12-1989

# Comparison of Five Role Groups of Michigan Participants in NASSP Assessment Centers

Janice I. Blanck I. Blanck
*Western Michigan University*

# COMPARISON OF FIVE ROLE GROUPS OF MICHIGAN PARTICIPANTS IN NASSP ASSESSMENT CENTERS

by

Janice I. Blanck

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
December 1989

# COMPARISON OF FIVE ROLE GROUPS OF MICHIGAN PARTICIPANTS IN NASSP ASSESSMENT CENTERS

Janice I. Blanck, Ed.D.

Western Michigan University

The purposes of this study were (a) to describe the relationship of job assignment and assessment center performance; (b) to extend the research on the content validity of the NASSP Assessment Center Project (Schmitt et al., 1982); and (c) to determine if there were statistically significant differences among five role groups of Michigan educators for each of the 12 NASSP Assessment Center skill dimensions and the overall ratings. A one-way parametric analysis of variance was used to determine the significant differences among mean scores for the five role groups of elementary, middle, and high school teachers; assistant principals; and quasi-administrators.

Significant differences were found among group means for five skill dimensions (problem analysis, organizational ability, decisiveness, leadership, and oral communication) and the assessors' overall rating. There were no significant differences among the five role groups for seven skill dimensions (judgment, sensitivity, stress tolerance, written communication, range of interests, personal motivation, and educational values).

A number of recommendations for further research and study were made, including (a) a need to compare performance effectiveness of

school leaders selected following assessment center participation with those selected by traditional methods, and (b) a need to compare the effectiveness of directed professional development activities based on assessment center outcomes. Based in part on the findings of this study and consideration of other issues, some general recommendations were also made. First, NASSP Assessment Centers should be used to select candidates for school leadership positions. Second, the assessment center and related developmental programs should be used in the preservice preparation of administrators in Michigan. Finally, the personnel evaluation standards of the Joint Committee on Standards for Evaluation in Education should be implemented and used to select and evaluate building leaders.

Order Number 9015286

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Blanck, Janice Irene, Ed.D.

Western Michigan University, 1989



U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

ACKNOWLEDGMENTS

The development of a thesis to its conclusion begins with a single idea that ultimately results in the compromise, coordination, and the expression of a topic that, hopefully, is timely, appropriate, and contributory to the profession. To complete the defined objective, the writer must possess more than a belief in the selected subject; a commitment to task is essential.

I know not of the preparation of others' theses. My perspective is of the endless hours of reading, research, and adaptability. These tasks were secondary to the personal and professional guidance I received from my professors, mentors, friends, and family.

I dedicate this thesis to my father, Richard Knowles White, who reminded me continuously of the importance of education as a vehicle for upward mobility in a democratic society. His support in life was not lessened by his death for it is in his memory that I completed this project. Throughout the intervening months following his death, my mother, Irene Frances White, stood as a reminder of her husband's encouragement.

The members of my committee were readily available to offer suggestions for strengthening the study. Their efforts were to ensure that, within the limits of my ability, the outcome would result in a quality product. Without Dr. Edgar Kelley, the chairperson; Dr. James Sanders; and Dr. David Blomquist, any measure of success I have achieved would assuredly be of lesser quality.

To Dr. Leonard Jensen, I extend my gratitude for his patient guidance in teaching me the statistical processes and the understanding of the meaning of the data which is the focus of this study.

The quality in the preparation of this manuscript is due entirely to the professional competence and personal pride of Ms. Lee Pakko. She was always available to meet commitments and for reassurance that the constraints of time would be met.

The NASSP Assessment Center Project is only as effective as the ability of the assessors, who believe in its importance as a means to assist in the selection of quality personnel to lead and to guide teachers in the development of our children. To those assessors who devoted the long hours and weeks necessary to make the process work and to constantly strive for its improvement, I consider it an honor to be counted as their professional colleague.

Finally, my everlasting love and appreciation for the forbearance of Harvey, Erika, and Ryan during the ordeal of this project.

Janice I. Blanck

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# CHAPTER I

## CONTEXT OF THE PROBLEM

Since World War II, the assessment center method has been used in the United States (Moses & Byham, 1977) for the purpose of (a) selection--an employment screening device; (b) placement--knowledge of an individual's capabilities is used to place candidates in managerial positions in which they have potential for success; (c) training and career development--feedback is given to individuals to assist them in the development of programs for self-improvement, and skill profiles are used by management to plan training programs; (d) promotion and advancement--this was an issue in the 1970s and 1980s largely due to past minority misrepresentation in managerial positions; and (e) organizational development (B. M. Cohen, 1975; Dreher & Sackett, 1980). An assessment center is a "comprehensive, standardized procedure in which multiple assessment techniques such as situational experiences and job simulations are used to evaluate individual employees for various purposes" (Thornton & Byham, 1982, p. 1). By the early 1980s, business, industry, and education in the United States were assessing over 30,000 persons each year (Thornton & Byham, 1982).

Two primary reasons have been given for the popularity of assessment center procedures. One is the difficulty in defining managers' jobs. Not only do they differ at various levels, but jobs

within the same level may have a variety of responsibilities. A second reason for the popularity of assessment centers is the opportunity for use of assessments of desired behaviors other than the typical measures of on-the-job performance observations or administration of pencil-and-paper tests (Thornton & Byham, 1982).

There are six beliefs why the use of assessment centers have increased (Sackett, 1982):

1. The validity evidence for assessment centers is strong.
2. Assessment centers are more valid than conventional methods.
3. As job samples, assessment centers have content validity.
4. Research findings regarding assessment centers can be generalized from one organization to another.
5. Assessment centers do not discriminate.
6. Rating and reaching consensus regarding candidates is a straight forward, well-understood process.

The assessment center process is one of the most fair predictors available to determine advancement for employees, giving each individual an equal opportunity to demonstrate capabilities for more advanced jobs (Thornton & Byham, 1982). The most common assessment center exercises are in-basket exercises, leaderless group discussions, oral presentation exercises, role play exercises, and written reports and analysis exercises (Byham, 1971).

## The Research Problem

The research problem is to compare differences in 12 skill dimensions and the overall rating among five groups of Michigan

educators who were participants in the National Association of Secondary School Principals Assessment Center Project as conducted through the Michigan Principals Assessment and Development Center (MPADC). The time of assessment of the participants includes the period from March 1985 through June 1988.

Identifying potentially successful candidates for positions in school administration is one of the greatest challenges confronting American education. The assessment center can be a valuable tool for generating additional evaluative information about school personnel who are interested in administrative careers (NASSP Assessment Center Formal Introduction, National Association of Secondary School Principals [NASSP], undated).

The five groups studied were comprised of elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators. Specific information describing each of the groups is included in Chapter III.

A study of the problem is important to determine whether there is a statistically significant difference in the performance of the members of one group as compared with the members of each of the other groups on the 12 defined skill dimensions and the overall rating. Furthermore, participants and other educators often ask if performance differences are apparent among the various groups of participants. This additional validation of a specific component of the National Association of Secondary School Principals Assessment Center Project will further assist school districts in making better informed decisions about the selection of school administrators.

## Operational Definitions

What is and what is not an assessment center is defined by the Task Force on Development of Assessment Center Standards. In May 1975, the task force endorsed the "Standards for Ethical Considerations for Assessment Center Operations." A revision of the standards was adopted by the Seventh International Congress on the Assessment Center Method in New Orleans (Moses & Byham, 1977). The following minimal requirements must be met to be considered an assessment center:

> Multiple assessment techniques must be used. At least one of these techniques must be a simulation.
>
> A simulation is an exercise or technique designed to elicit behaviors related to dimensions of performance for the job by requiring the participant to respond behaviorally to situational stimuli. The stimuli present in a simulation parallel or resemble stimuli in the work situation. Examples of simulations include group exercises, in-basket exercises, and fact-finding exercises.
>
> Multiple assessors must be used. These assessors must receive training prior to participating in a center.
>
> Judgments resulting in an outcome (i.e., recommendation for promotion, specific training or development) must be based on pooling information from assessors and techniques.
>
> An overall evaluation of behavior must be made by the assessors at a time separate from observation of behavior.
>
> Simulation exercises are used. These exercises are developed to identify a variety of predetermined behaviors and have been pretested prior to use to insure that the techniques provide reliable, objective, and relevant behavioral information for the organization.
>
> The dimensions, attributes, characteristics, or qualities evaluated by the assessment center are determined by an analysis of relevant job behaviors.

> The techniques used on the assessment center are designed to provide information which is used in evaluating the dimensions, attributes, or qualities previously determined.
>
> An assessment center consists of a standardized evaluation of behaviors based on multiple inputs. Multiple trained observers and techniques are used. Judgments about behavior are made, in part, from specially developed assessment simulations. These judgments are pooled by the assessors at an evaluation meeting during which all relevant assessment data are reported and discussed, and the assessors agree on the evaluation of the dimensions and any overall evaluation that is made. (Moses & Byham, 1977, pp. 304-305)

1. NASSP Assessment Center is the National Association for Secondary School Principals Assessment Center Project. Hereinafter, the National Association of Secondary School Principals is referred to as NASSP.

2. MPAC is the Michigan Principals Assessment Center.

3. MPADC is the Michigan Principals Assessment and Development Center.

4. Elementary teacher was assigned by the local school district at the time of assessment to teach in Grades kindergarten through 5 or kindergarten through 6.

5. Middle school teacher was assigned by the local school district at the time of assessment to teach in Grades 6 through 8 or 7 through 9.

6. High school teacher was assigned by the local school district at the time of assessment to teach in Grades 9 through 12 or 10 through 12.

7. Assistant principal was assigned by the local school district at the time of assessment as a school administrator.

8. Quasi-administrators were assigned by the local school district at the time of assessment as psychologists, counselors, department chairpersons, social workers, teacher consultants, coordinators, and specialists.

## Purposes of the Study

The purposes of the study were (a) to determine whether there are statistically significant differences among the mean scores for the five role groups for each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus using procedures as developed by the NASSP Assessment Center Project; (b) to describe the relationship of job assignment and assessment center performance; and (c) to extend the research on the content validity of the NASSP Assessment Center Project as conducted by Schmitt, Noe, Merritt, Fitzgerald, and Jorgensen in 1982.

The subjects for this study were those persons who were assessed by use of the NASSP Assessment Center Project. This study was limited to those persons assessed by MPAC from March 1985 through June 1988. In 1989, by merger with the Michigan Academy for Principal Preparation (MAPP), the university component of the project, the name of the single unit in Michigan was changed to the Michigan Principals Assessment and Development Center (MPADC).

## Conceptual Framework

The Integrative Model for Training and Development (see Figure 1), developed by Mealiea and Duffy (1980), was used as the conceptual

framework for this study. This model has benefits for organizations, including school districts.

The model is a systematic plan that integrates the components of job analysis, needs assessment, motivational theory, performance appraisal, assessment center technology, feedback, training evaluation, and career path or development (Mealiea & Duffy, 1980). By using the model a school district could benefit by accurately measuring development needs.

For assistant principal and principal positions, the school can provide, through the NASSP Assessment Center Project, specific dimensions that are identified for these positions. The candidates then are aware of their strengths and weaknesses and training programs can be identified specific to the identified strengths or weaknesses. Second, the feedback is reliable, valid, and detailed about potential training needs and career paths. This can produce motivation for the individual and the organization can benefit. Third, training can be measured. And, fourth, if the assessment center reports are used with a combination of other information about a potential assistant principal or principal the school district and the participant could benefit.

Information about the assessment center components of the model was based on a model for training and development which included 19 separate areas. The study addressed performance appraisal dimensions associated with target position and feedback meeting (Mealiea & Duffy, 1980).

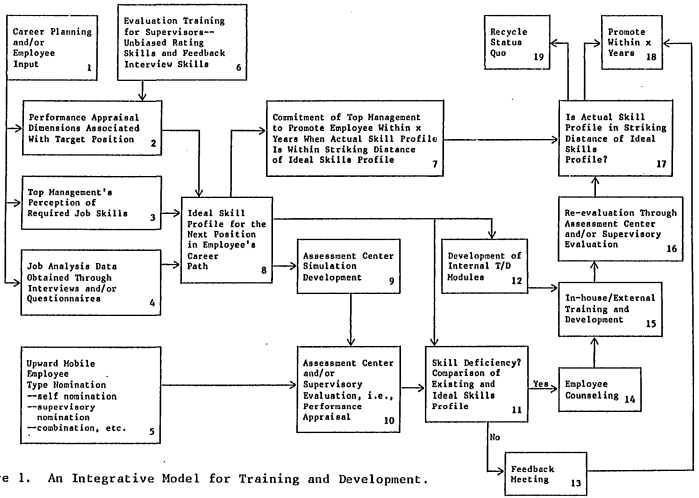


Figure 1. An Integrative Model for Training and Development.

