to know the needs of students, job occupations, follow-ups, and placements.

VITA

Jimmie DeWayne Osborn

Candidate for the Degree of

Doctor of Education

Thesis: IDENTIFICATION OF ROLE AND FUNCTION FOR PROPOSED RESEARCH UTILIZATION SPECIALISTS IN VOCATIONAL-TECHNICAL EDUCATION

Major Field: Vocational-Technical and Career Education

Biographical:

Personal Data: Born in Benkelman, Nebraska, October 2, 1941, the son of Glen and Vivian Osborn.

Education: Graduated from Benkelman High School, Benkelman, Nebraska, in May, 1959; received the Associate of Arts degree from McCook Junior College, McCook, Nebraska, in June, 1961; received the Bachelor of Science degree from Colorado State University, Fort Collins, Colorado, in May, 1965, with a major in Agricultural Education; received the Master of Science degree in Agricultural Education from the University of Nebraska in 1969; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1972.

Professional Experience: Teacher of Vocational Agriculture at Arnold High School, Arnold, Nebraska, from July, 1965 to June, 1970. The vocational-technical educator from Nebraska awarded an Education Professions Development Act "552" grant to pursue a doctoral degree at Oklahoma State University in June, 1970.

Professional Organizations: Member of the Nebraska Vocational Agriculture Teachers' Association, National Vocational Agriculture Teachers' Association, American Vocational Association, National Education Association, former member of Custer County Nebraska Education Association.