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A study to determine the relationship between certain normative data and administrative knowledge as measured by the Written Michigan Vocational Administrative Examination

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A STUDY TO DETERMINE THE RELATIONSHIP BETWEEN CERTAIN NORMATIVE DATA AND ADMINISTRATIVE KNOWLEDGE AS MEASURED BY THE WRITTEN MICHIGAN VOCATIONAL ADMINISTRATIVE EXAMINATION

By

William L. Pratt

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ABSTRACT

A STUDY TO DETERMINE THE RELATIONSHIP BETWEEN CERTAIN NORMATIVE DATA AND ADMINISTRATIVE KNOWLEDGE AS MEASURED BY THE WRITTEN MICHIGAN VOCATIONAL ADMINISTRATIVE EXAMINATION

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The writer's purpose in conducting this study was to determine the relationship between candidates' scores on the Written Michigan Vocational Administrative Examination (WMVAE) and their educational level, teaching certification, administrative coursework, teaching experience, administrative experience, and occupational experience. The population comprised 63 candidates who took the WMVAE before entering the Leadership Development Program at Ferris State University, Big Rapids, Michigan, in 1986, 1987, and 1988. Candidates' responses on the Demographic Profile Form and their scores on the WMVAE were compared.

Descriptive as well as inferential statistics were used. Multiple regression analysis and stepwise regression techniques were employed. Population statistics were used to describe the examinees by educational level, teacher certification, and coursework, as well as teaching, administrative, and occupational experience. Frequency distributions were given for candidates' scores on each of the nine

WMVAE subtests as well as their aggregate WMVAE scores for each of the six normative characteristics selected. The subtests were Program Planning, Development, and Evaluation; Instructional Management; Personnel Management; Facilities and Equipment Management; Student Services; Staff Development; Professional Relations; School/Community Relations; and Business and Financial Management.

Correlation techniques revealed associations between the independent and dependent variables at the negligible, low, and moderate levels, according to the range devised by Davis (1971). None of the relationships were at the substantial or very strong level. The highest correlation coefficient was the moderate association was between the independent variable administrative experience and the dependent variable candidates' scores on the Staff Development subtest of the WMVAE.

No statistically significant relationship (at the .05 alpha level) was found between the normative data and candidates' aggregate scores on the WMVAE. Therefore, the statistical results indicated that the normative data selected were not good predictors of candidates' WMVAE scores.

This dissertation is dedicated to the late

Dr. Bruce J. Dunn,

my mentor and best friend.

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Many hours were spent studying and writing while my son, Shane, entertained himself. His maturity and understanding are deeply appreciated.

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CHAPTER I

THE PROBLEM

Introduction

Certification of school administrators is of increasing concern in the field of education. The National Commission on Excellence in Educational Administration (1987), sponsored by the University Council for Educational Administration, found in its examination of educational leadership in the United States a lack of licensure systems presumed to promote excellence. Among other criteria, the Commission strongly advocates a rigorous written and oral examination for those seeking school administrative positions.

With the recent emphasis on excellence in education, there is a trend toward competency testing for administrators, as well as for students and teachers. Whether competency testing, certification, or both prevail, it is important to determine the training, experience, and degree(s) necessary for competent administrators.

In their paper entitled "Where Are We and Where Are We Going in School Administrator Preparation in the United States?" Gousha, LoPresti, and Jones (1986) indicated some ongoing concerns regarding the issue of preparation and certification of administrators. In their first national survey of three constituencies (state certification officials, officials of large

public school districts, and directors at institutions of higher education that have doctoral programs in the field of education), Michigan was the only state that did not have certification requirements for administrators. Although Public Act 163 (effective July 1, 1988) requires that administrators in Michigan public schools attain certification as school administrators, many concerns must still be addressed (as evidenced by the hearings) regarding the development and maintenance of administrator preparation and certification (Michigan Department of Education, 1988).

Gousha et al. found that, of the 38 states in their study that certified school administrators, 16 had competencies to be met for certification and 2 were considering competencies. Furthermore, 11 states in the survey used examinations as part of their certification process. Of the 11 states requiring examination, 3 used the administration and supervision section of the National Teachers Examination battery; the other 8 used some form of locally developed examination.

The Michigan Institute for Educational Management (MIEM) Assessment Center is a program for prospective school principals and assistant principals and represents a significant effort on the part of school administrators to become self-policing. Center personnel diagnose individual candidates' strengths and weaknesses in 12 skill dimensions identified as necessary for effective performance as a principal. The Assessment Center is available to all school districts and is used by MIEM to determine entry-level skills for general education administrators (MIEM, 1985). However, in two

areas of education, special education and vocational education, certain administrators may need special skills.

The qualifications for directors of vocational education, shared-time directors of vocational education, career education planning district (CEPD) vocational-technical specialists, and area program implementers are stated in the Administrative Guide for Vocational-Technical Education in Michigan 1987 (Michigan State Board of Education, 1987) as follows:

> A. Education
> Secondary vocational administrators shall be graduates of an approved and accredited college or university with at least a Master's Degree and shall have completed vocational education preparation in the administration, supervision, and organization of vocational education programs.
> B. Experience
> Secondary vocational administrators shall have had a minimum of three years of experience in administration and/or teaching in vocational education programs.
> C. Other Conditions
> If a candidate does not meet the above referenced qualifications, an evaluation of competency will be made by the Michigan Department of Education based upon the combined education and experience of the individual. (pp. 251-52)

The Michigan Department of Education (MDE), Vocational-Technical Education Service (V-TES), is entrusted with the responsibility to "determine adequacy" of candidates who want to assume a state-reimbursable vocational administrative position. Rule 1 (3) of the Michigan Administrative Rules Relating to Education (Legislative Service Bureau, 1982a) states:

> R 395.231 Local administrators
> Rule 1. (3) Local administrators shall have the following qualifications:
> a. They shall be graduates of a recognized college or university with a master's degree and shall have completed vocational education courses in the

> administration, supervision, and organization of vocational education programs. They shall hold or be eligible to hold a valid Michigan teachers' certificate.
> b. They shall have had at least three years of experience in administration and/or teaching in vocational education programs. They shall have had at least two years of occupational experience, other than teaching or educational administration. In the case of trade and industry supervisors, they shall have had three years of occupational experience, other than teaching or educational administration.
> c. Under certain circumstances, if a candidate does not fully qualify, a competency examination may be arranged. The state board of education . . . will determine the adequacy of his combined education and experience as equivalent to the requirements set forth in subdivisions (a) and (b) of this subrule. (p. 261)

Thus, according to Rule 1 (3)(c), the purpose of a competency examination is to "determine the adequacy" of those applicants who do not meet the minimum criteria.

The Leadership Development Program and the Written Michigan Vocational Administrative Examination

The MDE/V-TES has supported in-service programs for vocational-technical administrators. As well, the MDE has supported vocational leadership training through reimbursements to sponsoring school districts and community colleges. Three universities in Michigan--the University of Michigan, Michigan State University, and Ferris State University--have received state and/or federal funds to develop and implement training programs for vocational administrators. Public funds have also been expended for the development and validation of a "competency examination" for the eventual purpose of helping decision makers determine the adequacy of administrative applicants.

Ferris State University was awarded a grant in 1985 to continue the vocational administrator training program that had its beginning at the University of Michigan and later at Michigan State University. This program is frequently referred to as the Leadership Development Program (LDP). Funds from this grant were also to be used in developing and validating a written vocational administrative examination. That examination, the Written Michigan Vocational Administrative Examination (WMVAE), was based on the 166 competencies identified by researchers at the National Center for Vocational Education (Norton, Ross, Garcia, & Hobart, 1977) and the 67 competencies determined to be "absolutely needed" by first-year vocational administrators in Michigan (Moore & Ray, 1985) (see Appendix A). The exam is administered to participants entering the Leadership Development Program. (Development of the WMVAE is discussed more fully in Chapter III.)

Statement of the Problem

To date, little research has been conducted at the national level that has indicated the relationship between the characteristics of administrators and their scores on written administrative examinations. The research that has been conducted in this area has been outside of the educational administration domain. In Michigan, no research has been undertaken on the relationship between scores on the WMVAE and the criteria specified in the Michigan Administrative Rules Relating to Education, i.e., coursework, teaching experience, teaching certificate,

administrative experience, level of education, and years of occupational experience.

How much occupational experience is required for minimal and optimal administrative competence? Is vocational teaching experience (i.e., electronics) more important than nonvocational experience (i.e., English)? How much education is required for optimal entry-level administrative competency? What is the relationship between the State Department criteria and the WMVAE? As these questions have not been addressed in the literature, inconsistencies may exist in the selection, reimbursement, and eventual certification requirements for Michigan vocational administrators. Consequently, unnecessary parallel training and certification processes may continue to exist in Michigan.

Because of this lack of research-based data, individuals constantly challenge the existing reimbursement requirements for vocational administrators. The Michigan V-TES has little research with which to support the suggested criteria, and the research that has been conducted has had many limitations (Rude, personal conversation, 1989). As a result of the present study, the level of awareness of individuals responsible for the selection, training, and reimbursement of vocational administrators could be raised so that they may objectively establish requirements that are based on relevant criteria rather than on opinion or tradition.

Purpose

The researcher's purpose in conducting this study was to address the above-stated problem by determining the relationship, if any, between certain normative data and administrators' knowledge, as measured by their scores on the WMVAE.

Importance of the Study

Resources are available with which to identify and verify competencies necessary for school administrators. Resources are also available with which to develop assessment centers and competency examinations. Educators, boards of education, legislators, and others are asked to establish criteria for administrative positions. Therefore, this study is important because the writer sought to determine the extent to which candidates' results on the WMVAE are correlated with certain qualifications stated in the Michigan Administrative Rules Relating to Education, Rule 1 (3) (Legislative Service Bureau, 1982a). For example, do candidates with occupational work experience perform better on the examination than those without such experience? Do candidates with teacher certification do better than those without certification?

Although the researcher did not address the validity of assessment centers, competency lists, examinations, or other means of determination, he did examine the relationship between examination results and suggested criteria for the reimbursement of vocational administrators.

Research Questions

The following questions were addressed in this study:

1. Is there a statistically significant relationship between a candidate's educational level and his/her WMVAE scores?

2. Is there a statistically significant relationship between a candidate's graduate-level coursework in administration, supervision, and organization of vocational education programs and his/her WMVAE scores?

3. Is there a statistically significant relationship between a candidate's teaching certification and his/her WMVAE scores?

4. Is there a statistically significant relationship between a candidate's vocational teaching experience and his/her WMVAE scores?

5. Is there a statistically significant relationship between a candidate's vocational administrative experience and his/her WMVAE scores?

6. Is there a statistically significant relationship between a candidate's occupational experience and his/her WMVAE scores?

Hypotheses

The following hypotheses, stated in the null form, were formulated to guide the analysis of data collected in this study.

Hypothesis 1: There is no statistically significant relationship between a candidate's educational level and his/her WMVAE scores.

Hypothesis 2: There is no statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores.

Hypothesis 3: There is no statistically significant relationship between a candidate's possessing or not possessing Michigan teacher certification and his/her WMVAE scores.

Hypothesis 4: There is no statistically significant relationship between a candidate's years of teaching experience in vocational education programs and his/her WMVAE scores.

Hypothesis 5: There is no statistically significant relationship between a candidate's years of experience in administering vocational education programs and his/her WMVAE scores.

Hypothesis 6: There is no statistically significant relationship between a candidate's years of occupational experience and his/her WMVAE scores.

Research Methodology

Participants in the Leadership Development Program were the subjects for this study. These LDP participants were selected from applicants throughout Michigan, whose common goal was to become eligible for reimbursement as a vocational administrator. The normative data and WMVAE test scores were collected from the files of the 63 individuals who had participated in the LDP during 1986, 1987, and 1988.

Descriptive statistics were employed to provide a description of the LDP participants and the distribution of WMVAE scores. Inferential statistics were used to examine the relationship between the independent and dependent variables.

Assumptions

1. The researcher assumed that the 67 competencies identified as "absolutely needed" in the survey reflect those that are essential for beginning vocational administrators in Michigan.

2. The researcher assumed that the examination was developed according to accepted standards and as detailed in the MDE's WMVAE specifications and procedures.

3. The researcher assumed that the candidates responded to the test items and to the Demographic Profile Form to the best of their ability.

Limitations

1. The study sample was limited to candidates who had taken the WMVAE as a pretest before entering the Leadership Development Program (LDP) in 1986, 1987, and 1988.

2. No attempt was made to evaluate programs, instructors, candidates, or test items.

3. The WMVAE does not include a performance test.

4. Results on the WMVAE do not necessarily indicate the candidate's performance as an administrator.

5. Results on the WMVAE may not be accurate predictors of candidates' success in seeking administrative positions.

Definitions of Terms

The following terms are defined in the context in which they are used in this dissertation.

Administrative experience. Years of administering vocational education programs.

Candidate. A person who has taken the WMVAE as a pretest for the Leadership Development Program.

Coursework. Postbaccalaureate-level vocational education academic courses in the administration, supervision, and organization of vocational education programs.

Educational level. The highest level of schooling achieved (i.e., baccalaureate, master's, doctorate), as measured by degree earned.

Michigan vocational administrators. Persons who administer secondary and postsecondary vocational programs in Michigan and are approved for reimbursement in accordance with state administrative rules.

Occupational experience. Years of wage-earning work experience in a specific business, trade, or industrial area.

Teacher certification. The type of teaching certificate the candidate possesses, i.e., noncertified, vocationally certified, annually authorized, or other, according to the type of certificate or authorization held.

Teaching experience. Years of teaching in a vocational subject.

Written Michigan Vocational Administrative Examination (WMVAE). A test on which an individual must demonstrate professional knowledge of the vocational administrative occupation.