Source: "An Integrated Model for Training and Development: How to Build on What You Already Have" by L. W. Mealiea and J. F. Duffy, 1980, Public Personnel Management Journal, 9, p. 338.

## Dissertation Overview

A brief summary of the development and purposes of the assessment center, operational definitions, the research objectives, and the conceptual framework for the assessment center model are presented in Chapter I.

A review of the literature is presented in Chapter II. The design and methodology for the study, the instrumentation for data collection, the hypotheses, and the methods for data analysis are presented in Chapter III.

The findings of the study are presented in Chapter IV. A discussion of the findings and recommendations for further study are presented in Chapter V. Based on this study and consideration of other issues, some general recommendations are also presented in Chapter V.

## CHAPTER II

## REVIEW OF THE LITERATURE

The purposes of the study were (a) to determine if there are statistically significant differences among the mean scores for the five defined groups (elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators) for each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus using procedures as developed by the NASSP Assessment Center Project; (b) to describe the relationship of job assignment and assessment center performance; and (c) to extend the research on the content validity of the NASSP Assessment Center Project as conducted by Schmitt et al. (1982).

The summary of the literature review includes the following: (a) the history of assessment centers, (b) the NASSP Assessment Center, (c) the leaders, (d) assessment centers and predicting managerial success, (e) content validity of the NASSP Assessment Center, and (f) personnel evaluation.

### The History of Assessment Centers

The history of assessment center techniques began in the 1930s when German psychologists used the methods to select German army, navy, and air force officers (Thornton & Byham, 1982). The German military assessment programs used multiple assessment techniques and

assessors to judge the performance of complex behaviors. The techniques used, however, had some major drawbacks. For example, the program lacked standardized administration and observation procedures, relied upon handwriting and facial expressions to assess leadership, and lacked validation of the program (Thornton & Byham, 1982).

During World War II the British established War Office Selection Boards (WOSB) to identify army officers. The WOSB program made extensive use of intelligence tests, psychiatric interviews, situational tests, reliance upon leadership testing in group situations, and used problem-solving tasks in leaderless group activities (Moses & Byham, 1977; Thornton & Byham, 1982).

The Australian and Canadian governments modeled their assessment centers after the British; however, they placed more emphasis upon the personal interview than did the British WOSB program. Also, both the Australian and Canadian programs had a larger number of military assessors and the programs gave more autonomy to military personnel in regional assessment locations. These adjustments were made because of large geographical distances across the countries and because of national differences in values (Thornton & Byham, 1982).

From 1943 to 1945, the Office of Strategic Services (OSS) in the United States assessed 5,392 persons. They had to select persons who would serve as secret agents and persons who would serve as propaganda experts or secretaries. Both subjective and objective exercises were used by OSS (Moses & Byham, 1977).

In 1956, the Management Progress Study (MPS) conducted by the American Telephone and Telegraph Company (AT&T) became the model upon which future assessment methods were based (Geering, 1980; Hoyle, 1975; Thornton & Byham, 1982; Tziner & Dolan, 1982). Between 1956 and 1960, 422 men were assessed in groups of 12. Only men were assessed. The MPS was an 8-year long-term study and the men were followed to determine their potential growth and the characteristics which lead to success in management. During the 8-year predictive study, it was found that 85% of the individuals who achieved the middle management level had been correctly identified by the assessment process (Hinrichs, 1978; Hoyle, 1975).

The men were assessed on 25 characteristics of managerial functions, interpersonal relations, general abilities, values, and attitudes. The assessment activities included a 2-hour interview, an in-basket exercise, a business game, a leaderless group discussion, projective tests, paper-and-pencil tests and inventories, a personal history questionnaire, and an autobiographical essay (Hinrichs, 1978; Thornton & Byham, 1982).

Many descriptions of assessment center programs and validity research were published from 1967 to 1970. Industrial and business corporations using assessment center processes other than AT&T were, for example, General Electric, International Business Machines, Sears and Roebuck, Standard Oil, and J. C. Penney (Thornton & Byham, 1982).

Since the pioneering studies of AT&T in the 1950s, the assessment approach to managerial selection has increased. During the late 1970s, the number of organizations using assessment centers grew to

nearly 2,000 (Zemke, 1980).

In 1973, the first meeting of the International Congress of the Assessment Center was held. At the Third Congress in 1975, the first set of Guidelines or Standards and Ethical Considerations for Assessment Center Operations was adopted. In 1978, the standards were reviewed and revised (Geering, 1980).

Assessment centers are costly to set up and maintain; however, they also appear to save organizations considerable money (S. L. Cohen, 1980). By using multiple assessment techniques, by standardizing procedures for making inferences, and by the process of pooling the judgments of multiple assessors in rating each candidate's behavior, the likelihood of successfully predicting performance is increased (Cascio & Silbey, 1979). Assessment centers are cost efficient and pay for themselves in terms of estimated savings by more than 4 times their cost (S. L. Cohen, 1980). The "start-up cost" for the Stockton, California, Public Schools was approximately $100,000, which covered the consultant's fee to develop original assessment materials for nine positions, develop an extensive program manual that contains training materials and assessment instructions, and train the first group of assessors (Joines & Hayes, 1986).

Assessment center methods have been used in business, industry, and government for selecting and developing managerial staff since the 1950s. In educational administration, assessment centers began in the 1970s (Schmitt, Noe, Merritt, & Fitzgerald, 1984). However, the use in education does not reflect what the literature recommends; and scientifically developed instruments, such as assessment centers,

have not been implemented (Pokorny, 1985). The assessment center should be an integral part of the selection process as determined by 65% of the respondents in a survey (Bley, 1983).

## The NASSP Assessment Center

The National Association of Secondary School Principals (NASSP), in conjunction with the American Psychological Association (APA), developed an educational assessment center in 1975. The NASSP Assessment Center Project focuses on the needs of elementary and secondary principals and is used for selecting new administrators or developing the skills of existing administrators (Jeswald, 1977). Therefore, the assessment center has benefits for personnel selection and professional development needs. The major objective of the NASSP Assessment Center is to assist school districts in making better administrative personnel decisions (Schmitt et al., 1984); however, Dennison (1981) reported that the assessment center approach for assisting in the selection of school principals was not widely used. California educators were not familiar with the assessment center concept. School administrators and teachers were in general agreement concerning the skills that should be assessed in the selection of a school principal (Dennison, 1981). In 1987, however, 28% of first year principals reported that the NASSP Assessment Center Project had been used as an important factor in their selection (Pellicer, Anderson, Keefe, Kelley, & McCleary, 1988).

The first task of the NASSP Assessment Center Project was the identification of skills or behavior dimensions that were assumed to

be job related. The job analysis conducted indicated 12 dimensions were important for successful working school administrators. These dimensions can be assessed in an assessment center (Schmitt et al., 1984). Following are the 12 dimensions with their definitions:

Problem analysis: Ability to seek out relevant data and analyze complex information to determine the important elements of a problem situation; searching for information with a purpose.

Judgment: Ability to reach logical conclusions and make high quality decisions based on available information; skill in identifying educational need and setting priorities; ability to evaluate critically written communications.

Organizational ability: Ability to plan, schedule, and control the work of others; skill in using resources in an optimal fashion; ability to deal with a volume of paperwork and heavy demands on one's time.

Decisiveness: Ability to recognize when a decision is required (disregarding the quality of the decision) and to act quickly.

Leadership: Ability to get others involved in solving problems; ability to recognize when a group requires direction; to interact with a group effectively and to guide them to the accomplishment of a task.

Sensitivity: Ability to perceive the needs, concerns, and personal problems of others; skill in resolving conflict; tact in dealing with persons from different backgrounds; ability to deal effectively with people concerning emotional issues; knowing what information to communicate and to whom.

Stress tolerance: Ability to perform under pressure and during opposition; ability to think on one's feet.

Oral communication: Ability to make a clear oral presentation of facts or ideas.

Written communication: Ability to express ideas clearly in writing; ability to write appropriately for different audiences-- students, teachers, parents, and others.

Range of interests: Competence to discuss a variety of subjects--educational, political, current events, economic conditions, etc.; desire to actively participate in events.

Personal motivation: Need to achieve in all activities attempted; evidence that work is important to personal satisfaction; ability to be self-policing.

Educational values: Possession of a well-reasoned educational philosophy; receptiveness to new ideas and change. (Lemley & Hersey, 1988, p. 11)

In 1979, NASSP began its first validation study of the use of assessment center methods in the selection of school administrators. Based on the findings of the content validity study, the researchers concluded that "the use of the NASSP Assessment Center can be defended on the basis of its content validity" (Schmitt et al., 1982, p. 50). Content validity is important to establish when various methods are used for personnel selection. The assessment center process and content validity have been endorsed by the United States courts in at least 12 different decisions. The first decision occurred in 1976 in Omaha, Nebraska (Byham, 1983).

Variations occur between all approved NASSP Assessment Center Projects, but there must be a standard of at least 1 assessor for every 2 participants. Some centers conduct a 6 on 6 approach, i.e., 6 assessors and 6 participants. Others, however, may conduct a 6 on 12 approach, 6 assessors and 12 participants. The participants are observed by the assessors during the assessment center process.

The activities include two leaderless group exercises, two in-basket exercises, a fact-finding exercise, and a structured personal interview. After discussing each of the assessees' behaviors and

skills, a consensus rating for each of the 12 dimensions is reached by the team of assessors. Consensus is defined as "collective opinion or concord; general agreement or accord" (The American Heritage Dictionary of the English Language, 1969, p. 283). The NASSP Assessment Center Project Assessor Briefing Guide (NASSP, undated) states that the consensus period is for clarification and that all confusions and ambiguities need to be eliminated. Judgments about ratings must be based only upon the participant's performance on the activities during the assessment center. Information about the participant outside the assessment center must not be considered in assigning ratings. Each assessor has an obligation to sustain discussion during consensus. A copy of the assessors' Numerical Rating Report is cited as Appendix A. Following the consensus and the writing of the final reports by the assessors, a comprehensive final report is prepared and shared with each assessee in a private feedback session (Hersey, 1980).

Since the NASSP Assessment Center Project was initiated in 1975, more than 11,000 participants have been assessed. Over 400 school systems are involved and 53 centers operate internationally (Hersey, 1989).

Every successful organization has one attribute that sets it apart from unsuccessful ones, dynamic and effective leadership (Hersey & Blanchard, 1982). There is a continual search for persons who have the necessary skills and ability to lead effectively. Not only is this true in business and industry, but it is also true in educational institutions.

In the selection of school principals, Farmer (1985) found that participants agreed that the NASSP Assessment Center was a fair and objective process but disagreed on the use of the results in promotional decisions. Farmer also reported that principals' ratings of participants on 50% of the skill dimensions were significantly greater than the assessors' judgments of these skills. However, Farmer learned that assessor trained principals and nonprincipal trained assessors assigned generally equal scores to the participants.

## The Leaders

While there are numerous definitions of leadership, one definition is "the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation" (Hersey & Blanchard, 1982, p. 83). Leadership is a dynamic process and varies from situation to situation with changes in leaders and followers (Hersey & Blanchard, 1982). The leader must be concerned about task accomplishment and human relationships since leadership involves accomplishing goals with and through people (Hersey & Blanchard, 1982).

There is no one unique way to manage or be a leader (Fiedler, 1969). Compatible organizations need to design programs that would help individuals learn about their managerial strengths. This is what the NASSP Assessment Center Project has as one of its goals (Hersey, 1980).

Included in the definition of a leader should be expectations. Leaders are expected to lead, to provide a sense of direction, to

motivate others toward attainment of goals, and to build consensus (Carvelti, 1982). He further stated, "We need to help people become sensitive to style, flexibility, alternative models of leader behavior, and what they imply for practitioners" (Carvelti, 1982, p. 327).

## Assessment Centers and Predicting Managerial Success

The principal in any school is expected to be a leader. New demands are being placed upon school principals as a consequence of the research on effective schools and the reports from national commissions.

Educational management is an important key to effective schools (Miller, 1983). The literature and the research on effective schools continue to show an increase in the demands on the principal.

The most important functions of school principals and the factors used to select them was studied by Beck (1986). His findings indicated that principals have an important role in their schools, but there is no consistent pattern for selecting them, although certain steps were commonly used, such as the screening of credentials and interviews. Society places importance on education. With the increased volume of research supporting that instructional leadership is the key to effective schools, the selection of the school principal becomes an issue of paramount importance (Dickson, 1987).

More attention is being paid to the development of a wider variety of training approaches for educational administrators (Miller, 1983). Sixty-five percent of the respondents in Bley's (1983) study agreed that the assessment center results should be used as the basis

for the professional development of principals, and 80% agreed on the use of the assessment center for the development of administrative candidates. Although there was agreement among participants that the assessment center accurately measures the skills required of building principals, their recommendation for improving the assessment center was for long-term professional development plans focusing on the individual's specific needs.

