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CONCURRENT VALIDITY OF TWO ADMINISTRATOR SELECTION
PROCEDURES

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CONCURRENT VALIDITY OF TWO
ADMINISTRATOR SELECTION PROCEDURES

by

Roger D. Breed

A DISSERTATION

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TITLE

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Selection Procedures

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CONCURRENT VALIDITY OF TWO
ADMINISTRATOR SELECTION PROCEDURES

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University of Nebraska, 1985

Adviser: Frederick C. Wendel

Purpose

The purpose in this study was the determination of the degree of concurrent validity between performance on two procedures used in the selection of school administrators. The two procedures used were a structured interview, the Administrator Perceiver Interview (API) developed by Selection Research, Incorporated, and an assessment center developed by the National Association of Secondary School Principals (NASSP).

Procedures

Administrator selection literature as well as available research on selection criteria and selection procedures was reviewed.

Two sets of scores (one from the API and one from the NASSP Assessment Center) were gathered on a sample

group (n=19). The sample group was composed of educators from one assessment center project (University of Nebraska-Lincoln). Correlation coefficients were computed between the two sets of scores. Inferential statistics were used to determine the extent of concurrent validity. Concurrent validity was indicated by the degree to which performance on the API agreed with performance on the NASSP Assessment Center.

Findings

The correlation coefficients between API total scores and NASSP Assessment Center skill dimension scores were non-significant and near zero. Only six of 156 possible correlation coefficients between API theme scores and NASSP Assessment Center skill dimension scores were significant. Of these, only the API theme Group Enhancer and the NASSP Assessment Center skill dimension Leadership purported to measure similar information and had a significant and positive correlation ($r=+0.47$). Although findings were limited by the small sample size, concurrent validity between performance on the Administrator Perceiver Interview and performance in the NASSP Assessment Center was not supported.

Conclusions

Based on the literature, both the Administrator Perceiver Interview and the NASSP Assessment Center represent acceptable procedures for use in the selection of school administrators. The interchangeability of all or parts of the API and the NASSP Assessment Center, however, was not supported in the findings of this study. Overall, for the sample group, performance on the API seemed to provide different information concerning a candidate's potential for school administration than did the NASSP Assessment Center.

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CHAPTER I

Introduction

The effect of a principal on a school's relative success or failure has been the subject of much research in the 1970s and 1980s. Researchers have identified leadership traits, skills, and behaviors of principals which have positive effects on student attitude and achievement (Henthorn, 1980). The principal is "the pivotal figure in a school--the one who most affects the quality of teacher performance and student achievement" (Lipham, 1981, p. vii).

The "principal principle," that the principal is the primary catalyst in successful schools, is a much written about and talked about topic (NSPRA, 1981). Few can doubt that the selection of effective school administrators is a crucial step in the development and maintenance of public schools which are conducive to student learning. The thrust and enthusiasm of those who have done research about effective schools, however, has not carried over into the examination of the selection of school administrators. While those doing effective schools research point to the need for effective principals, little has been written or done to improve the process by which school administrators

are identified and selected.

Only 77 articles were listed with a major descriptor of administrator selection in public elementary and secondary schools in a 1984 computer search of the Education Resources Information Center for the years 1966-1983. The authors of most of these articles described step-by-step plans to involve a variety of audiences in administrator selection while little was written about validated methods or procedures for selecting the most effective administrator. Lipham (1981) concluded:

Currently, candidates for the principalship are largely self-selected, meagerly supported, inadequately prepared and haphazardly placed.(p.19)

Validated procedures are lacking in the selection of school administrators. The most commonly used technique for the selection of school administrators is a personal interview given by untrained interviewers (Kahl, 1980). The process of attempting to select the most effective school administrator is an intuitive one in most school districts. Kahl (1980) reviewed the literature on the selection of school administrators and recommended that school districts should develop systematic, research-based selection programs; conduct

extensive planned interviews; and continuously monitor the effectiveness of the selection process.

Kahl's concluding recommendation speaks to an underlying basis for this study, that is, "Of what value are the measurement procedures now available for use in the selection of administrators?" Two procedures used in the selection of school administrators were examined to measure their relative use and value in the administrator selection process. The two procedures were the structured interview and the assessment center.

The interview has historically been a part of the personnel selection process. Interviewing was the most widely used and yet least reliable and valid personnel selection technique prior to 1960 (Thornton & Byham, 1982). The structured interview given by trained interviewers when focused on measurable dimensions and with scored responses was developed in the 1960's and was shown to have high reliability (Thornton & Byham, 1982). Studies in the 1950's and 1960's provided evidence that structured interviews, with scored responses, used for the selection of teachers, could be reliable and would significantly correlate with external criteria (Bonneau, 1957; Clifton & Hall, 1952; Dodge & Clifton, 1956; Knapp, 1955; Lieske, 1969;

Warner, 1969).

Assessment centers have been widely used in business, industry and government personnel selection and evaluation since the 1950's (Wendel & Kelley, 1983). Most large corporations in the United States use assessment center approaches as part of their personnel selection or development programs (Wendel & Kelley, 1983). An assessment center is a standardized set of procedures and activities which are multiple in number and which include one or more simulation exercises (Thornton & Byham, 1982). Assessment centers are used to assess a person's behaviors for selection, placement, development, or promotion usually in managerial positions (Wendel & Kelley, 1983). Assessment centers can accurately predict management performance and progress according to a review of criterion-related validity (Thornton and Byham, 1982).

The focus of this study was the concurrent validity of the two procedures. The structured interview used was the Administrator Perceiver Interview of Selection Research Incorporated of Lincoln, Nebraska. The assessment center used was the National Association of Secondary School Principals (NASSP) Assessment Center. Concurrent validity indicates the degree to which a subject's performance

on a test agrees with the performance on other tasks, tests or indicators in the same content area (Borg & Gall, 1983). The SRI Administrator Perceiver Interview and the NASSP Assessment Center purport to yield information on probable job related performance of potential school administrators. One may speculate that if an administrator does well on one measure, that administrator should also do well on the other. If both instruments are measuring administrator performance, then an examination of the two instruments should reveal concurrent validity and further the knowledge of their relative value in administrator selection.

Statement of the Problem

The major purpose of this study was the determination of the degree of concurrent validity between performance on two procedures used in the selection of school administrators. The two procedures were a structured interview (SRI Administrator Perceiver) and an assessment center (NASSP Assessment Center).

Statement of the Hypothesis

The following null hypothesis was tested:

There will be no significant correlations between scores on a structured interview procedure used in school administrator selection and scores on an assessment center procedure used in school administrator selection.

Definitions

- (1) Assessment Center - a standardized set of procedures and activities which are multiple in number, include one or more simulation exercises, involve multiple assessors, and which are used to assess persons for selection, placement, development, or promotion, usually in administrator positions.
- (2) Structured Interview - a standardized, low-stress, individually administered interview composed of questions on job-related issues. The questions are given and scored by trained interview specialists.

Assumptions

The following assumptions provided a frame of reference from which to interpret the study.

- (1) Each member of the sample participated fully in

completing both procedures.

- (2) The scores on both procedures remain stable over time.
- (3) While a period of years may have elapsed between the administration of the procedures, this study is considered concurrent.

Limitations

The findings of this study were limited by the number of scores, the procedures used and the statistical treatments applied to the data. Specific limitations included:

- (1) The pool of scores was drawn from one university's assessment center project.
- (2) The pool of scores was limited to those administrators volunteering the use of their scores from both procedures.
- (3) The time period between the structured interview scores and the assessment center score was as much as eight years.
- (4) This study was subject to those weaknesses inherent in the procedures examined as well as the statistical correlation methodologies used.

Significance of the Study

The selection of effective school administrators is pivotal to the effectiveness of public schools. The intent of this study was to examine the status of school administrator selection in general and the value and use of two selection procedures, specifically. The body of professional knowledge about administrator selection should be increased as a result of this study. Findings of this study should indicate evidence, if any, of the value and use of the structured interview and the assessment center in administrator selection. Evidence of the interchangeability of these two selection procedures was developed in this study. This knowledge could assist researchers and practitioners in further investigating concurrent validity of the many selection procedures presently used in the selection of public school administrators.

Organization of the Study

The purpose of this chapter was to introduce and state the problem investigated. The hypothesis was stated and appropriate terms, assumptions and limitations were defined. Finally, the justification for the study was given. Chapter 2 includes a review

of related literature regarding administrator selection. Literature on selection criteria, selection procedures, recommended practices and other issues related to the selection of public school administrators was included in the review. The third chapter contains an explanation of the procedures used in this study. In addition, Chapter 3 includes a description of the sample and an explanation of the two instruments (selection procedures) used in this study (SRI Administrator Perceiver Interview and NASSP Assessment Center). The fourth chapter contains a presentation of and an analysis of the data. Chapter 5 contains a summary of the findings, conclusions of the study and recommendations for further studies.

CHAPTER II

Review of the Literature

The review of the literature is divided into three sections. The first section is an examination of the writings relative to administrator selection including status studies and selection criteria. The literature relative to specific selection procedures including application forms, letters of recommendation, tests, interviews and assessment centers is surveyed in the second part. The literature pertaining to recommended practices for administrator selection is reviewed in the third section.

Administrator Selection

Status Studies

The importance of administrator selection in public elementary and secondary schools was underscored by several studies in the 1980's which tied measures of school success to school principal behaviors (Lipham, 1981). Additional studies consistently showed a positive relationship between the leadership and human relations skills of a principal and certain school attributes (Cross, 1981). This linkage between effective principal and effective school, however, has not resulted in new and improved procedures for the

selection of school administrators. Nearly all selection procedures in use today were in use more than 30 years ago (Harlan, Klemp and Schaalman, 1980). Administrator selection practices remain "unsystematic, based on myths and unsupported by research" (Newberry, 1977, p.41).

Substantiation of the lack of progress in administrator selection procedures was found in a review of several status studies of administrator selection (Newberry, 1975; Lucio & McNeil, 1969; McIntyre, 1974; McIntyre, 1979; Kahl, 1980; and Baltzell & Dentler, 1983). School districts seldom have a written policy for administrator selection; seldom have a job description; make little use of consultants; leave selection decisions to superintendents, personnel directors, or boards of education; and rely on interviews, references and reports of past performance as primary sources of information according to one study of the procedures and criteria used to select elementary principals in British Columbia, Canada (Newberry, 1975). In the United States, several studies on selection of school administrators have findings consistent with Newberry's (Lucio & McNeil, 1969; Kahl, 1980; and Baltzell & Dentler, 1983).

Wagstaff and Spillman (1974) pointed out that the traditional route to the principalship is a four step process. First, prospective principals self-select from the teacher ranks. Second, they complete a graduate program in educational administration. Third, they meet state certification requirements. Fourth, they safely navigate through a selection process at the local school district level (Wagstaff and Spillman, 1974).

Researchers in an extensive study sponsored by the National Education Association reported that school districts recruited heavily by means of advertisements and announcements to placement bureaus of colleges and universities, followed by a two part selection process (Lucio & McNeil, 1969). First, school district personnel screened candidates on the basis of paper qualifications followed by written or oral examinations. The written examinations were used least often and consisted of questions about the candidate's philosophy of education. The oral examinations were either informal or structured interviews. Examinations were then evaluated by appointed committee members who made a recommendation to the superintendent.