The terms "vocational education" and "occupational education" are used interchangeably throughout the dissertation.

Summary and Overview

According to the Michigan Administrative Rules Relating to Education (Legislative Service Bureau, 1982b), education, experience, and teaching certification are important for vocational education administrators. However, the initial review of literature revealed minimal research in support of these or similar requirements. Thus, this writer's purpose was to investigate the basis in tradition, mandate, and current practice regarding the identification of competencies, measurement techniques, and desired administrative characteristics of vocational education administrators.

Chapter I contained an introduction to the study, a statement of the problem, the writer's purpose, importance of the study, research questions and hypotheses, background of the WMVAE, assumptions and limitations, and definitions of key terms.

Chapter II is a review of literature on topics of interest in the present study. The historical development of occupational competency testing is considered first. Next, the identification and verification of competencies for administrators in general and vocational administrators in particular are discussed. Administrative credentialing and examinations are also reviewed. The correlation of normative data and occupational knowledge is examined, as well.

The design and methodology of the study are explained in Chapter III. The subjects, development of the WMVAE, and the data-collection method are described. The independent and dependent

variables are discussed, and the data-analysis techniques are explained.

Results of the data analyses are reported in Chapter IV. Chapter V contains a summary of the study, conclusions, and recommendations for further research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Several topics appear to be relevant to the present investigation. The first topic considered in this chapter is the historical development of occupational competency testing. Many techniques surfaced in the review of literature regarding the assessment, selection, and evaluation of human beings, i.e., paper-and-pencil examinations, projective tests, and sociometric methods. Also discussed in this chapter is the identification and verification of administrative competencies in general and of vocational administrative competencies in particular. These competencies are frequently perceived as prerequisites for a program or position. Literature on administrative credentialing and administrative examinations is also reviewed. Finally, research on the correlation of normative data and occupational knowledge is discussed.

Historical Development of Occupational Competency Testing

Historically, the evaluation of occupational competencies seems to have attracted attention primarily during periods of emergencies. During World War I, the Oral Test was developed by U.S. Army

personnel so that millions of civilians could be effectively classified for army occupations. In addition, the United States Employment Service found a need to classify by certain skill levels the millions of unemployed workers during the Depression of the 1930s (Panitz & Olivo, 1971). The Civil Service has also played a major role in the development of written tests and, more recently, of practical performance tests.

Over the years, examinations have been relied on in many professions to maintain or monitor the level of employee competence in those fields. Acceptance of the uniform certified public accountant (CPA) examination and grading service by state licensing boards as a valid measure of proficiency in accounting enhanced the stature of professional accountants (Zook, 1980). Continued competence is expected of health professionals, to protect consumers from outdated or inappropriate practices (Johnston, 1983). Johnston noted that a standardized certifying examination is used to evaluate entry-level competence of medical technologists. She also expressed her concern about certifying examinations: "An appropriate mechanism for validation of continued competence has not been agreed upon by health professionals" (p. ii).

According to Whitener (1981), the National Occupational Competency Testing Institute (NOCTI), housed at Ferris State University in Big Rapids, Michigan, "was created in an effort to provide a uniform national occupational competency testing program to serve vocational educators on a permanent basis" (p. 5). Boras (1985) stated that the "NOCTI was established to serve as a national

occupational testing center to serve vocational education, and has emerged as the nation's leader in occupational testing" (p. 3). He further reported that the nationwide use of NOCTI examinations implies that they are accepted throughout the nation as a means of testing the occupational competence of vocational teachers.

In describing the Assessment Center Project of the National Association of Secondary School Principals (NASSP), Hershey (1986) explained some of the early stages in the development of the assessment center concept. He described how, through years of research and development, Neal Schmitt and a team from Michigan State University found the assessment center to be a valid procedure for selecting school administrators. Hershey stated that a unique long-term developmental component called "Springfield," used in conjunction with the assessment center selection program, was initiated in 1982 as a response to local and regional interest in devising more effective methods of training school administrators. He also indicated that the psychometric process of the assessment center, along with the behavior modeling of the Springfield component, led to rapid skill development, participant enthusiasm, and effective transfer of skills to on-the-job performance.

The Maryland State Department of Education embarked on a comprehensive school-improvement initiative aimed at ensuring quality leadership at the school-building level (Shilling, 1986). To do this, the statewide Maryland Assessment Center Program (MACP) was created, which was conducted in cooperation with the NASSP

Assessment Center. One of the objectives of the MACP is to "help local school districts screen candidates who seek administrative positions" by diagnosing the candidates' strengths and weaknesses in skill dimensions that the NASSP has validated as prerequisites for effective performance (p. 4). According to Shilling, the purpose of the assessment center program is to improve the quality of future educational leaders by providing more objective performance information on entry-level candidates for the principalship. Shilling also stated that "the assessment center 'offers no quick fixes' but it does lay the foundation of steady, step-by-step improvement in school management and leadership" (p. 11).

Commenting on the effects of the assessment center, Farmer (1986) noted that change in the process of selecting school-based administrators will necessitate change in training and appraisal, in order to integrate the assessment center process with other personnel functions.

Competency testing in the field of education is not used solely to test the competence level of educators. It is also widely used to measure students' level of competence (Schnittjer & Flippo, 1984). Legislators, superintendents, and board of education members continue to pressure educators for greater accountability. Hence, minimum competency testing will continue to play a prominent part in the widespread effort to assess academic achievement (Klein, 1984).

Identification and Verification of Administrative Competencies

In their second annual survey of certification and employment standards for educational administrators, Gousha, LoPresti, and Jones (1987) found that all state departments of education had implemented or were in the process of implementing standards for certification of educational administrators, but only 20 of them required specific competencies to obtain certification. Since their first survey report the previous year, Gousha et al. found that only one state agency had made any change toward developing more specific competencies for use in certification. They did find that school districts had more stringent and specific competency requirements than state certification standards demanded. In their survey of institutions of higher education, Gousha et al. found that two-thirds of the 75 institutions in their study had program standards that exceeded state certification requirements for educational administrators. Ten institutions had added or changed competencies since the survey of the previous year.

In 1978, the Georgia Department of Education contracted with the National Evaluation System (NES) to determine the content knowledge and skills deemed necessary for entry-level administrators and supervisors (Schnittjer & Flippo, 1984). NES personnel provided the Georgia Department of Education with 151 topics and an objective for each topic. The objectives were sent to independent content experts in the field, who reviewed them for topic-objective match, content, accuracy, and bias. A second ad hoc committee narrowed the

151 objectives to 117, which were eventually adopted. Eventually, NES personnel selected 82 objectives for item writing.

In 1980, the Florida legislature passed Section 231.087, one of the more far-reaching consequences of the movement to reshape Florida's educational system. Griffin and Barry (1984) described the legislators' intention in passing this section:

> Efficient and effective management of schools to meet the needs of students in today's society requires a unique blend of skills, experience, and academic background which is rarely provided through typical baccalaureate programs in education. The purpose of this section is to provide for the identification of those competencies basic to effective management of schools and to provide for the development of a program of competency-based certification of school managers.

The Florida Council on Educational Management was established and given the responsibility to identify relevant managerial competencies of school managers, standards, and procedures for evaluating managers' performance (Griffin & Barry, 1986). The Council used four reports to identify relevant managerial competencies: (a) a study of high-performing principals, identified by student assessment test results; (b) a study of high-performing principals as indicated by superintendent assessment; (c) findings of independent studies of competencies exhibited by nonschool managers; and (d) findings of a study of Florida schools by the NASSP.

According to a special report of the NASSP Consortium for the Performance-Based Preparation of Principals (NASSP, 1985), collaborative efforts between principals and professors were initiated as early as the 1960s. A group of interested professors

began attending the annual NASSP conventions, and this group later became known as the Committee of Professors of Secondary School Administration and Supervision. They first met in 1970 to investigate the feasibility of competency-based, field-based, and performance-based training programs. Although the goal to improve the academic and professional preparation of school administrators has remained the same, the emphasis has shifted to field-based preparation.

From these organizations and committees, an assessment center was established to meet NASSP objectives. A set of generic skills for the principalship was identified. The committee moved to encourage interest in a national consortium among colleges and universities with a record of competency-based administrative education. A survey was completed, and a consortium was formed to further competency-based administrative education.

The following is a definition of competencies proposed by the NASSP and accepted in the consortium report:

> Competency can be measured only through an accumulation of evidence, over time, that an individual is able to apply knowledge and perform certain functions and skills in ways which are, more often than not, perceived positively by both the individual and his (or her) audiences. (p. 4)

The authors of the report went on to state that a person is not competent because of what he/she knows, does, or feels; rather, an individual is competent when what he/she knows, does, or feels is evaluated as being positive in its results and is also part of the person's consistent behavior as a human being.

Identification and Verification of Vocational Administrative Competencies

The Vocational Education Act of 1963 provides for assistance to state and local educational agencies in the development of programs and services to help the many youths in high schools and community colleges who need some type of specialized education.

> The development of dynamic and functional programs depends to a large extent upon the availability of qualified educational leadership in local school districts, intermediate school districts, and in high schools and community colleges operated by such districts. (Wenrich, Hodges, Sommerfeld, & Dugan, 1968, p. 4)

Based on this need, University of Michigan personnel began the Michigan Leadership Development Program in 1964. The training program consisted of an 8-week workshop held on the University of Michigan campus in Ann Arbor and a year-long internship done in the trainees' home school districts.

Traditionally, in Michigan as elsewhere across the United States, most vocational administrators come from the ranks of vocational teachers. These teachers typically have job-specific occupational experience and teach in this specialized discipline. Teachers moving into administrative positions find that the role of vocational administrator is much broader than that of general education administrator and yet requires some specific competencies.

> The need for strong and competent administrators of vocational education has long been recognized. The rapid expansion of vocational education programs and increased student enrollments have resulted in a need for increasing numbers of trained vocational administrators at both the secondary and postsecondary level. Preservice and in-service administrators need to be well prepared for the complex and unique skills required to successfully direct vocational programs.

> The effective training of local administrators has been hampered by the limited knowledge of the competencies needed by local administrators and by the limited availability of competency-based materials for the preparation of vocational administrators. In response to this pressing need, the Bureau of Occupational and Adult Education of the U.S. Office of Education, under provisions of Part C--Research of the Vocational Education Amendments of 1968, funded The Center for a scope of work entitled "Development of Competency-Based Instructional Materials for Local Administrators of Vocational Education." (Norton et al., 1977, p. iii)

The need for strong and competent administrators of vocational education is no less important today than it has been in the past. The vocational administrator is expected to be a specialist in vocational-technical education and to possess the knowledge, skills, and abilities of the general education administrator. The vocational administrator is also expected to work effectively with representatives of business and industry, as well as with those from other agencies, i.e., Job Training Partnership Act and Department of Social Services personnel.

> Most vocational administrators are recruited from teaching positions and vocational teachers generally have a high degree of competence in a particular field. Leaders in vocational education can no longer follow their specialized roles exclusively; they must be both specialists in vocational education and behavioral scientists as well. They must be able to understand and assess the trends of environmental and social change. They must be able to relate vocational and technical education to business and industry, to government, and to education in general. They must be able to conceptualize the new and emerging relationships and set new goals for vocational education. (Wenrich & Wenrich, 1974, p. 102)

To address the problems of training vocational administrators, as outlined above, researchers at the Center for Vocational Education at The Ohio State University (pursuant to a grant from the Office of Education, U.S. Department of Health, Education, and

Welfare) conducted a national investigation to identify and verify the competencies that are important to secondary and postsecondary vocational education administrators. From this research, a list of 166 competencies in nine categories or administrative functions was developed. Based on these competencies, the parameters for the identification of essential competencies for first-year vocational administrators in Michigan were established.

> The one-hundred and sixty-six (166) competencies verified as a result of the National Center for Research in Vocational Education were used as the basis for determining what competencies were considered "absolutely needed" or "probably needed" by first year vocational education administrators in Michigan. All vocational education administrators of Michigan (local directors, area center principals, CEPD coordinators, community college administrators, assistant principals of area centers, intermediate school district administrators, and assistant local directors) were included in the study. Returns were received from one-hundred and seventy-two (172) of the vocational administrators surveyed. Sixty-seven (67) competencies were identified as being "absolutely needed" by a first year administrator with a total of eighty (80) competencies identified as being "absolutely needed" or "probably needed." (Moore & Ray, 1985, p. 15)

These competencies were identified by researchers at Michigan State University through a grant awarded by the MDE/V-TES, to develop and implement the Vocational Education Administrator Leadership Development Program.

In 1972, the Florida State Legislature established the Council on Teacher Education (COTE) to identify the basic competencies for all classroom teachers and methods of assessing those competencies. COTE personnel identified and verified through professional consensus 23 generic competencies deemed essential to all classroom teachers (Mohamed, 1983). The next step was the identification and

verification of competencies unique to and deemed essential by appropriate professional groups in each specialization area in education. Through a comprehensive literature search, the Vocational Administrators' Competencies Identification and Verification Study Task Force identified 561 potential statements of vocational administrative competencies that had been identified in other studies conducted in the United States. The Task Force employed the Dacum and Delphi techniques to refine and screen the 561 statements of potential competencies into 83 generic statements of competencies considered to be unique to and needed by vocational administrators.

Researchers at the Massachusetts State Department of Education, Division of Occupational Education, under the direction of Harold Resnick, conducted a "state of the art" study of competency-based teacher education programs for vocational educators, including those at middle management and administrative levels. The second phase of the project included validation of competencies needed by vocational administrators. A subsequent phase was a national survey of certification requirements and professional-development activities for vocational educators throughout the United States (Resnick & Gardner, 1977).