Three skill categories the principal brings to the job are conceptual, technical, and human skills (Abbot, 1974; Katz & Kahn, 1978). The effectiveness of a principal depends on how well the administrator fulfills the tasks that help the school achieve its goals; how the administrator functions in achieving those tasks; and the skills acquired on the job to relate to other individuals (Abbott, 1974; Katz & Kahn, 1978).

The selected skills of leadership, problem analysis, judgment, organizational ability, and decisiveness were studied by Shields (1987). These specific skills were chosen for analysis because they were determined to be essential for all administrative tasks. His purposes were to analyze principals' behaviors to determine the following: (a) evidence that the skills were present in the principals; (b) human and material resources were employed in skill engagement; and (c) the methods used in skill management. The major conclusions were: (a) The principals demonstrated limited mastery of the NASSP skills selected for study, and (b) the principals demonstrated leadership characteristics similar to those of effective principals studied in the literature.

Attitudes of participants about the NASSP assessment process were studied by Ford (1987). The primary objectives were: (a) to determine whether assessees' attitudes differed among the 12 skill dimensions and (b) to determine if assessees' attitudes differed among NASSP's six assessment exercises.

The interaction between age, years of teaching experience, placement recommendation, region of residence, and scores of the skill dimensions of judgment, decisiveness, and written communication significantly influenced the participant's attitude toward the assessment process (Ford, 1987). Interaction between the placement recommendation score, the scores of problem analysis, judgment, leadership, written communication, and range of interest influenced the participant's attitude toward the process.

Following an analysis of numerous studies, Croghan and Lake (1984) synthesized the competencies for school administrators from the report of the Florida Council on Educational Management. They quantified the competencies into two groups: (a) the moderate or basic performing competencies and (b) the high performing competencies. Moderate performing and high performing administrators both practiced the basic competencies. The basic competencies were determined to be essential for the schools to be considered at least "average." The high performing competencies were those pertaining to (generic) all classifications of school administration and that differentiated the moderate performers from their high performing counterparts. The basic and high performing competencies cited by Croghan and Lake (1984) are congruent with the 12 NASSP skill

dimensions, as well as with 7 approaches to school building administration that are identified to support the skill dimension activity. The basic and high performing competencies for each cluster of performance as determined by Croghan and Lake (1984) are noted in Table 1.

Table 1

Basic and High Performing Competencies

| Cluster | Basic competencies | High performing competencies |
|---|---|---|
| Purpose and direction | Commitment to school mission | Leadership orientation<br>Decisiveness |
| Cognitive skills | | Interpersonal search<br>Information search<br>Concept formation<br>Conceptual flexibility |
| Consensus management | Concern for public relations<br>Operation adaptability | Managing interaction<br>Persuasiveness |
| Quality enhancement | Developmental orientation | Achievement motivation<br>Management control |
| Organization | Delegation | Organizational ability |
| Communication | Written communication<br>Oral communication<br>Organizational sensitivity | Self-presentation |

Note. Data are from "Competencies of Effective Principals" by J. H. Croghan and D. G. Lake, November 1984, Occasional Papers in Educational Policy Analysis, No. 410 (p. 42), Research Triangle Park, NC: Regional Council for Educational Improvement.

The principal is expected to be a leader within a complex role, requiring competencies and skills that will affect the school directly and indirectly. Principals need to participate in various kinds of professional development programs that enhance their professional skills (Geering, 1980). By participating in an assessment center, principals have the ability to receive information about their strengths and weaknesses. They then are able to participate in professional development programs that increase their strengths in the dimensions measured. This enables the principal to become more effective on the job.

The review of the literature uncovered "gaps" in the use of assessment centers. The majority of studies conducted found content validity and predictive validity of assessment centers. There was little evidence of comparing assessment center performance and sex, age, educational background, or race. Sex, occupational level, and conceptual level were not directly related to assessment center performance or cognitive complexity (Holman, 1987).

The reasons for the use of assessment centers was studied by VanNewkirk (1984). Her methodology included an examination of records of the NASSP Assessment Center Project, interexamination of records of the NASSP Assessment Center Project, interpreting published data on assessment centers, corresponding with people who participated actively in assessment center programs, and observations of assessment center procedures. Throughout the study, she found significant evidence to support her hypotheses that the assessment center is objective and it is expedient because it establishes a

known talent pool from which school systems can select as needed.

The NASSP Assessment Center process is effective in promoting the self-improvement of center participants (Walden, 1985). The most positive impact on professional growth occurs when a school system uses the skill profiles for development and designs appropriate follow-up classes. An important aspect of Walden's study was the strong negative influence on professional growth when a school district uses the skill profiles as criteria for promotion or nonpromotion.

## Content Validity of the NASSP Assessment Center

The degree of content validity of assessment center activities to 183 incumbent school administrators studied the relationship of the content of the assessment center to actual job behavior (Ehinger, 1986). She concluded that the assessment center activities were valid measures of the managerial abilities of incumbent school administrators in northeast Oklahoma where her study was conducted.

The most significant study of the validity of assessment centers as they pertain to education was that conducted by Schmitt et al. (1982). The study addressed the content validity of the mean scores and the standard deviations of the consensus skill ratings by assessors for candidates in various positions in education. The report stated the following: "Analysis of the internal validity of the center indicates agreement about the candidates' skill levels and that there are meaningful differences among the various skills" (Schmitt et al., 1982, p. 1). Schmitt et al. also wrote:

> We see the assessment center as a content valid procedure for the selection of school administrators. Evidence concerning its criterion-related validity is also positive, especially as it relates to supervisory performance ratings. Further, assessment center ratings are related to later student perceptions of school climate. (p. 2)

One section of the Schmitt et al. (1982) report compares the interraters' or assessors' mean scores and standard deviations of counselors and educational specialists with non-counselors and educational specialists on each of the 12 skill dimensions and the placement recommendation or overall rating. The data showed that the counselors and educational specialists attained higher mean scores than the non-counselors and educational specialists on each of the 12 skill dimensions and the performance recommendation or overall rating. The differences were significant at the .05 level of confidence for oral communication and range of interests. There were no significant differences identified for any of the other 10 skill dimensions. (See Appendix B.)

A second comparison in the Schmitt et al. (1982) study was a comparison of the mean scores and standard deviations of assistant principals with non-assistant principals. The group of non-assistant principals included all classroom teachers, kindergarten through 12, as well as counselors and education specialists, who were selected as a part of the sample for the study. The mean scores of non-assistant principals were higher than those of assistant principals for all skill dimensions except oral communication and personal motivation; however, significant differences at the .05 level of confidence were noted only for the skill dimensions of problem analysis and

decisiveness. (See Appendix C.)

The interrater mean scores of teachers with nonteachers was also studied by Schmitt et al. (1982). Teachers were classified as those with assignments at the elementary, middle or junior high school, or senior high school. Nonteachers included all others in the study who did not have direct teaching assignments as classroom teachers. Although the mean scores of nonteachers were higher for all skill dimensions except decisiveness and oral communication, there were no significant differences in any of the mean scores at the .05 level of confidence. (See Appendix D.)

Citing the mean scores of the candidates by separate position level (elementary, middle or junior high, and senior high school teachers, and district level personnel), Schmitt et al. (1982) stated that district-level personnel (counselors and education specialists) received higher interrater mean scores for all skill dimensions except sensitivity. Only personal motivation was statistically significant at the .05 level of confidence. (See Appendix E.)

Although Schmitt et al. (1982) studied the comparative analyses of the mean scores of interrater validity of counselors and education specialists with non-counselors and education specialists, assistant principals with non-assistant principals, teachers with nonteachers, and teachers by level of assignment with district level staff, they did not make comparisons of interrater mean scores with each of the three levels of teaching with nonteachers and assistant principals. Nor did Schmitt et al. (1982) determine the differences within groups

where significant differences were found. A summary of the Schmitt et al. (1982) study is found in Table 2.

Table 2

Summary of Mean Scores Significant at the .05 Level of Confidence for Defined Role Groups for the 12 NASSP Skill Dimensions and Assessors' Overall Rating as Determined by Schmitt et al. (1982)

| Skill dimension | Defined role groups | Significant |
|---|---|---|
| Problem analysis | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Non-assistant principals performed higher than assistant principals | Yes |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Judgment | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Organizational ability | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |

Table 2--Continued

| Skill dimension | Defined role groups | Significant |
|---|---|---|
| | Teachers by position level vs. district level personnel | No |
| Decisiveness | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Non-assistant principals performed higher than assistant principals | Yes |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Leadership | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Sensitivity | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Stress tolerance | Counselors and educational specialists vs. non-counselors and educational specialists | No |

Table 2--Continued

| Skill dimension | Defined role groups | Significant |
|---|---|---|
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Oral communication | Counselors and educational specialists performed higher than non-counselors and educational specialists | Yes |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Written communication | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Range of interests | Counselors and educational specialists performed higher than non-counselors and educational specialists | Yes |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |

Table 2--Continued

| Skill dimension | Defined role groups | Significant |
|---|---|---|
| Personal motivation | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | District level personnel performed higher than teachers by position level | Yes |
| Educational values | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs. non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |
| Assessors' overall | Counselors and educational specialists vs. non-counselors and educational specialists | No |
| | Assistant principals vs non-assistant principals | No |
| | Teachers vs. nonteachers | No |
| | Teachers by position level vs. district level personnel | No |

## Personnel Evaluation

A review of the literature without addressing current practices and procedures in the evaluation of personnel, which includes the assessment of applicants for school leadership positions, would be incomplete. There is no question that a lack of trust and confidence in the process, as well as in the evaluators, is widespread on the evaluation of personnel in education (Joint Committee on Standards for Educational Evaluation, 1988).

Traditionally, business and industry have used performance assessment to make decisions about employees. Questions related to promotions, layoffs and transfers, and salary adjustments are examples of how the data are applied. Further, performance data assist in the placement of employees in positions where their abilities can be best used and the assignment to appropriate future positions. Although used primarily for hiring and promotion, assessment centers can be adapted to the process of assessing needs for training and development (Vinton, Clark, & Seybolt, 1986). When an assessment center is used to make decisions on promotions, or to identify those with potential for supervision and management, the assessment center data are usually combined with interviews and data obtained from performance appraisals. When used to select a candidate for a position, the data from an assessment center are usually combined with information from reference checks, medical reports, and interviews. In each case, the assessment is part of a complementary decision-making system (Thornton & Byham, 1982).

A good record of performance on one job, however, is not always predictive of success on a future job, especially when the two share different duties and responsibilities. And, unfortunately, the decision-making process with respect to internal placements too often include nonvalidated predictors and inconsistent use of data across decisions and across candidates in the same decision category, as well as the introduction of biased and irrelevant data, such as politics, personality, and personal favoritism (Markham, Harlan, & Hackett, 1987).

"Assessment centers provide a means of systematically gathering and processing information concerning the promotability (as well as the development needs) of employees" (Heneman, Schwab, Fossum, & Dyer, 1989, p. 378). For example, Gino's, Incorporated, an operator of fast-food shops with $200 million annual sales, settled on the assessment center approach in 1972. By 1975, Gino's had conducted 22 sessions with 364 participants. The data were used to better evaluate managerial potential (Heneman et al., 1989).

Unlike other promotion predictors, considerable research has been conducted to determine the reliability, validity, and fairness of assessment centers for use in the selection and promotion of employees. Most of the research has been supportive (Gaugler, Rosenthal, Thornton, & Bentson, 1987).

Writing in the second edition of Personnel/Human Resources Management Today, a Merrill Lynch stockbroker had this to say about assessment centers: "Welcome to the Merrill-Lynch account executive simulation exercise" (Rout, 1986, p. 262). The exercise is designed

to show how applicants will perform under conditions similar to those that a real stockbroker faces.

At Merrill Lynch, the evidence is that the test works. In 1977, a group of new account executives who had already been hired, but had not started working, were given the test. Sixteen months later, production of the stockbrokers who did well on the test was compared with those who did not. The production of the former group was 25% to 30% higher than the latter group (Schneier, Beatty, & McEvoy, 1986).

The Joint Committee on Standards for Educational Evaluation (1988) wrote the following statement in regard to personnel evaluation:

> The need for sound evaluation of education personnel is clear. In order to educate students effectively and to achieve other related goals, educational institutions must use evaluation to select, retain, and develop qualified personnel and to manage and facilitate their work. (p. 5)

Furthermore, the Joint Committee on Standards for Educational Evaluation (1988) supported the above statement by emphasizing the dominant criticisms of education personnel evaluation practices as failing to screen unqualified applicants from the selection processes and to provide direction for staff development programs. Cited as particularly relevant to improve evaluation of administrators are the assessment centers for selecting school principals sponsored by the National Association of Secondary School Principals (Hersey, 1989; Joint Committee, 1988, Schmitt et al., 1982; Thornton & Byham, 1982).