In a 1977 study prepared for the California State Legislature, researchers described the common steps

used by California school district officials in selecting administrators. These steps included (a) screening the applications, letters and references of the candidates; (b) ranking the candidates; (c) interviewing finalists by a committee; (d) selection decision by the superintendent; and (e) approval by the school board (California State Legislature, 1977). In the California study, researchers concluded that most districts had no written policies for administrator selection and that "the likelihood of selection depended on the contacts the candidate had in the central office" (California State Legislature, 1977, pg. 26).

After reviewing teacher and administrator selection processes covering the years 1965-1980, Kahl (1980) also reported that most school districts lacked established policies for the selection of teachers or administrators and that school district personnel relied on information gathered from interviews, academic credentials and personal references. Kahl (1980) further noted that there was very definitely a political aspect to the administrator selection process and that the process often operated on the "who you know, not what you know" system (p.16). Kahl recommended that personnel in school districts "could

learn much from business and industry where the importance of the executive selection process is recognized and extensive and systematic programs are more frequently used" (1981, p.5). Kahl further noted there was substantial evidence that the effectiveness of different selection methods depended largely on the nature of the local school district environment. From his review of several studies, Kahl concluded that the research clearly pointed to the "desirability of locally established selection procedures and criteria" (1980, p.31).

In a nationwide study conducted to identify variations and commonalities in principal selection processes, researchers also reported on the significance of local customs and traditions in the selection of school principals (Baltzell & Dentler, 1983). After closely investigating the selection processes in ten randomly sampled, geographically dispersed school districts with enrollments of 10,000 or more students, the researchers found "striking commonalities across districts" (Baltzell and Dentler, 1983, p.3). The common selection characteristics included: (a) superintendent and key deputies firmly controlled the selection process; (b) many factors such as promotions, seniority, parent concerns, faculty

concerns, meeting equity requirements and education leadership merits impacted the selection decision; (c) local definitions of "fit" and "image" often dominated the selection criteria; (d) the comparative consequences of the various technical selection procedures were "cloudy"; (e) clearly articulated criteria and reasons for the selection decision were not made; and (f) selection processes were not characterized as merit based or equity centered. "It is the aims embodied in local history and culture which dictate and shape the real outcomes of principal selection--not techniques," concluded Baltzell and Dentler (p.10).

Baltzell and Dentler (1983) did report on some districts using "promising" alternative procedures to select principals. These districts used procedures which provided more objective, reliable and comprehensive data for assessing applicants than the more conventional practices. Three procedures were described: (1) assessment centers; (2) district operated internships; and (3) exemplary conventional practices.

Four methods for selecting educational administrators were used by school boards according to Tesolowski and Morgan (1980). The four methods were

(a) the personal preference approach where selection is based on an "implicit feeling of the board and is conditioned by board biases, prejudices, and values"; (b) the background approach where the work histories of potential managers are closely examined to see if they resemble the histories of successful managers; (c) the internal characteristics approach which "uses aptitude measures to predict job success"; and (d) the behavioral or skills approach which uses tests and scientific methods to predict future success based on a "comparison of past behavior patterns of successful administrators and job requirements" (Tesolowski & Morgan, 1980, p.108). The most frequently used method according to Tesolowski and Morgan was the personal preference method. The authors concluded that "none of these selection methods is valid when utilized alone" (p.108). Tesolowski and Morgan (1980) recommended that school boards consider assessment centers which can provide less biased, more reliable information for school boards in the complex task of selecting educational managers.

Overall, personnel in school districts employed unsystematic practices in the selection of school administrators (Newberry, 1977) and the process was not governed by written school board policies (Kahl, 1980).

Procedures used to select school administrators were less than rigorous (McIntyre, 1974); often constrained by local conventions and competing interests (Baltzell & Dentler, 1983); and lacking in effective programs for identifying and recruiting talented candidates for school leadership positions (Wagstaff & Spillman, 1974).

Criteria for Selection of School Administrators

Selection criteria are specific items of information gathered by school district officials and used to assess job applicants (Kahl, 1980). Selection criteria are the bench marks and the litmus tests used to identify the best candidate for a particular job. The use of well defined criteria when selecting school administrators "presents an alternative to vibrations or intuitive feelings" in the screening process (Newberry, 1975, p.41). A variety of personal characteristics, professional skills, and miscellaneous factors is used as selection criteria for public school administrators.

School district hiring officials seek administrators who possess "humanistic qualities" (Bryant, 1978). In his study of administrator selection criteria, Bryant (1978) reported school district officials also sought administrators who were

well-groomed; wrote business-like letters of application; had previous administrative experience and good letters of recommendation; and were well-spoken, self-confident and poised (p.2).

Deever and Jurs (1975) surveyed 78 school districts in eight states to identify the criteria used by school districts in the administrator selection process. Superintendents were asked to rank order eleven administrator selection criteria. The researchers concluded that the selection process encompassed two areas of criteria--personal characteristics and professional characteristics. The summarized rankings were:

1. Professional Competence
2. Professional Leadership
3. Human Relations
4. Personal Motivational Characteristics
5. Intelligence
6. Professional Training and Experience
7. Recommendations
8. Philosophy
9. Personal Characteristics
10. Social-Economic Characteristics
11. Personal Data (Deever & Jurs, 1975, p.2)

Newberry (1975), in his study of administrator

selection in British Columbia, also described professional and personal characteristics used as selection criteria. According to Newberry, the five most commonly used personal criteria were mature judgment, scholarship, personal security, group skills and good health. Commonly used professional criteria included human relations skills, classroom teaching experience, decision-making skills, community relations skills and administrative technical skills. Newberry (1975) noted considerable attention given to age and length of classroom teaching experience.

Teitelbaum (1972) sought to determine the most important professional and personal criteria for selecting elementary principals for inner city schools. The study investigated opinions of educators (all principals, assistant principals, and school secretaries) and a sample of community representatives in 77 inner-city schools. A questionnaire was administered to the professional educators and lay persons, with over 1400 questionnaires tabulated. The results indicated considerable agreement about which criteria were most important. The rankings of administrative characteristics were:

<u>Personal</u>	<u>Professional</u>
1. Good human relations	1. Administrative and supervisory skill
2. Innovative	2. Relates well with
3. Integrity	parents and
4. Fair minded	community
5. Good humored	3. Dedication
6. Scholarship	4. Personal character
7. Child oriented	5. Innovative and
8. Charisma	skilled in
9. Emotional stability	evaluation
10. Dedication	6. Professional activities
11. Good staff relations	7. Child oriented
12. Relates well with parents and community	8. Teaching skill and experience
13. Administration and Supervision	9. Intelligence
14. Decision making	10. Educational background
15. Personal appearance and health	11. Human relations skills
16. Communication	12. Charisma
	13. Varied background
	14. Staff relations

skills

17. Authoritative

18. Teaching skill and
experience

19. Humility (Teitelbaum, 1972, p.20)

Wagstaff and Spillman (1974), following their review of 15 studies on the "traitist approach to identifying leaders" (p.35), recommended eight attributes to consider in selecting elementary principals.

1. Commitment to the elementary school
principalship

2. Self confidence

3. Penchant for ambiguity and uncertainty

4. Insights into the interrelatedness of the
school to itself and its environment

5. Empathy

6. Ability to communicate

7. Acceptance of and willingness to cope with
conflict

8. Knowledge of and skill in human relations
(p.37)

Leadership was a widely accepted criterion for selection of administrators (Kahl, 1980, p.43). Lucio and McNeil (1969) in their National Education

Association study of the selection of administrators noted the extensive use of leadership as a criterion. These authors also distinguished between leadership traits and the effect of leadership; stating that "it is more important to know if an individual has had any effect in a leadership role than to know if he or she has some characteristics of a leader" (p.43).

Researchers in a 1977 study of California administrator selection methods which resulted in a report to the California State Legislature, stated that aside from the criterion of leadership potential, there were no fool proof predictors of successful performance as a school principal. According to the report, this situation existed because successful administrators have different personality types and schools have different needs (California State Legislature, 1977).

Poteet (1968) surveyed superintendents in Texas to determine the criteria used in selecting elementary school principals. The result of that study was a diverse and lengthy list of characteristics. Most frequently mentioned characteristics were personal qualities, such as honesty and loyalty. Next were professional qualities, and finally came background variables, such as political affiliation and religion. Poteet concluded that (a) some, but not extensive

teaching experience was required; (b) "local tailoring" of selection criteria was necessary and consistency between the philosophy of education of the candidate and that of the district was essential; (c) leadership ability was a critical factor; and (d) that considerable information about the position and local conditions be given to the candidate (p.45).

Evidence of the importance of "local tailoring" was also reported in several other studies (Morphet & Schultz, 1966; Faber & Shearren, 1970; Miner, 1967; Cross, 1981; Baltzell & Dentler, 1983; and Kahl, 1980). The qualities, characteristics, and skills required in a leader are "determined to a large extent by the demands of the situation in which he is to function as a leader" (Faber & Shearren, 1970, p.310). "A match between the values and philosophy of an administrator and those of the district or community is essential" (Kahl, 1980, p.52). Put another way, Baltzell and Dentler (1983) held that "given many competing aims that are involved in any administrator appointment and the fact that 'educational leadership' is difficult to define and measure, fit or image often come to dominate the selection criteria" (p.3). After candidates meet state certification requirements and acquire a few years of teaching experience, "they

compete for administrative jobs on the basis of their fit to local values and customary ways of doing things" (Baltzell & Dentler, 1983, p.4).

Job placement of principals often "ignores the need to match particular capabilities to a particular job," concluded Gorton and McIntyre (1978) for the National Association of Secondary School Principals (NASSP) after a large scale study of the high school principalship. The NASSP researchers first characterized the typical principal and then conducted indepth interviews with sixty effective principals and the students, teachers, parents and central-office administrators in their schools. The NASSP researchers recommended that school district officials systematically search for and select administrators who have the following characteristics:

1. They use problem analysis to determine what is important in a situation. They use good judgment in identifying educational needs, perceive differences in requirements and expectations and are decisive when they need to be.
2. They communicate clearly with a variety of audiences, plan and organize well and possess strong interpersonal skills.

3. They are tactful, sensitive and emotionally stable and encourage confidence.
4. They are highly motivated and sufficiently flexible to respond to change.
5. They have adequate professional knowledge including understanding leadership, curriculum development, school law, school management, human relations and community relations. (NASSP, 1981, p.101-103).

Several authors reported widespread use of factors such as age, sex, teaching or administrative experience, and graduate hours as selection criteria (Campbell, 1971; Newberry, 1977; McIntyre, 1974; McIntyre, 1979, Wagstaff & Spillman, 1974, Cross, 1981; and Baltzell & Dentler, 1983). Kahl (1980) noted there were many districts which attached far too much significance to irrelevant factors such as "sex, age, marital status and length of teaching experience" (p.51). The simplistic ideas that good teachers make good principals and that a certain number of years of experience was a critical variable were widely held (Newberry, 1977, p.42). Baltzell and Dentler (1983) quoted one observer's opinion of the administrator selection criterion in his district:

Administrators were chosen by what

everybody's image of what a principal should be--tall, dignified, white-haired, father figure (p.38).

