



Variables that predict Partnership Academy Assessment Center candidates Promotability to school administration positions
by Fay Christoffersen Weber

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:

ABSTRACT The purpose of this study was to determine which of twelve assessment skill dimensions, three personal characteristics, and twenty-one professional characteristics are the best predictors of "promotability" to school administration positions.

The administrative performance of 300 participants was evaluated by the Partnership Academy Assessment Center between March, 1984 and December, 1987, and their promotional status was determined in March of 1989.

Skill dimension scores from the PAAC evaluation and the personal and professional characteristic measures from the candidates' questionnaires provided the discriminating variables for the study. A step-wise discriminant analysis was employed to test the predictive power of these variables at the .05 level of confidence.

By applying discriminant analysis, it was found that 67.22 percent of the candidates could be correctly classified regarding their promotional status. Among the 34 variables analyzed, twelve were determined to be significant discriminators of candidates' "promotability" to school administrative positions; seven were professional characteristics and five were PAAC skill dimensions.

Presented in order of their predictive strength, the two best discriminators were "Teacher" ($d = -.55$) and "Years of Administrative Experience" ($d = -.52$), which were negatively correlated with administrative promotions.

The next best predictors were "Problem Analysis" ($d = .44$), "BA Social Science" ($d = .37$), "Personal Motivation" ($d = .36$), and "Sensitivity" ($d = .30$), which were positively correlated with administrative promotions. "Dean" ($d = .26$), "Range of Interest" ($d = .26$), "Stress Tolerance" ($d = -.22$), "BA English" ($d = .22$), "Administrative Intern" ($d = .21$) and "Principal" ($d = -.20$), were discriminating but less powerful predictors.

Since this study was based on a total population of PAAC school districts in Orange and Los Angeles counties, conclusions must be used cautiously with other populations.

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ASSESSMENT CENTER CANDIDATES'
"PROMOTABILITY" TO SCHOOL
ADMINISTRATION POSITIONS

by

Fay Christoffersen Weber

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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ABSTRACT

The purpose of this study was to determine which of twelve assessment skill dimensions, three personal characteristics, and twenty-one professional characteristics are the best predictors of "promotability" to school administration positions.

The administrative performance of 300 participants was evaluated by the Partnership Academy Assessment Center between March, 1984 and December, 1987, and their promotional status was determined in March of 1989.

Skill dimension scores from the PAAC evaluation and the personal and professional characteristic measures from the candidates' questionnaires provided the discriminating variables for the study. A step-wise discriminant analysis was employed to test the predictive power of these variables at the .05 level of confidence.

By applying discriminant analysis, it was found that 67.22 percent of the candidates could be correctly classified regarding their promotional status. Among the 34 variables analyzed, twelve were determined to be significant discriminators of candidates' "promotability" to school administrative positions; seven were professional characteristics and five were PAAC skill dimensions.

Presented in order of their predictive strength, the two best discriminators were "Teacher" ($d=-.55$) and "Years of Administrative Experience" ($d=-.52$), which were negatively correlated with administrative promotions.

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CHAPTER 1

THE PROBLEM

Introduction

School districts have been charged with the critical task of selecting the best qualified principals and vice principals, yet little has been published on how administrators have been or should be chosen or promoted. In one of the few comprehensive reports, Selecting American Principals: An Executive Summary, Baltzell and Dentler (1983) cite that most school districts' selection processes are not based on merit. More often, local goals, aims, and conditions, i.e., traditional political appointment systems, determine the selection of principals and assistant principals.

The recent U.S. Secretary of Education, William Bennett, stressed the need for an effective school administration selection and promotion process. In the forward to the Principal Selection Guide published by the Office of Educational Research and Improvement (1987), he stated:

The choice of principals is too important to be left to chance--with patronage, politics, favoritism, or familiarity edging out merit. Their significance demands that we make every effort to find, hire and groom good principals who will provide the leadership that American schools need.

In a response to a wide-spread request from school districts for a more effective administrative selection process, the National Association of Secondary School Administrators (NASSP) founded the Assessment Center in 1975. The purpose of the center is to help districts identify as well as develop school administrators who have strong leadership potential and to select and promote the most effective principals and vice principals (Hershey, 1977).

An affiliate of NASSP, the Partnership Academy Assessment Center (PAAC), was formed in 1984 as a cooperative effort between school districts in Orange and Los Angeles counties, California State University, Fullerton, and the Orange County Department of Education. From March, 1984 to December, 1987, 300 PAAC candidates seeking promotions to school administration positions participated in the Partnership Academy Assessment Center, resulting in background information and skill dimension ratings on each candidate.

Previous research (Huck, 1973; Klimoski & Strickland, 1977; Schmitt, Noe, Merritt, & Fitzgerald, 1984; Hunter & Hunter, 1984) found assessment centers to be predictive of job performance and advancement criteria. For example, candidates who have high overall assessment scores are more likely to be promoted and perform better on the job than those with lower scores.

For the most part, these studies are based on the candidates' overall assessment rating rather than individual skill dimensions (Alexander, 1979). London and Stumpf (1983) encouraged additional study to determine the relative importance of the assessment skill dimensions in relationship to other characteristics used for promotion purposes such as age, sex, education, current position, and length of teaching experience.

Following the suggestion of London and Stumpf (1983), this study focused on assessment center skill dimension as well as personal and professional characteristics used to determine which of these variables were the best predictors of PAAC candidates' promotability to school administration positions and to determine to what degree these variables serve as predictors.

Background of the Problem

Historically, the role of the school principal has been recognized as having a major impact on the learning process of children (Johnston & Douglas, 1984). Selection of these critical leaders has come under close scrutiny in the past decade due in part to the research on effective schools and the important role principals play in creating effective schools.

In their research, Mangieri & Arnn (1985) found four commonalities of effective schools to be: 1) a climate conducive to learning, 2) a school-wide emphasis on basic skills, 3) a system of clear instructional objectives for

monitoring students' performance, and 4) a strong programmatic leader. The recurring message of effective school research is that principals need to be strong instructional leaders. Scott Thompson (1982), NASSP's executive director, states, "Because other research has demonstrated the importance of good principals in producing effective schools, the value of a process for selecting strong principals is obvious."

Bennett (1988) reports that almost half of all current principals will retire during the next ten years. He suggests we take this opportunity to "fill our schools with dynamic, committed leaders, for they provide the key to effective schools where we either win or lose the battle for excellence in education." To accomplish this, Baltzell and Dentler's (1984) findings emphasize the need to establish an objective, reliable, unbiased selection process.

Cohen and Manasse (1982) report that despite increasing knowledge about principal effectiveness, few school systems have defined what they expect from their principals. Principals themselves often do not know why they are selected for a particular position; thus, "There is no clear mandate for any particular behavior, no articulated criteria for evaluating effectiveness, and little opportunity for principals to get useful feedback on their performance."

Presently, efforts are under way across the country to assist in improving the effectiveness of school principals and the selection practices. The Southern Regional Education Board analyzed the characteristics of principals, and their recommendations were outlined in the Preparation and Selection of School Principals (Cornett, 1983). They include more selective graduate programs in educational administration, the use of assessment center techniques, and the need for districts to employ objective means for looking at potential candidates.