To identify the competencies necessary in administering a joint vocational school in Ohio, a survey instrument containing 191 task statements within 9 competency categories was sent to the 49 joint vocational school superintendents in Ohio. Of the 191 tasks, 121 (63%) were deemed important to superintendents (Wolf, 1985).

The studies discussed above represent some of the efforts to identify and verify competencies needed by vocational administrators. In some cases, the competencies have been similar to those of other school administrators. According to Wolf (1985), more similarities than differences have been found to exist in the competencies needed by general and vocational education superintendents in the areas of curriculum, instruction, program planning, student services, personnel management, staff development, professional relations, community relations, facilities, management, and business management.

Administrative Credentialing

Research has been conducted to project the supply of and demand for school administrators. In their study of data collected in six states, Kuh, McCarthy, and Zent (1983) found that supply and demand influence certification requirements. They stated,

> While an oversupply of potential job incumbents can have some positive effects on the profession (e.g., strengthening certification requirements and preparation standards), the profession cannot respond to market changes without sufficient knowledge of supply/demand trends. (p. 3)

It is noteworthy that Kuh et al. had difficulty conducting the study because of wide differences in certification requirements in each state. The researchers found that administrative certification requirements ranged from a written examination to a minimum number of graduate courses for completion of a specialist's degree. They also found that administrators in some states did not even hold proper administrative credentials.

Kuh et al. concluded, "It may be an appropriate time for the profession to identify the competencies necessary for satisfactory administrative performance and to reflect them in certification requirements" (p. 15). They called for definite standards for judging satisfactory performance and suggested that these standards might be established by regional accrediting associations.

Gousha et al. (1986) reported that, of the 38 states in their study that certified school administrators, 16 specified competencies to be met for certification and 20 did not have competencies; in 2 states, specific competencies were under consideration at the time of the study. Of the institutions of higher education with graduate programs for school administrators, 32 had a list of required competencies and 17 did not have required competencies; respondents from 3 campuses did not respond to the question.

In Michigan as in other states, a state license is required in many occupations. For example, to be a licensed butter grader in Michigan, the applicant for licensure must (a) pass the examination, (b) have some experience in manufacturing and grading butter, and (c) abide by the rules of the Department of Agriculture. It is difficult to obtain information about licensing in Michigan because 12 of the state's 22 departments, including the Michigan Supreme Court and the Legislative Council, have licensing responsibilities (Michigan Employment Security Commission, 1986).

Gousha et al. (1986) reported that, in 11 of the states included in their study, an examination was administered as part of the certification process. Eighteen states did not have such an examination. In another three states, the administration and supervision section of the National Teacher Examination battery was used. In the remaining eight states in the study, some form of examination developed by or for the specific state was used.

At the 13 institutions of higher education Gousha et al. found were using some kind of examination, the Graduate Record Examination was the most commonly used. The Miller Analogies Test was used on eight campuses, and in many other cases locally developed tests or interviews were used, or state examinations were required. The administration and supervision section of the National Teacher Examination battery was used on only two campuses. Sixteen institutions had some form of comprehensive or qualifying written examination as an entrance requirement for an advanced degree program for school administrators, whereas four required an oral examination upon completion of the program. Gousha et al. reported that "the specific use of competencies is growing" and that the use of examinations is also increasing (p. 13).

Leavitt (1978) cited three general approaches to formal assessment: paper-and-pencil tests, projective examinations, and sociometric methods. Each has its own advantages and disadvantages. Paper-and-pencil devices are relatively standardized, but their use is largely limited to mass-selection situations. Projective examinations yield rich material, but they are subjective,

individualistic, expensive, and poorly validated. Sociometric measures are easy to use and relatively valid but have serious implications for the power relationships in an organization.

In Gousha et al.'s (1986) survey, 32 state certification officials reported that teaching experience was required for certification as a school administrator in their states; another seven indicated their states had no such requirements. Twenty-eight respondents stated that classroom teaching experience was required for graduate study in school administration at their institutions of higher education. In contrast, 24 indicated such experience was not required, but many of them said students of school administration were encouraged to have classroom teaching experience because it is often required for state certification and employment. In 20 states, 6 districts, and 15 campuses represented in the study, 3 years of teaching experience were required; in all constituencies sampled, this was the most common number of years required. The next most common amount of teaching experience required by states and institutions of higher education was 2 years. Gousha et al. also found that six of the school districts required 5 years of teaching experience before an individual could apply for an administrative position.

Gousha et al. also found that 21 states had continuing education requirements for persons holding certification as school administrators. The other 18 states in their study had no such requirements. The requirements in the 21 states included graduate

study, continuing education units, and clock hours of staff development--all within a period of from 1 to 10 years.

The minimum qualifications that have been established for superintendents of schools in Michigan are outlined in the School Code of 1976 (Legislative Service Bureau, 1982b):

> 380.651 Superintendent; minimum qualifications.
> Sec. 651. An intermediate superintendent shall possess the following minimum qualifications:
> (a) Forty-five months' experience as a teacher or administrator in public or nonpublic schools.
> (b) A teacher's certificate issued by the state board and a master's degree in education from a college or university approved by a recognized accrediting agency. (p. 74)

> 380.1246 Superintendent of schools; qualifications.
> Sec. 1246. A person employed as a superintendent of schools shall possess at least an earned bachelor's degree from a college acceptable to the state board and shall be the possessor of or be eligible for a teacher's certificate or have educational qualifications equivalent thereto, under standards determined by the state board. (p. 74)

The minimum qualifications for directors of special education in Michigan are outlined in the Revised Administrative Rules for Special Education (Michigan State Board of Education, 1986b):

> R. 340.1771 Director of special education; special education and experience requirements.
> Rule 71.(1) For full approval, a director of special education shall possess all of the following minimum qualifications:
> (a) An earned master's degree or equivalent.
> (b) Full approval in at least 1 area of special education.
> (c) Three years of successful professional practice or administrative experience in special education, or combination thereof.
> (d) Thirty semester or 45 term hours of graduate credit and a successful 200-clock-hour practicum in special education administration. Graduate credit shall be earned in a college or university whose program has been approved by the state board of education and shall be distributed appropriately to assure knowledge and competency as related to special education in the following areas:

(i) Program development and evaluation.
(ii) Personnel staffing, supervision, and evaluation.
(iii) Interpersonal relationships, communications, persuasion, and morale.
(iv) Evaluation of in-service organization and management.
(v) Budgeting, financing, and reporting.
(vi) Parent relationships.
(vii) School plant planning.
(viii) Consultation.
(ix) Research and grant writing.
(x) Office management, including office automation.
(xi) School-related legal activities and due process hearing.
(xii) Computer-assisted management.

(e) One year of successful experience as special education director in an approved special education program.

(f) Recommendation from a college or university approved for the preparation of special education directors which attests that the person has acquired the knowledge and competencies in subdivision (d) of this subrule and has demonstrated leadership ability and general knowledge of issues and problems in all disability areas of special education. (p. 40)

The rules regulating the certification of administrators in Michigan are currently being considered for revision.

In addition, to participate in the Michigan Institute for Educational Management Assessment Center (MIEMAC) program or to be eligible for assessment, a candidate must meet the following requirements (MIEM, 1985):

MINIMUM ELIGIBILITY REQUIREMENTS

The Assessment Center Program is designed to assist public school districts in the selection and training of candidates for school-level administrative positions. Therefore, school district superintendents are expected to commit their top candidates for principalships and assistant principalships to participate in the program. Appropriate participants are teachers, assistant principals and district-level personnel who are prepared for, and highly motivated towards, building-level administrative assignments. The following minimum eligibility criteria are MANDATORY for all participants for the MIEMAC Program.

1. Possession of graduate work or some administration experiences, other than principalships.

2. Recommendation of the school district superintendent or supervisor.
3. Signed agreement by the participant to respect the copyright and confidentiality of the Assessment Center process and materials.
4. Commitment by the school district administration that the participant will attend in-service or professional development training programs designed to address skill deficiencies identified in the assessment center process.

In the final selection of participants for the Assessment Center program, superintendents wish to consider the following factors:

1. Present and future need for administrators.
2. Educational training and experience.
3. Employment tenure in the district.
4. Performance to date.
5. District need for female and minority administrators.
6. District use of assessment center data in its administrative selection process.
7. Employee's participation in the district's leadership development program, if applicable. (pp. 5-6)

According to the National Commission on Excellence in Educational Administration (1987), research findings have shown that the educational administration field lacks licensure programs promoting excellence. The Commission made several important recommendations, which included establishing a national policy board for educational administration, modeling administrative preparation programs after those of other professional schools, and reforming licensure programs.

The Commission recommended that licensure programs should be substantially reformed. Concerning what state policymakers should do, the Commission recommended that each state have an administrative licensure board with the responsibility to issue and revoke licenses, and that temporary or emergency licenses should not be granted. It also recommended entry-level and fully licensed

status. The entry-level license would be granted after completion of a state-approved program, but before professional practice. Full licensing would be granted only after the candidate had documented successful performance in a full-time administrative position for at least 3 years. Also recommended was that licenses be issued for a specific period of time and that they be portable from state to state.

Forsyth (1987) cited mixed reactions to the Commission's 1987 report, Leaders for America's Schools. He quoted Gibboney (1987) as saying, "Some have called the recommendations of the Commission sensible and timely. On the other hand, one critic labeled the report: 'not even old wine in new bottles; it is more like Mississippi River water in cans'" (p. 3). Forsyth concluded that those who are familiar with educational administration are inclined to agree that the profession is in need of reform. He indicated that it is impossible to have quality professional-preparation programs under conditions of unsequenced course offerings in disjointed segments that lack careful monitoring for quality or relevance. He suggested that educators first must agree on what it is that school administrators should know and be able to do.

Administrative Examinations

Attempts to measure human characteristics and school achievement date back well over 100 years. Buros published his first mental measurement yearbook in 1938 (Panitz, 1971).

> For the formal phases, like personnel selection and performance evaluation, a good deal of research and experience is

> available. Every executive in industry these days is aware of personality tests, patterned interviews, personnel-rating forms, and the like. Underlying each of these is a large (but not large enough) body of theory and empirical research. Unfortunately no comparable amount of work has been done on the day-to-day problems of assessment to help the executive make increasingly accurate spot judgments about other people. Even so, some useful things are coming to be known. So, when the boss asks, "Well, what did you think of him?" the executive can honestly say something more than, "He's a nice guy" or "I don't like him." (Leavitt, 1978, p. 92)

In Leaders for America's Schools, the National Commission on Excellence in Educational Administration (1987) stated that licensure should depend on completion of a state-approved program, demonstration of knowledge and skills by passing a "rigorous written and oral examination," and demonstration of competence in a simulated or actual work setting. According to the Commission, merely accumulating course credits should not be a "back door" entrance to school administration. In addition, renewal of licensure should be required and approved only on the basis of successful performance and continuing professional development under the quality control of the state licensure board.

In their second annual survey, Gousha et al. (1987) found that, in 13 states, some form of examination was used; this was three states more than in the first annual report. One of these states would be using the administrative examination from the National Teachers Examination battery, and the other two would develop their own written examinations. In their 1987 study, Gousha et al. found that in only one additional state was some form of assessment planned.

Gousha et al. surveyed 40 large school districts in their 1987 study. Fourteen of the 22 school districts from which a representative responded used some form of screening examinations for administrative employment; in one district, a "promotional examination" was being implemented for the first time. The researchers also found that 12 of the districts were using NASSP-endorsed assessment centers, and three districts had established locally developed assessment centers. Forty-eight of the 73 institutions of higher education whose personnel responded to the survey used some form of examination as a screening device for entry into graduate programs; one institution used an examination related to knowledge of educational administration. Six institutions had added some kind of assessment to their graduate programs since Gousha et al.'s previous survey, bringing the total to 62.

In New Jersey, not only have new initiatives been implemented that require applicants for teacher certification to pass standardized subject-area competency tests, but plans have been developed whereby school principals would be required to pass a state-administered written examination and to undergo a management-skills evaluation at a state regional assessment center (New Jersey State Department of Education, 1986).

The Florida Council on Educational Management developed a certification examination that was designed to measure the knowledge deemed essential to the success of an educational manager. The examination was designed to assess knowledge in eight areas: public

school curriculum and instruction, organizational management and development, human resource management and development, leadership skills, communication skills, technology, educational law, and educational finance (Griffin & Barry, 1986). The certification examination was pilot tested using graduate students in education; it was then field tested for 2 years.

After identifying and verifying competencies that are essential and very important to vocational administrators, Mohamed (1983) stated that the "next step is the development of test items to measure mastery and/or determine need for training in each competency area."

The Georgia Department of Education contracted with National Evaluation Systems to develop a test in administration and supervision (Schnittjer & Flippo, 1983). Georgia educators identified the content knowledge that an applicant would need in order to function as an administrator/supervisor in Georgia schools. The test covered seven subareas: overview of leadership in education, organizational and legal structures in education, management of school operations, personnel management, instructional supervision, curriculum development, and social issues in school administration. Educators seeking initial certification in administration who finished their coursework after September 1980 are now required to take the Teacher Certification Test in administration and supervision (Schnittjer & Flippo, 1984). Three categories of administrators are covered: (a) building-level

administrators, (b) district instructional supervisors, and (c) school district central office staff (superintendents, assistant superintendents, and curriculum coordinators.

Correlation of Normative Data and Occupational Knowledge

As evidenced by the review of literature, the identification and verification of occupational competencies and competency testing are not unique to the educational field, nor are they restricted to a particular age group or gender. Furthermore, many researchers outside the educational arena have investigated the correlation between characteristics of candidates and their performance on examinations.