Selection criteria such as age, marital status, sex, race and national origin, if used by districts for selection, are illegal. Title VII of the Civil Rights Act of 1964 and subsequent legislation including the Age Discrimination in Employment Act of 1967, Title IX of the Education Amendments of 1972 and the Rehabilitation Act of 1973 form the legislative foundation for equal employment opportunity in the United States (Schustereit, 1980). These laws prohibit employment discrimination on the basis of religion, race or national origin, age, sex, or non-related handicaps, respectively. Supreme Court decisions such as Griggs v. Duke Power Company (1971) have strengthened the equal opportunity laws (Schustereit, 1980). The impact of these laws is to require employers to demonstrate statistically or rationally the relationship between selection criteria and jobs and to document carefully the fairness of selection procedures to protected groups (Harlan, Klemp, & Schaalman, 1980).

In a state-of-the-practice study of occupational assessment in business and education, researchers

recommended the use of competencies as selection criteria (Klemp, 1980). Competencies according to this report were defined as "characteristics of an individual that underlie effective work performance" (Klemp, 1980, p.9). Competencies must be "explicitly" job-related and could include knowledge, experience, skills, traits or motives. If properly developed and applied, competencies would meet the requirements of equal employment opportunity legislation (Harlan, Klemp, Schaalman, 1980, p.2). Competency measures, however, aside from some application in assessment centers, were rarely used in education (Harlan, Klemp, Schaalman, 1980, p.7).

The specific information or criteria used by school district officials to assess school administration candidates ranged from grooming habits to complex skills as educational leadership. Local conventions, customs and the competing aims of various audiences in the public school setting influenced the development and application of selection criteria. Prior teaching or administration experience, leadership, and human relation skills were the most often mentioned criteria in the literature (Kahl, 1980). There was little evidence in the literature that administrator selection criteria were

competency-based or matched with specific administrative job requirements (Harlan, Klemp, Schaalman, 1980).

Predictive Qualities of Selection Criteria

Studies of the predictive quality of administrator selection criterion are relatively few in number and often inconclusive (Yukl, 1981). Researchers have been more successful in identifying criteria that do not have a relationship with successful administrative performance than in identifying criteria that correlate with successful administrative performance.

The personal characteristics of sex, teaching experience, completion of academic courses, state certification requirements, marital status, and age were largely discredited in the research even though many school districts continue to use these criteria in the selection process (Kahl, 1980). Michish (1971) studied the success of women as elementary school principals and concluded, "Women are often superior administrators especially when dealing with staff morale." Campbell (1971) studied administrator evaluation factors and concluded that there was no convincing evidence that experience in teaching was related to success in school administration. Conceptually, principals have an "adult-to-adult

function as compared with the adult-to-child role of the school teacher" (Sarason, 1971, p.112). In one study, researchers reported that the completion of some graduate courses in educational administration had a negative relationship with the performance of executives in a professionally staffed organization (Gross & Herriot, 1966). Wagstaff and Spillman (1974) concluded that state certification requirements are often the product of "professional compromise" with little evidence that the various required components make any difference in the effectiveness or ineffectiveness of school administrators (p.36). Research on an applicant's age and marital status showed that these criteria had no merit as selection criteria for school administrators (Newberry, 1977; AASA, 1967).

Thyberg (1965) reported that various measures of interpersonal relations did not differentiate among candidates. He concluded that the selection of school administrators was still a judgmental process and that "the judgment of competent, trained administrators was the most reliable method of evaluating candidates" (p.46).

Research conducted in business organizations has revealed a strong association between an individual's

motivation to assume management responsibilities and actual success in managerial work. Miner (1965) conducted a study of graduate students in educational administration and other graduate students preparing for other types of work in a school system to see if future school administrators had higher levels of managerial motivation. He reported that potential school administrators are no more likely to have higher levels of management motivation than those seeking careers in teaching.

Some researchers, however, have indicated predictive criteria for administrator selection. McIntyre (1979) stated that the role of the educational administrator required a "moderate level of scholarship a breadth of knowledge, and the ability to speak and write accurately and forcefully" (p.32). McIntyre (1979) recommended the intelligence testing of administrators and concluded that correlations between job performance and intelligence testing and communication skills "tend to be low but positive" (p.32). Similarly, Wagstaff and Spillman (1974), after surveying fifteen studies of administrator traits, described the average principal in a "position of leadership exceeds the average member of the school in the following respects: intelligence, scholarship,

dependability in exercising responsibilities, activity and social participation" (p.36).

Possible criteria for administrator selection appeared in the research studies of leadership behavior and effective schools. Task orientation and human relations orientation, two dimensions of leadership, were "consistently related to positive school climate, teacher morale and school innovativeness" (Katz & Kahn, 1978, p.546). Effective schools researchers also described principals of schools in which student learning exceeded the predicted levels of learning for the student population. The principals in these schools were assertive, achievement-oriented leaders with the managerial and human relations skills to set high expectations for teachers and students and to maintain an orderly and peaceful school climate (Schoemaker & Fraser, 1981). Blumberg and Greenfield (1980) found that successful principals efficiently satisfied routine organizational demand and allocated more time and effort to activities directly related to improving organizational performance such as curriculum planning and teacher development.

Researchers used an extensive job analysis to establish a set of skill dimensions essential to the performance of a school principal as a part of the

development of the National Association of Secondary Schools Principal's Assessment Center (Schmitt, 1980). The twelve skill dimensions are: (1) problem analysis, (2) judgment, (3) organizational ability, (4) decisiveness, (5) leadership, (6) sensitivity, (7) range of interests, (8) personal motivation, (9) stress tolerance, (10) educational values, (11) oral communications and (12) written communications. The skill dimensions represent three broad skill clusters: (a) administrative skills (problem analysis, judgment, organizational ability, and decisiveness); (b) interpersonal skills (leadership, sensitivity, range of interests and stress tolerance); and (c) communication skills (written and oral communications) as well as two dimensions (personal motivation and educational values) which may be classified as "others" (Wendel & Kelley, 1983, p.12). The NASSP skill dimensions are job relevant, that is explicitly related to subsequent measures of job performance and school climate (Schmitt, 1984). Hersey (1982) stated that the NASSP skill dimensions, when assessed in an assessment center setting, were valid predictors of the job success of administrator personnel.

The effectiveness of different selection criteria were partly dependent on the nature of the local

environment (Kahl, 1980). Researchers have repeatedly found the significance and impact of local characteristics, customs and values in developing and applying selection criteria (Miner, 1967; Morphet & Schultz, 1966; Baltzell & Dentler, 1983). One selection criterion, philosophy of education, was used by Kahl (1980) to illustrate the impact of local customs on selection procedures. A well-formulated philosophy of education was important for school administrators (Kahn, 1980; NASSP, 1981). Thus, a match between local values and an administrator's philosophy of education was essential (Kahl, 1980). Heller (1975) concluded that the subjective consideration of community factors and expectations became much more important after the initial screening of candidates. Heller's (1975) rationale was that after the initial screening of applicants' credentials, all the remaining candidates had the necessary qualifications, thus the "gut reactions" and local values "fit" became more dominant criteria.

In a related issue, Kleinman (1960) stated that the job descriptions and the characteristics of the job vacancy must not be overlooked. Reasoning that selection is a "two-way process", Kleinman (1960) concluded that if candidates have sufficient

information about a vacancy and the situational factors, those selected are less likely to be dissatisfied (p.31).

The predictive qualities of selection criteria are also related to the methods used to develop the selection criteria. Three approaches are used to develop selection criteria: (a) "armchair theoretic", (b) factor analytic, and (c) empirical (Dunette, 1966). In the armchair theoretic approach, one or more experts in the field are asked to list the skills or characteristics required for a given job. The factor analytic approach includes a job task analysis in which the components of a particular job are described, correlated and factor analyzed to yield the basic skill or behavior dimensions required to do the job. In the empirical approach, skills or characteristics which differentiate the performance of individuals are identified by observing and describing the differences in behaviors of individuals from different criterion groups (e.g. effective and ineffective principals). Selection criteria drawn from the empirical method demonstrated the greatest usefulness in identifying potential outstanding job performance; followed by criteria drawn from the factor analytic approach. Least useful in predicting job performance are

selection criteria drawn from the "armchair theoretic" approach (Huff, et.al., 1980).

School district personnel choose selection criteria primarily by use of the "armchair theoretic" method. School district personnel employ experts or consultants (or others who should know) to identify the personal characteristics and professional skills necessary for successful administrator performance (Kahl, 1980). One may conclude that such criteria may have little validity in predicting actual job performance. Only in a few instances (such as the NASSP Assessment Center) were efforts made to identify empirically administrator selection criteria.

The research on the quality of administrator selection criteria was characterized by problems of homogeneity of sample subjects (only selected candidates were studied), difficulties in defining successful job performance; and sparsity (Kahl, 1980; Ryans, 1967). While researchers since the late 1970's have developed job related criteria for distinguishing between effective and ineffective administrators, such as effective principals' characteristics and the NASSP skill dimensions, few school districts are using these criteria for actual selection (Harlan, Klemp, & Schaalmann, 1980).

McIntyre (1974) summarized that "it is a truism in the selection business that the best evidence of one's future behavior in a given situation is his present and past behavior in similar situations" (p.33). This widely accepted belief, coupled with the impact of local, situational factors on selection criteria and the sparsity of valid predictive selection criteria, may indicate the increased value of internships, assessment centers or other methods of training and identifying potential administrators (McIntyre, 1974; Cornett, 1983; and Erickson & Shinn, 1977).

Administrator Selection Procedures

Selection procedures are the methods of gathering and using information about prospective administrators. Selection procedures were reported as being similar across school districts and regions (Baltzell and Dentler, 1983). The typical procedure included the use of letters of application, application forms, recommendations and interviews (Bryant, 1978). The usual sequence of steps for selecting a school administrator began with advertising the administrator vacancy and contacting college or university placement offices. Following the announcement of the vacancy, school district selection procedures commonly included: a) receiving letters of application from candidates,

b) receiving completed application forms from candidates, c) receiving credentials from a candidate's college or university, d) screening the written information about candidates to narrow the field, e) contacting references, f) selecting the interview pool, g) interviewing the finalists and h) making the selection recommendation (AASA, 1981).

Researchers examined the total selection process and suggested a variety of methods to reduce possible bias and to improve the objectivity of the selection process. Kahl (1980) concluded that the general consensus of researchers was that several people should be involved in the process of evaluating candidates. Fuhr (1977) demonstrated the importance of involving personnel who would work with new persons after their selection; and Cross and Davis (1974) recommended the careful selection, training and use of screening committees and interview teams. Reynolds (1976) had 66 hiring officials rank 24 candidates on the basis of a videotaped lesson, an interview and a resume. She concluded that global perceptions of candidates were the dominant factor and that when multiple procedures were used the selection process was improved. Several researchers reported the need for greater objectivity in the selection process (Chadwick, 1971; McIntyre,

1974; Medley, 1967; and Redfern, 1980). Kahl (1980) summarized, "While both objective and subjective approaches have merit, the most desirable strategy would be to use a combination of techniques for evaluating candidates" (p.32).

Since selection procedures are general ways of measuring selection criteria, the value of a selection procedure depends on its reliability and validity. Reliability refers to the consistency of the selection procedure. For example, different selection officials using the same procedure should come up with the same findings with respect to the same candidates, or a single selection official should arrive at the same result with a repetition of the procedure. A valid selection procedure accomplishes its purpose; a selection procedure that generally results in the selection of effective school administrators would be considered valid. Research findings on the reliability and validity of selection procedures used for selecting school administrators, however, were relatively sparse (Harlan, Klemp, Schaalman, 1980). Some parallel research from studies of manager selection in business and industry were included in the discussion of the most common selection procedures.