Baltzell and Dentler's study (1983) highlighted the assessment center process as a promising instrument in the selection of school administrators, which has long been recognized as a tool for identifying managerial talent. Further, the Principal Selection Guide (Office of Educational Research, 1987) recommends the assessment center as a successful technique for selecting school administrators.

Statement of the Problem

The purpose of this study was to determine which of the twelve assessment center skill dimensions, three personal characteristics, and twenty-one professional characteristics are the best predictors of PAAC candidates' "promotability" to school administration positions.

The twelve skill dimensions include: problem analysis, judgment, leadership, organizational ability, stress tolerance, range of interest, oral communication, written

communication, sensitivity, decisiveness, personal motivation, and educational values. Personal characteristics include: age, gender and race; professional characteristics include: undergraduate and graduate majors, years of teaching experience and previous administrative experience, and job title when attending PAAC.

Need for the Study

Because of the ever increasing need for capable leaders, educators are looking for ways to improve their traditional methods of selecting individuals for principals and assistant principals. In an effort to overcome inadequate hiring practices which may result in poorly skilled administrators, many districts have incorporated multiple assessment procedures to identify, select and develop high quality leadership. One of these procedures is the assessment center process which has been developed, implemented, and validated by NASSP.

Because most assessment center predictive studies have used overall rating scores, this study will address the candidates' twelve skill dimensions in conjunction with the personal and professional characteristics. Variables that are determined to be highly predictive of candidates promoted to administrative positions can be used by PAAC participating school district personnel committees to assist in the selection of high quality administrative candidates.

Skill dimensions that are most highly predictive of candidates who are selected and/or promoted to administrative positions can be incorporated into educational administration training programs and in-service training at California State University, Fullerton, Orange County Department of Education, and PAAC school districts to strengthen administrative candidates' skills in those dimensions.

Results from this PAAC study can be used by NASSP to gain information from a local center that may be applied to further research at state and national levels.

Questions to be Answered

1. Which of the assessment center skill dimensions, personal and professional characteristics are the most significant predictors of PAAC candidates promotability to school administration positions?
2. To what degree are the assessment center skill dimensions, personal, and professional characteristics the most significant predictors of PAAC candidates' "promotability" to school administrative positions?

General Procedures

1. The literature has been thoroughly reviewed to derive implications for this study. The review of literature included the examination of selected data from the Educational Research Information Center (ERIC), doctoral dissertations and psychological abstracts from 1950 through 1988.

2. Two instruments were used in this study: a candidate's survey instrument and a candidate's consensus rating form.
 - a. A survey was sent to each PAAC candidate two weeks prior to their attending the assessment center and returned the morning of the first day at the center. This survey obtained information on the candidates' personal and professional characteristics. Each candidate provided information related to their age, gender, race, undergraduate and graduate majors, job title, grade level and years of teaching experience. This information was used for the identification and classification of data and served as discriminating variables for the study.
 - b. The PAAC consensus rating form was tabulated on each candidate's twelve administrative skills dimensions. This data also served as discriminating variables for the study.
3. General questions were formulated to address the problem of this study which were described above.
4. Hypotheses which relate directly to the promotion of PAAC candidates based on assessment center skill dimensions and personal and professional characteristics were established.
5. Permission to conduct the study was obtained from the Director of PAAC and NASSP.

6. Three hundred candidates assessed between March, 1984 and December, 1987 were asked to voluntarily cooperate in the study. Procedures for confidentiality were outlined. Each candidate signed a release of information document in order that PAAC performance scores could be acquired.
7. District superintendents or their designee were called in March of 1989 to determine the promotional status of PAAC candidates.
8. The candidates' personal and professional characteristics were numerically coded and skill dimension ratings were recorded, studied and analyzed to determine which characteristics were the best predictors of the candidates' promotional status.

Limitations and Delimitations

The conclusions of this study are limited to the boundaries implied by school districts served by the partnership Academy Assessment Center and similar suburban districts outside the PAAC boundaries where candidates have been selected for administrative positions. Only PAAC candidates from these districts were included in the study because assessment center skill dimension scores were not available for non-PAAC candidates.

The PAAC suburban districts situated within Southern California are:

Anaheim Union High School District
Burbank Unified School District
Bassett Unified School District
Bonita Unified School District

Buena Park Unified School District
Centralia School District
Duarte Unified School District
Fullerton Elementary School District
Huntington Beach Unified School District
Irvine Unified School District
Long Beach Unified School District
Norwalk-La Mirada Unified School District
Orange Unified School District
Placentia Unified School District,
Rowland Heights Unified School District
Saddleback Valley Unified School District
Santa Ana Unified School District
Walnut Valley Unified School District
Yorba Linda School District
Orange County Department of Education
California State University, Fullerton

Districts where candidates have been promoted outside the boundaries of PAAC are:

Baldwin Park Unified School District
Chino Unified School District
Fontana Unified School District
Riverside Unified School District
Temecula Unified School District

The research implications may be limited to a similar population of administrators.

Because of the PAAC operation procedures, candidates were assessed at different times and locations throughout a three year period. Further, the research population was not randomly sampled but included the entire population of candidates who participated in PAAC between March, 1984 and December, 1987. Data from the total population of the 300 candidates assessed was considered.

Definition of Terms

APA, Division 14: American Psychological Association's
Division of Industrial and Organization Psychology.

Assessment Center: A standardized evaluation of behavior based on multiple judgments. Judgments are made, in part, from assessment simulations. These judgments are then pooled by the assessor at an evaluation meeting during which all relevant data are discussed and an overall evaluation is made.

National Association of Secondary School Principals (NASSP): NASSP was founded in 1916, has 36,000 members and a staff of sixty. Its members consist of secondary school principals, assistant principals, persons engaged in secondary school administration or supervision and college professors teaching courses in secondary administration education. It has several publications including the Bulletin (nine issues per year) which refers from time to time to the development of the Assessment Center. The NASSP Assessment Center was developed in 1975.

Simulations: An assessment process where candidates participate in activities that typify activities a principal would experience on the job.

Assessment Center Skill Dimensions

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: Skill in identifying educational needs and setting priorities; ability to reach logical

conclusions and make high-quality decisions based on available information, searching for information with a purpose.

Organizational Ability: Ability to plan, schedule and control the work of others; skill in identifying education needs and setting priorities; ability to critically evaluate written communication.

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 problem solving; ability to recognize when a group requires direction; to effectively interact with a group to guide them to accomplish 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 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 and ideas.

Written Communication: Ability to express ideas clearly in writing; to write appropriately for different audiences--students, teachers, parents, etc.

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

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

Educational Values: Possession of a well-reasoned educational philosophy; receptiveness to new ideas and change.

CHAPTER 2

REVIEW OF THE LITERATURE

History of the Assessment Center

The purpose of this subsection was to identify relevant historical movements leading to the inception of the NASSP Assessment Center and PAAC.