Zook (1980) conducted a study to identify characteristics that are significantly correlated with performance on the CPA examination. One of Zook's purposes was to provide useful information to state board members who stipulate candidate qualifications and to employees of the American Institute of Certified Public Accountants who prepare and grade the examination. Zook found that there was no statistically significant correlation between possession of a graduate degree and success on any of the four parts of the CPA examination. He also found that there was no statistically significant relationship between past work experience, i.e., accounting-related vocational experience, and performance on the law, theory, and practice parts of the examination. However, Zook did find a significant relationship between the number of years of employment in public accounting and success on the auditing part

of the examination. There was no significant difference on the auditing part of the examination between individuals who had experience teaching accounting and those who had no such experience. Likewise, no significant relationship was found between the number of credits earned in various subjects and performance on the practice, theory, and auditing parts of the CPA examination. Zook did find a positive correlation between credits earned in business law and performance on the law part of the examination.

Standardized certifying examinations are used in the medical field, as well. These examinations are used to evaluate competence of incumbent employees, as well as of those entering the profession. Johnston (1983) completed a study of the relationships among demographic factors, continuing education, and competence as measured by a standardized certification examination for medical technologists. She found that there was no statistically significant relationship between test scores and number of years of experience since certification. Likewise, there was no statistically significant relationship between test scores and the number of continuing education credits completed since certification and test scores.

Beach (1985) investigated the relationships between occupational work-experience requirements of Massachusetts vocational teachers and their scores on written and practical vocational competency examinations. She also sought to determine the relationship between examination scores and teaching experience and educational background. Beach found that scores on a written

examination were positively correlated with teaching experience; the scores were also positively correlated (significant at the .05 level) with formal educational background. However, test scores decreased slightly as work experience increased.

Whitener (1980) reviewed scores on written and performance examinations in four areas--auto mechanics, carpentry, machine trades, and quantity food preparation--using test results from the National Occupational Competency Testing Institute (NOCTI). He studied the relationship of these scores to occupational experience, teaching experience, and educational level. Whitener found that "for some occupations, there is little or no relationship between occupational competence and occupational experience, teaching experience, educational level and their aggregate" (pp. 159-60). For example, in quantity food preparation, he found that length of occupational experience, length of teaching experience, and educational level did not significantly influence pass/fail levels or written, performance, or total examination scores. In comparison, Whitener did find that, on the auto mechanics examinations, years of occupational experience was positively and significantly correlated with performance but not with scores on the written examination.

To determine the relationship between occupational experience, educational level, and teaching experience, Boras (1985) studied examination scores on the NOCTI's computer technology examinations. He found no statistically significant correlation between

occupational experience, educational level, or teaching experience and the pass/fail level on written, performance, or total examinations.

Austin (1985) studied the job satisfaction of mid-level administrators in higher education. Personal characteristics of 260 administrators at a large research university were compared to their job satisfaction. Age was found to be the strongest of three predictors of job satisfaction (older administrators tended to be more satisfied). It was followed by gender (women were somewhat more satisfied than men) and number of years of employment (no significant relationship to satisfaction).

Ehinger and Guier (1985) found that gender made a difference in assessment-center performance. Their population comprised 103 school administrators, of whom 74 were men and 29 were women. Women scored higher than men on the in-basket exercise and leaderless-group discussion, and they did significantly better in interpersonal competency and oral presentation. The results were corroborated with a noncognitive paper-and-pencil measure of performance.

Summary

Paramount to quality education is the competence of educational leaders. For those who are responsible for selecting school administrators, it is essential that the minimum selection and certification requirements be valid and reliable. Unfortunately, these requirements too often are based on unresearched data.

In the review of literature, several studies were found in which examination scores were correlated with normative data. Of particular importance were those of Whitener (1981), Johnston (1983), Boras (1985), and Beach (1985). Most of these studies were outside the field of educational administration, and none dealt specifically with vocational-technical education administration.

In the present study, the researcher compared the relationship between scores on a written administrative examination and criteria used by the MDE/V-TES in the selection and approval of reimbursed vocational administrators. The criteria identified were (a) level of education, (b) administrative coursework, (c) years of administrative experience, (d) teacher certification, (e) years of teaching experience, and (f) occupational experience.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

The writer's purpose in conducting this study was to determine the relationship between six types of normative data (the independent variables) and administrators' knowledge in nine areas (the dependent variable), as measured by the WMVAE. In this chapter, the design of the study and research procedures are explained. First, the subjects are described. The procedures and instruments used to gather the data used in this study are discussed. The hypotheses are restated, the independent and dependent variables are presented, and the data-analysis techniques are explained.

Subjects

The subjects in this investigation included all 63 individuals who were given the WMVAE before participating in the Michigan Leadership Development Program (LDP) during 1986, 1987, and 1988. LDP candidates were selected from applicants aspiring to enhance their credentials for reimbursement as vocational administrators at the secondary or postsecondary level.

Data-Collection Procedures and Instruments

All subjects completed the Demographic Profile Form (see Appendix B) before taking the WMVAE. This profile form was approved by the MDE/V-TES. Sources of data for this study were obtained from Ferris State University and the MDE/V-TES. The candidates' scores on the WMVAE were taken from the Report of Scores form. The researcher received permission to use these data from the MDE/V-TES. This research project was approved by the University Committee on Research Involving Human Subjects (UCRIHS) at Michigan State University (see Appendix C).

The Demographic Profile Form

The Demographic Profile Form was designed to collect data that are required of individuals desiring to be reimbursed as vocational administrators. The criteria for reimbursement of vocational administrators are found in the Michigan Administrative Rules Relating to Education, R395.231, Rule 1 (3) (Legislative Service Bureau, 1982a). According to Rule 1 (3)(a), the administrator "shall be a graduate of a recognized college or university with a master's degree and shall have completed vocational education courses in the administration, supervision, and organization of vocational education programs" (p. 261). On the profile form, candidates were asked to indicate their highest degree earned: associate's, bachelor's, master's, educational specialist, or doctorate (Item 9). Candidates were also asked whether they had completed graduate-level vocational education courses in the

administration, supervision, and organization of vocational education programs (Item 11).

Rule 1 (3)(A) also states: "[The administrator] shall hold or be eligible to hold a valid Michigan teacher's certificate" (p. 261). Thus, candidates were asked to indicate whether they had or were eligible to hold a valid Michigan teacher's certificate (Item 8).

Rule 1 (3)(b) states that the administrator "shall have had at least three years of experience in administration and/or teaching in vocational education programs" (p. 261). Hence, candidates were asked to indicate the number of years of vocational teaching and vocational administration experience they had had (Item 12). Rule 1 (3)(B) also states that the administrator "shall have had at least two years of occupational experience, other than teaching or educational administration" (p. 261). Candidates were asked to indicate the number of years of occupational experience (other than teaching or educational administration) they had had (Item 12).

The Written Michigan Vocational Administrative Examination (WMVAE)

The WMVAE is a 3-hour, criterion-referenced, paper-and-pencil test consisting of 200 multiple-choice items. It is used to measure knowledge in nine skill areas: (a) program planning, development, and evaluation; (b) instructional management; (c) personnel management; (d) facilities and equipment; (e) student services; (f) staff development; (g) professional relations and self-development; (h) school/community relations; and (i) business and financial

management. The examination is administered according to guidelines published in the test manual.

The WMVAE was developed in 1986 by a committee of practicing vocational administrators from all levels of vocational education and was overseen by a separate advisory committee composed of MDE consultants, vocational administrators, and university teacher educators. The process was directed by two test consultants--one from Michigan State University and one from Ferris State University.

The advisory committee used a systematic rating procedure to develop a table of test specifications, which identify the relative emphasis given to each category on the WMVAE. The relative weights on the nine categories and related competencies were based on the importance of the task for entry-level vocational administrators and the frequency with which the task is performed.

The test-development process included two item-by-item reviews. First, each item was reviewed by at least one person with test-construction expertise, who focused on the format, quality of wording, and other factors that can be detected by an experienced item writer. This review included such factors as the appropriateness of reading levels, clarity of stems and distractors, clues in wording, and arrangement of items and alternatives. Second, each item was reviewed by the advisory committee, who focused on item consistency, including credibility of distractors, currency and accuracy of information, clarity of items, validity of occupational information, and biases of items. An independent field review by a separate group of practicing vocational administrators

was undertaken to validate the final content. This review called for an analysis of the relationship between the competency and the item and for validating the correct answer.

Participants from the 1985 LDP provided item-response data for the pilot test. In addition to completing the test, participants reacted to the clarity of procedures for test administration, specific test directions, and format of the test, items, and answer sheet. Response data from the pilot test included a calculated item difficulty or p-value and discrimination index for each item, along with the number (or percentage) of individuals selecting each response option. The results were used to detect and eliminate ambiguities or inaccuracies and to improve or replace defective items.

The Kuder-Richardson internal consistency reliability coefficient (KR-20) of the WMVAE is .85. Standard deviations range from 11.077 to 13.43, and the standard error of measurement is 5.2.

Research Questions

The following questions were addressed in this study:

1. Is there a statistically significant relationship between a candidate's educational level and his/her WMVAE scores?

2. Is there a statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores?

3. Is there a statistically significant relationship between a candidate's teaching certification and his/her WMVAE scores?

4. Is there a statistically significant relationship between a candidate's vocational teaching experience and his/her WMVAE scores?

5. Is there a statistically significant relationship between a candidate's vocational administrative experience and his/her WMVAE scores?

6. Is there a statistically significant relationship between a candidate's occupational experience and his/her WMVAE scores?

Hypotheses

The following hypotheses, stated in the null form, were formulated to guide the analysis of data collected in this study.

Hypothesis 1: There is no statistically significant relationship between a candidate's educational level and his/her WMVAE scores.

Hypothesis 2: There is no statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores.

Hypothesis 3: There is no statistically significant relationship between a candidate's possessing or not possessing Michigan teacher certification and his/her WMVAE scores.

Hypothesis 4: There is no statistically significant relationship between a candidate's years of teaching experience in vocational education programs and his/her WMVAE scores.

Hypothesis 5: There is no statistically significant relationship between a candidate's years of experience in administering vocational education programs and his/her WMVAE scores.

Hypothesis 6: There is no statistically significant relationship between a candidate's years of occupational experience and his/her WMVAE scores.

Independent Variables

The six independent variables were candidates' (a) educational level, (b) administrative coursework, (c) administrative experience, (d) teacher certification, (e) teaching experience, and (f) occupational experience. Information regarding these variables was collected from the LDP participants' Demographic Profile Forms.

Dependent Variable

The dependent variable was the participants' WMVAE scores on the following nine subtests: (a) Program Planning, Development, and Evaluation; (b) Instructional Management; (c) Personnel Management; (d) Facilities and Equipment Management; (e) Student Services; (f) Staff Development; (g) Professional Relations; (h) School/Community Relations; and (i) Business and Financial Management.

Data-Analysis Techniques

Several types of statistical analyses were performed to determine the relationship between the independent variables and the dependent variable. The data were analyzed using the Statistical Package for the Social Sciences (SPSS, 1987). The .05 alpha was established as the criterion for statistical significance.

Both descriptive and inferential analyses were used in the study. Descriptive statistics were employed to provide a profile of the examinees, based on the normative data selected for the study. Multivariate regression analyses were used to determine the direction and strength of the relationship between the selected normative data and participants' WMVAE scores.

Summary

A description of the methodology was provided in this chapter. The subjects, data-collection instruments, independent and dependent variables, and data-analysis techniques were discussed. The research questions and hypotheses were restated.

CHAPTER IV

RESULTS OF THE DATA ANALYSIS

Introduction

The researcher's purpose in this study was to describe the relationship between certain normative data and administrators' knowledge in nine areas, as measured by the WMVAE. The normative data used in this study were the candidate's educational level; graduate-level coursework in the administration, supervision, and organization of vocational-technical programs; Michigan teacher certification; teaching experience; administrative experience; and occupational experience. The nine areas measured by the WMVAE are Program Planning, Development, and Evaluation; Instructional Management; Personnel Management; Facilities and Equipment Management; Student Services; Staff Development; Professional Relations; School/Community Relations; and Business and Financial Management.

Results of the data analyses are presented in this chapter. Normative data on the 63 LDP participants included in this study are presented first. These data were gathered from the Demographic Profile Form that all subjects completed before taking the WMVAE. Next, candidates' scores on the nine subtests of the WMVAE, as well as their aggregate scores, are presented. Results of the correlational analyses of the normative data and candidates' scores

on the WMVAE are discussed in the next section, followed by results of the multiple regression analyses. Results of testing the hypotheses, as stated below, are discussed in the last section of the chapter.

Hypothesis 1: There is no statistically significant relationship between a candidate's educational level and his/her WMVAE scores.

Hypothesis 2: There is no statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores.

Hypothesis 3: There is no statistically significant relationship between a candidate's possessing or not possessing Michigan teacher certification and his/her WMVAE scores.

Hypothesis 4: There is no statistically significant relationship between a candidate's years of teaching experience in vocational education programs and his/her WMVAE scores.

Hypothesis 5: There is no statistically significant relationship between a candidate's years of experience in administering vocational education programs and his/her WMVAE scores.

Hypothesis 6: There is no statistically significant relationship between a candidate's years of occupational experience and his/her WMVAE scores.

Normative Data

Educational Level

The distribution of the population by educational level--that is, the highest degree held by the candidates at the time of the examination--is displayed in Table 4.1. Seventy-three percent of the candidates met the minimum state requirement of having at least a master's degree to be eligible for reimbursement. Less than 2% did not possess at least a bachelor's degree, and approximately 25% had a bachelor's degree.

Table 4.1.--Distribution of candidates by educational level.