Application Forms

Most school districts require job candidates to complete an application form (Baltzell & Dentler, 1983). Application forms are easy to construct, inexpensive and can be designed to include only the questions of concern to school district hiring officials. Generally, application forms are used to gather biographical, educational and work experience information. By having candidates complete application forms, school district officials gain information on the candidate's literacy, spelling, grammar and usage, as well as neatness and the ability to follow simple directions. Bryant (1978) reported on the importance to hiring officials of neat and businesslike written materials from administrator candidates. In sum, "accurately completed application forms provide an uncomplicated profile of an applicant's skill and job-related experience" (Harlan, Klemp, & Schaalman, 1980, p.53).

The reliability of an application form generally has not been an issue because it is a self-reporting document. One problem with application forms is that candidates may falsify information in order to enhance their chances for a job. One study of entry level managers reported that applicant information may disagree with verified information as much as 57

percent of the time (Goldstein, 1971). Researchers in other studies involving incumbents who did not need to sell themselves for the job (Cascio, 1975) and applicants who were led to believe that a faking scale was included in the application blank (Schrader & Osburn, 1972), reported that application form information was highly reliable.

Manager selection researchers reported that application form data has some utility for the prediction of job performance. Asher (1972) studied the personal, education and job history information from application forms and reported that rigorously defined items, which were cross validated with job requirements, produced validity coefficients over .60. Thayer (1977) and Roach (1971) found similar validities with application form items which were carefully related to specific job characteristics.

Letters of Recommendation

Letters of recommendation or reference letters were required by most school districts from administrator applicants (Bryant, 1978). Hiring officials used letters of recommendation to obtain information on job-related skills, applicant character, work habits and employment history. Letters of recommendation were usually written at the request of

the person being recommended and often maintained in a university credential file. The research on letters of recommendation in school administrator selection was rare and generally suggested that selectors of personnel should be extremely wary about placing much confidence in such letters. "Our studies show that predictions about people are only slightly, if any, more accurate with letters of recommendation than without them" (McIntyre, 1974, p.33).

One study attempted to relate the content of letters of recommendation to measurable attributes of the people about whom the letters were written (Bozarth, 1956). Bozarth (1956) found a correlation of .00 between statements concerning intelligence, as categorized and weighted by a jury and combined scores on the Miller Analogies and the Watson-Glaser Critical Thinking Appraisal. Similar correlations were reported (.15 and -.08) when statements concerned social acceptability were compared with standings on a peer acceptance inventory for two different groups (Bozarth, 1956).

Letters of recommendation were reported as generally unreliable in studies reviewed by Harlan, Klemp and Schaalman (1980). These researchers reasoned that different supervisors have different levels of

skill in writing, communicating, and evaluating, resulting in interrater unreliability. Employers reacted more favorably to well-written recommendations, regardless of the quality of the candidate described (Mosel & Gohen, 1959). Mosel and Gohen (1959) concluded that judgments based on reference quality rather than content may be invalid, reflecting more on the writer than the subject of the letter of recommendation. Researchers also reported that there is some evidence that employers stereotyped authors of recommendations by their sex and judged recommendations accordingly (Kruger & Shikiar, 1979). Further, employers reacted more favorably to confidential files (where the right to review references has been waived by the candidate) regardless of the recommendations on candidate competence (Shaffer, et.al., 1976). In a study using Wisconsin school officials, however, Lewis and Korschgen (1982) concluded that there were no significant differences in the way hiring officials evaluated confidential, non-confidential, or non-descriptive recommendations. Still, letters of recommendation include useful information on the applicant's character and performance in past jobs (Mosel, 1958), particularly if selection officials verified the content of letters and were trained to

attend to content rather than the style of the reference (Harlan, Klemp & Schaalman, 1980).

Interviews

Kahl (1980) reviewed school district selection procedures and concluded that "the personal interview is the information gathering technique most utilized and it is likely that the interview will remain the most important selection procedure" (p.5). The typical interview process consists of a conversation between an applicant and one or more hiring officials. The personal interview has high face validity in employment situations because of the reasonableness of the idea that an employer should directly meet and question a potential employee prior to an employment decision. Interviewing can be of some value, but McIntyre (1974) cautions that "our impressions from interviews are wrong about as often as they are right" (p.33).

Unlike application forms and letters of recommendations, the interview was extensively studied in the literature. Wagner (1949) reported reviewing 106 titles referring specifically to the selection interview; Mayfield (1964) reported reviewing over 300. Of these studies, approximately 25 percent were based on research evidence (Carlson, 1972). While most of these studies were conducted in business and industry,

Kahl (1980) and Muller (1979) reported little difference in the use of the selection interview in education as compared to other fields. The widespread use of the selection interview was confirmed by several studies (Campbell, 1977; Baltzell & Dentler, 1983, and Harlan, Klemp & Schaalman, 1980).

Three formats for interviews were described in the literature. They were the: (a) laissez-faire or unguided interview, (b) semi-structured interview, and (c) structured interview. The semi-structured interview was described as the most used form (Harlan, Klemp & Schaalman, 1980). In this form of interview, the interviewer has to cover certain broad areas such as education, work experience and past accomplishments but retains discretion over the exact order of questions and time. The semi-structured interview resulted in certain data from all interviewees but did not assure comparable data across interviewers and interviewees. The second most used interview form, according to Harlan, Klemp & Schaalman (1980), was the laissez-faire or unguided interview wherein the interviewer was not bound by questions or areas. This type of interview resulted in high spontaneity but lacked standardization. The least used interview was the structured interview. In a structured interview,

the interviewer followed a specific script of questions. This procedure has a high degree of standardization thus increasing the reliability and validity of the interview (Schwab & Henneman, 1969). An example of a structured selection interview is the Administrator Perceiver Interview developed by Selection Research Incorporated. The Administrator Perceiver Interview is used in this study and its development, use, reliability and validity is discussed in Chapter III.

The most commonly used technique for the selection of school administrators was a semi-structured personal interview given by untrained interviewers (Kahl, 1980). Wood (1979) studied teacher selection and identified that the interview was the determining factor in selection of beginning teachers. Researchers have attempted to use the interview to evaluate 96 different traits or dimensions (Wagner, 1949). Wagner (1949) reported that the interview was most often used to measure a candidate's overall ability, physical appearance, manner, intelligence, judgment and voice quality. The validity of the interview procedure has been assessed against such criteria as performance ratings, success in training and job tenure. Rundquist (1947) reported that higher validities were achieved

for the interview by restricting the scope of the interview to assessing only the social interaction skills of the applicant. Sociability or interpersonal relations were the areas most accurately assessed by the interview according to several studies (Otis, Campbell & Prien, 1962; Holt, 1958; and Loevinger, 1959; Grant & Bray, 1969). Overall, regardless of the criteria used, reported validities for the selection interview were low (Harlan, Klemp, & Schaalman, 1980).

The reliability of the selection interview was low in non-standardized, unstructured interviews (Thornton & Byham, 1982). One problem reported was lack of consistency (Carlson, 1972). Different interviewers may take different approaches with different candidates. The same interviewer may not ask the same questions of different candidates or may vary the emphasis given to various questions. Low reliability of the selection interview resulted when one or more interviewers evaluated a candidate (Ulrich & Trumbo, 1965). School district hiring officials relying on the unstructured interview run the risk of creating a series of serious problems. Mullins and Davis (1981) reported that these problems included: (a) over-confidence in decisions made on basis of interview, (b) overly talkative interviewers, (c) inconsistency

of questions, (d) central tendency errors where some interviewers tend to rate almost all applicants as average, (e) halo and contrast effects where interviewers are overly influenced by one characteristic or by prior interviews, (f) stereotyping, (g) personal bias, and (h) inappropriate or illegal questions. Further, Mullins and Davis (1981) concluded that the unstructured interview was "extremely vulnerable to charges of unfair discrimination because it is unstandardized and subjective" (p.67).

Higher reliabilities were reported when interviews were structured. The reliability of interviews improved when structure such as a standard set of job-related questions and the use of a written interview guide were used (Schwab & Heneman, 1969). When interviewers were provided with more information about the position being filled, reliability was also increased (Langdale & Weitz, 1973). Rating forms used in conjunction with the interviews which assured that the interviewer would address all the required factors increased reliability of the interview process (Bailey, 1974). Bolton (1970) described the skill of the interviewers as one of the most important factors in the selection interview process and recommended the

training, practice and evaluation of interviewers. Training of school administrators involved in selection to help them become aware of their personal biases and to increase their consistency was also recommended by several researchers (Brown, 1968; Borman, 1975; and Rix, 1981). In spite of the fact that structuring the interview improved reliability, the validity of the selection interview remained low (Heneman, et.al., 1975).

The selection interview may still be a functional component in the selection process particularly in the assessment of interpersonal relations skills of candidates, and its use, already widespread, was reported as growing (Harlan, Klemp, Schaalman, 1980). Further, extensive, planned interviews with trained interviewers accomplished far more than superficial unstructured interviews (Kahl, 1980). Overall, however, the selection interview has limited value because of its low validity and numerous possibilities for errors (Mullins & Davis, 1981).

Testing

Several thousand tests have been used in the selection of employees to measure many different attributes: general intelligence, personality characteristics, content knowledge, perceptual and

motor skills (Harlan, Klemp, & Schaalman, 1980). Few tests, however, are used in the selection of school administrators (Kahl, 1980).

McIntyre (1974) recommended intelligence testing of school administrator candidates and stated "whatever it is such tests measure is not a liability but may be an asset for school principals" (p.32). Ghiselli (1973) examined the validity studies from 1921 to 1971 using occupational samples. He computed the average validity coefficients for the criteria of training and job proficiency. He found that general intelligence tests appeared to be much better predictors of success in job training than in predicting job performance. Further, Ghiselli (1973) concluded that general intelligence tests were most useful, because of their scholastic nature, in managerial occupations.

Generally, testing of school administrator candidates occurred as a part of initial screening or as a qualifying examination for administrative certification. School districts such as Dallas Independent School District in Dallas, Texas, and the Clearwater School District of Clearwater, Florida, required basic skills tests of all applicants (Engel & Erion, 1984). Dallas Independent School District requires all candidates to take the Wesman Personnel

Classification Test. This test is a 28 minute test of verbal and quantitative ability. Since 1976, Clearwater School District has required applicants to pass a test of reading comprehension and arithmetic competency. These tests were based on the underlying philosophy that minimal competency in language, reading and math skills were essential if other necessary competencies were to reach acceptability (Engel & Erion, 1984). Further, several states require some form of basic skills test for certification purposes (Hathaway, 1980). One example is Colorado which requires all candidates for certification to take five sections of the California Achievement Test. The required sections are spelling, language mechanics, language usage, math applications and math concepts. A 75th percentile score or higher is required in all areas to pass. Colorado Commissioner of Education Calvin M. Frazier defended his state's use of competency testing stating:

Individuals have challenged us to show that basic skills screening supports better education. I doubt that research confirms such a relationship, but certainly no research would show that having basic competencies hurts educators (1983, p.73).