Assessment centers in recent years have come to be associated with the training and development of managers in corporations, and more recently, with administrators in education. Originally the multiple assessment center procedures were used on a large scale by German military psychologists during World War II. In 1942, the British Army adopted the principles and procedures used by the Germans. They had become dissatisfied with their traditional methods of selecting officers and found that cadets selected through the assessment center process were more successful than those chosen through traditional techniques (OSS, 1948; Taft, 1959; Huck, 1973).

According to Lantz and Tobias (1985), "The earliest assessment centers in the U.S. were designed to recruit not good managers but good spies (agents)." During World War II, the Office of Strategic Services (OSS), a forerunner of the CIA, was looking for a systematic way of

screening potential agents. Impressed by the idea of "simulation" invented at the turn of the century by the German and British military to select candidates for officer training, the OSS embraced the technique. It set up the first formal assessment center in the U.S. in 1943 at a secret site called "Station S," just outside Washington, D.C. (Lantz & Tobias, 1985).

Perhaps the greatest contribution of the multiple assessment approach used by the military was the development of "real life" or situational exercises. The situational methods offered the potential for adding to the scope of human behavior that can be observed and evaluated under standardized conditions (Huck, 1973).

During World War II, 5,000 recruits passed through the OSS center, and ground rules for the assessment "game" (Lantz & Tobias, 1985) were formulated. Recruits were taken to new locations away from their normal jobs and put through hypothetical situations that involved group decision making and role playing. They were assessed by trained personnel. The OSS assessment experience highlighted the psychological problems inherent in assessment and won many supporters for the value of combining multiple tests and observations by pooling the judgments of several assessors (Taft, 1959).

After the second world war, assessment center technology was applied to industry. American Telephone and Telegraph first applied the assessment center process

(Byham, 1970) as part of data collection procedures for its Management Progress Study. Follow-up investigations in the Management Progress Study (Bray & Grant, 1966) demonstrated considerable predictive power for the assessment center method both for young non-college management men who had emerged from the ranks at an early age and for college recruits assessed very shortly after employment.

In 1958, the first non-research assessment center was opened by Michigan Bell Telephone Company for the appraisal of candidates for promotion to management from vocational occupations. The results of the assessment center were deemed so successful by line managers that the assessment center spread to fifty established centers in Bell System Companies (Bray & Campbell, 1968). Today the majority of Fortune 500 companies utilize the assessment center approach to help analyze the potential entrance-level managers for promotion (Schmitt, Noe, Merritt, Fitzgerald, & Jorgensen, 1983).

In the 1970's, the National Association of Secondary School Principals expressed interest in the use of assessment center technology for the assessment and training of school administrators. Paul Hersey (1980), National Director of NASSP, wrote:

For years principals and other school personnel asked the National Association of Secondary School Principals for assistance in identifying and developing strong building administrators.

The design of the initial NASSP pilot assessment center had to be broadly applicable to administrative

positions in both the elementary and secondary public schools. The assessment center was to be a flexible technique that could be applied either for the purpose of selecting new staff members or developing the abilities of present administrators (Jeswald, 1977).

The development of an educational assessment center for NASSP became a reality in the summer of 1975. A formal offer of technical assistance coupled with a plan that described the potential for cooperatively developing a new approach for identifying administrative leaders was brought to NASSP's attention by the Public Policy and Social Issues Committee of the American Psychological Association's Division of Industrial and Organizational Psychology.

The APA Division 14 Committee assigned several key personnel to work with NASSP in the developmental and operational phases of the program. Moses explains:

This project grew out of an awareness that the psychology profession had considerable knowledge and expertise that might be valuable in settings where the services of industrial organizational psychologists are not commonly found.

During the job study, the focus of the work narrowed somewhat to concentrate on the assistant principal and principal's positions (Jeswald, 1977).

Late in 1975, the Prince William County and Charlottesville school districts, both in Virginia, were selected to be pilot projects. Based on extensive interviews with teachers and administrators in the pilot school

district, the assessment center was designed with the following three components (Hersey, 1977):

1. Twelve skill dimensions with specific definitions were found to relate to the most important characteristics of successful principals. The skills to be assessed were problem analysis, judgment, organizational ability, decisiveness, leadership, sensitivity, stress tolerance, oral communication, written communication, personal motivation, range of interests and educational values.
2. Simulation techniques and exercises were written into the design to provide information for evaluating the twelve skills. These techniques simulate activities that a principal experiences each day, including leaderless group activities, fact-finding and stress tests, administrative in-baskets, a structured personal interview and a candidate feedback session.
3. After the design of the assessment center process was complete, NASSP established a four-day assessor training workshop at its national headquarters in Reston, Virginia for designated administrators for each pilot district. Upon completion of this phase of training, assessors were prepared to return to their respective school districts to initiate assessment centers.

NASSP also took an important step in September, 1982 to protect the integrity of its assessment project by initiating a comprehensive accreditation plan. This

certifies that affiliated projects throughout the country are evaluated and recognized as meeting nine important and necessary "standards of quality" (Hersey, 1982). One of these standards is that each center has a general plan which follows prescribed NASSP guidelines. All fifty NASSP assessment centers in the United States use the same standardized materials and procedures.

In the fall of 1979, a three-year validation study to quantify outcomes of the assessment center was initiated by NASSP. Neal Schmitt, a professor of industrial psychology at Michigan State University, and his colleagues conducted the study. Grants from the Rockefeller Family Fund and the Spencer Foundation assisted in the support of the project (Thomson, 1983).

At the conclusion of their validation study, Schmitt and his fellow psychologists (1984) reported:

We see the assessment center as a content valid procedure for the selection of school administrators. . . . Correlations of skill ratings with the overall placement recommendation range from .53 to .72 with the exception of the Range of Interests dimension This is certainly a desirable outcome.

The Partnership Academy Assessment Center, Fullerton, California, submitted an assessment center proposal to the National Association of Secondary School Principals on May 26, 1983. The proposal presented the organizational structure and operating procedures describing the joint powers agreement.

PAAC was to serve school districts in Orange and Los Angeles counties and the graduate program in Educational Administration at California State University, Fullerton. The purpose was to identify skills and attributes of aspirants for school principal positions and other levels of administration and management positions (PAAC Proposal, 1983). The proposal was accepted by NASSP, and the first assessor training session took place in March, 1984. Since its inception until December, 1987, 300 candidates have been assessed.

An agreement was signed between California State University, Fullerton, Anaheim Union High School District, Centralia School District, Huntington Beach City School District, Irvine Unified School District, Norwalk-La Mirada Unified School District, Orange Unified School District, Placentia Unified School District, Walnut Valley Unified School District, and the Orange County Department of Education in 1984 to develop, operate and maintain guidelines of NASSP. The affairs of PAAC are conducted by an eleven-member board of directors, and its office is located at California State University, Fullerton.

There has been significant growth in membership of the Partnership Academy Assessment Center in the past three years with eleven new school districts joining PAAC. These districts are: Basset Unified, Bonita Unified, Buena Park Elementary, Burbank Unified, Duarte Unified, Fullerton Elementary, Rowland Unified, Long Beach Unified,

Saddleback Valley Unified, Santa Ana Unified and Yorba Linda.