In the 1960s, the federal government became deeply concerned about the poor performance of disadvantaged children in the schools,

recognized the need, and placed emphasis upon the improvement of programs in science and mathematics. Extensive efforts were made by the federal government to improve the programs and required that these programs be evaluated. Not surprisingly, the evaluation movement of the 1960s and 1970s did not hold accountable the personnel responsible who were teaching and supervising the programs. The acceptance was that deficiencies were due to the concepts, designs, and substance of the programs, thus generally excluding the inherent threat of personnel accountability and evaluation.

As the continued evaluation of programs and students further supported deficiencies in student performance and the quality of the programs, pressure from state and federal agencies, as well as local school districts, began to centralize accountability on members of the education profession. Educators expressed concerns over the haste and quality of personnel evaluation systems. Thus, local school districts, state departments of education, colleges of education, and professional education associations recognized the need to develop personnel evaluation procedures that were objective in nature and technically acceptable. As a result, 14 professional education associations are currently supporting the standards developed by the Joint Committee on Standards for Educational Evaluation (1988).

The Joint Committee on Standards (1988) stated that the function of the standards is to correct deficiencies in current practice and to present educators and board members with a widely shared view of general principles for developing and assessing sound, acceptable personnel evaluation procedures, and with practical advice for

implementing them. The four basic attributes of sound evaluation are propriety, utility, feasibility, and accuracy. The 21 standards are classified under these four basic attributes and are summarized below.

Propriety standards require that evaluations be conducted legally, ethically, and with due regard for the welfare of evaluatees and clients of the evaluations. Five standards are classified under the propriety standards. They are: (a) P1--service orientation, (b) P2--formal evaluation guidelines, (c) P3--conflict of interest, (d) P4--access to personnel evaluation reports, and (e) P5--interactions with evaluatees.

Utility standards are to guide evaluations so that they will be informative, timely, and influential. The five standards classified under the utility standards are as follows: (a) U1--constructive orientation, (b) U2--defined uses, (c) U3--evaluator credibility, (d) U4--functional reporting, (e) U5--follow-up and impact.

Feasibility standards refer to evaluation systems that are as easy as possible to implement, efficient, and resourceful with adequate funding and the involvement of those who are affected with the process. The three feasibility standards are cited as: (a) F1--practical procedures, (b) F2--political viability, and (c) F3--fiscal viability.

Accuracy standards, the fourth general category, require that the information obtained be as technically accurate as possible and that conclusions be linked to the data. There are eight standards listed under this category: (a) A1--defined role, (b) A2--work

environment, (c) A3--documentation of procedures, (d) A4--valid measurement, (e) A5--reliable measurement, (f) A6--systematic data control, (g) A7--bias control, and (h) A8--monitoring evaluation systems.

The relationships between the standards and the selection process as it pertains to the NASSP Assessment Center Project are identified in Table 3. Based upon the median ratings of the members of the Joint Committee on the applicability of the standards to the selection process, it can be seen that each of the standards is rated high with the exception of constructive orientation, defined uses, and follow-up impact. These three standards, which are classified under the basic attribute of the utility standards, are rated as medium in the selection process.

Table 4 outlines the preparation, practice, continuing education, entry, and participation from professional educators in educational systems. Of particular interest is the highlighting of "assessments of applicants" as "those evaluations and associated decisions which are of most concern in The Personnel Evaluation Standards (Joint Committee, 1988, p. 169).

Reference was made on page 13 to the Guidelines or Standards and Ethical Considerations for Assessment Center Operations as adopted and later revised by the International Congress of the Assessment Center (Geering, 1980). A parallel is noted between the personnel evaluation standards and the standards for assessment centers. These parallels are noted in Table 5.

Table 3

Joint Committee Median Ratings of Each Standard's
to Evaluations Related to Given Personnel A

| | Evaluation: | | | | | |
|---|---|---|---|---|---|---|
| | Entry to training | Certification/ licensing | Defining a role | Selection | Staff development | P: ac |
| Propriety standards | | | | | | |
| P1 Service orientation | hi | hi | hi | hi | hi | |
| 2 Formal evaluation guidelines | hi | hi | med | hi | hi | |
| 3 Conflict of interest | hi | hi | lo | hi | med | |
| 4 Access to personnel evaluation reports | hi | med | lo | hi | med | |
| 5 Interactions with evaluatees | hi | med | med | hi | hi | |
| Utility standards | | | | | | |
| U1 Constructive orientation | hi | lo | hi | med | hi | |
| 2 Defined uses | hi | hi | lo | med | hi | |
| 3 Evaluator credibility | hi | hi | hi | hi | hi | |
| 4 Functional reporting | hi | hi | hi | hi | hi | |
| 5 Follow-up and impact | lo | lo | hi | med | hi | |
| Feasibility standards | | | | | | |
| F1 Practical procedures | hi | med | hi | hi | hi | |
| 2 Political viability | med | hi | hi | hi | med | |
| 3 Fiscal viability | med | med | med | hi | hi | |

Table 3

ngs of Each Standard's Applicability
ed to Given Personnel Actions

| ection | Evaluations for: Staff develop-ment | Professional feedback & accountability | Merit awards | Tenure decisions | Promotion decisions | Termina-tion |
|---|---|---|---|---|---|---|
| hi | hi | med | med | hi | med | hi |
| hi | hi | hi | hi | hi | hi | hi |
| hi | med | hi | hi | hi | hi | hi |
| hi | med | hi | med | hi | hi | hi |
| hi | hi | hi | hi | hi | hi | hi |
| med | hi | hi | hi | med | med | med |
| med | hi | hi | med | hi | hi | hi |
| hi | hi | hi | hi | hi | hi | hi |
| hi | hi | hi | med | hi | hi | hi |
| med | hi | hi | med | hi | hi | med |
| hi | hi | med | hi | med | med | med |
| hi | med | med | hi | med | med | hi |
| hi | hi | hi | hi | hi | hi | hi |

Table 3--Continued

| | Entry to training | Certification/ licensing | Defining a role | Selection | Staff development | Evaluation |
|---|---|---|---|---|---|---|
| Accuracy standards | | | | | | |
| A1 Defined role | med | hi | hi | hi | hi | |
| 2 Work environment | lo | lo | hi | hi | hi | |
| 3 Documentation of procedures | hi | hi | med | hi | med | |
| 4 Valid measurement | hi | hi | med | hi | hi | |
| 5 Reliable measurement | hi | hi | med | hi | hi | |
| 6 Systematic data control | hi | hi | med | hi | hi | |
| 7 Biased Control | hi | hi | med | hi | hi | |
| 8 Monitoring evaluation systems | hi | hi | hi | hi | hi | |

Note. From The Personnel Evaluation Standards (p. 17) by Joint Committee on Standards for Educa

| | Evaluations for: | | | | | |
|---|---|---|---|---|---|---|
| lection | Staff develop-ment | Professional feedback & accountability | Merit awards | Tenure decisions | Promotion decisions | Termina-tion |
| hi | hi | hi | hi | hi | hi | hi |
| hi | hi | hi | med | hi | hi | hi |
| hi | med | hi | hi | hi | hi | hi |
| hi | hi | med | hi | hi | hi | hi |
| hi | hi | med | med | hi | hi | hi |
| hi | hi | hi | hi | hi | hi | hi |
| hi | hi | hi | hi | hi | hi | hi |
| hi | hi | hi | hi | hi | hi | hi |

e on Standards for Educational Evaluation, 1988, Beverly Hills, CA: Sage.

Table 4

Types of Evaluations and Decisions Involved in Deploying, and Developing Professional Ed

| | Educational personnel system | | | |
|---|---|---|---|---|
| Stages of involvement | Preparation | | Practice | |
| | Evaluations | Decisions | Evaluations | Dec |
| | Evaluations of supply and demand | Assigning priorities and allocating funds to specialized training programs | Evaluations of staffing needs | Definit Decisio certa cies |
| Entry | Evaluations of recruitment programs | Determining how the programs should be changed or strengthened | Evaluations of recruitment programs | Determi progr chang ened |
| | *Assessments of applicants | *Selection of students | *Evaluations of applicants | *Select membe |
| Participation | Intake evaluations | Determining student programs | *Correlated evaluations of jobs and incumbents' qualifications | *Updati defin |
| | Evaluations of students' mastery of course requirements | Assigning course grades | *Reviews of job performance and special achievements | *Decidi remov proba or to |
| | Cumulative progress reviews | Counseling for remediation | | *Tenure *Promot *Merit *Counse devel *Honors *Recert |
| | | | Grievance hearings | Rulings griev |

Table 4

Decisions Involved in Preparing,
oping Professional Educators

onal personnel systems

| | Practice | Continuing education | |
|---|---|---|---|
| tions | Decisions | Evaluations | Decisions |
| s of staff-<br>s | Definitions of jobs<br>Decisions to fill certain job vacancies | Correlated assessments of institutional and staff needs | Deciding on continuing education offerings/opportunities |
| s of re-<br>t programs | Determining how the programs should be changed or strengthened | *Assessments of the needs and achievements of individual staff members | *Deciding whether to approve applications for study leaves, sabbatical leaves, and for special grants |
| ns of<br>ts | *Selection of staff members | | |
| d evalua-<br>jobs and<br>ts' quali-<br>s | *Updating of job definitions | Intake evaluations | Designing individualized continuing education programs |
| f job per-<br>and spe-<br>ievements | *Deciding whether to remove or continue probationary status or to terminate<br>*Tenure<br>*Promotion<br>*Merit pay<br>*Counseling for staff development<br>*Honors (awards)<br>*Recertification | Progress reviews | Providing feedback to guide the learning process |
| hearings | Rulings on the grievances | | |

Table 4--Continued

| Stages of involvement | Educational personnel sy | | | |
|---|---|---|---|---|
| | Preparation | | Practice | |
| | Evaluations | Decisions | Evaluations | |
| | Final evaluations of students' fulfillment of their programs | Graduation decisions | *Correlated evaluations of finances, staffing needs, seniority of present staff and options for down-sizing | *Re d |
| | *Evaluations of qualifications to practice given educational roles | *Certification<br>*Licensing | *Evaluations of performance and/or investigations of charges | *De t<br>*De w o |

Note. From The Personnel Evaluation Standards (pp. 168-169), by Joint Committee on Standar

*Those evaluations and associated decisions which are of most concern in The Evaluation of

:ional personnel systems

| Practice | | Continuing education | |
|---|---|---|---|
| ıations | Decisions | Evaluations | Decisions |
| :ed evalua-<br>)f finances,<br>ıg needs, se-<br>r of present<br>ınd options<br>m-sizing | *Reduction in force decisions | Evaluations of participants' achievements in continuing education experiences | Deciding whether given applicants should be rewarded with future grants and/or leaves |
| ions of per-<br>:e and/or in-<br>igations of | *Deciding whether to terminate<br>*Deciding whether to withdraw licenses or certificates | Evaluations of qualifications to practice given educational roles | Certification<br>Licensing<br>New assignments |

)mmittee on Standards for Education Evaluation, 1988, Beverly Hills, CA: Sage.

The Evaluation of Standards.

Table 5

Comparison of the Personnel Evaluation Standards and Selected Standards for Assessment Centers

| Personnel evaluation standards[a] | Assessment center standards[b] |
|---|---|
| P1 Service orientation | Assessment centers are incorporated as a part of a total system. |
| P2 Formal evaluation guidelines | Written policy statements about participation and the use of the information. |
| P3 Conflict of interest: Guideline: Comparison of multiple sources of information should be used. | Multiple assessment techniques. |
| Conflict of interest: Guideline: Selection of personnel to conduct the process should be used. | Multiple assessors (or evaluators) who receive training. |
| P4 Access to personnel evaluation reports: Should be limited to individuals with a legitimate need. | Informed consent, protection of privacy, and security of records. |
| P5 Interactions with evaluatees | Feedback to the participants is constructed so as to serve as a guideline for personal and professional growth and development. |
| U1 Constructive orientation | Feedback to the participants is constructed so as to serve as a guideline for personal and professional growth and development. |
| U2 Defined uses | Written policy statements about participation and the use of the information. |
| U3 Evaluator credibility: Persons with the necessary qualifications should be used. | Multiple assessors (or evaluators) who receive training. |

Table 5--Continued

| Personnel evaluation standards[a] | Assessment center standards[b] |
|---|---|
| U4 Functional reporting | Feedback to the participants is constructed so as to serve as a guideline for personal and professional growth and development. |
| U5 Follow-up and impact | Feedback to the participants is constructed so as to serve as a guideline for personal and professional growth and development. |
| F1 Practical procedures | Techniques used in the assessment center are designed to provide information which is used in evaluating dimensions, attributes, or qualities previously determined. |
| F2 Political viability: Concerned parties are constructively involved. | Thorough documentation of the development process is emphasized and appropriate revisions made when necessary. |
| F3 Fiscal viability | Exercises are predetermined and provide information relevant for the organization. |
| A1 Defined role: If the roles are clearly defined, the evaluator can determine valid assessment criteria. | Exercises are designed to provide information on the performance dimensions. |
| A2 Work environment | Relevant information for the organization in question. |
| A3 Documentation of procedures Monitoring evaluation systems | Thorough documentation of the development process is emphasized and appropriate revisions made when necessary. |
| A4 Valid measurement: Guideline: Measurement procedures must be valid. | Exercises are designed to provide information on the performance dimensions. |

Table 5--Continued

| Personnel evaluation standards[a] | | Assessment center standards[b] |
|---|---|---|
| | | Prior research does not guarantee validity in a new setting. |
| | Valid measurement: Decisions-about what to measure need to identified. | Simulations parallel or resemble stimuli in the work situation. Prior research does not guarantee validity in a new setting. |
| A5 | Reliable measurement: Guideline: Multiple observers must be used. | Pooled judgments from multiple assessors (or evaluators) and techniques. |
| | Reliable measurement | Prior research does not guarantee reliability in a new setting. |
| A6 | Systematic data control | Prior research does not guarantee validity or reliability in a new setting. |
| A7 | Bias control | Assessment centers are administered in a professional manner with concern for the treatment of individuals. |
| A8 | Monitoring evaluation systems | Thorough documentation of the development process is emphasized and appropriate revisions made when necessary. |

Note. In the Assessment Center Standards of Behavior, there is a direct relationship with the 21 Personnel Evaluation Standards.