The ease of administering standardized tests coupled with their objectivity make testing a captivating option for hiring officials and the public at large (Engel & Erion, 1984). Several researchers expressed caution over the use of tests. Harris (1979) advised that testing be employed only for gross screening purposes, serving as a red flag, just as would poor transcripts or poor recommendations. Smith (1980) asserted that there is no standard test available today that can accurately measure or predict teaching or administrator performance. The American Association of School Administrators (1981) concluded that testing is a sensitive business due to demonstrated discriminatory impact of some psychometric tests but that testing should be considered as a part of the selection process to give hiring officials a better idea of the candidate's thinking skills and abilities. McIntyre (1974) concluded that there is ample evidence of the usefulness of standardized tests in the initial selection of personnel, "provided that test performance was only one of the many pieces of evidence that is used and provided that inflexible test score cut off points are not used" (p.31).

Assessment Centers

An assessment center is a comprehensive,

standardized procedure in which multiple assessment techniques such as situational exercises and job simulations are used to evaluate objectively individuals for various purposes (Thornton & Byham, 1982). Assessment centers are widely used in business and industry for purposes of selection, promotion, career counseling, skill development or measurement of potential (Huff, et.al., 1980). This review will concentrate only on the assessment center as a selection procedure.

Thornton and Byham (1982) defined an assessment center as a procedure (not a location) that consists of a standardized evaluation of behavior dimensions for targeted jobs based on multiple inputs. Trained assessors and a variety of exercises and techniques are used. Assessors make judgments about the behaviors of candidates in the exercises. These judgments are pooled by assessors at an evaluation meeting during which all observed assessment data are reported and discussed. The assessors complete the procedure by agreeing on the evaluation on each of the behavior dimensions and any overall evaluation or rating.

The Third International Congress on the Assessment Center in 1975 endorsed Standards for Ethical Considerations for Assessment Center Operations. The

standards included the following requirements for an assessment center:

1. Multiple assessment techniques must be used.
At least one of these techniques must be a simulation.
2. Multiple assessors must be used. These assessors must receive training prior to participating in a center.
3. Judgments resulting in an outcome (i.e., recommendation for promotion, specific training or development) must be based on pooling information from assessors and techniques.
4. An overall evaluation of behavior must be made by the assessors at a separate time from observation of behavior.
5. Simulation exercises are used. These exercises are developed to tap a variety of predetermined behaviors and have been pre-tested prior to use to insure that the techniques provide reliable, objective, and relevant behavioral information for the organization in question.
6. The dimensions, attributes, characteristics, or qualities evaluated by the assessment

center are determined by an analysis of relevant job behaviors.

7. The techniques used in the assessment center are designed to provide information which is used in evaluating the dimensions, attributes, or qualities previously determined. (Moses and Byham, pp.304-305).

An assessment center has five key components: (a) behavior dimensions, (b) standardized performance situations, (c) assessee behavior, (d) assessor observations, and (e) competency judgments (Williamson & Schaalman, 1980). Behavior dimensions are a limited set of descriptors reflecting the kinds of behaviors required to do the particular job for which the assessment center is being used. Behavior dimensions are generally determined by job analysis research. Performance situations are exercises designed to elicit behaviors represented by the behavior dimensions. The details and extent of these exercises, like the behavior dimensions, must be specifically job related. Performance situations included:

1. Inbaskets--an individual simulation for evaluating administrative ability.
Participants assume the role of a new administrator and receive a set of materials

which an administrator might expect to find in an inbasket including telephone messages, letters, memos, reports and materials such as a calendar, organizational chart, list of personnel and stationery. Participants review materials, take action on items by writing letters, memos, and reminders, and give reasons for their actions within the allotted time. Inbasket exercises are sometimes followed by an interview where each participant is questioned about the rationale and clarity of the actions taken in the exercise.

2. Interviews--usually a semi-structured individual interview used to elicit information on specific knowledge, skill, abilities or experiences. Interviews are often used to acquire insights into a participant's development, work objectives, attitudes, social values and personal idiosyncracies.
3. Business games--individual or team exercises which simulate a business process (e.g. the purchase of toy parts to fabricate a future product) and require participants to

diagnose, plan and act in the face of given market and resource parameters.

4. Fact finding exercises--individual or team activities in which participants are presented with a problem to be resolved in a specified period of time. Participants are given only an outline of the problem and must, therefore, seek out other relevant information from informed services (e.g., assessors prompted to give only specifically requested information, written material or other given resources). After an allotted time, participants must make a report of their findings and proposed solutions. Participants are evaluated on the thoroughness of the search, stress tolerance, and the quality of the proposed solution.
5. Leaderless group discussions--group exercises in which participants must cooperate to solve a mutual problem. Participants may or may not have assigned roles. Leaderless group activities elicit indications of participants' interpersonal skills, persuasiveness, openness to other's ideas, leadership and organizational ability

(Williamson & Schaalman, 1980).

Observable and quantifiable assessee behaviors are the basis for the competency judgments of assessors. Usually multiple assessors observe individual assessees. Assessor observations are systematically pooled after the completion of the performance situations and the final rating is a consensus of the assessor evaluations.

The assessment center system used in the United States by businesses, industries and public agencies was primarily devised by researchers at American Telephone and Telegraph (A.T.&T.) in the 1950s (Moses, 1977). Most of the conceptual framework, underlying assumptions and initial uses of assessment center methods, however, can be traced to three military organizations in the first half of the twentieth century. In the 1930s assessment center methods were used to select German army, navy and air force officers. German psychologists contributed the ideas that (1) holistic observation, rather than elementalistic observations should be used, and (2) naturalistic observation or the observation of behavior in natural situations should be the basis for measuring the performance of a candidate. Further, they used multiple assessors and multiple techniques to assess

the performance of complex behaviors (Wendel & Kelley, 1983). The British War Office Selection Boards (WOSBs) identified new World War II army officers by using a program modeled after the German programs. Leadership testing in group situations was an important component of the WOSB program. Three aspects of leadership were operationally defined and systematically observed by WOSB assessment teams: (1) level of function, (2) group cohesiveness, and (3) stability. In addition to refining the simulations and exercises, the British introduced reliability and validity studies for the evaluation of their assessment centers (Thornton & Byham, 1982). The Office of Strategic Services (OSS) developed and operated the first assessment center in the United States during World War II. The OSS had the enormous task of identifying and placing thousands of personnel in a variety of jobs ranging from spies and saboteurs to persons who would serve as records clerks and secretaries. OSS personnel in a little over two months developed the following list of steps for assessing candidates which even today serves as an "excellent model...on how to set up and operate an assessment center" (Thornton & Byham, 1982).

1. Conduct a job analysis.
2. Identify personality determinants for success

and failure on the job and next select variables to be assessed.

3. Develop a rating scale for each personality variable and an overall variable.
4. Design a program of procedures to assess the identified variables.
5. Prepare a general description of the personality of each candidate before preparing specific recommendations.
6. Prepare simply written personality sketches which predict each assessee's behavior in the organization.
7. Conduct a staff conference to review and revise the sketches and to make final ratings and recommendations.
8. Construct experimental designs for the evaluation of the assessment program.

(Thornton and Byham, 1982)

OSS personnel refined situational and performance exercises, used both subjective and objective measures, and monitored their assessment validity through follow-up studies. Most results of these studies were positive. Wiggins (1973) showed after reanalyzing OSS procedures and validity studies, that the OSS procedures led to a higher proportion of successful

candidates and a lower proportion of misclassified rejects (i.e., people who would have been successful if they had been selected for service).

American business and industry adopted assessment procedures after World War II. Much of the impetus for use of assessment centers in business resulted from the Management Progress Study; an extensive, longitudinal study conducted at A.T.&T. under the leadership of Douglas W. Bray. This study was intended to investigate the factors which influence the progress of young managers at A.T.&T. (Bray, 1964). After conducting a review of management literature and ascertaining the judgment of A.T.&T. personnel officials, Bray selected 25 characteristics of successful managers. The characteristics included managerial functions (e.g., organizing, planning, decision making); interpersonal relations (e.g., communications skills, personal impression, sensitivity); general abilities; values and attitudes. Assesseees were rated on each of the variables and on the likelihood of being promoted to middle management in 10 or fewer years. Several assessment techniques were selected. Projective tests (e.g., the Thematic Aperception Test, and the Rotter Incomplete Sentences Test), paper and pencil tests (e.g., the School and

College Ability Test and the Test of Critical Thinking), a personal history questionnaire, and an autobiographical essay were required of all assessees. A two-hour interview covered background, personal objectives, social values, and interests. Inbasket exercises, a business game and leaderless group discussions were required of all individual assessees. Assessors were professionally trained and included psychologists, A.T.&T. staff, consultants and university faculty. Following all of the exercises, the assessors met and discussed their observations of the exercises and tests. Then the assessors rated the participants on the 25 characteristics. The assessment staff members assigned a final rating of "yes" or "no" to each assessee indicating whether they predicted the assessee would or would not be promoted to middle management. The results of the assessment procedures and the ratings of individual assessees were not released to the assessees nor to A.T.&T. to minimize the potential bias on an individual's progress in the company. In later research studies, Bray, et.al., (1974) reported that the overall assessment rating accurately predicted the actual progress made in the company over the following years. (Thornton & Byham, 1982).

While Bray did not intend for the assessment procedures used in the Management Progress Study to be used in actual personnel practices (e.g. selection, promotion and development), the unique contribution of the techniques in the personnel function became increasingly evident (Tesolowski & Morgan, 1980). A.T.&T. officials, using Bray's research, developed and implemented the first assessment center at Michigan Bell in 1958. After A.T.&T. researchers found a 10 to 30 percent improvement in selection success by use of assessment center ratings rather than by traditional selection procedures, the company increased its use of assessment center methods (Willis & Becker, 1976). By 1973 more than 100 companies were using assessment centers for selecting (Huck, 1973). General Electric, International Business Machines, Standard Oil (Ohio), General Motors and Sears are among the hundreds of corporations using assessment centers in personnel practices (Wendel & Kelley, 1983). The use of assessment centers has expanded beyond business and industry and today is used in the selection, promotion, or development of astronauts, scientists, engineers, police recruits, foreign service officers, and firemen (Thornton & Byham, 1982).

Application of assessment center technology to

education in general and the selection of school administrators in particular has to this date been minimal. The largest use of assessment center methodology within a school system was in New York City in 1980. New York school officials conducted a comprehensive job analysis, defined job skill dimensions, defined the exercises and implemented the center to select new junior high school principals (Thornton & Byham, 1982). The Broward County (Florida) Public Schools and the Greensboro (North Carolina) Public Schools as well as several post secondary institutions use assessment center methods in their personnel programs (Williamson & Schaalman, 1980). The National Association of Secondary School Principals (NASSP) Assessment Center program is by far the most extensive application of assessment center technology in the selection of school administrators and as such was used as one of the instruments in this study. There are 27 NASSP Assessment Centers located in over 20 states (Hersey, 1985). The history, use, validity and reliability of the NASSP Assessment Center will be detailed in Chapter III.

Assessment center methods have been widely examined by researchers. Williamson and Schaalman (1980) reviewed over 30 studies and concluded that the

assessment center method was grounded in a tradition of research and represented a significant advance in the assessment of competence. The assessment center has high face validity because of the use of job related simulations. Most assessors, assessees and researchers find the assessment center process acceptable and valid, particularly in comparison to interviews or psychological tests. Further, because some assessment center exercises are in effect constituted from actual work samples, assessment center methods have a high degree of content validity. To demonstrate effectiveness as a selection technique, however, the technique must have evidence of predictive validity. In other words, what is the degree to which the assessment center methods can accurately predict job performance?