Since the inception of PAAC, five school districts have discontinued membership due to budget cuts or new administration. These districts are: Huntington Beach City, Norwalk-La Mirada, Orange Unified, Placentia Unified and Burbank Unified.

Critique of the Assessment Center Process

The purpose of this subsection was to review the literature that addressed the pros and cons of the assessment center process.

Since its adaptation to civilian business use in the mid-1950's, the assessment center process has grown increasingly as a method of identifying management talent. While the assessment center has gained a high degree of popularity as a valid process for identifying management talent, certain aspects of assessment centers have been questioned.

For example, Lantz and Tobias (1985) advise aspiring executives to "Put away your ideas of leadership training," because "more and more corporations are sending managers to assessment centers for evaluations that can make or break a fast track manager's career." Because candidates are not given a second chance to demonstrate managerial potential, evaluations can be "a matter of life or death for participants." Earlier work by Kraut (1972)

and Huck (1973) dismiss this claim due to inconclusive data.

Howard (1974) states that if a candidate gets the impression that his or her career is on the line based on a few days "on stage," the feeling of stress can be strong, thus affecting the candidate's performance. On the other hand, Bailey, Fillow and Kelly (1987) suggest, "knowing what you are doing and being good at it may be the best stress reduction technique to be found." Further, Howard suggests since stress is a typical part of a manager's job, a candidate should be stressed to see how he or she copes under pressure.

Candidates who do outstandingly well in assessment center may become a "crown prince or princess" in their organization (Kraut & Scott, 1972). Management may treat them so well that their future success becomes a self-fulfilling prophecy, and the validity coefficients for the assessment center process may become inflated. However, later research (Howard, 1974; Stumpf & London, 1981; Silzer, 1985; and Gaugler, et al., 1987) found a favorable rating was not a sufficient reason to be promoted with the possible exception of the top 5 percent who received the highest rating.

Estimates of costs for assessment centers runs from \$500 to \$5,000 per candidate, exclusive of staff salary (Byham, 1970). Installation costs are the highest, but to these must be added the salary and time spent by

assessors and assessees, facilities, location and material costs. In the end, these costs must be weighted in the context of current selection ratios against the possible gains in selection and training (Howard, 1974).

Hogan and Zenke (1986) evaluated the cost effectiveness of four principal selection procedures (interviews, assessment center, selected assessment center exercises, and paper and pencil tests). They found the assessment center to be the most cost effective method when both the evaluation processing costs and the predictive validity of the principal's job performance are considered.

Another question raised is the advantage of the situational test utilized in the assessment center over the use of paper and pencil instruments alone. Since these are the most costly aspect of the assessment center, how much additional information can be gained by the use of group and individual situation tests?

Wollowick and McNamara's (1969) study indicates that situational tests add to the predictiveness of paper and pencil tests which included cognitive ability tests, personality inventories, measures of leadership and background history. Inclusion of the elements unique to the assessment center procedures nearly doubled the criterion variance, making a substantial, unique contribution to the prediction of management success.

An earlier study by Hinrich (1969) found that data from existing personnel records were highly predictive of

overall ratings obtained from a two-day assessment program. He suggests that a careful evaluation of personnel records and employment could provide much of the same information as a lengthy and expensive assessment program. Dunnette (1971), in contrast, found that nearly 80 percent of the variance in the assessment center ratings was unassociated with the ratings based on personnel records and that the assessment center "does contribute independent, valid, and useful diagnostic information about managerial abilities and behavioral tendencies" that is not contributed by personnel file ratings.

Wollowick and McNamara (1969) reported that the assessment program is a valid predictor of management success. However, their data indicates that much higher validities may be achieved by an empirical combination of the scores, records and ratings which show the highest correlation with the selection criterion.

Assessment Center Skill Dimensions

The purpose of this subsection was to review literature that addressed issues related to assessment center skill dimensions and organizational use of assessment data.

The assessment center method was designed to measure stable characteristics which conceptually represent management-related abilities (Bycio, Hahn & Alvare, 1987). These skill dimensions are based on job analysis, multiple raters and multiple observations by assessors. Assessors

are trained to observe behavior accurately, and exercises are chosen to measure the dimensions in order to yield content rated judgments. Each assessor independently rates candidates on each dimension and determines overall ratings (Sackett & Hakel, 1979).

Based on extensive interviews with teachers and administrators in pilot school districts, NASSP and a committee from the American Psychological Association's Division of Industrial and Organizational Psychology determined twelve skill dimensions which were found to be the most important characteristics of successful assistant principals and principals (Hersey, 1982). The twelve skill dimensions were given specific definitions to be used by assessors to determine candidates' strength and weakness in these skill areas.

However, several studies indicate that not all the twelve skill dimensions are considered as important as others in the administrative selection process. For example, Sackett and Hakel (1979) examined how assessors used assessment center information in forming overall ratings. They found that assessors used only a few dimensions, although they had been instructed to use all of them in their judgments. Three dimensions (leadership, organizational ability and decisiveness) accurately predicted overall ratings.

In the NASSP Assessment Center validation study, Schmitt and Noe, et al. (1983) found that the dimensions

most highly and consistently correlated with job performance were leadership, oral communication, organizational ability, decisiveness, judgment and problem analysis. Correlations of rating on sensitivity, stress tolerance, educational values, range of interests and personal motivation with various job-performance ratings were lower and less significant.

Russell's (1985, 1986) study of the decision-making process of assessment centers found assessors did not use specific dimensions in making their judgments. Assessors' perception of centers' participants were strongly affected by interpersonal skills or problem solving skills.

Pollack (1962) and Valenzi and Andrew (1973) report that assessor ratings tend to be higher for variables which assessment centers indicate are relatively unimportant. Sacket and Hakel (1979) also found skill dimension ratings differ significantly due to dimension importance, with dimensions which are considered most important rated lower.

According to Byham (1970), assessment centers have been designed to predict managerial success by providing raters with the opportunity to infer personal qualities that have been determined, through job analysis, to be relevant to success. That is, the assessment centers' standardized evaluation materials and procedures are used to assess traits/skills which are then used to predict future success on the job (Klimoski & Strickland, 1987).

Sackett and Dreher (1982) refute that assessment dimensions accurately reflect the complex traits they purport to measure. Their research found little consistency of the same dimensions from exercise to exercise. They suggest the reason for the low across-exercise correlation is that assessment centers are situationally, rather than dimensionally, determined.

However, Neidig and Neidig (1984) argued that properly designed situational exercises purposely place candidates in a variety of job-related contexts, and therefore the quality of the performance across exercises by all participants is not necessarily expected to be the same. Epstein (1979, 1983) further posits that one cannot hope to obtain high correlation across exercises "because situational uniqueness masks the consistency." According to Epstein, response consistencies emerge only when situational effects have been canceled out by averaging dimension ratings over a sufficient number of occasions. In support of Neidig and Epstein's position, Schmitt's (1977) results indicate high interrater reliability along with a great degree of similarity across raters in the perceived dimensionality of ratings.