[a]From The Personnel Evaluation Standards by Joint Committee on Standards for Educational Evaluation, 1988, Beverly Hills, CA: Sage.

[b]From Assessment Centers and Managerial Performance by G. C. Thornton, III, and W. D. Byham, 1982, New York: Academic Press.

## Summary

In summary, an assessment center is a "comprehensive standardized procedure in which multiple assessment techniques such as situational experiences and job simulations are used to evaluate individual employees for various purposes" (Thornton & Byham, 1982, p. 1). One example of an assessment center is the NASSP Assessment Center Project.

In conducting the research about the uses of the assessment center, the following conclusions from the literature review about the findings can be made:

1. Assessment center methods have been used in business, industry, and government since World War II; however, they have only been used in education since 1975.

2. Assessment center processes include simulation activities such as an interview, in-basket exercises, and leaderless group discussion. All assessment centers must follow the Guidelines or Standards and Ethical Considerations for Assessment Center Operations established by the International Congress of Assessment Centers.

3. Twelve skill dimensions have been identified by the NASSP Assessment Center Project as critical to being an effective building administrator.

4. The use of the NASSP Assessment Center process has increased since the 1980s. Over 25% of the new principals in 1987 compared to 14% of experienced principals showed the use of the assessment center as an important factor in their selection.

5. The best use of the assessment center process has been for professional development. There is disagreement when the results are used only for promotion. The NASSP Assessment Center Project assists principals in selecting professional developmental activities that relate to their strengths and weaknesses. This can help the principals in becoming a more effective leader, since research shows effective schools must have strong leaders.

6. The majority of studies conducted on assessment centers have found content validity, predictive validity, and criterion related validity.

7. Although Schmitt et al. (1982) completed a major study of the validity of the NASSP Assessment Center Project, they did not make comparisons of mean scores with each of the three levels of teachers with nonteachers and assistant principals. Nor did they determine the differences within groups for all skill levels where significant differences were found. Therefore, they did not test within the groups when significant differences were noted. These omissions are addressed in this study.

8. The Joint Committee on Standards for Personnel Evaluation was recognized by 14 professional education organizations as the agency that sets personnel evaluation standards. The Joint Committee's Personnel Evaluation Standards correspond to the Guidelines or Standards and Ethical Considerations for Assessment Center Operations.

9. By 1987, the exact number of organizations using assessment centers was unknown. However, estimates have exceeded 2,000.

10. As shown on a survey, in 1989 between 10% and 14% of 166 private and public organizations were using assessment centers to identify supervisory talent among office, plant, and professional-technical employees.

11. There is widespread dissatisfaction with the quality of personnel evaluation in education.

12. The dissatisfaction with the decision-making process in business and industry in the selection of candidates for positions, internally and externally, parallels education.

# CHAPTER III

## DESIGN AND METHOD

### Introduction

The purposes of the study were (a) to determine whether there are statistically significant differences among the mean scores for the five role groups (elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators) for each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus using procedures as developed by the NASSP Assessment Center Project; (b) to describe the relationship of job assignment and assessment center performance; and (c) to extend the research on the content validity of the NASSP Assessment Center Project as conducted by Schmitt et al. in 1982. Differences were tested against the null hypothesis which stated there are no differences.

The subjects for this study are the five groups of participants who were assessed in the MPADC project from March 1985 through June 1988. The groups and the number of participants in each group were as shown in Table 6. Other demographics of the members of each group are cited in Table 7.

Table 6

Number of Participants in Each Group

| Group | Number |
|---|---|
| Elementary school classroom teachers | 53 |
| Middle school classroom teachers | 47 |
| Senior high school classroom teachers | 38 |
| Assistant principals | 140 |
| Quasi-administrators (counselors, department chairpersons, psychologists, and consultants) | 116 |
| Total | 394 |

## Instrumentation and the Data

Data were derived from the ratings of assessors on each of the 12 skill or behavior dimensions and the overall rating of the assessors for each participant. The instrument used was the report developed for consensus by the NASSP Assessment Center Project.

## Research Hypotheses

The research hypotheses were that there will be statistically significant differences among the mean scores of the five groups of Michigan educators in each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus using procedures as developed by the NASSP Assessment Center Project. Differences were tested against the null hypothesis, which stated

Table 7

Demographics of Members of Each Group

| Group | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| | Caucasian | Black | Hispanic | Total | Caucasian | Black | Hispanic | Total |
| Elementary school classroom teachers | 16 | 4 | 0 | 20 | 30 | 2 | 2 | 34 |
| Middle school classroom teachers | 27 | 1 | 0 | 28 | 16 | 2 | 1 | 19 |
| Senior high school classroom teachers | 26 | 1 | 1 | 28 | 10 | 0 | 0 | 10 |
| Assistant principals | 47 | 31 | 0 | 78 | 21 | 40 | 0 | 61 |
| Quasi-administrators | 48 | 7 | 0 | 55 | 48 | 12 | 1 | 61 |

there will be no differences.

The statistic to be used to determine whether there are statistically significant differences is a parametric one-way analysis of variance. The finding of a statistically significant difference in an analysis of variance is based upon an F-ratio test to determine whether a difference exists somewhere within the means of the five groups under investigation. This finding does not specify where that significant difference exists among the means of the five role groups.

In order to determine where those differences exist among pairs of group means, the statistic contrast analysis was used. One of the procedures of contrast analysis considered for this study was the Tukey method, known as the honest significant difference, or the HSD statistic (Runyon & Haber, 1986). A second method, the Scheffé statistic, was also reviewed (Remington & Schork, 1985). Each of these procedures, however, is applicable primarily to the comparison of mean scores where sample or group sizes are equal. Group sizes in this study were not equal; and therefore, the Tukey and the Scheffé methods were not appropriate.

The specific procedure of contrast analysis selected to make the comparisons in this study is known as the Bonferroni statistic. The Bonferroni statistic was chosen because of its applicability to groups of unequal size (Duncan, Knapp, & Miller, 1983). The formula for computing contrast analysis by the Bonferroni method is as follows (Duncan et al., 1983, p. 153):

$$\underline{t} = \frac{\overline{X}1 - \overline{X}2}{\sqrt{MSE\left(\frac{1}{\underline{n}1} + \frac{1}{\underline{n}2}\right)}}$$

$\overline{X}1$ = larger mean of each comparison.

$\overline{X}2$ = smaller mean of each comparison.

MSE = mean square for error.

$\underline{n}1$ = larger number in group being compared.

$\underline{n}2$ = smaller number in group being compared

The data in the contrast analysis tables are referenced as follows:

X1 refers to elementary school teachers.

X2 refers to middle and junior high school teachers.

X3 refers to senior high school teachers.

X4 refers to assistant principals.

X5 refers to quasi-administrative personnel.

## Summary

An overview of the design and methodology was presented in this chapter. The subjects, population, sampling plan, design, instrumentation, and the data collection were discussed. Statistical data for each of the 12 skill or behavior dimensions and the statistical data for the assessors' numerical rating summary are cited in Chapter IV. These data include the findings from the application of the parametric one-way analysis of variance statistic, as well as the findings from the statistic contrast analysis where statistically significant

differences at the .05 level of confidence were found among the means of the five role groups. A copy of the assessors' numerical rating summary is cited as Appendix A. Appendices B, C, D, and E show data analysis for studies conducted by Schmitt et al. (1982). The findings of the study are found in Chapter IV. A discussion of the findings and suggestions for further research are in Chapter V. Also noted are some general recommendations.

# CHAPTER IV

## THE FINDINGS OF THE STUDY

The purposes of the study were (a) to determine whether there are statistically significant differences among the mean scores for the five role groups (elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators) for each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus using procedures as developed by the NASSP Assessment Center Project; (b) to describe the relationship of job assignment and assessment center performance; and (c) to extend the research on the content validity of the NASSP Assessment Center Project as conducted by Schmitt et al. (1982).

The findings of the study are presented in a series of successive tables in Chapter IV. A descriptive comparison of the rank order of mean scores of each skill dimension for each of the five role groups is in Table 8. Through the use of the parametric statistic analysis of variance, the data in each of the Tables 9, 11, 13, 15, 17, and 19 show that there are statistically significant differences at the .05 level of confidence among the mean scores for five role groups for the skill identified and the overall assessor rating. Significant differences among group means were determined for the following skill dimensions: problem analysis, organizational ability, decisiveness, leadership, oral communication, and assessors'

Table 8

Comparison of Rank Order of Mean Scores of the 12 NASSP Ski

| Elementary school teachers | | | Middle school teachers | | | High school teachers | |
|---|---|---|---|---|---|---|---|
| Skill dimension | Mean score | SD | Skill dimension | Mean score | SD | Skill dimension | Mean scor |
| Oral communication | 20.47 | 3.39 | Oral communication | 21.09 | 2.90 | Decisiveness | 20.1 |
| Decisiveness | 20.43 | 3.93 | Decisiveness | 20.21 | 4.76 | Personal motivation | 20.0 |
| Personal motivation | 20.19 | 3.67 | Personal motivation | 20.21 | 3.53 | Oral communication | 19.8 |
| Stress tolerance | 19.43 | 2.69 | Stress tolerance | 19.63 | 2.79 | Stress tolerance | 19.6 |
| Leadership | 19.38 | 3.87 | Leadership | 19.55 | 4.58 | Leadership | 18.8 |
| Organizational ability | 18.85 | 2.84 | Organizational ability | 18.49 | 3.37 | Organizational ability | 18.4 |
| Written communication | 18.77 | 3.85 | Written communication | 18.38 | 4.09 | Written communication | 18.4 |
| Sensitivity | 17.74 | 2.97 | Sensitivity | 18.31 | 3.26 | Educational values | 17.3 |
| Range of interests | 17.57 | 3.91 | Educational values | 17.64 | 2.47 | Sensitivity | 17.2 |
| Educational values | 17.25 | 2.99 | Problem analysis | 17.75 | 3.22 | Range of interests | 17.0 |
| Problem analysis | 16.83 | 2.79 | Range of interests | 16.45 | 4.45 | Problem analysis | 16.6 |
| Judgment | 16.83 | 2.86 | Judgment | 16.21 | 3.16 | Judgment | 16.5 |

Table 8

res of the 12 NASSP Skill Dimensions of the Five Role Groups

| High school teachers | | | Assistant Principals | | | Quasi-administrators | | |
|---|---|---|---|---|---|---|---|---|
| ll dimension | Mean score | SD | Skill dimension | Mean score | SD | Skill dimension | Mean score | SD |
| reness | 20.13 | 4.08 | Decisiveness | 22.34 | 4.02 | Oral communication | 21.63 | 3.26 |
| al motivation | 20.00 | 3.88 | Oral communication | 21.85 | 3.58 | Decisiveness | 20.76 | 4.11 |
| mmunication | 19.87 | 3.00 | Personal motivation | 20.79 | 3.77 | Personal motivation | 20.71 | 3.51 |
| tolerance | 19.68 | 2.48 | Stress tolerance | 20.24 | 2.68 | Leadership | 20.34 | 3.57 |
| ship | 18.82 | 3.53 | Leadership | 19.50 | 4.10 | Stress tolerance | 20.17 | 3.05 |
| tational ability | 18.40 | 2.80 | Written communication | 19.35 | 3.95 | Organizational ability | 19.86 | 2.86 |
| l communication | 18.40 | 4.05 | Organizational ability | 19.07 | 3.35 | Written communication | 19.27 | 4.28 |
| ional values | 17.34 | 2.81 | Range of interests | 18.19 | 3.60 | Sensitivity | 18.66 | 3.46 |
| ivity | 17.21 | 2.87 | Sensitivity | 18.17 | 3.24 | Problem analysis | 18.46 | 3.18 |
| of interests | 17.00 | 3.71 | Educational values | 18.08 | 3.10 | Educational values | 17.94 | 3.09 |
| a analysis | 16.63 | 3.24 | Problem analysis | 17.63 | 3.27 | Range of interests | 17.88 | 3.82 |
| nt | 16.50 | 3.16 | Judgment | 17.49 | 3.27 | Judgment | 17.51 | 3.12 |

overall rating.