Two studies attempted to validate the assessment center by predicting actual job performance. Bray and Campbell (1968) and Clingenpeel (1979) found very small correlations between assessment center ratings and various job performance criteria. Additional studies conducted by A.T.&T. researchers (e.g. Moses, 1972; Moses and Boehm, 1975, Huck and Bray, 1976) presented "a fairly impressive confirmation of the predictive validity of the assessment center method," particularly

when the predictor was the overall rating from the assessment center and the criterion was promotion potential or global managerial ratings of job performance (Williamson & Schaalman, 1980, p.198). Wollowick and McNamara (1969), Hinrichs (1969,1978) and Kraut and Scott (1972) examined International Business Machines (IBM) assessment center ratings and found that assessment center ratings could and did moderately predict actual job performance. Cohen, et.al. (1974) completed an extensive review of validity studies and found that larger percentages of the assessed groups were higher in subsequent job performance, job potential and progress; thus supporting the idea that assessment center methods resulted in selecting candidates who were more likely to be successful. Thornton and Byham (1982) concluded, "While criticisms have been raised about other aspects of assessment centers, even the critics agree that the process accurately identifies persons who, if promoted, are most likely to experience success as a manager (p.306).

The research on the reliability of assessment centers indicated a moderate degree of reliability (Williamson & Schaalman, 1980). Studies of inter-rater reliability were the most common types of reliability reported with correlations of .70 or higher common. A

test-retest reliability study by Moses (1973) found reliability coefficients ranging from .49 to .72. Other researchers emphasized improving standardization of procedures (Sackett & Hakel, 1979) and rigorous training of assessors (Richards & Jaffer, 1972) to maintain or improve assessment center reliability.

Assessment centers were found to be generally acceptable under Equal Employment Opportunity Commission (EEOC) guidelines (Byham, 1980). The requirements for job analysis, job related activities as well as the use of multiple, trained assessors as standard procedures for assessment centers resulted in a body of research evidence that supports the predictive and content validity and the fairness of assessment centers. Byham (1980) stated that no industrial assessment center has ever been found illegal under EEOC guidelines.

Assessment centers are relatively expensive, costing as much as \$500 to \$600 per candidate (Wilson and Tatge, 1973). Cascio and Silberg (1979) estimated assessment center costs at up to \$2000 per candidate. Wickstrom (1967) cautioned, however, that the expenses resulting from the employment of a poor manager are far greater and Cascio and Silberg (1979) demonstrated that assessment centers are cost effective as a selection

procedure.

Overall, assessment centers, in comparison with other traditional selection procedures, showed several clear advantages. The standardization of procedures, requirement of job analysis and job related activities, use of multi-assessment techniques, and use of trained, multiple assessors represent practices consistent with the state of the art of competence assessment (Williamson & Schaalman, 1980). While the use of assessment centers in administrator selection is minimal, Tesolowski and Morgan (1980) argued that because supervision in a school district does not differ from that of any other supervisory position in government or industry, school boards should consider adopting assessment center procedures to select school administrators.

Selection Procedures Summary

Selection procedures are the methods of gathering information about prospective administrator candidates. The most commonly used selection procedure was a semi-structured interview (Kahl, 1980). Other selection procedures included application forms, letters of recommendations, tests and assessment centers. The research on the validity and reliability

of the various procedures was mixed. The highest validity correlations were reported for procedures which were standardized, structured and job related.

Each selection procedure (interviews, letters of recommendation, application forms, tests, and the assessment center) has the potential to contribute effectively to the selection of school administrators. Further, each selection procedure can be detrimental to the selection process if handled or used improperly. McIntyre (1974) offered this conclusion:

We have a great deal of evidence to convince us that the tools we use in administrator selection are considerably less trustworthy than most practitioners realize. We can state without equivocation that such devices as letters of recommendation, rating scales, and interviews are of extremely limited value as used in most situations. However, we can much less confidently point the practitioner toward practical alternatives (p.150).

The exception to McIntyre's pessimistic view of administrator selection procedures was the assessment center procedure. Assessment centers, if properly designed and implemented, offered significant validity in the selection of administrators (Thornton and Byham,

1982). Assessment centers also represented the state-of-the-art in selection procedure recommendations in that assessment centers included multiple assessment techniques, multiple assessors, standardized methods, objective criteria, and job related exercises.

Recommended Practices in Administrator Selection

The need for sound and systematic procedures by which school administrative personnel are examined and appointed has been discussed for decades (Deever & Jurs, 1975). Yet, even the best selection practices are limited. No single assessment technique or combination of techniques will measure the future competency of an individual with 100 percent accuracy. Presently, most selection practices suffer from inadequate outcome criteria, single perspective job analysis, if one exists at all, and a restricted range of assessment measures. The lack of research on the skills, behaviors and attitudes needed to accomplish complex jobs such as public school administration limits the utility of any selection strategy (Harlan, et.al., 1980). Still, researchers have substantiated several recommendations which if adopted by school district officials in their administrator selection programs would significantly improve the effectiveness

of the selection process (Jeswald, 1977).

Kahl (1980) recommended several practices to improve administrator selection after reviewing the major research findings from the 1970's. His recommendations included:

1. Develop a systematic administrator selection process.
2. Actively recruit if necessary.
3. Use research findings to establish procedures and criteria.
4. Involve several people in both the development of the program and the evaluation of candidates.
5. Use a variety of information-gathering methods and selection criteria.
6. Establish selection criteria locally--at the district or even school level. For some criteria, this may require some simple, but on-going local research.
7. Tailor selection criteria to specific administrator vacancies.
8. There is no shortage of administrator candidates, and therefore no reason to hire an administrator without superior academic credentials. One strategy might be to screen

candidates initially based on academic criteria. Personal and professional qualities of the more promising candidates may be assessed in later stages.

9. Do not underestimate the importance of either objectively or subjectively gathered information on candidates. However, it is advisable to increase objectivity where appropriate. For example, interview guides and rating forms and standard forms for recommendations can be helpful.
10. Many of the criteria valued by educators are difficult to measure. The interview remains an important means of evaluating candidates. Extensive, planned interviews can accomplish far more than superficial interviews which may be mere formalities.
11. Give candidates as much information as possible about the administrative position and "environmental factors." Self-selection on the part of candidates can simplify and improve administrator selection.
12. The success of administrator selection practices requires continuous monitoring. No matter how good a selection program is, there

will be some administrators who do not "work out." Knowledge of the specific reasons persons do not work out and the characteristics of those individuals can be useful to the improvement of selection criteria (p.37-38).

Baltzell and Dentler (1983) completed a nationwide study of principal selection. They reported that principal selection was becoming increasingly important as the pressures on public education continues to mount and as a large portion of the present cadre of principals retires. After describing present common practices in principal selection and noting how little information existed on how principals might best be selected, Baltzell and Dentler (1983) surmised that because of the diversity of school districts and because of the impact of local aims and culture on the real outcomes of principal selection there is no one way of selecting principals which will be effective for all school districts. Nonetheless, Baltzell and Dentler (1983) recommended the following steps for developing improved principal selection practices:

1. Districts should undertake a self-study policy appraisal to determine the status quo of their current procedures.

2. School district board members and administrators will need to make a commitment to improving the selection process and back this commitment with money as well as authority.
3. Technical features of the new principal selection program will need to be linked to the larger goals of the school district (e.g. education equity, affirmative action, curriculum innovation) and designed to fit the locale and its policy priorities from the outset.
4. Procedural elements should include an openness of the intake process which encourages a wide pool of applicants and an involvement of a diverse team of trained professionals to conduct the appraisal of applicants for the principalship.
5. Technical elements of the principal selection program should include the development and dissemination of criteria which encompass all of the duties and skills required for each principalship; a process for generating, training and conserving a large pool of applicants and future candidates; and a

method of using multiple assessors and multiple techniques of assessment.

In a state-of-the-practice study of the assessment of occupational competence in business, industry and education, researchers identified several recommendations to improve the competency assessment portion of selection processes (Huff, et.al., 1980). As a first step, the researchers recommended school district officials should systematically identify valid performance criteria which are important to the performance of the whole job rather than only discrete tasks. Secondly, school district officials should, using a variety of perspectives and sources, develop a comprehensive description of the job and of the individuals who perform the job well. Finally, researchers recommended that school officials adopt a heterogeneous selection procedure which uses a variety of measurement techniques and emphasizes exercises of operant performance.

Several authors recommended the assessment center method as the selection practice which might best meet school district needs of accountability, equity, reliability and validity (Hersey, 1977; Jeswald, 1977, Steller, 1984; Williamson & Schaalman, 1980; and Tesolowski & Morgan, 1980). Assessment centers are

most useful and effective in predicting job performance when applied to threshold jobs--jobs that differ substantially in skill and ability requirements from the positions in which candidates for these new openings typically are found (Jeswald, 1977). Since new administrators are often selected from the ranks of teachers, the use of assessment centers appears supported. The methodology of assessment centers included standardized procedures, validly developed criteria and job-related exercises, multiple assessors and multiple techniques (Williamson & Schaalman, 1980). Further, researchers indicated that assessment center procedures enable school district officials to select higher quality administrators than were selected by traditional methods (Hersey, 1977). Finally, because of the objectivity, fairness, and job-relatedness of the assessment center, school district officials would be in closer compliance with Equal Employment Opportunity Commission and Affirmative Action Guidelines (Tesolowski & Morgan, 1980).

Still other researchers reported that little has changed in selection procedures in the past 30 years (Harlan, et.al., 1980). Job analysis, rigorous exercise designs and criterion related validation are relatively uncommon in practice. Harlan, et.al.,

(1980) reviewed selection practices in education, business and industry and reported that there was a discrepancy between the practice of selection and the research of selection. He showed, for example, that selection devices such as the selection interview, while generally lower in reliability and validity than other devices, have increased in use. Harlan, et.al., (1980) concluded, "All that is really needed is time and money to implement methods already proven by research" (p.136). Based on this same pessimistic view of selection, other researchers recommended the active recruiting and training of potential school administrators (Buckley, 1971; Bowles, 1968; McIntyre, 1974; Chadwick, 1971). Cross (1981) recommended that school district officials first screen out the obviously unsuited candidates, then put the remaining applicants in temporary or quasi-administrative positions for a thorough on-the-job appraisal. McIntyre (1974) concluded that there was little evidence that selection procedures were being improved and therefore school district officials should select a large group of potential candidates for administrator positions and proceed via simulations, lab, coursework and internships to narrow the field and in effect develop new principals. Similar recommendations on the

use of internships were made by Baltzell and Dentler (1983) and Steller (1984). Cornett (1983) concluded that internships might well be the only way to decide if, in fact, a person is well-suited for the position of the principal in a school district.

Whatever procedures or methods are used to select school administrators, the process should be closely and regularly evaluated. Bolton (1970) stated that the measure of success of any selection process is likely to be only temporary thus requiring monitoring and evaluation.