Degree	Frequency	Percent
No degree	1	1.6
Bachelor's	16	25.4
Master's	42	66.7
Ed. specialist	2	3.2
Doctorate	2	3.2
Total	63	100.0

Vocational Administrative Coursework

The number and percentage of candidates who had taken graduate-level courses in the administration, supervision, and organization of vocational education programs are displayed in Table 4.2. Thirty-six of the 63 candidates (57.1%) had taken at least one such educational course before entering the Michigan LDP.

Table 4.2.--Distribution of candidates by vocational administrative coursework.

Administrative Courses	Frequency	Percent
Yes	36	57.1
No	27	42.9
Total	63	100.0

Teacher Certification

The number of candidates with teacher certification is shown in Table 4.3. A majority of those examined (51 or 81%) had a Michigan

teaching certificate. Only 12 of the 63 candidates (19%) did not have a teaching certificate at the time of the examination.

Table 4.3--Distribution of candidates by teacher certification.

Teacher Certification	Frequency	Percent
No	12	19.0
Yes	51	81.0
Total	63	100.0

Teaching Experience

Distribution of candidates by number of years of teaching experience is shown in Table 4.4. The mean number of years of teaching experience for the population was 8.7 years. The largest group of examinees (14 or 22.2%) was those with no teaching experience.

Table 4.4.--Distribution of candidates by teaching experience.

Teaching Experience	Frequency	Percent
No experience	14	22.2
1 year	1	1.6
2 years	4	6.3
3-5 years	4	6.4
6-8 years	6	9.6
9-11 years	10	15.9
12-14 years	10	15.8
15-17 years	6	9.6
18-20 years	8	12.8
Total	63	100.0

Mean = 8.7 years.

Administrative Experience

Distribution of the population by number of years of administrative experience is shown in Table 4.5. The mean number of years of administrative experience was .8 year. The largest group of candidates (41 or 65.1%) had had no administrative experience.

Table 4.5.--Distribution of candidates by administrative experience.

Administrative Experience	Frequency	Percent
No experience	41	65.1
1 year	8	12.7
2 years	4	6.3
3 years	4	6.3
4 or more years	6	9.6
Total	63	100.0

Mean = .8 year

Occupational Experience

Distribution of the population by number of years of occupational experience is shown in Table 4.6. The mean number of years of occupational experience was 7.4 years. The largest group of candidates (14 or 22.2%) had had no occupational experience.

Table 4.6.--Distribution of candidates by occupational experience.

Occupational Experience	Frequency	Percent
No experience	14	22.2
1 year	2	3.2
2 years	5	7.9
3-5 years	11	17.4
6-8 years	7	11.2
9-11 years	8	12.7
12-14 years	4	6.4
15-17 years	4	6.4
18 or more years	8	12.7
Total	63	100.0

Mean = 7.4 years

Candidates' Scores on the WMVAE

Program Planning, Development, and Evaluation Subtest

The distribution of candidates' scores on the Program Planning, Development, and Evaluation subtest of the WMVAE (Category 1) is displayed in Table 4.7. This section contained 30 items. The mean score on this subtest was 18.2 (60.5%). Candidates' scores ranged from a low of 36.7% to a high of 83.3%.

Instructional Management Subtest

The distribution of candidates' scores on the Instructional Management subtest (Category 2) is shown in Table 4.8. This section contained 26 items. The mean score on this subtest was 18.7 (71.9%). Candidates' scores ranged from a low of 38.5% to a high of 92.3%.

Table 4.7.--Candidates' scores on the Program Planning, Development, and Evaluation subtest (Category 1).

Subtest Score (in %)	Frequency	Percent
78-83	1	1.6
72-77	2	3.2
66-71	20	31.7
60-65	15	23.8
53-59	14	22.2
47-52	10	15.8
46 and below	1	1.6
Total	63	100.0

Mean = 18.2 Standard deviation = 2.5

Table 4.8.--Candidates' scores on the Instructional Management subtest (Category 2).

Subtest Score (in %)	Frequency	Percent
90-95	1	1.6
84-89	11	17.4
78-83	8	12.7
72-77	14	22.2
66-71	9	14.3
60-65	14	22.2
59 and below	6	9.6
Total	63	100.0

Mean = 18.7 Standard deviation = 3.0

Personnel Management Subtest

The distribution of candidates' scores on the Personnel Management subtest (Category 3) is shown in Table 4.9. This section contained 26 items. The mean score on this subtest was 18.6

(71.4%). Candidates' scores ranged from a low of 50% to a high of 92.3%.

Table 4.9.--Candidates' scores on the Personnel Management subtest (Category 3).

Subtest Score (in %)	Frequency	Percent
90-95	1	1.6
84-89	9	14.3
78-83	5	7.9
72-77	18	28.6
66-71	12	19.0
60-65	8	12.7
53-59	8	12.7
52 and below	2	3.2
Total	63	100.0

Mean = 18.6 Standard deviation = 2.7

Facilities and Equipment Management Subtest

The distribution of candidates' scores on the Facilities and Equipment Management subtest (Category 4) is shown in Table 4.10. This section contained 18 items. The mean score on this subtest was 13.7 (75.9%). Candidates' scores ranged from a low of 44.4% to a high of 94.4%.

Table 4.10.--Candidates' scores on the Facilities and Equipment Management subtest (Category 4).

Subtest Score (in %)	Frequency	Percent
90-95	2	3.2
84-89	11	17.5
78-83	23	36.5
72-77	13	20.6
66-71	7	11.1
60-65	2	3.2
53-59	3	4.8
52 and below	2	3.2
Total	63	100.0

Mean = 13.7 Standard deviation = 2.0

Student Services Subtest

The distribution of candidates' scores on the Student Services subtest (Category 5) is displayed in Table 4.11. This section contained 17 items. The mean score on this subtest was 12.4 (72.7%). Candidates' scores ranged from a low of 41.2% to a high of 94.1%.

Staff Development Subtest

The distribution of candidates' scores on the Staff Development subtest (Category 6) is shown in Table 4.12. This section contained 19 items. The mean score on this subtest was 12.8 (67.5%). Candidates' scores ranged from a low of 47.3% to a high of 94.7%.

Table 4.11.--Candidates' scores on the Student Services subtest (Category 5).

Subtest Score (in %)	Frequency	Percent
90-95	3	4.8
84-89	5	7.9
78-83	8	12.7
72-77	10	15.9
66-71	19	30.2
60-65	10	15.9
53-59	6	9.5
52 and below	2	3.2
Total	63	100.0

Mean = 12.4 Standard deviation = 1.8

Table 4.12.--Candidates' scores on the Staff Development subtest (Category 6).

Subtest Score (in %)	Frequency	Percent
90-95	1	1.6
84-89	3	4.8
78-83	5	7.9
72-77	12	19.0
66-71	20	31.7
60-65	5	7.9
53-59	15	23.8
47-52	2	3.2
Total	63	100.0

Mean = 12.8 Standard deviation = 1.9

Professional Relations Subtest

The distribution of candidates' scores on the Professional Relations subtest (Category 7) is displayed in Table 4.13. This

section contained 18 items. The mean score on this subtest was 14.4 (79.8%), the highest mean score for all nine subtests. Candidates' scores ranged from a low of 55.6% to a high of 94.4%.

Table 4.13.--Candidates' scores on the Professional Relations subtest (Category 7).

Subtest Score (in %)	Frequency	Percent
90-95	3	4.8
84-89	12	19.0
78-83	31	49.2
72-77	12	19.0
66-71	2	3.2
60-65	2	3.2
53-59	1	1.6
Total	63	100.0

Mean = 14.4 Standard deviation = 1.5

School/Community Relations Subtest

The distribution of candidates' scores on the School/Community Relations subtest (Category 8) is shown in Table 4.14. This section contained 20 items. The mean score on this subtest was 12.6 (62.8%). Candidates' scores ranged from a low of 40% to a high of 85%.

Business and Financial Management Subtest

The distribution of candidates' scores on the Business and Financial Management subtest (Category 9) is displayed in Table 4.15. This section contained 26 items. The mean score on this

subtest was 13.5 (51.8%), the lowest mean score for all nine subtests. Candidates' scores ranged from a low of 26.9% to a high of 76.9%.

Table 4.14.--Candidates' scores on the School/Community Relations subtest (Category 8).

Subtest Score (in %)	Frequency	Percent
84-99	1	1.6
78-83	4	6.3
72-77	3	4.8
66-71	13	20.6
60-65	24	38.1
53-59	8	12.7
47-52	5	7.9
41-46	3	4.7
35-40	2	3.2
Total	63	100.0

Mean = 12.6 Standard deviation = 2.0

Table 4.15.--Candidates' scores on the Business and Financial Management subtest (Category 9).

Subtest Score (in %)	Frequency	Percent
72-77	1	1.6
66-71	2	3.2
60-65	14	22.2
53-59	15	23.8
47-52	8	12.7
41-46	10	15.9
35-40	11	17.4
34 and below	2	3.2
Total	63	100.0

Mean = 13.5 Standard deviation = 2.8

Aggregate WMVAE Scores

The distribution of candidates' aggregate scores on the WMVAE is displayed in Table 4.16. The WMVAE contained a total of 200 test items. The mean score on the examination was 134.8 (67.4%). Candidates' total scores ranged from a low of 54% to a high of 80%.

Table 4.16.--Candidates' aggregate scores on the WMVAE.

Aggregate Score (in %)	Frequency	Percent
78-83	1	1.6
72-77	13	20.8
66-71	31	49.3
60-65	10	15.9
53-59	8	12.8
Total	63	100.0

Mean = 134.8 Standard deviation = 11.3

Correlation of Normative Data and WMVAE Scores

The Pearson r correlation coefficients between each of the independent variables and subtest and aggregate scores on the WMVAE are summarized in Table 4.17. Asterisks indicate the cells on which there was a moderate association between the independent and dependent variables (.30 to .49), according to the ranges outlined by Davis (1971). None of the correlations indicated a substantial (.50 to .69) or very strong (.70 or higher) association. The highest association (.469) was that between candidates' having three or more years of administrative experience (ADMEXP3) and scores on the Staff Development subtest (Category 6).

Table 4.17.--Multiple correlation coefficient matrix.

	MITEACH	DEGREE3	ADMCOUR2	ADMEXP3	TEACHEXP3	OCCEXP2
Category 1	.111	-.004	.182	.232	-.261	.008
Category 2	.353*	.126	-.028	.060	-.012	.072
Category 3	.179	.087	-.061	.073	-.058	-.002
Category 4	.086	.116	-.098	.096	-.147	.012
Category 5	-.199	-.301*	.151	.231	-.374*	.012
Category 6	-.090	.098	.110	.469*	-.006	-.135
Category 7	.148	-.068	-.025	.010	-.189	-.004
Category 8	.014	.062	.097	-.121	.253	-.240
Category 9	.094	-.130	-.007	.145	-.065	.083
WMVAE total	.198	.018	.066	.227	-.151	-.013

Note: Asterisk indicates moderate association.

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

The point-biserial correlation formula used in this study represents an algebraic simplification of the Pearson product-moment correlation coefficient formula (Glass & Hopkins, 1984), which is used when X is a dichotomous variable. Each independent variable was set up as a dichotomy. For example, candidates did (scored as 1) or did not (scored as 0) have a teaching certificate.

Program Planning, Development, and Evaluation Subtest

A regression analysis was performed between candidates' scores on the Program Planning, Development, and Evaluation subtest and each of the independent variables. The results of the analysis are displayed in Table 4.18. The largest beta value was obtained for

the independent variable teaching experience (TEACHEXP3); this value was statistically significant at the .05 level. Of the six independent variables, possession of a Michigan teaching certificate was the one most closely related to candidates' scores on the Program Planning, Development, and Evaluation subtest.

Table 4.18.--Results of multiple regression analysis between independent variables and scores on the Program Planning, Development, and Evaluation subtest (Category 1).

Variable	Beta	Sig. of $\underline{T}$
OCCEXP2	.02823	.8218
ADMCOUR2	.15108	.2440
MITEACH	.28405	.0672
TEACHEXP3	-.30640	.0203*
ADMEXP3	.20139	.1347
DEGREE3	-.13333	.3660

$\underline{R}^2$ = .1865 Adj. $\underline{R}^2$ = .0993 $\underline{p}$ = .0629

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Instructional Management Subtest

A regression analysis was performed between candidates' scores on the Instructional Management subtest and each of the independent variables. The results of this analysis are displayed in Table 4.19. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH); this value was statistically significant at the .05 level.

Table 4.19.--Results of multiple regression analysis between independent variables and scores on the Instructional Management subtest (Category 2).

Variable	Beta	Sig. of T
OCCEXP2	.08328	.5101
ADMCOUR2	-.08918	.4930
MITEACH	.48615	.0025*
TEACHEXP3	-.08136	.5313
ADMEXP3	.15924	.2385
DEGREE3	-.12415	.4030

R^2 = .1748 Adj. R^2 = .0864 p = .0843

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Personnel Management Subtest

A regression analysis was performed between candidates' scores on the Personnel Management subtest and each of the independent variables. The results of this analysis are displayed in Table 4.20. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH). No statistically significant relationship was found between any of the independent variables and candidates' scores on this subtest.

Table 4.20.--Results of multiple regression analysis between independent variables and scores on the Personnel Management subtest (Category 3).

Variable	Beta	Sig. of T
OCCEXP2	-.00320	.9810
ADMCOUR2	-.10338	.4560
MITEACH	.26422	.1113
TEACHEXP3	-.07429	.5915
ADMEXP3	.14007	.3296
DEGREE3	-.05775	.7144

R^2 = .0631 Adj. R^2 = .-.0373 p = .7065

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

Facilities and Equipment Management Subtest

A regression analysis was performed between candidates' scores on the Facilities and Equipment Management subtest and each of the independent variables. The results of this analysis are shown in Table 4.21. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH). No statistically significant relationship was found between any of the independent variables and candidates' scores on the Facilities and Equipment Management subtest.