The analysis of variance showed a significant difference at the .05 level of confidence. However, the analysis of variance did not show significant differences between any group mean pairs. The null hypothesis, which stated that there are no differences, has been rejected for each of the five skill areas and the overall assessor rating.

Statistically significant differences were found in five identified skill areas and the overall assessor rating. The Bonferroni method of contrast analysis has been conducted to determine where these differences exist. The Bonferroni method of contrast analysis was selected because of the uneven number of participants in each of the five role groups (elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators). Tables 1C, 12, 14, 16, 18, and 20 show where the differences exist for each identified skill and the overall assessor rating for the five role groups.

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the skill problem analysis is in Table 9. The differences were tested against the null hypothesis, which stated that there are no differences. There are significant differences ($p < .05$) among the mean scores for the skill dimension problem analysis for elementary, middle, and high school teachers; assistant principals; and quasi-administrators.

Table 9

Analysis of Variance of Problem Analysis Skill for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F-ratio |
|---|---|---|---|---|
| Among group means | 185.86 | 4 | 46.46 | 4.609* |
| Within groups | 3293.05 | 389 | 10.08 | |
| Total | 4108.91 | 393 | | |

*$F.95\ (4,\infty) = 2.37$. Significant at the .05 level of confidence.

The Bonferroni method of contrast analysis has been conducted to determine where these differences exist. The Bonferroni method was selected because of the differences in group sizes. These data are in Table 10. There were no significant differences at the .05 level of confidence between any of the other group mean pairs for the skill dimension problem analysis.

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the skill organizational ability is in Table 11. The differences were tested against the null hypothesis, which stated that there are no differences. There are significant differences ($p < .05$) among the mean scores for the skill dimension organizational ability for elementary, middle, and high school teachers; assistant principals; and quasi-administrators.

Table 10

Contrast Analysis of Problem Analysis for Five Role Groups

| | | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|---|
| | Mean | 16.83 | 16.74 | 16.63 | 17.63 | 18.46 |
| $\bar{X}1$ | 16.83 | 0 | 0.09 | 0.20 | 0.80 | 1.63* |
| $\bar{X}2$ | 16.74 | | 0 | 0.11 | 0.89 | 1.72* |
| $\bar{X}3$ | 16.63 | | | 0 | 1.00 | 1.83* |
| $\bar{X}4$ | 17.63 | | | | 0 | 0.83 |
| $\bar{X}5$ | 18.46 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of Two Group Means | Calculated $t$ score | Hypothetical $t$ score | Sig. at .05 level |
|---|---|---|---|
| Quasi-administrators vs. high school teachers | 3.47* | 2.33 | Yes |
| Quasi-administrators vs. middle school teachers | 3.12* | | Yes |
| Quasi-administrators vs. elementary school teachers | 3.09* | | Yes |

Given significant differences for the skill dimension organizational ability, the Bonferroni method of contrast analysis has been conducted to determine where these differences exist. These data are in Table 12. No significant differences were found at the .05 level of confidence between any of the other group mean pairs for the skill dimension organizational ability.

Table 11

Analysis of Variance of Organizational Ability for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 106.63 | 4 | 26.66 | 2.78* |
| Within groups | 3736.69 | 389 | 9.61 | |
| Total | 3843.32 | 393 | | |

*$F.95\ (4,\infty) = 2.37$. Significant at .05 level of confidence.

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the skill decisiveness is in Table 13. The differences were tested against the null hypothesis, which stated that there are no differences.

There are significant differences ($p < .05$) among the mean scores for the skill dimension decisiveness for elementary, middle, and high school teachers; assistant principals; and quasi-administrators. The statistic contrast analysis was used to determine where these differences exist. The Bonferroni method of contrast analysis was selected because of the differences in the sizes of the five role groups. The contrast analysis for the skill dimension decisiveness is in Table 14. There were no significant differences at the .05 level of confidence between any of the other group mean pairs for the skill dimension decisiveness.

Table 12

Contrast Analysis of Organizational Ability for Five Role Groups

| | | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|---|
| | Mean | 18.85 | 18.49 | 18.39 | 19.07 | 19.86 |
| $\bar{X}1$ | 18.85 | 0 | 0.36 | 0.46 | 0.22 | 1.01 |
| $\bar{X}2$ | 18.49 | | 0 | 0.10 | 0.58 | 1.37* |
| $\bar{X}3$ | 18.39 | | | 0 | 0.68 | 1.47* |
| $\bar{X}4$ | 19.07 | | | | 0 | 0.79 |
| $\bar{X}5$ | 19.86 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of two group means | Calculated $t$ score | Hypothetical $t$ score | Sig. at .05 level |
|---|---|---|---|
| Quasi-administrators vs. high school teachers | 2.56* | 2.33 | Yes |
| Quasi-administrators vs. middle school teachers | 2.53* | | Yes |

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the skill dimension leadership is in Table 15. The differences were tested against the null hypothesis, which stated that there are no differences. Significant differences ($p < .05$) were found among the mean scores for the skill dimension leadership for elementary, middle, and high school teachers; assistant principals; and quasi-administrators.

Table 13

Analysis of Variance of Decisiveness for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 322.47 | 4 | 80.62 | 4.71* |
| Within groups | 6659.70 | 389 | 17.12 | |
| Total | 6982.16 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

Since significant differences were found for the skill dimension leadership, the Bonferroni method of contrast analysis was conducted to determine where these differences exist. These data are in Table 16. There were no significant differences at the .05 level of confidence between any of the other group mean pairs for the skill dimension leadership.

The analysis of variance to determine whether there are significant differences among the mean scores for the five role groups for the skill dimension oral communication is in Table 17. The differences were tested against the null hypothesis, which stated that there are no differences.

There were significant differences ($p < .05$) among the mean scores for the skill dimension oral communication for elementary, middle, and high school teachers; assistant principals; and quasi-administrators. The Bonferroni method of contrast analysis was

Table 14

Contrast Analysis of Decisiveness
for Five Role Groups

| | | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|---|
| | Mean | 20.43 | 20.21 | 20.13 | 22.34 | 20.76 |
| $\bar{X}1$ | 20.43 | 0 | 0.22 | 0.30 | 1.91* | 0.33 |
| $\bar{X}2$ | 20.21 | | 0 | 0.08 | 2.13* | 0.55 |
| $\bar{X}3$ | 20.13 | | | 0 | 2.21* | 0.63 |
| $\bar{X}4$ | 22.34 | | | | 0 | 1.58* |
| $\bar{X}5$ | 20.76 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of two group means | Calculated $t$ score | Hypothetical $t$ score | Sig. at .05 level |
|---|---|---|---|
| Assistant principals vs. middle school teachers | 3.05* | 2.33 | Yes |
| Assistant principals vs. quasi-administrators | 3.03* | | Yes |
| Assistant principals vs. high school teachers | 2.91* | | Yes |
| Assistant principals vs. elementary school teachers | 2.85* | | Yes |

Table 15

Analysis of Variance of Leadership for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 151.46 | 4 | 37.86 | 3.38* |
| Within groups | 4357.97 | 389 | 11.20 | |
| Total | 4509.44 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

Table 16

Contrast Analysis of Leadership for Five Role Groups

| | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|
| Mean | 19.38 | 19.56 | 18.82 | 19 50 | 20.39 |
| $\bar{X}1$ 19.38 | 0 | 0.18 | 0.56 | 0.12 | 1.01 |
| $\bar{X}2$ 19.56 | | 0 | 0.74 | 0.06 | 0.83 |
| $\bar{X}3$ 18.82 | | | 0 | 0.68 | 1.57* |
| $\bar{X}4$ 19.50 | | | | 0 | 0.89 |
| $\bar{X}5$ 20.39 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of two group means | Calculated t score | Hypothetical t score | Sig. at .05 level |
|---|---|---|---|
| Quasi-administrators vs. high school teachers | 2.43* | 2.33 | Yes |

Table 17

Analysis of Variance of Oral Communication for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 171.22 | 4 | 42.80 | 3.85* |
| Within groups | 4320.11 | 389 | 11.10 | |
| Total | 4491.34 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

conducted to determine where these differences exist between pairs of means. These data are in Table 18. There were no significant differences at the .05 level of confidence between any of the other group pairs for the skill dimension oral communication.

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the overall assessor rating is in Table 19. The differences were tested against the null hypothesis, which stated that there are no differences.

Significant differences ($p < .05$) among the mean scores of the assessors' overall ratings for the 12 skill dimensions for elementary, middle, and high school teachers; assistant principals; and quasi-administrators were found. Since significant differences were found, the Bonferroni method of contrast analysis was conducted. These data are in Table 20. No significant differences were found at

Table 18

Contrast Analysis of Oral Communication for Five Role Groups

| | | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|---|
| | Mean | 20.47 | 21.09 | 19.87 | 21.85 | 21.63 |
| $\bar{X}1$ | 20.47 | 0 | 0.62 | 0.60 | 1.38* | 1.16 |
| $\bar{X}2$ | 21.09 | | 0 | 1.22 | 0.76 | 0.54 |
| $\bar{X}3$ | 19.87 | | | 0 | 1.98* | 1.76* |
| $\bar{X}4$ | 21.85 | | | | 0 | 0.22 |
| $\bar{X}5$ | 21.63 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of two group means | Calculated $t$ score | Hypothetical $t$ score | Sig. at .05 level |
|---|---|---|---|
| Assistant principals vs. high school teachers | 3.25* | 2.33 | Yes |
| Quasi-administrators vs. high school teachers | 2.83* | | Yes |
| Assistant principals vs. elementary school teachers | 2.57* | | Yes |

the .05 level of confidence between any of the other group mean pairs for the assessors' overall rating.

Through the application of the parametric statistic analysis of variance, Tables 21 through 27 show that there are no statistically significant differences ($p < .05$) among the mean scores of the five role groups for the following skill dimensions: judgment,

Table 19

Analysis of Variance of Overall Rating for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 169.21 | 4 | 42.30 | 3.89* |
| Within groups | 4219.71 | 389 | 10.84 | |
| Total | 4388.93 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

sensitivity, stress tolerance, written communication, range of interests, personal motivation, and educational values. Therefore, the null hypothesis, which stated that there are no statistically significant differences among the groups, was accepted for each of the skill dimensions listed above.

The data analysis to determine whether there are significant differences among the mean scores for the five role groups for the skill dimension judgment is in Table 21. The differences were tested against the null hypothesis, which stated that there are no differences. There were no significant differences ($p < .05$) among the mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension judgment.

The analysis of variance to determine whether there were significant differences among the mean scores for the five role groups

Table 20

Contrast Analysis of Overall Rating
for Five Role Groups

| | | $\bar{X}1$ | $\bar{X}2$ | $\bar{X}3$ | $\bar{X}4$ | $\bar{X}5$ |
|---|---|---|---|---|---|---|
| | Mean | 17.98 | 18.38 | 18.05 | 19.40 | 19.59 |
| $\bar{X}1$ | 17.98 | 0 | 0.40 | 0.07 | 1.42* | 1.61* |
| $\bar{X}2$ | 18.38 | | 0 | 0.33 | 1.02 | 1.21 |
| $\bar{X}3$ | 18.05 | | | 0 | 1.35 | 1.54* |
| $\bar{X}4$ | 19.40 | | | | 0 | 0.19 |
| $\bar{X}5$ | 19.59 | | | | | 0 |

Comparison between pairs of mean scores

| Comparison of two group means | Calculated t score | Hypothetical t score | Sig. at .05 level |
|---|---|---|---|
| Quasi-administrators vs. elementary school teachers | 2.94* | 2.33 | Yes |
| Assistant principals vs. elementary school teachers | 2.67* | | Yes |
| Quasi-administrators vs. high school teachers | 2.49* | | Yes |

(elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension sensitivity is in Table 22. The differences were tested against the null hypothesis, which stated that there are no differences. There are no significant differences ($p < .05$) among the mean scores for the five role groups for the skill dimension sensitivity.