While assessment centers have been one of the most popular and validated methods for identifying individuals with management talent, the primary use of the assessment center has been the recommendation made by the assessors regarding the participant's potential for managerial work

or promotion potential (Noe & Steffy, 1987). Only limited research has addressed what skill dimensions are most predictive of candidates' advancement to a school administrative position and what relative value these skills have in relation to the candidates' other personal and professional characteristics.

In a follow-up study of 65 organizations' utilization of assessment center results, Alexander (1979) found the most prevalent use of the evaluations was for making promotional decisions and identifying the strengths and weaknesses of employees. The organizations focused more on the immediate feedback process than the long-term utilization of the result.

In the same study, 36 organizations who ranked their six top criteria used for promotional decision making found two traditional promotional criteria considered more important than the assessment center evaluation. Criteria tied for first and second were recommendations of employee's boss and performance appraisal, followed by the assessment center evaluation.

Based on his study, Alexander (1979) reports:

The future outlook for assessment centers remains unclear. On the positive side, assessment centers seem to be valid predictors of subsequent managerial performance and their potential utilization appears to be largely untapped at present. On the negative side, however, assessment centers require a great deal of planning, time and effort to effectively utilize the results. Future research should be directed at identifying the critical factors and conditions which facilitate the long-term utilization of assessment center results.

In McIntyre's (1987) recent study of ten PAAC school districts, superintendents or their designee ranked assessment evaluations seventh in the promotional criteria used by the district. The nine promotional criteria ranked in order of importance were: credentials, required skills in district's job analysis, profession up-dating, resume, references, degrees, PAAC final assessment report, length of experience and letter of application.

When Macintyre (1987) asked how the final assessment reports were used in their school districts' principals and vice principals selection process, four administrators stated it was used as a superintendent's reference, three used it to assist in paper screening and two stated it is shared with interviewers. One reported its use in the final interview if all finalists have been assessed.

London and Stumpf (1983) suggest that more research is needed to understand administrative staffing among organizations. Such research may suggest policies and procedures to improve promotion decisions, thereby helping to ensure that these decisions are effective and equitable. Simulations and resulting skill dimensions ratings may be valuable in examining the effects of changes in policies and procedures on decision process variables and for training personnel managers to make better promotion decisions.

Personal and Professional
Characteristics of Principals

The purpose of this subsection was to review literature that has studied personal and professional characteristics of individuals who have been promoted to school management positions.

Several organizational surveys and experimental research suggest what information is used to make management promotion decisions. Commonly used candidate information includes college degrees, work experience in lower-level positions and on-the-job performance (Bowman, 1964; Newcomer, 1955). However, many organizations do not have systematic performance appraisal systems. When someone is recommended for promotion it is unclear what and how information is used.

Campbell, et al. (1970) suggests that the weight assigned to past performance in making promotion decisions is likely to vary from organization to organization. It is also confounded with other factors such as gender, friendship, appearance or political influence. Thus, some candidate characteristics used to make promotion decisions are ability-related whereas others are non-ability-related. The relative importance of these variables in promotion decisions has seldom been investigated.

Frequently the predictor information which serves as a basis for promotion decisions is used during the early screening process before specific individuals are seriously considered. This information is not likely to

exhibit much variance across the candidates who are seriously considered since they are all likely to meet minimal requirements. Consequently, variables which are likely to be important in seriously evaluating candidates for promotion should be identified, and the contribution of these variables should be studied (London & Stumpf, 1983).

Research suggests that relatively few variables are likely to be used in making a promotion decision. Selection committees generally focus on only a few variables that exhibit meaningful variation and use various heuristics to keep the information process load within their capability (Newell & Simon, 1972). Given that only a small amount of information available is likely to be used in decision making, knowing what information to use is important (London & Stumpf, 1983).

In 1977, 1981 and 1988, three surveys carried out by the National Association of School Principals and the National Association of Elementary Principals (NAESP) reported on the personal and professional characteristics of school principals.

Pharis and Zakariya's (1978) NAESP survey of elementary principals found the median age for all principals was 46, and this figure has remained constant since 1928. In a recent NASSP survey of persons named to secondary principalships in 1987, researchers found the first appointment age has increased each decade. For example,

in 1965 more than one-third of all secondary principals were under age 30, only 24 percent in 1977, and only 2 percent in 1987. In 1987, 47 percent were appointed between the ages of 30 and 39, and 51 percent were 40 years or older (Pellicer, Anderson, Keefe, Kelly, & McCleary, 1988).

Female principals tend to be somewhat older than male principals, but this difference is narrowing. More than half of the males were appointed to principalships before the age of 35 as compared to only one-fourth of the female principals. The median age of first appointment for men was 32 years, for women, 40.

Despite affirmative action programs, increasing sensitivity, and under representation of minority groups, the principalship at both the elementary and secondary level remains a white domain. Pharis and Zakariya (1978) found the ethnic distribution of principals at the elementary level to be 90.7 percent white, 5.5 percent black, 2.3 percent Native American, 0.9 percent Hispanic and 0.6 percent other. At the secondary level, Byrne, Hines, and McCleary (1978) found the ethnic level of principals to be 96 percent white, 3.0 percent black, 0.2 percent Native American, 0.6 percent Hispanic, and 0.2 percent other. However, Pellicer, et al. (1988) reports that although their actual percentage remains small, there are almost three times as many Hispanic principals and black assistant principals as there were ten years ago. Among male

principals, Pharis and Zakariya (1978) found the ratio of minorities to white to be 7.4 to 92.6 percent. Among female principals, 18.1 percent are minorities and 81.9 percent are white.

Data from the Valentine, et al. study (1981) showed almost all current high school principals appointed had experience as assistant high school principals or as middle school principals or assistant principals--or some combination of these. Teaching and teaching-related experiences such as coaching and counseling consumed a total of six years or fewer for half of the principals. Only a few of the secondary principals had taught over twelve years. In contrast, Pellicer and Anderson, et al.'s (1988) study now finds that almost half of first year principals had taught over ten years.

In all states surveyed, Pharis and Zakariya (1978) found male elementary principals to outnumber women. Eighteen percent of the elementary school principals were women; 82 percent were men. At the secondary level, 93 percent were male and 7 percent were female. The National Council of Women in Education (1980) documented that only 13.5 percent of the nation's principals are females, down from 37 percent in 1960. Females compose 2.9 percent of junior high school principals and 1.4 percent of senior high school principals.

Bilken and Brannigan (1980) report that gaining an administrative credential is no barrier for women. While

preferential hiring and promotional practices explain some of the gender imbalance in educational administration, ~~and~~ women's ambivalence about career orientation seems to be more of an impediment than preferential hiring.

Marshall (1985) posits that for some women traditional cultural definitions of femininity which emphasize attributes such as sensitivity, conformity, lack of assertiveness and dependency may contribute to this lack of aspiration to become an administrator. Her two alternative hypotheses regarding the imbalance of women to men in educational administration are: 1) that some women do not seek administrative positions when they see the realities and the barriers in moving to positions of power and 2) they may be rejecting a patriarchal, political, manipulative model of school leadership, preferring teaching.