Table 4.21.--Results of multiple regression analysis between independent variables and scores on the Facilities and Equipment Management subtest (Category 4).

Variable	Beta	Sig. of T
OCCEXP2	.01917	.8843
ADMCOUR2	-.13102	.3357
MITEACH	.28976	.0755
TEACHEXP3	-.16403	.2289
ADMEXP3	.15445	.2730
DEGREE3	-.04365	.7776

R^2 = .1008 Adj. R^2 = .0045 p = .4057

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

Student Services Subtest

A regression analysis was performed between candidates' scores on the Student Services subtest and each of the independent variables. The results of this analysis are shown in Table 4.22. The largest beta value was obtained for the independent variable teaching experience (TEACHEXP3). This value was statistically significant at the .05 level. Holding a master's degree or higher (DEGREE3) was also statistically significant at the .05 level.

Table 4.22.--Results of multiple regression analysis between independent variables and scores on the Student Services subtest (Category 5).

Variable	Beta	Sig. of $\underline{T}$
OCCEXP2	.00769	.9480
ADMCOUR2	.13818	.2573
MITEACH	.07662	.5946
TEACHEXP3	-.38593	.0023*
ADMEXP3	.13720	.2765
DEGREE3	-.32689	.0210*

$\underline{R}^2$ = .2798 Adj. $\underline{R}^2$ = .2027 $\underline{p}$ = .0041

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Staff Development Subtest

A regression analysis was performed between candidates' scores on the Staff Development subtest and each of the independent variables. The results of this analysis are shown in Table 4.23. The largest beta value was obtained for the independent variable administrative experience (ADMEXP3); this value was statistically significant at the .05 level.

Table 4.23.--Results of multiple regression analysis between independent variables and scores on the Staff Development subtest (Category 6).

Variable	Beta	Sig. of $\underline{T}$
OCCEXP2	-.22032	.0638
ADMCOUR2	-.00363	.9760
MITEACH	-.09459	.5085
TEACHEXP3	.13206	.2751
ADMEXP3	.51018	.0001*
DEGREE3	.14012	.3096

$\underline{R}^2$ = .2900 Adj. $\underline{R}^2$ = .2140 $\underline{p}$ = .0030

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Professional Relations Subtest

A regression analysis was performed between candidates' scores on the Professional Relations subtest and each of the independent variables. The results of this analysis are shown in Table 4.24. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH); this value was statistically significant at the .05 level.

Table 4.24.--Results of multiple regression analysis between independent variables and scores on the Professional Relations subtest (Category 7).

Variable	Beta	Sig. of T
OCCEXP2	.01629	.9006
ADMCOUR2	-.04803	.7205
MITEACH	.34957	.0314*
TEACHEXP3	-.25233	.0639
ADMEXP3	.04354	.7538
DEGREE3	-.25518	.0994

R^2 = .1183 Adj. R^2 = .0239 p = .2942

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

School/Community Relations Subtest

A regression analysis was performed between candidates' scores on the School/Community Relations subtest and each of the independent variables. The results of this analysis are displayed in Table 4.25. The largest beta value was obtained for the independent variable teaching experience (TEACHEXP3); this value was statistically significant at the .05 level.

Table 4.25.--Results of multiple regression analysis between independent variables and scores on the School/Community Relations subtest (Category 8).

Variable	Beta	Sig. of $\underline{T}$
OCCEXP2	-.25143	.0527
ADMCOUR2	.08286	.5287
MITEACH	-.16227	.2996
TEACHEXP3	.28604	.0327*
ADMEXP3	-.07936	.5595
DEGREE3	.12801	.3939

$\underline{R}^2$ = .1561 Adj. $\underline{R}^2$ = .0657 $\underline{p}$ = .1317

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Business and Financial Management Subtest

A regression analysis was performed between candidates' scores on the Business and Financial Management subtest and each of the independent variables. The results of this analysis are shown in Table 4.26. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH); this value was statistically significant at the .05 level.

Table 4.26.--Results of multiple regression analysis between independent variables and scores on the Business and Financial Management subtest (Category 9).

Variable	Beta	Sig. of $\underline{T}$
OCCEXP2	.05441	.6782
ADMCOUR2	-.08250	.5413
MITEACH	.32788	.0440*
TEACHEXP3	-.09257	.4930
ADMEXP3	.20323	.1488
DEGREE3	-.29820	.0563

$\underline{R}^2$ = .1009 Adj. $\underline{R}^2$ = .0145 $\underline{p}$ = .3448

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Aggregate WMVAE Scores

A regression analysis was performed between candidates' aggregate scores on the WMVAE and each of the independent variables. The results of this analysis are shown in Table 4.27. The largest beta value was obtained for the independent variable Michigan teaching certificate (MITEACH), followed by administrative experience (ADMEXP3). Both of these values were statistically significant at the .05 level. However, the correlation between the aggregate WMVAE score and the independent variables was not statistically significant ($\underline{p}$ = .1006). Therefore, all other correlations reported as statistically significant in this study should be considered with reservation.

Table 4.27.--Results of multiple regression analysis between independent variables and aggregate scores on the WMVAE.

Variable	Beta	Sig. of T
OCCEXP2	-.02322	.8547
ADMCOUR2	-.01530	.9066
MITEACH	.40059	.0118*
TEACHEXP3	-.17856	.1742
ADMEXP3	.28747	.0366*
DEGREE3	-.18926	.2062

R^2 = .1676 Adj. R^2 = .0784 p = .1006

Key: MITEACH = possession of a Michigan teaching certificate, DEGREE3 = master's degree or higher, ADMCOUR2 = administrative coursework, ADMEXP3 = 3 or more years of administrative experience, TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

*Significant at the .05 level.

Results of the Stepwise Multiple Regression Analysis

A stepwise entry process was used to verify the importance of each variable listed in Table 4.18. The significance level was set at .05; all variables exceeding that limit were excluded. The following tables show the results only for those subtest scores and independent variables whose significance levels did not reach or exceed .05. This information should be considered with reservation because the result of the multiple regression analysis between the independent variables and the candidates' aggregate WMVAE scores was not statistically significant.

Program Planning, Development, and Evaluation Subtest

The results of the stepwise multiple regression analysis for the Program Planning, Development, and Evaluation subtest are displayed in Table 4.28. Teaching experience (TEACHEXP3) was the only variable that was significantly correlated with scores on this subtest.

Table 4.28.--Results of stepwise multiple regression analysis between independent variables and scores on the Program Planning, Development, and Evaluation subtest (Category 1).

Variable	Beta	Sig. of $\underline{T}$
TEACHEXP3	-.26109	.0387*

Key: TEACHEXP3 = 3 or more years of teaching experience.

$\underline{R}^2$ = .06817 Adjusted $\underline{R}^2$ = .05289 $\underline{p}$ = .0387

*Significant at the .05 level.

Instructional Management Subtest

The results of the stepwise multiple regression analysis for the Instructional Management subtest are shown in Table 4.29. Michigan teaching certificate (MITEACH) was the only independent variable that was significantly correlated with candidates' scores on this subtest.

Table 4.29.--Results of stepwise multiple regression analysis between independent variables and scores on the Instructional Management subtest (Category 2).

Variable	Beta	Sig. of I
MITEACH	.35269	.0046*

Key: MITEACH = possession of a Michigan teaching certificate.

R^2 = .12439 Adjusted R^2 = .11004 p = .0046

*Significant at the .05 level.

Student Services Subtest

Results of the stepwise multiple regression analysis for the Student Services subtest are displayed in Table 4.30. Two independent variables were found to have a statistically significant relationship to candidates' scores on this subtest. Teaching experience (TEACHEXP3) had the strongest relationship, followed by possession of a master's degree or higher (DEGREE3).

Table 4.30.--Results of stepwise multiple regression analysis between independent variables and scores on the Student Services subtest (Category 5).

Variable	Beta	Sig. of I
TEACHEXP3	-.37675	.0015*
DEGREE3	-.30432	.0092*

Key: TEACHEXP3 = 3 or more years of teaching experience.
DEGREE3 = master's degree or higher.

R^2 = .23228 Adjusted R^2 = .20669 p = .004

*Significant at the .05 level.

Staff Development Subtest

Results of the stepwise multiple regression analysis for the Staff Development subtest are shown in Table 4.31. One independent variable, administrative experience (ADMEXP3), was found to have a statistically significant relationship to candidates' scores on this subtest.

Table 4.31.--Results of stepwise multiple regression analysis between independent variables and scores on the Staff Development subtest (Category 6).

Variable	Beta	Sig. of T
ADMEXP3	.46859	.0001*

Key: ADMEXP3 = 3 or more years of administrative experience.

R^2 = .21957 Adjusted R^2 = .20678 p = .0001

*Significant at the .05 level.

School/Community Relations Subtest

Results of the stepwise multiple regression analysis for the School/Community Relations subtest are displayed in Table 4.32. Two independent variables, teaching experience (TEACHEXP3) and occupational experience (OCCEXP2), were found to have a statistically significant relationship to candidates' scores on this subtest.

Table 4.32.--Results of stepwise multiple regression analysis between independent variables and scores on the School/Community Relations subtest (Category 8).

Variable	Beta	Sig. of *T*
TEACHEXP3	.27778	.0248*
OCCEXP2	-.26615	.0312*

Key: TEACHEXP3 = 3 or more years of teaching experience, OCCEXP2 = 2 or more years of occupational experience.

R^2 = .13420 Adjusted R^2 = .10534 p = .0133

*Significant at the .05 level.

Results of Hypothesis Testing

Six hypotheses were formulated to determine the relationship between six types of normative data (independent variables) and candidates' scores on the WMVAE (dependent variable). In this section, each hypothesis is restated, followed by the results for that hypothesis.

Hypothesis 1: There is no statistically significant relationship between a candidate's educational level and his/her WMVAE scores.

The strongest relationship for candidates with a master's degree or higher (DEGREE3) was with scores on the Student Services subtest (Category 5), as shown in Table 4.17. The correlation coefficient of .301 was moderate, according to the ranges used by Davis (1971). This was a negative correlation, which would indicate that candidates with a master's or a more advanced degree scored lower on this subtest than did those who had less education. The

multiple regression results also showed that the association was statistically significant (Table 4.22) and had the second strongest relationship when stepwise regression analysis was performed (Table 4.30). Only teaching experience (TEACHEXP3) had a stronger relationship to scores on the Student Services subtest (Category 5) in the stepwise regression analysis. The relationship between a candidates' educational level and his/her aggregate WMVAE score was not statistically significant (Table 4.27). Therefore, Hypothesis 1 was not rejected.

> Hypothesis 2: There is no statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores.

The strongest association for candidates who had completed coursework in vocational administration (ADMCOUR2) was with scores on the Program Planning, Development, and Evaluation subtest (Category 1), as shown in Table 4.17. The next strongest relationship was with scores on the Student Services subtest (Category 5). These two coefficients were .18 and .15, respectively. Both coefficients were in the range described by Davis (1971) as a low association. Both correlations were positive, which would tend to indicate that candidates who had completed coursework in the administration, supervision, and organization of vocational education programs had slightly higher test scores in these two areas. Scores on the individual subtests and aggregate scores on the WMVAE were not significantly related to the

independent variable administrative coursework (ADMCOUR2). Based on these results, Hypothesis 2 was not rejected.

Hypothesis 3: There is no statistically significant relationship between a candidate's possessing or not possessing Michigan teacher certification and his/her WMVAE scores.

The strongest association for candidates with a Michigan teaching certificate (MITEACH) was with scores on the Instructional Management subtest (Category 2), as shown in Table 4.17. The coefficient of .353 indicates that candidates with a teaching certificate had slightly higher scores on this subtest than did those without a teaching certificate. The aggregate test scores of candidates with a Michigan teaching certificate had a positive correlation coefficient of almost .02 (Table 4.17). Although there were significant relationships between a candidate's having a Michigan teaching certificate and his/her scores on two subtests and the aggregate WMVAE, the overall comparison was not statistically significant. Thus, Hypothesis 3 was not rejected.

Hypothesis 4: There is no statistically significant relationship between a candidate's years of teaching experience in vocational education programs and his/her WMVAE scores.

The strongest relationship for candidates with three or more years of teaching experience in vocational education programs was with scores on the Student Services subtest (Category 5), as shown in Table 4.17. The moderate negative correlation of -.374 indicates that candidates with three or more years of teaching experience tended to score lower on the Student Services subtest than those without that amount of experience. The next highest correlation was

a moderate one with scores on the Program Planning, Development, and Evaluation (Category 1) and School/Community Relations (Category 8) subtests.

A statistically significant relationship was found between the independent variable teaching experience (TEACHEXP3) and candidates' scores on the Student Services subtest (Table 4.22). Results of the regression analysis indicated there was also a statistically significant relationship between teaching experience and candidates' scores on the Program Planning, Development, and Evaluation and School/Community Relations subtests. However, the results of the overall comparison were not statistically significant. Therefore, Hypothesis 4 was not rejected.

> Hypothesis 5: There is no statistically significant relationship between a candidate's years of experience in administering vocational education programs and his/her WMVAE scores.

As shown in Table 4.17, a moderate correlation of .469 was found between the independent variable administrative experience (three or more years of experience--ADMEXP3) and candidates' scores on the Staff Development subtest (Category 6). This finding suggests that experienced administrators had higher scores on the Staff Development subtest than did administrators with less experience. A statistically significant difference (.0001) was found between candidates with three or more years of administrative experience and those with less experience. However, the results of the overall comparison were not statistically significant. Therefore, Hypothesis 5 was not rejected.

Hypothesis 6: There is no statistically significant relationship between a candidate's years of occupational experience and his/her WMVAE scores.