Table 21

Analysis of Variance of Judgment
for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 94.09 | 4 | 23.52 | 2.36 |
| Within groups | 3862.82 | 389 | 9.93 | |
| Total | 3956.91 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

Table 22

Analysis of Variance of Sensitivity
for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 73.28 | 4 | 18.32 | 1.74* |
| Within groups | 4104.94 | 389 | 10.52 | |
| Total | 4178.23 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

The test, analysis of variance, for significant differences among the mean scores for the five role groups for the skill dimension stress tolerance is in Table 23. The differences were tested against the null hypothesis, which stated that there are no differences. No significant differences ($p < .05$) were found among the mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension stress tolerance.

Table 23

Analysis of Variance of Stress Tolerance for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | $F$ ratio |
|---|---|---|---|---|
| Among group means | 38.79 | 4 | 9.69 | 1.24* |
| Within groups | 3034.08 | 389 | 7.79 | |
| Total | 3072.87 | 393 | | |

*$F.95\ (4,\infty) = 2.37$. Significant at the .05 level of confidence.

The data analysis to determine whether there are significant differences between the mean scores for the five role groups for the skill written communication is in Table 24. The differences were tested against the null hypothesis, which stated that there are no differences. No significant differences ($p < .05$) were found among the mean scores of the five role groups (elementary, middle, and high

school teachers; assistant principals; and quasi-administrators) for the skill dimension written communication.

Table 24

Analysis of Variance of Written Communication for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 59.31 | 4 | 14.82 | 0.89* |
| Within groups | 6422.04 | 389 | 16.50 | |
| Total | 6481.35 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

The statistic analysis of variance was used to determine whether there were significant differences ($p < .05$) among the mean scores for the five role groups for the skill dimension range of interests. These data are in Table 25. The differences were tested against the null hypothesis, which stated that there are no differences. There were no significant differences ($p < .05$) among the mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension range of interests.

The analysis of variance to test for significant differences among the mean scores for the five role groups for the skill dimension personal motivation is in Table 26. The differences were tested

Table 25

Analysis of Variance of Range of Interests for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 131.10 | 4 | 32.77 | 2.23* |
| Within groups | 5696.73 | 389 | 14.64 | |
| Total | 5827.84 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

against the null hypothesis, which stated that there are no differences. No significant differences ($p < .05$) were found among the mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension personal motivation.

Table 26

Analysis of Variance of Personal Motivation for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 34.33 | 4 | 8.58 | 0.63* |
| Within groups | 5225.59 | 389 | 13.43 | |
| Total | 5259.92 | 393 | | |

*F.95 (4,∞) = 2.37. Significant at the .05 level of confidence.

The analysis of variance to test for significant differences among the mean scores for the five role groups for the skill dimension educational values is in Table 27. The differences were tested against the null hypothesis, which stated that there are no differences. There were no significant differences ($p < .05$) among the mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the skill dimension educational values.

Table 27

Analysis of Variance of Educational Values for Five Role Groups

| Source | Sum of squares | Degrees of freedom | Variance | F ratio |
|---|---|---|---|---|
| Among group means | 38.63 | 4 | 9.65 | 1.08* |
| Within groups | 3473.91 | 389 | 8.93 | |
| Total | 3512.55 | 393 | | |

*$F.95\ (4,\infty) = 2.37$. Significant at the .05 level of confidence.

## Summary

A descriptive comparison of the rank order of mean scores for each of the skill dimensions for each of the five role groups was in Table 8. The five role groups were defined as elementary, middle, and high school teachers; assistant principals; and quasi-administrators. Through the use of the parametric statistic analysis of

variance, it was determined that there were statistically significant differences ($p < .05$) among the mean scores for the five role groups for three administrative skills, an interpersonal skill, and a communication skill, as well as the assessors' overall rating. Significant differences among group means were determined as follows: problem analysis, organizational ability, decisiveness, leadership, oral communication, and assessors' overall rating.

Therefore, the null hypothesis, which stated that there were no differences, was rejected for each of the five skill dimensions and the assessors' overall rating. The statistics for the five skill dimensions and the assessors' overall rating were found in Tables 9, 11, 13, 15, 17, and 19.

The statistic contrast analysis was used to determine where these differences were among pairs of mean scores of the five role groups. The Bonferroni method of contrast analysis was used because of the differences in size of each of the five role groups. The statistically significant difference ($p < .05$) between pairs of group means for the five skill dimensions and the assessors' overall rating for the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) were in Tables 10, 12, 14, 16, 18, and 20.

The parametric statistic analysis of variance was used to determine that there were no significant differences ($p < .05$) among the group mean scores of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) for the seven skill dimensions as follows: judgment, sensitivity,

stress tolerance, written communication, range of interests, personal motivation, and educational values. The data analysis to determine whether there were significant differences among the group mean scores for the five role groups for the seven skill dimensions were in Tables 21 through 27.

# CHAPTER V

## FINDINGS AND GENERAL RECOMMENDATIONS

### Research Hypotheses

The purposes of the study were (a) to determine whether there were statistically significant differences among the mean scores for the role groups (elementary, middle, and senior high school teachers; assistant principals; and quasi-administrators) for each of the 12 skill dimensions and the overall performance recommendation given by the assessors during consensus; (b) to describe the relationship of job assignment and assessment center performance; and (c) to extend the research on the content validity of the NASSP Assessment Center Project as conducted by Schmitt et al. (1982). The procedures used were those developed by the NASSP Assessment Center Project. Differences were tested against the null hypothesis which states there were no differences.

The statistic used to determine whether there were statistically significant differences was a parametric one-way analysis of variance. The finding of a statistically significant difference in an analysis of variance was based upon an F-ratio test to determine whether a difference existed somewhere within the mean scores of the five role groups.

## Discussion of the Findings

The findings did not specify where these significant differences existed among the mean scores. In order to determine the differences between groups, the statistic contrast analysis was used. The specific method of contrast analysis selected to make these comparisons is known as the Bonferroni procedure. The Bonferroni method was selected because of the differences in the group sizes of each of the five role groups (Duncan et al., 1983).

The findings of the study are there were statistically significant differences at the .05 level of confidence between certain role groups on their abilities to perform problem analysis, organizational ability, decisiveness, leadership, oral communication, and the assessors' overall rating. These differences between the identified role groups were found in Chapter IV.

There were no statistically significant differences ($p < .05$) between role groups for the skill dimensions judgment, sensitivity, stress tolerance, written communication, range of interests, personal motivation, and educational values. These analyses were also found in Chapter IV.

The study compared the performance on each of the 12 skill dimensions and the assessors' overall rating between elementary, middle, and high school teachers; assistant principals; and quasi-administrators who were interested in becoming school administrators. Comparisons between the five role groups, therefore, were for aspiring school administrators.

Where there were no significant differences among the groups, the findings were that no one group was disadvantaged in participating in the assessment center. On the basis of the data, these aspiring school administrators have equal opportunities.

The question of differences between the performances of elementary, middle, and senior high school teachers is often asked by superintendents and participants. There were no statistically significant differences ($p < .05$) between the three teacher groups on any of the 12 skill dimensions and the assessors' overall rating. The data supported that each group of teachers aspiring to become school administrators has an equal opportunity for success based upon the outcomes of performance in the Michigan Principals Assessment and Development Center.

One of the purposes of this study was to compare and extend the research on content validity of the NASSP Assessment Center Project as conducted by Schmitt et al. (1982). When groups were combined to include all members of the subgroups, Schmitt et al. found few significant differences. When the groups were studied by specific categories, however, more significant differences appeared.

Comparisons of outcomes of the Schmitt et al. (1982) study with this study found agreement on several of the skill dimensions. The data, however, identified conflicting outcomes in other skill dimensions. The two studies are summarized in Table 28.

Where the Schmitt et al. (1982) study and this study identified different outcomes, the reason for these differences may have been due to the composition of the groups. For example, for the skill

Table 28

Comparison of the Data Between the Schmitt et al. Study and This Study

| Schmitt et al. | This study |
|---|---|
| Problem analysis: | |
| Non-assistant principals performed higher than assistant principals. | No significant differences between any of the four role groups and assistant principals. Quasi-administrators performed higher than elementary, middle, and high school teachers. |
| Judgment: | |
| No significant differences. | No significant differences. |
| Organizational ability: | |
| No significant differences. | Quasi-administrators performed higher than high school teachers and middle school teachers. |
| Decisiveness: | |
| Non-assistant principals performed higher than assistant principals. | Assistant principals performed higher than each of the other four role groups. |
| Leadership: | |
| No significant differences. | Quasi-administrators performed higher than high school teachers. |
| Sensitivity: | |
| No significant differences. | No significant differences. |

Table 28--Continued

| Schmitt et al. | This study |
|---|---|
| Stress tolerance: | |
| No significant differences. | No significant differences. |
| Oral communication: | |
| Counselors and educational specialists performed higher than non-counselors and educational specialists. | Assistant principals performed higher than high school teachers and elementary school teachers. Quasi-administrators performed higher than elementary school teachers. |
| Written communication: | |
| No significant differences. | No significant differences. |
| Range of interests: | |
| Counselors and educational specialists performed higher than non-counselors and educational specialists. | No significant differences. |
| Personal motivation: | |
| District level personnel performed higher than non-counselors and educational specialists. | No significant differences. |
| Educational values: | |
| No significant differences. | No significant differences. |

Table 28--Continued

| Schmitt et al. | This study |
|---|---|
| Assessors' overall rating: | |
| No significant differences. | Quasi-administrators performed higher than elementary school teachers and high school teachers. Assistant principals performed higher than elementary school teachers. |

dimension problem analysis, Schmitt et al. (1982) combined all subgroup members to compare performance with that of assistant principals. This study compared the performance of the four role groups, elementary school teachers, middle school teachers, high school teachers, and quasi-administrators, with the performance of assistant principals.

For the skill dimension decisiveness, Schmitt et al. (1982) combined all subgroup members to compare performance with that of assistant principals. This study compared the performance of each of the four role groups, elementary school teachers, middle school teachers, high school teachers, and quasi-administrators, with the performance of assistant principals.

Comparisons for the skill dimensions oral communication and range of interests were not meaningful because of the membership of the groups in the two studies. Schmitt et al. (1982) compared performances of counselors and educational specialists with non-counselors and educational specialists for each of the two skill

dimensions. This study compared performances among the five role groups for each of the two skill dimensions oral communication and range of interests.

## General Recommendations

Based in part on the findings of this study and consideration of other issues, some general recommendations are made.

The Joint Committee on Standards for Educational Evaluation (1988) wrote that a commanding criticism of education personnel evaluation practices was failure to screen unqualified applicants from the selection process. Although the NASSP Assessment Center Project is currently in practice at 53 sites internationally, the program is not widely applied in Michigan as a process for assistance in the selection of qualified candidates nor to screen unqualified applicants from consideration for school leadership positions.

A plan should be developed to promote statewide support for the use of the Michigan Principals Assessment and Development Center as a means to assist in the selection of candidates for school leadership positions. As local school district personnel become knowledgeable about the assessment center and its complimentary programs for professional development, the final reports on participants can also be used to assist in the screening of unqualified candidates.

Support for the use of the assessment center as a valuable instrument for assisting local school districts in making better informed decisions in the selection of principals and assistant principals must first come from an understanding of the purposes of the

NASSP project. No one person can, or should, be expected to promote the assessment center. Other agencies with extended contact in Michigan education are recommended to discuss the positive attributes of participation in the assessment center. These agencies would include departments of graduate administration in colleges of education, the state department of education, intermediate school districts, professional organizations, leaders in local school districts, assessors, and participants of the assessment center process.

The assessment center process as developed by NASSP was cited by the Joint Committee (1988) as particularly applicable to the improvement of the evaluation of administrators. In general, the quality of evaluation programs at all levels in education are appraised as inadequate.

The Joint Committee (1988) supported the need for dependable and reliable evaluation of educational personnel and recommended that evaluations be used to select, retain, and develop qualified personnel. Local school districts, departments of education, colleges of education, and professional education organizations recognized the need to develop personnel evaluation procedures that were objective and operationally acceptable.

This study presented data identifying the direct relationship between the 21 Personnel Evaluation Standards and the Assessment Center Standards of Behavior. The function of the standards is to correct inadequacies and to contribute general principles for developing accepted personnel evaluation procedures. The Standards of Behavior for Assessment Centers also address general principles, the

ethics of the process, as well as the ethics of the assessment center directors and those who serve as assessors in the program.

A committee should be selected in Michigan to represent the Joint Committee, graduate school administration, the Michigan Association of School Administrators, the Michigan Association of Secondary School Principals, the Michigan Elementary and Middle School Principals Association, and the Michigan Principals Assessment and Development Center. The purpose of the committee would be to develop a model personnel evaluation program based on the general principles of the Personnel Evaluation Standards and the Standards of Behavior for Assessment Centers. Local school districts would be encouraged to adapt the model to their specific organizations.