Evidence regarding gender differences in career aspiration levels of motivation to manage is mixed. Some studies suggest that males have greater career salience and engage in greater goal-directed career planning behavior than females (Brenner & Tomkiewicz, 1979). Other studies have found no difference between males and females (Hardesty & Betx, 1980; Ryne & Rosen, 1983). The assessment center method may provide some advantage for females as they are shown by Schmitt, et al. (1983) to score slightly higher than men in the NASSP validity study.

Moses and Boehm (1975) found the overall assessment rating to be significantly related to progress in

management and that the success rate for women was comparable to that of men. Ritchie and Boehm (1977) supported the assumption that the same kind of life experience and interest that characterized successful managers of one sex are also predictors of success for the other.

Donnell and Hall's (1980) review of five studies involving almost 2,000 men and women reached the conclusion that the "women, in general, do not differ from men in the ways they administer the management process." Evidence from these studies support that the life experiences, interests, and the skills needed to be a successful manager are not sex related.

In Noe and Steffy's (1987) study of 100 candidates who had been promoted to principalships, males reacted more positively to assessment center experience than females and appeared to have more information concerning availability of principalships. They found that candidates who received the favorable promotion recommendations reported engaging in more systematic activities to learn about the principalship and acquire more information about positions than participants who received less favorable evaluations.

Noe and Steffy (1987) also reported that the closer candidates' current positions are to the target position, the more the individual becomes interested in information concerning job openings and visibility so that decision makers are aware of his or her skills and abilities. For

example, assistant principals reported more intended systematic and environment exploration than teachers and counselors because their position requires more similar skills.

Schmitt, et al. (1983) also reported some tendency for nonteaching personnel to perform higher than other groups. He posits this is due to the candidates' greater exposure and experience with administrative decision making which they encounter at the district level.

These studies are supported by the work of Pellicer and Anderson, et al. (1988), who found that only 20 percent of those selected as secondary principals have had no secondary experience. Service as an athletic coach (52 percent) or as chairperson (46 percent) are common on-the-job training experiences. Other typical experiences are service as a guidance counselor (22 percent) or athletic director (28 percent).

The undergraduate majors of those entering the principalship have always been diverse with no one undergraduate field dominating. The academic disciplines of humanities, sciences, and social sciences combined represent the content fields of about two-thirds of the undergraduate majors. However, within this group the number of social science majors almost doubled in the past ten years which may reflect the concern for social conditions in society and schools (McCleary & Thompson, 1979). Pellicer, et al.'s study (1988) found the academic

background at the bachelor's level of new principals strikingly similar to the principals in the 1978 study.

Elementary school principals continue to improve in academic preparation. In NAESP's 1978 study, all elementary principals had a bachelor's degree, and 96.4 percent had a master's degree or higher, while in 1987, 99 percent of the secondary principals had their master's degree or higher (Pellicer & Anderson, 1988). At the graduate level, 70 percent of secondary principals majored in educational administration which, when combined with other fields of education, included more than 85 percent of secondary principals.

NASSP's Senior High School Principal (McCleary & Thompson, 1979) summary report stated that successful teaching experience, advanced degree study in educational administration (including internships), and administrative experience, particularly in a challenging assistant principalship, are almost universal for the effective principals. These experiences helped to build management skills, leadership skills, and knowledge and experience with educational programs.

Summary

The literature review was designed to expand upon the historical background and the development of the Assessment Center as well as to critique the process and skills used to evaluate potential school administrators' strengths and weaknesses. Further, literature was reviewed to explore

the biographical and professional background and characteristics most typical of those serving as school administrators.

CHAPTER 3

METHODOLOGY

This chapter describes the procedures by which data was gathered, processed and analyzed in order to select discriminating variables that best predict the "promotability" of PAAC candidates to school administration positions. The major divisions in this chapter are: (1) population description, (2) categories of investigation, (3) validity of the NASSP Assessment Center, (4) method of data collection, (5) method of organizing data, (6) statistical hypotheses, and (7) analysis of data.

Population Description

The population for this study consisted of 300 candidates whose administrative performance was evaluated by the Partnership Academy Assessment Center between March, 1984 and December, 1987. Since the candidates were nominated to attend the center by their superintendent or superintendent designee, and they were motivated to be promoted, all the candidates agreed to participate. No population sampling occurred, as the total population was included in the study.

The candidates represented graduate students from California State University, Fullerton's educational

administration professional credential program and nineteen California school districts located in Orange and Los Angeles counties. These districts, which range in size from 3,500 to 62,000 students, are: Anaheim Union High School District, Bonita Unified School District, Buena Park School District, Burbank Unified School District, Centralia School District, Duarte Unified School District, Fullerton Elementary School District, Huntington Beach City School District, Irvine Unified School District, Norwalk-La Mirada Unified School District, Long Beach Unified School District, Orange Unified School District, Placentia Unified School District, Rowland Heights Unified School District, Saddleback Valley Unified School District, Santa Ana Unified School District and Walnut Valley Unified School District.

On a monthly basis, different PAAC candidates attended the center over a three year period of time. Fifty-nine (19.7%) of the candidates were assessed in 1984, 94 (31.3%) in 1985, 89 (29.7%) in 1986 and 58 (19.3%) were assessed in 1987. The majority of the candidates (90%) had already obtained their Master's degree as well as their California school administrative credential prior to attending PAAC.

Of the 300 candidates completing the assessment center evaluation, 174 are women (58%) and 126 are men (42%). Two hundred sixty-eight are Caucasians (86.7%), 25

are Hispanics (8.3%), six are Asians (2.0%) and five are Blacks (1.7%).

The most frequent age range of candidates falls in the 36 to 45 year bracket (44.7%) followed by 26 to 35 (28.3%) and 46-55 (21.7%) (see Table 1 for further breakdown of age). Age ranges for men and women are similar (see Table 2 for further breakdown of age by gender).

TABLE 1
FREQUENCY OF AGE RANGE OF PAAC CANDIDATE

Age	<u>n</u>	Relative Frequency (%)	Cumulative Frequency (%)
25 and younger	3	1	1.0
26-35	85	28.3	29.3
36-45	134	44.7	77.0
46-55	65	21.7	95.7
56-65	12	4.0	99.7
66 and older	1	.3	
Total	300	100	100

Of the 300 candidates, 19 (6.3%) have Bachelor's degrees, 270 (90%) have Master's degrees, and 11 (3.7%) have Ph.D.s or Ed.D.s. The three most frequent Bachelor degree majors are social studies, education, and English or foreign languages. Eighty-two candidates (27.3%) have social studies majors, 74 candidates (24.7%) have majors in education and 29 candidates (9.7%) have majors in

TABLE 2
FREQUENCY OF AGE RANGE OF WOMEN AND MEN CANDIDATES

Age	Women <u>n</u>	Men <u>n</u>	Relative Frequency (%)		Cumulative Frequency (%)	
			women	men	women	men
25 and younger	2	1	1.2	0.8	1.2	0.8
26-35	49	36	28.2	28.6	29.4	29.4
36-45	78	56	44.8	44.4	74.2	73.8
46-55	38	26	21.8	20.6	96.0	94.6
56-65	7	6	4.0	4.8	100.0	99.2
65 and older	0	1		0.8		
Total	174	126	100.0	100.0	100.0	100.0

English or foreign language (see Table 3 for further breakdown of B.A. majors). The three most frequent Master's degree majors are educational administration, education and social science. One hundred fifty-one candidates (50.3%) have Master's degrees in educational administration, 69 (23.0%) have Master's degrees in education, 36 candidates (12.0%) have academic degrees, and 31 candidates (10.4%) have Master's degrees in psychology/counseling (see Table 4 for further breakdown of M.A. majors).