In summary, administrator selection continues to be accomplished by traditional methods which are often unreliable and lacking validity (Harlan, et.al., 1980). Presently, there is a need in school districts for fair, objective, and valid procedures to identify administrators (Jeswald, 1977). This need is heightened by the necessity of school district officials to comply with Equal Employment Opportunities Commission guidelines and to meet public demands for accountability and excellence (Steller, 1984). Research-based practices to improve the present practices of administrator selection are available in the literature. One set of recommendations suggests accepting the faults of the traditional selection

procedures, such as the selection interview, and concentrating instead on the development and in-service training of administrators. Another set of recommendations concludes that a properly designed and implemented assessment center, which has the reliability and validity as a selection procedure heretofore lacking in other procedures, could result in the selection of high quality administrators, comply with EEOC guidelines, and answer public demands for accountability and educational excellence.

CHAPTER III

Methods

Information about the sample, design, instruments and data analysis used in this study of the concurrent validity of two administrator selection procedures is presented in this chapter.

Sample

The subjects for this study were administrators and teachers from one university assessment center project (University of Nebraska-Lincoln). All subjects had taken the Administrator Perceiver Interview and undergone the NASSP Assessment Center. The conditions under which subjects were required to take one or both procedures varied. Some were required to take one or both procedures. Others volunteered to take one or both procedures as part of a professional development program or as a part of the application process for an administrative job. The Administrator Perceiver Interview was taken by subjects from 1976 to 1984 under conditions described in the Administrator Perceiver Technical Manual. Administrators and teachers participated in assessment centers from 1982 thru 1984. Time lapses between procedures varied from several months to eight years. Only administrators and

teachers who volunteered to release their scores from both procedures were included in the study. Nineteen pairs of scores were gathered.

Design

A correlational design was used in this study. Correlational research is concerned with determining the extent of relationship existing between variables and the extent to which variations in one or a combination of variables are associated with variations in another variable or combinations of variables (Ary, Jacobs, & Razavich, 1979). Correlational techniques were used to examine relationships between performance on a structured interview (Administrator Perceiver Interview) and on an assessment center (NASSP Assessment Center). This study consisted of the collection of two sets of scores on a sample of subjects and the computation of correlation coefficients between these sets of scores. Data were gathered in the form of pairs of scores from the personnel files of subjects and from the files of the University of Nebraska-Lincoln Assessment Center Project. Administrator Perceiver Interview results for each administrator were composed of twelve theme area scores from zero to five and a total score of zero to sixty (see Appendix A for list of scores). Assessment

Center results were composed of twelve scores from zero to five. No total score is reported for the NASSP Assessment Center because only separate skill dimensions were assessed (see Appendix A for list of scores).

Instrumentation

Two selection procedures were used with the sample group. The correlation of the scores on these two procedures was the basis for this study. The two selection procedures were the Administrator Perceiver Interview and the NASSP Assessment Center.

Administrator Perceiver Interview. The Administrator Perceiver Interview (API) of Selection Research Incorporated in Lincoln, Nebraska, was an individually administered structured interview. The purpose of the Administrator Perceiver Interview was to provide information on interviewees' probable job-related characteristics. According to the Administrator Perceiver Technical Manual, (1980),

The API, when administered and interpreted by a Certified Administrator Perceiver Specialist, will, in terms of statistical probability, indicate if the interviewee has the potential to develop a positive working relationship with teachers or establish a positive, open school climate. (p.18)

Items and theme areas for the Administrator Perceiver Interview were based on research that began in the 1950s by Donald R. Clifton, President, Selection Research Incorporated, and others (Clifton & Hall, 1952; Gaeddert, 1956; Knapp, 1955). The original Administrator Perceiver Interview was constructed in 1974. Interviews with educational managers as well as management personnel of business and industry were used to provide much of the information for item formation. Original scoring standards were developed by analyzing the content responses of administrators, who were identified as "outstanding" by peers. The analyses focused on consistency of concepts expressed to given items. If responses to a given question evoked consistent responses, the item was retained with the scoring standard specified by the consistent responses (Administrator Perceiver Technical Manual, 1980).

The Administrator Perceiver Interview contains open-ended questions, each of which is job related. Three types of questions were used: (a) situational--interviewees were asked to respond to given situations; (b) observational--interviewees were asked to reflect upon the actions of a third party; and (c) personal--interviewees were asked to state their beliefs and how they intended to behave as an

administrator (Muller, 1979).

Scores from the third edition of the Administrator Perceiver Interview were used. This edition was made up of five questions organized around each of 12 theme areas for a total of 60 questions. The 12 theme areas, according to the Administrator Perceiver Technical Manual, should be considered "conceptual organization points, not factors" (Administrator Perceiver Technical Manual, 1980, p.2). In addition a total score was reported. The theme areas are:

1. Mission. Mission is represented by one's personal commitment to make an affirmative impact on the lives of others. This administrator believes staff members can grow and develop. This person is primarily concerned with a cause that can be of benefit to others.
2. Human Resources Development. Human resources development is indicated by the administrator's ability to receive satisfaction from the personal and professional growth of staff members. This person helps staff members experience success and finds fulfillment in the achievement of each person's goals.
3. Relator. The relator theme is evident when the administrator desires positive personal

relationships with others and has strategies to build relationships with the staff. This administrator is committed to an extended and enduring relationship of mutual support.

4. Delegator. A delegator wants to know each teacher's strengths and interests in order to extend responsibilities in a way which helps each teacher grow and be successful. This person begins with the individual and moves to the task or area of responsibility.

5. Arranger. An arranger demonstrates insights and skills in working with groups of people in order to achieve common objectives. This person understands the uniqueness of individuals and helps people to work together effectively and openly.

6. Catalyzer. The catalyzer is an administrator who can stimulate the performance of teachers through searching out and encouraging the creative and innovative ideas of teachers. This person is open with personal ideas and builds enthusiasm about positive changes.

7. Audience Sensitivity. An audience sensitive administrator spontaneously assesses the thoughts, feelings, proposed actions, and actions from the

viewpoint of patrons, faculty and students. This person remains sensitive to this awareness and uses such insight in the decision-making process.

8. Group Enhancer. Group enhancers believe their particular staff has great potential. This person looks for the strengths in individual staff members and has a positive perspective toward them. This administrator builds pride through the accomplishments of staff and plans ways to maintain a supportive group climate.

9. Discriminator. The discriminator is an administrator who differentiates according to a well-defined value system which focuses on the worth and dignity of human beings. . . especially students. This person is characterized by an ability to identify that the most important aspect of a school is what happens between teachers and individual students.

10. Performance Orientation. The performance orientation theme is observed in an administrator who is goal directed. This person's goals are stated in terms of specific "practical" outcomes for self and others. This person uses criteria for measurements, has definite objectives, and is

interested in measurable results.

11. Work Orientation. An administrator with work orientation is intensely involved in work and is almost continuously thinking about it. This person tends to rehearse and review activities related to work, family and special interest commitments. Such an administrator has a life style which integrates these areas of priority into his/her actualization. This person possesses a great deal of stamina and ordinarily is actively involved for long days and weeks.

12. Ambiguity Tolerance. This administrator displays a tendency to suspend judgment until as much evidence as possible is available from involved parties. A high tolerance for ambiguity is seen as a means to an end rather than an end to itself. Much restraint is placed upon impulsive decision making. (Administrator Perceiver Technical Manual, p.23-24)

The Administrator Perceiver Interviews were administered in standardized settings. Interviewers were required to undergo specialized training before administering or interpreting the API. The API required training included a developmental history of the process, rationale behind the process, procedures

for administering the interview and training on interpreting the interview. Interviewers must interpret and submit a minimum of 20 taped interviews for critiquing and for establishing reliability of interpretation prior to certification. The standardized administration of the API included asking questions using exact wording and exact order (Administrator Perceiver Technical Manual, 1980, p.13) Scoring was based on responses of the interviewee. The responsibility of the interviewer was to listen for certain key words or phrases in the responses of the interviewee. A score of predictor (+) or non-predictor (0) was given to each item. The total score on the Administrator Perceiver Interview could range from zero to sixty. Also calculated was a score of one to five on each of the twelve theme areas for each interview.

The Administrator Perceiver Interviews were scored only by certified Administrator Perceiver Specialists who had completed a training workshop and obtained an 85 percent or greater agreement between themselves and a Selection Research Incorporated Perceiver Academy analyst based on a minimum of 20 interviews. Interrater reliability of the Administrator Perceiver Interview has been reported as high as +.90 (Powell, 1978). Internal consistency reliability of the

Administrator Perceiver Interview was reported to be $+ .83$ using a sample size of 577 (Administrator Perceiver Technical Manual, 1980, p.6). At this time test-retest reliability of the Administrator Perceiver Interview has not been established. Early research on structured interviews, however, indicated responses were stable over time (Clifton, 1956; Dodge, 1955).

Several studies have correlated performance on the Administrator Perceiver Interview with teacher ratings of on-the-job performance (Powell, 1978; Moss, 1980). Correlations of teacher rating scores with total scores on the Administrator Perceiver Interview range from $+ .56$ to $+ .65$ (API Technical Manual, 1980, pp.8-10). Moss (1980) found a negative correlation between the API and a survey of central office supervisors. He concluded, however, that the two scales used did not measure the same qualities in administrators.

NASSP Assessment Center. The second procedure used was the NASSP Assessment Center. The purpose of the NASSP Assessment Center was to provide school district personnel with an objective and effective way of selecting school administrators (Schmitt, 1982). Assessment centers are most effective especially when applied to predicting job performance in threshold jobs that differ substantially from the positions in which

candidates for new openings are typically formed (Jeswald, 1977). The NASSP Assessment Center was initiated in 1975 by a committee of the National Association of Secondary School Principals and the Division of Industrial/Organizational Psychology of the American Psychological Association. This committee gathered information and developed the skill dimensions, exercises and activities that make up the NASSP Assessment Center. Skill dimensions were derived from investigation of job-related characteristics of successful school administrators. The skill dimensions measured in the NASSP Assessment Center are:

1. 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.
2. Judgment. Skill in identifying educational needs and setting priorities; ability to reach logical conclusions and make high quality decisions based on available information; ability to critically evaluate written communications.
3. 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 paper work and heavy demands on one's time.

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

5. Leadership. Ability to get others involved in solving problems; ability to recognize when a group requires direction, to effectively interact with a group to guide them to accomplish a task.

6. Sensitivity. Ability to perceive the needs, concerns, and personal problems of others; skill in resolving conflicts; 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.

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

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

9. Educational Values. Possession of a

well-reasoned educational philosophy;
receptiveness to new ideas and change.

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

11. Oral Communication. Ability to make a clear oral presentation of facts or ideas.

12. Written Communication. Ability to express ideas clearly in writing; to write appropriately for different audiences--students, teachers, parents, etc. (NASSP, 1982, p.12-13)

The structure and exercises of the NASSP Assessment Center are based on the tenets of assessment centers which have been widely used in business and industry since 1950 (Thornton & Byham, 1982). NASSP Assessment Centers required participants to function in simulated activities over a two day period. The activities included a leaderless group activity, an assigned role group activity, a fact-finding exercise, paper and pencil in-baskets, and a personal semi-structured interview. Each activity was coded against certain skill dimensions and specific "look fors" were established for each skill dimension in each exercise (Wendel & Kelley, 1983). Participants were observed by six assessors as they performed the

exercises. Assessors are previously selected and trained in a four day workshop which included a historical review of assessment centers; an orientation to the twelve skill dimensions and assessment exercises; practice in observation, recording, and consensus discussion; and instruction in the preparation of final reports (Wendel & Kelley, 1983). After discussing the observed behavior of each candidate in each of the assessment center activities, assessors assigned a consensus rating from 0 (no opportunity to observe the skill) to 5 (an extremely high degree of skill was shown) on each of the 12 skill dimensions. An assessment report summarizing a participant's performance was prepared and reviewed with each participant.