The Joint Committee also recognized the failure of school districts to provide direction for staff development programs. Information from the NASSP Assessment Center process is effective in promoting the self-improvement of center participants. The most beneficial effect on professional growth occurs when a school system uses the skill dimension summaries for development and designs appropriate follow-up classes (Walden, 1985). A strong negative influence on professional growth was identified when assessment center final reports of participants who were assessed were used for making decisions about promotions and nonpromotions.

The rank order of the mean scores of each skill dimension for each of the five role groups was shown in Table 8. The mean scores found that preservice graduate education administration and professional development activities are recommended for each of the five

role groups for each of the skill dimensions. For example, the highest mean score for elementary school teachers aspiring to become school administrators is 20.47 with a possible maximum mean score of 30.00 for the skill dimension oral communication. By following this process with each of the skill dimensions, it is apparent that preservice graduate study in education administration and continuous professional development activities are needed for each of the skill dimensions for the five role groups. The high need areas are judgment, problem analysis, range of interests, educational values, sensitivity, and written communication.

Local school districts should be encouraged to participate actively in the developmental programs of the Michigan Principals Assessment and Development Center. Based on the mean scores of assessment center participants who were included in this study, it is recommended that the assessment center outcomes be used as a basis for preservice graduate education administration study and continuous professional development.

A preservice graduate education administration program can be selected by the participant in consultation with a university advisor based upon the recommendations of the assessors in consensus. School districts are recommended to develop professional development activities based upon the specific needs of the administrator or the aspiring administrator.

Also recommended are the opportunities present through the developmental programs of the Michigan Principals Assessment and Development Center. Activities are designed by the participant with the

assistance of coaches and mentors to address on-the-job problems, identified personal needs, or to further strengthen areas of interest.

A final recommendation is that professional development programs can be provided to existing school administrators for the further development of the generic skills that are assessed. Professional organizations, such as Michigan Association of School Administrators, Michigan Association of Secondary School Principals, Michigan Elementary Middle School Principals Association, and the Michigan Institute for Educational Management Leadership Academy, can provide specific workshops or in-services that relate to the specific developmental needs.

## Suggestions for Further Study

There are a number of relationships between subjects that should be studied. Suggestions for further study include the following:

1. A comparison of the male participants and the female participants in the assessment center.

2. A comparison of assessment center participants who are from urban, suburban, and rural settings.

3. A comparison of defined occupational level by experienced assessment center participants.

4. A comparison of the level of professional preparation of participants.

5. A comparison of performance effectiveness of school leaders selected following assessment center participation with those

selected by traditional methods.

6. A study of the effectiveness of directed professional development activities based on assessment center outcomes.

7. A study of the development of personnel evaluation systems by local school districts combining the general principles of the Standards for Personnel Evaluation and the Standards of Behavior for Assessment Centers based on the adaptation of the recommended state model.

8. A comparison of current building leaders; elementary, middle, and high school teachers; assistant principals; and quasi-administrators.

## Conclusion

The use of the assessment center process as developed by the National Association of Secondary School Principals Assessment Center Project has validity for providing valuable assistance in the selection of school building administrators. The rank order of mean scores of the 12 skill dimensions within each of the five role groups (elementary, middle, and high school teachers; assistant principals; and quasi-administrators) identified the need for preservice graduate education administration study and continuous directed postdevelopment activities for aspiring school administrators and assistant principals for each of the skill dimensions. High need areas for development were noted.

Statistically significant differences ($p < .05$) were found between the performance levels of certain role groups for the skill

dimensions problem analysis, organizational ability, decisiveness, leadership, oral communication, and the assessors' overall rating as determined by the use of the statistic contrast analysis. No significant differences ($p < .05$) were found between the three teacher groups on any of the 12 skill dimensions and the assessors' overall rating.

No significant differences ($p < .05$) were found among the mean scores of the five role groups for the skill dimensions judgment, sensitivity, stress tolerance, written communication, range of interests, personal motivation, and educational values. Although there were no significant differences in the mean scores, this does not preclude the need for preservice graduate education study in school administration for aspiring school administrators and assistant principals, as well as postprofessional development in directed activities.

Assessment centers measure generic skills and not mastery in the role-related skills of an effective building leader. Individuals could have the generic skills but need training in the role-related skills. Graduate preparation programs must develop both. Also, current building leaders should not only have the generic skills, but also the role-related skills. Professional organizations can provide meaningful workshops or in-services for the continued professional development in both. Local school districts, universities, professional organizations, and departments of education should work together to provide the necessary services for potential and current administrators.

# APPENDICES

Appendix A

Numerical Rating Summary

## NUMERICAL RATING SUMMARY

Participant _____

| SKILLS | ASSESSOR | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Problem Analysis | | | | | | |
| Judgment | | | | | | |
| Organizational Ability | | | | | | |
| Decisiveness | | | | | | |
| Leadership | | | | | | |
| Sensitivity | | | | | | |
| Stress Tolerance | | | | | | |
| Oral Communication | | | | | | |
| Written Communication | | | | | | |
| Range of Interests | | | | | | |
| Personal Motivation | | | | | | |
| Educational Values | | | | | | |
| Placement Recommendation | | | | | | |

Appendix B

Means and Standard Deviations of Counselor and Non-Counselor on the Skill Dimensions

Position Type and Skill Ratings[a]

Means and Standard Deviations of Counselor and Non-Counselor on the Skill Dimensions

| | Counselor/Ed. Spec. | | Non-Counselor/Ed. Spec. | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Problem Analysis* | 3.1346 | .7417 | 2.7815 | .7420 |
| Judgment* | 3.0769 | .6816 | 2.7100 | .7107 |
| Decisiveness* | 3.6346 | .7677 | 3.4183 | .7098 |
| Leadership* | 3.2941 | .8785 | 2.9326 | .8152 |
| Sensitivity* | 3.4423 | .6390 | 3.2197 | .6956 |
| Educational Values* | 3.4615 | .7266 | 3.1288 | .6800 |
| Stress Tolerance* | 3.4231 | .6670 | 3.1901 | .7478 |
| Oral Communications | 3.5192 | .6414 | 3.3792 | .6673 |
| Written Communications* | 3.4808 | .7794 | 3.2454 | .7476 |
| Organizational Ability* | 3.3846 | .7959 | 2.9621 | .7936 |
| Range of Interests | 3.4314 | .7281 | 3.2290 | .7278 |
| Personal Motivation* | 3.8302 | .7780 | 3.5259 | .7197 |
| Placement Recommendation* | 3.2143 | .8663 | 2.8169 | .8188 |

[a]Nonteaching personnel (n = 70-51) coded as 1; Non-counselors/Ed. Spec. (N = 355-263) coded as 0.

*Main effect of position significant at $p \leq .05$

Source: Criterion-Related and Content Validity of the NASSP Assessment Center (p. 15) by N. Schmitt, R. Noe, R. Merritt, M. Fitzgerald, and C. Jorgensen, 1982, Reston, VA: National Association of Secondary School Principals.

Appendix C

Means and Standard Deviations of Assistant Principal and Non-Assistant Principal on Consensus Skill Ratings

Means and Standard Deviations of Assistant Principal and Non-Assistant Principal on Consensus Skill Ratings[a]

| | Asst. Principals | | Non-Asst. Principals | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Problem Analysis* | 2.6338 | .6599 | 2.8964 | .7676 |
| Judgment | 2.6377 | .6410 | 2.8056 | .7347 |
| Decisiveness* | 3.2941 | .6924 | 3.4980 | .7262 |
| Leadership | 2.9104 | .7330 | 3.0120 | .8601 |
| Sensitivity | 3.1940 | .6334 | 3.2731 | .7055 |
| Educational Values | 3.1212 | .6449 | 3.2000 | .7114 |
| Stress Tolerance | 3.1493 | .7437 | 3.2500 | .7378 |
| Oral Communications | 3.4143 | .7517 | 3.3984 | .6392 |
| Written Communications | 3.2394 | .8012 | 3.2960 | .7447 |
| Organizational Ability | 2.8806 | .6634 | 3.0723 | .8393 |
| Range of Interests | 3.1791 | .7963 | 3.2846 | .7117 |
| Personal Motivation | 3.5417 | .6487 | 3.4857 | .7613 |
| Placement Recommendation | 2.7447 | .7323 | 2.9215 | .8841 |

[a]Assistant Principals (N = 94-66) coded as 1; Non-Assistant Principals (N = 333-247) coded as 0.

*Main effect of position significant at $p \leq .05$.

Source: Criterion-Related and Content Validity of the NASSP Assessment Center (p. 16) by N. Schmitt, R. Noe, R. Merritt, M. Fitzgerald, and C. Jorgensen, 1982, Reston, VA: National Association of Secondary School Principals.

Appendix D

Means and Standard Deviations of Teachers and Non-Teachers on Consensus Skill Ratings

Means and Standard Deviations of Teachers and Non-Teachers on Consensus Skill Ratings[a]

| | Teachers | | Non-Teachers | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Problem Analysis | 2.8333 | .7748 | 2.8462 | .7203 |
| Judgment | 2.7358 | .7414 | 2.8203 | .6808 |
| Decisiveness | 3.4628 | .7193 | 3.4409 | .7309 |
| Leadership | 2.9378 | .8516 | 3.0720 | .8050 |
| Sensitivity | 3.2316 | .7194 | 3.2937 | .6458 |
| Educational Values | 3.1361 | .6900 | 3.2560 | .7060 |
| Stress Tolerance | 3.1458 | .7500 | 3.2778 | .7226 |
| Oral Communication | 3.3542 | .7500 | 3.2778 | .7226 |
| Written Communication | 3.2513 | .7325 | 3.3308 | .7913 |
| Organizational Ability | 2.9842 | .8375 | 3.1032 | .7571 |
| Range of Interest | 3.2447 | .7042 | 3.2880 | .7706 |
| Personal Motivation | 3.5183 | .7387 | 3.6591 | .7292 |
| Placement Recommendation | 2.8306 | .8739 | 2.9508 | .8273 |

[a]Teachers (N = 242-188) coded as 1; Non-Teachers (N =183-125) coded as 0.

Source: Criterion-Related and Content Validity of the NASSP Assessment Center (p. 17) by N. Schmitt, R. Noe, R. Merritt, M. Fitzgerald, and C. Jorgensen, 1982, Reston, VA: National Association of Secondary School Principals.

Appendix E

Means and Standard Deviations of Individuals at Various Position Levels at Time of Assessment

Means and Standard Deviations of Individuals at Various Position Levels at Time of Assessment[a]

| | Elementary | | Middle and Junior High | | Senior High | | District Level | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Problem Analysis | 3.1065 | .9215 | 2.9857 | .9088 | 2.9739 | .8320 | 3.2381 | .7003 |
| Judgment | 2.9953 | .8886 | 2.8143 | .7669 | 2.9478 | .7591 | 3.2381 | .5390 |
| Decisiveness | 3.6121 | .9365 | 3.7246 | .7647 | 3.6306 | .8194 | 4.0000 | .7071 |
| Leadership | 3.1674 | 1.0411 | 3.2836 | .9179 | 3.1304 | .9321 | 3.6190 | .8047 |
| Sensitivity | 3.5421 | .8197 | 3.4638 | .8328 | 3.3750 | .7955 | 3.333 | .7303 |
| Educational Values | 3.4766 | .8650 | 3.5000 | .8011 | 3.3482 | .7439 | 3.6190 | .5896 |
| Stress Tolerance | 3.1899 | .7414 | 3.2885 | .8004 | 3.2667 | .7465 | 3.2778 | .5745 |
| Oral Communications | 3.5907 | .7853 | 3.5072 | .8157 | 3.5517 | .7383 | 3.6667 | .6583 |
| Written Communications | 3.5540 | .8485 | 3.3000 | .9379 | 3.4188 | .8979 | 3.7143 | .7838 |
| Organizational Ability | 3.1963 | .9636 | 3.2174 | .9215 | 3.1696 | .8262 | 3.5238 | .6796 |
| Range of Interests | 3.2949 | .8050 | 3.2500 | .7376 | 3.2637 | .7429 | 3.4118 | .5073 |
| Personal Motivation* | 3.6000 | .7623 | 3.4038 | .7478 | 3.6211 | .6713 | 3.9424 | .8481 |
| Placement Recommendation | 2.8034 | .8508 | 2.8125 | .9063 | 2.9275 | .8162 | 3.2333 | .8584 |

[a]Elementary School (N = 216-156) coded as 1; Middle and Junior High School (N = 70-52) coded as 2; Senior High Schools (N = 138-90) coded as 3; District Level positions (N = 30-17) coded as 4.

*Main effect of level of position significant at $p \leq .05$.

Source: Criterion-Related and Content Validity of the NASSP Assessment Center (p. 19) by N. Schmitt, R. Noe, R. Merritt, M. Fitzgerald, and C. Jorgensen, 1982, Reston, VA: National Association of Secondary School Principals.

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