TABLE 3
FREQUENCY OF PAAC CANDIDATES' BACHELOR
DEGREE MAJORS

Major	<u>n</u>	Relative Frequency (%)	Cumulative Frequency (%)
Social Studies	82	27.3	27.3
Education	74	24.7	52.0
English, foreign language	29	9.7	61.7
Behavioral Science	29	9.7	71.4
Vocational/Art	24	8.0	79.4
Science	22	7.3	86.7
PE/Health	21	7.0	93.7
Math	18	6.0	99.7
Missing Data	1	0.3	
Total	300	100	100

TABLE 4
 FREQUENCY OF PAAC CANDIDATES' MASTER DEGREE MAJORS

Major	<u>n</u>	Relative Frequency (%)	Cumulative Frequency (%)
Education Administration	151	50.3	50.3
Education	69	23.0	73.3
Academic Degree	36	12.0	85.3
Counseling & Psychology	31	10.4	95.7
No M.A. Degree	12	4.0	99.7
Missing Data	1	0.3	
Total	300	100	100

The most frequent job titles of Assessment Center candidates are teacher, assistant principal and coordinator. One hundred four candidates (34.6%) are teachers, 102 (34%) are assistant principals, 54 (18%) are coordinators, 18 candidates (6%) are deans and 11 candidates (3.7%) are principals, and 11 candidates (37%) are administrative interns (see Table 5 for frequency distribution of job titles).

One hundred eight candidates (36%) are employed at the elementary level, 91 (30.3%) are employed at the secondary level, 60 (20%) are employed at the middle/junior high level and two candidates (0.7%) are employed at the K-12 level.

TABLE 5
 FREQUENCY DISTRIBUTION OF JOB TITLES
 OF PAAC CANDIDATES

Title	<u>n</u>	Relative Frequency (%)	Cumulative Frequency (%)
Teacher	104	34.6	34.6
Assistant Principal	102	34.0	68.6
Coordinator	54	18.0	86.6
Dean	18	6.0	92.6
Principals	11	3.7	96.3
Administrative Intern	11	3.7	
Total	300	100	100

The majority of PAAC candidates have over five years of teaching experience. One hundred twenty-four candidates (41.3%) have 11-15 years of experience, 80 (26.7%) have 6-10 years of experience and an additional 80 candidates (26.7%) have over 16 years of teaching experience.

Approximately two-thirds of the PAAC candidates have some administrative experience. The most frequent range of administrative experience is 1-5 years (69%), followed by 6-10 years (18%). Fewer candidates had 11-15 years (9%) or 16+ years (4%) of experience.

Categories of Investigation

All Assessment Center candidates who attended a two-day Center in Orange or Los Angeles Counties between March, 1984 and June, 1987 were asked to voluntarily respond to a personal and professional profile sheet and to allow the use of their assessment performance skill ratings in this study.

At the beginning of each Assessment Center, candidates were asked to complete a profile sheet which provided personal information such as: age, gender and race and professional information such as: undergraduate and graduate college majors, years of teaching experience, years of administrative experience, present job title and school level.

Data collected from these profile sheets were used as discriminant variables in the study to determine which of the personal and professional characteristics were significant predictors of PAAC candidates' "promotability" to educational administration positions.

At each center, assessors completed a performance rating sheet that provided a score for each of the candidate's twelve assessment skill dimensions. These skill dimensions also served as discriminant variables for predicting the "promotability" of PAAC candidates to educational administration positions.

A telephone interview was held with each PAAC superintendent or superintendent's designee in March, 1989 to

determine the candidates' promotion or non-promotion to school administration positions. Promotion criteria was based on a job title change that required an administrative credential and was accompanied by a minimum salary increase of \$2,000 per year. Promotion and non-promotion data served as the dependent variables for the study.

PAAC Assessment Center Procedure

Each candidate came to the Assessment Center for two days to participate in simulated activities typical of those carried out by a principal of a school. The exercises included leaderless group activities, fact-finding and stress activities and "in-basket" tasks containing problems of the type that could confront a principal in the operation of a school. In addition, there was structured personal interview.

During the two days of exercises, a group of assessors who had four days of prior training according to the rigorous standards of the National Association of Secondary Principals Assessment Center, observed the candidates as they participated in the activities. In a typical assessment center, twelve candidates were observed by a team of six assessors who recorded behavior related to the twelve skill areas.

Two days were set aside for consensus by the assessors. Each candidate's observed behaviors and skills were discussed by the team of assessors, each of whom has observed every candidate during some activity. The team

had to reach scoring consensus on each candidate's performance in each of the twelve skill areas. A rating of "5" denoted outstanding skill in the area assessed, whereas a rating of "1" denotes little skill.

The consensus skill ratings given by assessors for each of the twelve skill areas for the candidates participating in this study were averaged to give an overall mean score for each skill: Problem Analysis, Judgment, Organizational Ability, Decisiveness, Leadership, Sensitivity, Educational Values, Stress Tolerance, Oral Communication, Range of Interests, Personal Motivation and Written Communication (Schmitt, 1983).

A comprehensive assessment report on each of the skills was written according to the guidelines established by NASSP, describing the strengths and weaknesses of each candidate. Suggestions for professional development are included in the report which was discussed in detail with the participant in an intensive feedback session conducted by the Director or Associate Director.

Validity of the NASSP Assessment Center

A three-year validity study of the NASSP Assessment Center was carried out by a team of Michigan State University psychologists from 1979 to 1982 (Schmitt, Meritt, Fitzgerald & Noe, 1983). Results of this study focus on the internal validity, the criterion-related validity and the content validity.

The internal validity of the Assessment Center was determined by: (1) the extent of agreement among the assessors concerning the skill level of candidates, (2) the degree of relationship among ratings on the consensus skill dimensions and the placement recommendations and (3) the effects of various candidates' demographics (race and gender) and job experience (position held and school level) on consensus ratings on their skill dimensions (Schmitt, et al., 1982).

The agreement among raters was assessed by correlating the skill ratings given to the same candidate by different raters. The ratings of different assessors were highly correlated for all twelve skill dimensions as well as the placement recommendation. Most of the correlations were in excess of .60; those for the placement recommendations were all greater than .80, indicating a very high agreement among raters. The coefficient alpha was .90 or greater which indicated that there was substantial agreement among raters concerning the skill level of candidates (Schmitt, et al., 1982).