As shown in Table 4.17, candidates' scores on five of the nine subtests had a negligible association (.01 to .09) with the independent variable occupational experience (OCCEXP2). The other four correlations were in the low range (.10 to .29). The coefficient for aggregate test scores was -.013. None of the multiple regression analyses indicated a statistically significant relationship between the independent variables and the dependent variable. Therefore, Hypothesis 6 was not rejected.

Summary

Results of the data analyses conducted for this study were presented in this chapter. Six hypotheses were tested in an attempt to determine the relationship between educational level, administrative coursework, teacher certification, teaching experience, administrative experience, and occupational experience (independent variables) and candidates' scores on the WMVAE (dependent variable). None of the hypotheses was rejected.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was undertaken to assess the strength and direction of the relationship between certain normative data (educational level, graduate-level vocational coursework, teacher certification, teaching experience, administrative experience, and occupational experience) and administrators' knowledge in nine areas, as measured by the WMVAE.

The need for exemplary school leaders is as critical today as ever. Numerous reform movements have arisen in an attempt to improve the quality of education. Increased standards have been proposed for students, teachers, and administrators. The lead article in the June 1989 issue of Update, published by the Association for Supervision and Curriculum Development, was entitled "Tougher Standards Urged for School Administrators" (O'Neil, 1989). Among other criteria, these increased standards include "a national examination before being licensed" (p. 1).

In vocational-technical education, work experience is accepted as being essential for teacher certification in most states. Work experience has been the cornerstone of certification for vocational teachers since the Smith-Hughes Act of 1917. The question of how

much work experience is necessary has plagued vocational educators for years. Some have assumed that the more experience one has in the field, the better qualified that person will be to teach those skills. Is this true for vocational administrators as well? How important are occupational work experience and other specified credentialing criteria to the field of vocational administration?

The importance of some of these criteria with regard to the field of education was revealed in the review of literature. Beach (1985), Boras (1985), and Whitener (1981) brought these issues into focus for vocational teachers. Several studies were also highlighted that concerned educational administration. However, no studies were found in which the researcher focused specifically on vocational administrators.

The lack of studies addressing these relationships, especially in vocational administration, underscores the need for research in this area. By exploring these relationships, the writer sought to expand the knowledge base available to individuals responsible for identifying, promulgating, and monitoring administrative selection and certification requirements. Information on the relationships between the selected normative data and scores on the WMVAE should be useful to people in local, state, and national organizations advocating more rigorous standards for school administrators.

Procedures

Subjects for this investigation were all 63 individuals who took the WMVAE before participating in the Michigan LDP during 1986,

1987, and 1988. All subjects completed the Demographic Profile Form before taking the WMVAE. Data for the study were supplied by Ferris State University and the MDE/V-TES.

Descriptive information was reported to present a profile of the candidates' educational level, graduate-level vocational coursework, teacher certification, teaching experience, administrative experience, and occupational experience. Both descriptive and inferential statistics were used in analyzing the data.

Findings

Descriptive statistics were used to determine whether the candidates met the minimum criteria for reimbursement as vocational administrators in Michigan. Of the 63 candidates, 42 had a master's or higher degree. One examinee did not have even a baccalaureate degree. Fifty-one of the candidates possessed a teaching certificate. Thirty-six of the 63 candidates had taken at least one course in the administration, supervision, and organization of vocational education programs. Forty-four candidates met the minimum requirement of 3 years of teaching experience, and 10 candidates met the minimum requirement of 3 years of administrative experience. Forty-seven candidates had had 2 or more years of occupational experience.

Candidates' mean score on the total WMVAE was 67.4%. Candidates scored highest on the Professional Relations subtest, with a mean score of approximately 80%. The lowest mean score--

approximately 52%--was on the Business and Financial Management subtest.

The results of the inferential statistical analyses relative to the research questions are discussed in the following paragraphs. Each question is restated, followed by the findings for that question.

> Research Question 1: Is there a statistically significant relationship between a candidate's educational level and his/her WMVAE scores?

Regression analysis revealed a negligible positive correlation between WMVAE scores and candidates' having a master's degree or higher, as compared to having less than a master's degree. On one subtest, Student Services, there was a moderate negative association between educational level and WMVAE scores. No statistically significant relationship was found between candidates' educational level (master's degree or higher) and their aggregate scores on the WMVAE.

> Research Question 2: Is there a statistically significant relationship between a candidate's graduate-level coursework in the administration, supervision, and organization of vocational education programs and his/her WMVAE scores?

Regression analysis revealed a negligible negative correlation between candidates' aggregate scores on the WMVAE and their having taken the prescribed coursework to be a reimbursed administrator. Furthermore, on five of the nine subtests, the coefficients were negative. No statistically significant relationship was found between candidates' graduate-level administrative coursework and their aggregate scores on the WMVAE.

Research Question 3: Is there a statistically significant relationship between a candidate's possessing or not possessing Michigan teaching certification and his/her WMVAE scores?

Candidates' having a teaching certificate versus not having a teaching certificate was moderately associated with scores on the Instructional Management subtest. That is, candidates who had a teaching certificate had moderately higher scores on this subtest than did those without a teaching certificate. Teaching certification was the strongest contributor to candidates' scores on this subtest. However, no statistically significant relationship was found between candidates' teacher certification and their aggregate scores on the WMVAE.

Research Question 4: Is there a statistically significant relationship between a candidate's vocational teaching experience and his/her WMVAE scores?

Regression analysis revealed a moderate negative correlation between candidates' vocational teaching experience and their scores on the Student Services subtest. This was the second highest coefficient of all those in the study. All but one coefficient for the correlation between scores on the nine subtests and vocational teaching experience were negative, and all were lower than the moderate association range. No statistically significant relationship was found between candidates' vocational teaching experience and their aggregate scores on the WMVAE.

Research Question 5: Is there a statistically significant relationship between a candidate's vocational administrative experience and his/her WMVAE scores?

The strongest contributor to WMVAE scores was administrative experience; this correlation was on the Student Services subtest.

However, no statistically significant relationship was found between candidates' administrative experience and their aggregate scores on the WMVAE.

Research Question 6: Is there a statistically significant relationship between a candidate's occupational experience and his/her WMVAE scores?

Occupational experience was negatively correlated with test scores on four of the nine subtests and positively correlated with test scores on the remaining five subtests. All correlations were at the low or negligible level. However, no statistically significant relationship was found between candidates' occupational experience and their aggregate scores on the WMVAE.

Conclusions

The Michigan Administrative Rules Relating to Education and the Administrative Guide for Vocational-Technical Education in Michigan indicate the importance of certain credentials for reimbursement as a vocational administrator. The review of literature also indicated that many states and institutions emphasize similar credentials to be licensed or certified as a teacher or educational administrator.

Quality education and field experience are considered to be of utmost importance in most, if not all, occupations. The question is not only what criteria are important, but how those requirements might best be measured. In this study, the writer examined the relationship between six types of normative data and candidates' scores on nine subtests of the WMVAE. Standards for ranges of association were those identified by Davis (1971). The criterion

for significance was set at the .05 alpha level for examining the research hypotheses.

Overall, the relationship between the normative data and candidates' scores on the WMVAE was found not to be statistically significant at the .05 alpha level. Several independent variables were, however, determined to have a moderate relationship to test scores, according to Davis's levels of association.

None of the independent variables correlated at the moderate level of association or higher with scores on the Program Planning, Development, and Evaluation subtest. In fact, two of the correlations were at the negligible level. None of the normative data were determined to be good predictors of candidates' scores on the Program Planning, Development, and Evaluation subtest.

Scores on the Instructional Management subtest had a moderate relationship with one independent variable, Michigan teaching certification. All other relationships were low or negligible.

The third subtest was Personnel Management. Three of the independent variables had a negative but negligible association with scores on this subtest; two had a positive but negligible association, and one had a positive but low correlation. None of the normative data were determined to be good predictors of candidates' scores on the Personnel Management subtest.

None of the independent variables had even a moderate association with scores on the Facilities and Equipment Management subtest. Two independent variables had a low or negligible negative correlation with scores on this subtest. None of the independent

variables studied were found to be good predictors of scores on any of the WMVAE subtests.

Scores on the Student Services subtest were found to have a moderately negative association with two independent variables. Of the other four independent variables, three had a positive and one a negative association with scores on this subtest. Candidates with a master's degree and those with three or more years of teaching experience had moderately higher scores on the Student Services subtest than did their counterparts with lower educational levels and less teaching experience.

The highest association (.469), but still within the moderate range, was between scores on the Staff Development subtest and administrative experience. All other coefficients were considerably lower; three were negative and two positive.

The seventh subtest was Professional Relations. Three of the associations between the independent variables and scores on this subtest were negative and three were positive; three were low and three were negligible. None of the independent variables considered in the study was found to contribute to WMVAE scores.

School/Community Relations was the eighth subtest. None of the associations between the independent variables and scores on this subtest were found to be statistically significant. Two associations were negative; five of the six were low, and one was negligible.

None of the independent variables correlated at the moderate level or higher with scores on the Business and Financial Management subtest. Three were found to have a negative correlation, and three were at the negligible level. The selected criteria were not found to be adequate predictors of WMVAE scores.

When a multiple regression analysis was performed on the aggregate WMVAE scores and the independent variables, the result was found not to be statistically significant. In conclusion, candidates' educational level, graduate-level vocational coursework, teacher certification, teaching experience, administrative experience, and occupational experience did not significantly correlate with WMVAE scores, and therefore they cannot be considered good predictors of WMVAE scores.

The question of how much work experience is necessary has plagued vocational educators for years. The assumption has been that the more experience a vocational educator has in the field, the better able he/she will be to teach those skills. As evidenced in the review of literature, those assumptions apparently have been carried over as prerequisites for reimbursement as a vocational administrator. The importance of occupational work experience as a prerequisite for vocational administrators has not been established by any empirical data uncovered through the review of literature. Furthermore, the findings from this study cast serious doubt on the need for occupational work experience in the field of vocational administration because no significant difference in WMVAE scores was

found between candidates who did and those who did not have the required occupational work experience.

The question of how much formal education should be required for certification as a school administrator was not answered in any of the research reviewed for this study. National surveys have been conducted to determine how much education is required by various state agencies, universities, and school districts. The educational prerequisites for vocational administrators have often been found to be the same as those for general education administrators. The most frequently identified educational prerequisite is a master's degree. Of the 63 candidates included in this study, 46 met the prerequisite for vocational administrator reimbursement of having a master's degree or higher. However, no significant difference in WMVAE scores was found between candidates who did and those who did not have at least a master's degree. These findings lend support to individuals who contend that there is a lack of evidence for establishing the master's degree as a prerequisite.

The Michigan Administrative Rules Relating to Education require reimbursed vocational administrators to have a master's degree; the rules do not state what the curriculum should entail, other than courses in the administration, supervision, and organization of vocational education programs. Of the candidates included in the study, 36 had completed the desired coursework. However, no statistically significant difference in WMVAE scores was found between candidates who did and those who did not have the prescribed coursework.

Specific information on the number of courses or course content is clearly lacking, and expectations lack a needed specificity. Concerns are two dimensional. From these findings, the WMVAE does not appear to discriminate between individuals who do and those who do not have the prescribed degree and courses. Nor should a significant difference be expected when the criteria are not well defined.

A positive influence of teaching experience on teachers' performance on tests in the field of teaching might be expected. The influence of teaching experience on the administrative field is, at best, debatable. Findings from this study revealed little about the pervasive need for administrators to have teaching experience. In fact, no statistically significant difference in WMVAE scores was found between candidates with and those without the suggested three years of teaching experience.

Several comprehensive surveys have been conducted to determine the number of years of teaching experience required for school administrators. Little formal research has been conducted that has shown a significant and positive correlation between the optimal number of years of teaching experience and administrative competence. Other investigators are encouraged to conduct further research to determine whether teaching experience should, in fact, be a prerequisite for school administration.

Michigan's administrative rules require reimbursed vocational administrators to possess a teaching certificate. Of the subjects included in the survey, 51 of the 63 had a teaching certificate. A

statistically significant difference in WMVAE scores was found between candidates who did and those who did not have a valid teaching certificate. A statistically significant relationship was also found between administrative experience and WMVAE scores. That is, candidates who had a teaching certificate and experience in administration tended to do better on the examination than those without certification or the required three years of experience in administration.

A statistically weak but positive correlation was found for both independent variables, teaching certification and administrative experience. It should be noted that these findings are inconclusive because it is not known in what discipline the teaching certificate was awarded or at what level the administrative experience was gained. These findings should be viewed with caution because the overall relationship between aggregate WMVAE scores and normative data was found not to be statistically significant. In addition, the adjusted R^2 was only 7.8%. The R^2 value expresses the amount of variance in the criterion variable that can be predicted from a predictor variable or a combination of predictor variables (Borg & Gall, 1983).

In general, more questions were raised than answered as a result of this study. Much of the research was inconclusive, but it is significant in itself that the major findings were found not to be statistically significant. Even though the findings were found not to be statistically significant, they are important to the field of vocational administration. Other researchers are encouraged to

conduct more in-depth study in the field of vocational administrative training, testing, and credentialing.

The WMVAE clearly has some inherent shortcomings. First, it is a written examination, which, at the best, is a measure of knowledge. It does not contain a test of practical skills. Second, the WMVAE has been administered to relatively few candidates. Finally, the results of this study demonstrate that the vocational administrative reimbursement criteria, as specified in Michigan's Administrative Rules, are not good predictors of individuals' scores on the WMVAE.

Recommendations

Based on the study findings, the writer recommends that:

1. The results of this study should be considered when using the WMVAE scores to determine candidates' eligibility for reimbursement.

2. The results of this study should be considered when determining normative criteria for reimbursement and/or certification of vocational administrators.