The intercorrelations among skill dimensions indicate whether different dimensions are providing unique information. Relatively low correlations among dimensions indicate uniqueness. The correlations among NASSP assessment skill dimensions are moderate, generally in the .30 to .50 range. Higher correlations are observed among skill dimensions that should logically be related, for

example, Problem Analysis, Judgment, Decisiveness, Leadership and Organizational Ability (Schmitt, et al., 1983).

Correlations of skill ratings with the overall placement recommendations range from .53 to .72. With the exception of the Range of Interest dimension ($r=.35$), skill levels made in the Assessment Centers are highly related to the placement recommendation (Schmitt, et al., 1982).

Significant effects were noted for candidates' sex on four of the consensus skill ratings by candidates. Significant differences between male and female candidates are observed on Judgment, Educational Value, Oral Communication and Written Communication. Female candidates received significantly higher scores than males on these dimensions. White candidates received significantly higher mean consensus ratings than non-white candidates on Problem Analysis, Judgment, Decisiveness, Leadership, Written Communication, Organization Ability and overall placement ratings (Schmitt, et al., 1983).

Non-teaching personnel received higher consensus ratings than those who held teaching positions. Those candidates who were not teachers also received higher ratings on placement recommendations from the other group. Schmitt (et al., 1983) attributed this difference to non-teaching personnel having more administrative-like experience.

The content validity of the Assessment Center evaluated the extent to which the skill dimensions are necessary to perform essential administrative jobs. The major job dimensions of a principal identified by Schmitt (1980) include: Curriculum and instructional leadership, coordination of student activities, direction of supportive services, staff selection, evaluation and development, development and maintenance of community relations, coordination with district and other schools, fiscal management and maintenance of school plant and structures of communication.

According to Schmitt (et al., 1983),

The content validity of the assessment center as judged by the assessor-administrator experts is good. The tasks determined to be important in the performance of the principalship do require the skills assessed in the assessment center.

In his validation study he reported the following judgments made by experts in the validation study:

1. Problem Analysis was judged to be essential and necessary to all of the tasks comprising the major performance dimensions, especially tasks involving direction of support services of the school, curriculum and instructional leadership and structures of communication.
2. Judgment was found to be necessary for most of the tasks comprising the performance dimensions such as structured communication, development and maintenance of community relations, coordination of student

activities and direction of support services of the school.

3. Organizational Ability and Decisiveness were found to be related to all of the task dimensions.
4. Leadership was found to be most related to structuring communication, curriculum and instructional leadership.
5. Written communication was found to be essential for curriculum and instruction leadership, evaluation and development.
6. All other skill dimensions were judged to be necessary to the performance of one or more job dimensions, but they were not consistently as important to all job dimensions. Range of Interest and Personal Motivation were judged least useful.

The criterion-related validation is based on the candidates' rating on the Assessment Center skill to ratings they received later on the job. Examination of the criterion-related validity of the Assessment Center indicates that there is a positive relationship between Assessment Center skill ratings and ratings of subsequent job performance. Based on 15 job dimensions, validities are the highest and most consistently significant against performance ratings made by the administration superiors in the areas of Problem Analysis (.21), Judgment (.20), Decisiveness (.16), Leadership (.35), Oral Communication (.23), Written Communication (.19), and Organization

Ability (.40). These correlations between supervisor rating of performance and the candidates' overall ratings are significant at the $p > .05$ level (Schmitt, et al., 1983).

Method of Data Collection

One month prior to each Assessment Center held between March, 1984 and December, 1987, all Assessment Center candidates were mailed a letter explaining the research project and asking for their voluntary participation in the study. Potential volunteers were called three weeks prior to the center and asked if they were willing to participate in the study. After agreeing to participate, volunteers were informed by letter that they would be asked to complete a personal and professional data sheet and that their skill dimension ratings would be used in the study. Procedures dealing with confidentiality and signing the release of information were also included in the mailing. The volunteers were asked to return the volunteer consent form and the release of information form two weeks prior to their assessment date. Upon receipt of the consent form, the investigator sent volunteers a letter outlining the schedule, location and the responsibilities of the volunteer.

On the first day of the Assessment Center, volunteer candidates were asked to arrive one-half hour prior to the start of the Assessment Center to bring the completed and professional data sheet. The investigator checked to

see that all 300 candidates had signed a release of information so that the data sheet and the Assessment Center performance rating could be used in the investigation.

Twenty-seven months after the December, 1987 Assessment Center, PAAC superintendents or their designees were called to determine which PAAC candidates from their district have been promoted to administrative positions.

Methods of Organizing Data

The variables from the candidates' personal and professional data sheets, the assessment skill dimensions, and the promotional status of the candidates were placed on individual profile sheets. Three personal characteristics, twenty-one professional characteristics and the twelve assessment skill dimensions served as discriminating variables, and the promotional status of candidates served as nominal dependent variables. All data was analyzed on the mainframe computer Cyber 730 system at California State University, Fullerton.

Statistical Hypothesis

For the purpose of this study and to answer the general questions asked, a null hypothesis and its alternative will be tested.

Ho There are no discriminating variables among the twelve assessment skill dimensions, personal characteristics and professional characteristics that best

predict the promotion of PAAC candidates to school administration positions.

- H1 There are discriminating variables among the twelve assessment skill dimensions, personal characteristics and professional characteristics that best predict the promotion of PAAC candidates to school administration positions.

Analysis of Data

Before proceeding with the statistical analysis directly related to the hypothesis of this study, the reliability of the PAAC skill dimensions was evaluated.

The intercorrelation of the twelve mean scale scores was analyzed to determine if each skill dimension provided unique information. Correlation scores range from +1.00 to -1.00. Relatively low correlations among dimensions indicates uniqueness; high correlations indicates dimensions share information, and there is no need to measure the full set of skills.

The total group mean, standard deviation, and alpha was calculated for each of the twelve PAAC scale scores to determine interscale and intrascale reliability. Alpha scores range from 1.00 to .00; acceptable reliability for the skill dimensions was considered .80 or greater.

The primary purpose of this study was to determine the degree to which several quantitative variables could predict PAAC candidates' promotions to school

administrative positions, thus discriminant analysis was applied (Cacoullas, 1973; Eisenbeis & Avery, 1972).

Discriminant analysis examines the nature of group memberships to determine the best ways of predicting group membership. It encompasses both predictive and inferential multivariate techniques. For example, it can describe how a set of quantitative measures relate to group membership; and it can assess the statistical significance of those relationships (Cooksey, Wiseman, & Beckett, 1985), thus, the power of the discriminating variables in predicting the PAAC candidates' "promotability" to school administration positions.

The analysis and classification functions of this technique is further explained by Klecka (1975). The analysis objective is accomplished by weighting and linearly combining the discriminating variables (skill dimensions, personal characteristics, and professional characteristics) in such a way that the groups are statistically distinct as possible. This linear combination, or discriminant function, is of the form:

$$D = d_1 Z_1 + d_2 Z_2 + \dots + d_m Z_m$$

where D is the predicted group membership, the d's are the weighting coefficients, and the Z's are the standardized values of the m discriminating variables. In their standardized form the d's provide evidence of the relative predictive power of each of the m variables.