3. Agency personnel should seriously consider using performance criteria as well as written examination scores in determining candidates' eligibility for reimbursement and/or certification.

4. Research should be initiated to determine the normative criteria that are essential to be eligible for reimbursement or certification as vocational administrators.

5. Research should be undertaken to identify important and essential tasks performed by vocational administrators.

6. State and organization personnel engaged in developing competency tests for administrators need to record more details regarding candidates' background, to be used by future researchers in this area.

Reflections

"Where Are We and Where Are We Going in School Administrator Preparation in the United States?" (Gousha et al., 1986) is a question that still needs to be addressed. A question that is narrower in focus but one that also must be addressed is: Where are we and where are we going in vocational administrator preparation in Michigan?

Several questions and issues surfaced during the development of this project. One question that seems critical is: Now that administrator certification in Michigan has been defined, is there a need for vocational administrative reimbursement requirements? These two processes seem unnecessarily redundant. The question then follows: Can one be certified and not be eligible for reimbursement?

In several studies, researchers have attempted to address the issue of competencies that are essential for excellence in school administration. In Michigan, traditionally there have been parallel requirements for general, vocational, and special education administrators. Are these prerequisites supported by research, or

are they based more on tradition and mandates? To compound the issue, is the reimbursement procedure in Michigan an attempt to cover both secondary and community college administrators with one administrative rule? Can one assessment center, simulation exercise, performance test, or written examination be developed, validated, and administered to measure accurately the knowledge, skills, and abilities of administrators at both levels?

Efforts have been made and strategies are being developed to train general education and vocational education administrators. Has an important difference been found in the skills needed in these separate but similar occupations? If not, why are there separate but "equal" training programs? Funding agencies with the responsibility for distributing resources ultimately should be concerned about the most cost-effective means of establishing programs to train school administrators. A synergistic approach involving all departments and agencies concerned with school administration seems worthy of consideration.

APPENDICES

APPENDIX A

TASKS PERCEIVED BY MICHIGAN VOCATIONAL EDUCATION ADMINISTRATORS TO BE "ABSOLUTELY NECESSARY" FOR FIRST-YEAR VOCATIONAL ADMINISTRATORS

CATEGORY A: Program Planning, Development, and Evaluation

1. Survey student and parent interests.
2. Collect and analyze manpower needs assessment data.
3. Direct occupational task analysis for use in curriculum development.
4. Direct the identification of entry-level requirements for jobs.
*5. Involve community representatives in program planning and development.
6. Obtain state and federal services and resources for program development.
*7. Cooperate with district, county, regional, and state agencies in developing and operating vocational programs.
*8. Prepare annual program plans.
9. prepare and update long-range program goals.
*10. Develop overall vocational program goals.
11. Coordinate district curriculum development efforts.
12. Approve courses of study.
13. Establish school admission and graduation requirements.
14. Recommend program policies to the administration and board.
*15. Implement local board and administrative policies.
*16. Interpret and apply state and/or federal vocational education legislation.
17. Interpret and apply other relevant state and federal legislation (such as CETA).
*18. Develop plans for evaluating instructional programs.
19. Direct self-evaluation of the district vocational programs.
20. Involve external evaluation personnel in assessing program effectiveness.
21. Design and select instruments for evaluating instructional programs.
22. Evaluate the effectiveness of the instructional page.
*23. Initiate student and employer follow-up studies.
*24. Analyze student and employer follow-up studies.
25. Recommend curriculum recisions based on evaluation data.
26. Assess student testing and grading procedures.
27. Analyze the school's and community's feelings toward educational change.
28. Write proposals for the funding of new programs and the improvement of existing programs.
29. Coordinate local demonstration, pilot, and exemplary programs.

30. Design and oversee local research studies.
31. Interpret and use research results for program development and improvement.
32. Develop supplemental/remedial instructional programs to meet student needs.

CATEGORY B: Instructional Management

33. Establish instructional program entry and completion requirements.
34. Establish student rules and policies (such as attendance and discipline).
*35. Enforce student rules and policies.
36. Design and oversee student progress reporting procedures.
*37. Prepare a master schedule of course offerings.
38. Guide staff in selecting and using effective instructional strategies (such as individualized instruction).
39. Establish and implement a curriculum design that will achieve the school's instructional goals.
40. Guide staff in integrating and articulating the vocational program with the total educational program.
41. Promote the integration of vocational student organizational activities into the instructional program.
*42. Provide for cooperative education and apprenticeship programs.
43. Provide for supplemental/remedial instructional programs.
44. Provide for special needs programs.
45. Provide for adult/continuing education programs.
46. Guide the articulation of secondary and postsecondary vocational program activities.
*47. Approve selection of instructional equipment.
*48. Approve selection of instructional materials.
49. Maintain a learning resources center for students.

CATEGORY C: Student Services

*50. Oversee student recruitment activities.
51. Oversee school admission services.
52. Arrange for work study programs.
53. Oversee student guidance and testing services.
*54. Oversee student job placement and follow-up services.
55. Provide for a student record-keeping system.
56. Interpret and apply student rights, laws, and regulations.

CATEGORY D: Personnel Management

57. Prepare and recommend personnel policies.
58. Prepare and maintain a personnel handbook.
*59. Assess program staffing requirements.
60. Prepare job descriptions.
61. Establish staff selection and recruitment procedures.
*62. Recruit and interview potential staff.
*63. Recommend potential staff to the administration and board.
64. Participate in negotiating staff working agreements.
65. Establish staff grievance procedures.
66. Resolve staff grievance procedures.
67. Interpret the staff benefits program.
*68. Counsel and advise staff on professional matters.
*69. Schedule staff work loads.
70. Schedule staff leaves, vacations, and sabbaticals.
*71. Oversee the work of teachers and other school personnel.
72. Provide for a staff record-keeping system.
*73. Plan and conduct staff meetings.
*74. Prepare bulletins and other communications designed to keep staff informed.
*75. Observe and evaluate staff performance.
*76. Recommend staff promotions and dismissals.
77. Provide guidance to the staff on legal matters affecting the school program.
*78. Interpret and apply licensing and certification regulations.
*79. Interpret and apply labor laws and regulations.
*80. Interpret and apply affirmative action laws and regulations.

CATEGORY E: Staff Development

*81. Assess staff development needs.
82. Assist in the preparation of individual staff profiles.
83. Counsel staff regarding personnel development needs and activities.
84. Establish and maintain a staff learning resources center.
85. Conduct workshops and other inservice programs for professional personnel.
*86. Arrange for workshops and other inservice programs for professional personnel.
87. Provide for inservice programs for supportive personnel.
88. Provide for preservice programs for professional personnel.
89. Arrange for staff exchanges with business and industry.
90. Evaluate staff development programs.

CATEGORY F: Professional Relations and Self-Development

*91. Maintain ethical standards expected of a professional educator.
*92. Develop and maintain professional relationships with other administrators.
*93. Develop and maintain professional relationships with state department of education personnel.
*94. Develop and maintain relationships with personnel in professional organizations.
*95. Participate in professional organizations.
*96. Participate in professional meetings for self-improvement.
*97. Promote professional image through personal appearance and conduct.
98. Assist with the development of state and/or federal plans for vocational education.
99. Participate in the development of vocational education legislation.
100. Prepare policy and commendation statements.
*101. Represent teacher interests and concerns to other administrators and the board.
*102. Develop effective interpersonal skills.
*103. Read and use information from professional journals, reports, and related materials for self-improvement.
*104. Apply management techniques to personal work assignments.
*105. Develop cooperative problem-solving and decision-making skills.
*106. Assess personal performance as an administrator.

CATEGORY G: School-Community Relations

*107. Develop a plan for promoting good public relations.
108. Prepare and recommend public relations and communication policies.
109. Coordinate use of occupational (craft) advisory committees.
*110. Organize and work with a general vocational advisory council.
*111. Develop working relationships with employers and agencies.
112. Prepare and recommend cooperative agreements with other agencies.
*113. Involve community leaders (political and nonpolitical) in school programs and activities.
*114. Participate in school organizations.
*115. Participate in community organizations.

*116. Promote good relationships between vocational and general education staff.
117. Encourage staff participation in community civic, service, and social organizations.
118. Promote cooperative efforts of parent and teacher groups.
119. Conduct conferences with individuals relative to the vocational groups.
*120. Meet and confer with visitors.
*121. Conduct informational programs for the public (such as open house and career awareness programs).
*122. Make public appearances on school programs and activities.
123. Conduct public hearings and meetings on school issues.
*124. Conduct orientation programs for students and staff.
125. Conduct recognition programs for students, staff, and community supporters.
126. Plan for exhibits and displays.
*127. Develop materials to promote the vocational programs.
128. Write news releases for school and area media.
129. Obtain and analyze informal feedback about the school.
130. Evaluate and public relations program.
131. Interpret and apply public "right to know" laws and regulations.

CATEGORY H: Facilities and Equipment Management

*132. Assess the need for physical facilities.
133. Conduct land and facility feasibility studies.
134. Recommend building sites.
135. Recommend the selection of an architect.
136. Oversee architectural planning.
137. Submit building and equipment specifications.
138. Analyze building and equipment contract bids.
139. Recommend acceptance of new building.
140. Procure major equipment and furnishings.
141. Plan space requirements for programs.
142. Assign space according to priority needs.
143. Develop and implement an equipment and supply inventory system.
144. Establish preventive maintenance program for equipment and facilities.
*145. Interpret and apply health and safety laws and regulations.
*146. Develop and implement safety programs.

*147. Establish emergency plans (such as fire and disaster).
 148. Establish and oversee a security program.
 149. Schedule and oversee community's use of facilities.
 150. Develop long-range building and equipment plans.
 151. Prepare and submit renovation and alteration plans.

CATEGORY I: Business and Financial Management

 152. Prepare and recommend business policies.
 153. Establish purchasing and payment procedures.
 154. Establish receiving and shipping procedures.
*155. Prepare and regulate operational budgets.
*156. Prepare and regulate program budgets.
 157. Prepare and regulate capital improvement budgets.
 158. Prepare long-range budgets based on total program requirements.
 159. Adopt an appropriate financial accounting system.
*160. Analyze the cost of operating various instructional programs.
 161. Locate sources of funds for program development and operation.
*162. Approve all major expenditures.
*163. Approve requisitions and work orders.
 164. Determine insurance coverage needs.
*165. Respond to business correspondence.
*166. Prepare local, state, and federal reports.

*Indicates that vocational education administrators in Michigan perceived the item to be "absolutely" necessary for first year vocational administrators.

APPENDIX B

DEMOGRAPHIC PROFILE FORM

DEMOGRAPHIC PROFILE FORM

1. Name _____
   (last) First Middle

2. Social Security Number __ __ __ / __ __ / __ __ __ __

3. Age: [ ] Under 25
   [ ] 25-35
   [ ] 36-45
   [ ] 46-55
   [ ] Over 55

4. Sex: [ ] Male
   [ ] Female

Current Employment

5. Current Position: [ ] Administrator
   [ ] Teacher
   [ ] Other

6. Level of Current Employment
   [ ] High School
   [ ] Area Center
   [ ] Community College
   [ ] Adult Education
   [ ] College/University

7. Number of years in present role:
   [ ] Less than 1 year
   [ ] 1-3 years
   [ ] 4-5 years
   [ ] 6-8 years
   [ ] More than 9 years

Education

8. Your present status relative to education:

   [ ] I have or am eligible to hold a valid Michigan teacher's certificate.

   [ ] I am working toward a _____ degree
   (name of degree)

   in _____.
   (name of program)

   I expected to completed this degree in _____.
   (year)

[ ] I am not enrolled in any educational program at the present time but am considering enrolling in the future.

[ ] I am not enrolled in any educational program and am not considering future enrollment.

[ ] Other _____

_____

9. Highest Degree Earned
   [ ] Associates
   [ ] Bachelor
   [ ] Masters
   [ ] Ed. Specialist
   [ ] Doctorate

10. Number of years since last college course:

   [ ] Currently enrolled
   [ ] Less than 1 year
   [ ] 1-4 years
   [ ] More than 5 years

11. Have you completed vocational education courses in the administration, supervision, and organization of vocational education programs at the graduate level:

   [ ] Yes
   [ ] No

   If yes, explain:

_____

_____

_____

Work Experience

12. Calculate the total number of years you have been in the paid job market.

Classroom teaching vocational	_____ years
Classroom teaching Non-vocational	_____ years
Educational Administrative vocational	_____ years
Educational administration non-vocational	_____ years

Occupational Experience* (other than teaching or educational administration)		_____ years
Other _____		_____ years
	Total	_____ years

*My occupational experience is in the following areas:

_____

APPENDIX C

PERMISSION LETTER FROM THE UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
206 BERKEY HALL
(517) 353-9738

EAST LANSING • MICHIGAN • 48824-1111

December 2, 1988

IRB# 88-478

William L. Pratt
1385 Cleaver Road
Caro, MI 48723

Dear Mr. Pratt:

Subject: "A STUDY TO DETERMINE THE RELATIONSHIP BETWEEN CERTAIN NORMATIVE DATA ADMINISTRATIVE KNOWLEDGE AS MEASURED BY THE WRITTEN MICHIGAN VOCATIONAL ADMINISTRATIVE EXAM **IRB# 88-478**"

The above project is exempt from full UCRIHS review. The proposed research protocol has been reviewed by another committee member. The rights and welfare of human subjects appear to be protected and you have approval to conduct the research.

You are reminded that UCRIHS approval is valid for one calendar year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval one month prior to December 2, 1989.

Any changes in procedures involving human subjects must be reviewed by UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to my attention. If I can be of any future help, please do not hesitate to let me know.

Sincerely,

John K. Hudzik, Ph.D.
Chair, UCRIHS

JKH/sar

cc: G. Ferns

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REFERENCES

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