An extensive study of content and criterion related validity of the NASSP Assessment Center has been completed (Schmitt, 1984). The content validity of the NASSP Assessment Center skill dimensions was measured in the Schmitt study by asking "experts" to examine and rate the assessment center exercises as to the extent the exercises provided essential or helpful information about the skill dimensions. Content validity was judged to be "good;" also, the skills assessed in the assessment center were judged to be

"important in the performance of the principalship" (Schmitt, 1984, pp. 63-64). Interobserver reliability of assessor ratings of 176 candidates was found to be highly reliable, greater than .90 (Schmitt, 1984).

The NASSP Assessment Center's criterion-related and predictive validity was examined by gathering performance ratings of over 150 administrators from four different rater groups (self, supervisors, teachers, and support staff). Findings indicated that there were positive relationships between assessment center skill ratings and ratings of subsequent performance (Schmitt, 1984). "The ratings of skill dimensions made in the assessment center indicate a strong relationship to subsequent ratings of performance by teachers and supervisors," concluded Schmitt (1984, p.33).

Data Analysis

The data set for each subject was composed of twelve theme scores and a total score from the Administrator Perceiver Interview and twelve skill dimension scores from the NASSP Assessment Center. The first step of data analysis was to obtain means and standard deviations for each skill dimension or theme area on the two procedures. This step provided descriptive information useful in later analysis.

The second step of data analysis was to construct a correlation matrix of theme scores versus skill dimensions. Pearson product-moment correlation coefficients were determined between the twelve theme areas and total scores of the Administrator Perceiver Interview and the twelve skill dimension scores of the NASSP Assessment Center. The Pearson product-moment correlation technique was selected because it is the most stable technique and has the smallest standard error when used, as in this study, to correlate variables expressed as continuous scores (Borg & Gall, 1983). Additionally, a test of the level of significance of the correlation coefficients was employed. Analysis of the correlations significant at the .05 ($p \leq .05$) level provided information on the existence and strength of relationships between performance on the two instruments. These procedures allowed the hypothesis to be tested.

The final step of the data analysis was to apply a stepwise multiple regression to determine if combinations of theme scores of the Administrator Perceiver Interview (predictor variables) correlated with and to what extent, skill dimensions of the NASSP Assessment Center (criterion variables). A multiple regression technique was employed because of its

usefulness in studying the influence of several predictor variables on a criterion variable (Pedhazur, 1982). Multiple correlation coefficients (R), defined as measures of the magnitude of relationship between a criterion variable and a predictor variable or some combination of predictor variables, were computed where possible. Analysis of the correlation data in this step provided further indication of which theme score or combination of theme scores on the Administrator Perceiver Interview were related to which NASSP Assessment Center skill dimensions scores and to what degree.

CHAPTER IV

Presentation and Analysis of the Data

The major purpose of this study was the determination of the degree of concurrent validity between performance on two procedures used in the selection of school administrators. The two procedures used were a structured interview (SRI Administrator Perceiver) and an assessment center (NASSP Assessment Center). Concurrent validity in this study was indicated by the degree to which performance on the structured interview agreed with performance on the assessment center. The numerical index of concurrent validity was the computation of correlation coefficients between the scores of a sample group. Inferential statistics were used to analyze the data to determine the extent of the relationship between performance on the structured interview and performance in the assessment center. For the purpose of this study a correlation coefficient at a significance level of .05 would indicate a significant correlation.

The data were primarily correlation coefficients which can range from positive 1.00 to negative 1.00. A positive correlation indicates that high values of one of the two variables being correlated are associated

with high values of the other variable. In addition, when a positive correlation between two variables exists, low values of one variable are associated with low values of the second. Negative correlations indicate an inverse relationship; that is, low values of one variable are associated with high values of the second variable being correlated and vice versa. Correlations near zero indicate a lack of relationship between the two variables. There are no fixed standards to establish how large (i.e., greater than zero in either a positive or negative direction) correlations should be before being considered acceptable support of validity. Borg and Gall (1983), however, presented the following general guidelines for interpreting correlation coefficients:

- a) correlation coefficients of .20 to .35 define slight relationships,
- b) correlation coefficients of .40 to .60 define moderate relationships, and
- c) correlation coefficients of .65 to .85 define a high degree of relationship and allow possible group predictions that are sufficiently accurate for most purposes (p.624).

The findings and analysis of the computed data are presented in this chapter. To provide a systematic

presentation of these data, the following major headings are included in this chapter: (a) sample characteristics, (b) Administrator Perceiver Interview theme characteristics, (c) NASSP Assessment Center skill dimension characteristics, and (d) correlation of API and NASSP Assessment Center performance.

Sample Characteristics

The sample group was composed of 19 administrators and teachers who had taken the Administrator Perceiver Interview and undergone the NASSP Assessment Center (See Appendix A, Tables A-1 and A-2 for list of scores). The sample size of only 19 was one of the limitations of this study. Typically, correlation studies, such as this one, do not require large samples; however, a minimum of 30 cases is preferred (Borg & Gall, 1983).

The means and standard deviations for the API and NASSP Assessment Center scores were computed. For comparison purposes, tables of large samples of API scores and NASSP Assessment Center scores were included in the appendix (see Tables A-3 and A-4).

The sample group's API means and standard deviations are reported in Table 1. Eleven of the 12 sample group means were higher than the means of the study population (n=913) reported by Selection Research

Table 1

Means and Standard Deviations of the Sample Group by API Themes

Theme	n	Mean	Standard Deviation
Mission	19	2.6316	1.3829
Human Resource Development	19	2.8947	1.6962
Relator	19	2.3684	1.4985
Delegator	19	2.8947	1.5597
Arranger	19	2.8421	1.5371
Catalyzer	19	3.6842	1.2496
Audience Sensitivity	19	3.4211	1.0706
Group Enhancer	19	2.3684	1.2566
Discriminator	19	2.6316	1.4225
Performance Orientation	19	3.6316	1.0116
Work Orientation	19	3.2105	.9763
Ambiguity Tolerance	19	2.4211	1.3871
API TOTAL		35.6316	10.3022

Incorporated (See Table A-3). Further, eight of 12 standard deviations were higher, indicating greater variability of scores than the SRI study population. The sample group total score mean was higher (over 11 points) than the SRI study population. Overall, the sample group scored higher on the API and exhibited a slightly higher variability than did the SRI study population.

The sample group NASSP Assessment Center means and standard deviations are reported in Table 2. The sample group means were very similar to a population (n=350) reported by Schmitt (1984) and presented in the appendix (See Table A-2). Overall, the sample group scored slightly lower than the NASSP study population. Eight of the 12 means of the sample group were within one-tenth of a point of the NASSP study population means. Only on the skill dimensions of Decisiveness and Range of Interests were the means of the NASSP study population group more than three-tenths of a point greater than the sample group means. Nine of the 12 standard deviations of the sample group were equal to or smaller than those of the NASSP study population standard deviations indicating a slightly less variability of scores.

Overall, the sample group scored higher than

Table 2

Means and Standard Deviations of the Sample Group by Assessment
Center Skill Dimensions

Skill Dimension	n	Mean	Standard Deviation
Problem Analysis	19	2.7900	.4777
Judgment	19	2.7453	.6042
Organizational Ability	19	3.0000	.8071
Decisiveness	19	3.1747	.7181
Leadership	19	2.9395	.7230
Sensitivity	19	3.3068	.6127
Range of Interests	19	2.7632	.6019
Personal Motivation	19	3.5005	.7914
Educational Values	19	3.3411	.6614
Stress Tolerance	19	3.2553	.6046
Oral Communications	19	3.4121	.6602
Written Communications	19	3.4121	.7505

average on the API and slightly lower than the average on the NASSP Assessment Center compared to reported larger samples. Further, the small size of the sample group was a limitation in the study in that using a reduced sample size lessened the likelihood that true significant relationships would be observed.

Administrator Perceiver Interview Theme Characteristics

Correlation coefficients were computed among API theme and total scores. These intercorrelations are shown in Table 3. The purpose of this procedure was to determine if individual theme scores were measuring unique information about the sample group or simply measuring similar information. Relatively low correlations among the theme and total scores would indicate uniqueness; high correlations among theme and total scores indicate the themes are measuring approximately the same information.

The intercorrelations among the API themes and total score were positive and generally moderate to high. Significant correlations (at the .05 level) were indicated in 43 of 78 possible correlations (see Table 3). Correlations of the theme scores with the API total score range from .52 to .80 with the exception of Performance Orientation. All of these correlations

Table 3

Intercorrelations Between API Themes and Total

API Themes	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
1 Mission	1.00												
2 Human Resource Development	.46*	1.00											
3 Relator	.63**	.26	1.00										
4 Delegator	.11	.48*	.18	1.00									
5 Arranger	.52*	.42*	.63**	.32	1.00								
6 Catalyzer	.38	.27	.48*	.47*	.61**	1.00							
7 Audience Sensitivity	.45*	.33	.18	.16	.25	.35	1.00						
8 Group Enhancer	.21	.49*	.16	.47*	.03	.36	.21	1.00					
9 Discriminator	.44*	.37	.28	.21	.20	.49*	.51*	.45*	1.00				
10 Performance Orientation	-.14	.43*	-.16	.15	.25	.03	.10	.03	.21	1.00			
11 Work Orientation	.39*	.62**	.44*	.16	.47*	.56**	.44*	.57**	.58**	.31	1.00		
12 Ambiguity Tolerance	.31	.47*	.48*	.41*	.74***	.66**	.29	.29	.45*	.12	.46*	1.00	
TOTAL	.53**	.73***	.52*	.55**	.71***	.72***	.55**	.58**	.66**	.2794	.79***	.80***	1.00

* Correlation significant at .05 level

** Correlation significant at .01 level

*** Correlation significant at .001 level

were significant at or beyond a .05 level.

Selection Research Incorporated officials cautioned that the API themes are conceptual organizational points and not psychometric subtests (API Technical Manual, 1980, p.17). Further, past studies and validation studies have used only the total API score for correlation purposes. The intercorrelations presented in Table 3 support the idea that the total API score, rather than any one individual theme score, should be the basis for determining the degree of association between performance on the API and the NASSP Assessment Center.

NASSP Assessment Center Skill Dimension Characteristics

Correlation coefficients were computed among NASSP skill dimensions (see Table 4). Like the API theme scores, the NASSP skill dimension intercorrelations were moderate to high. Forty-four of the 66 possible intercorrelations were positive and significant at the .05 level. All of the skill dimensions had a moderate to high (+.40 to +.80) correlation with at least one other skill dimension. Predictably, the administrative skill dimensions (Problem Analysis, Judgment, Organizational Ability and Decisiveness) were the most highly related skill dimensions. The small sample size

Table 4

Intercorrelations Between NASSP Assessment Center Skill Dimensions

NASSP Skill Dimensions	1	2	3	4	5	6	7	8	9	10	11	12
1 Problem Analysis	1.00											
2 Judgment	.63**	1.00										
3 Organizational Ability	.79***	.45*	1.00									
4 Decisiveness	.19	.31	.42*	1.00								
5 Leadership	.56**	.71***	.23	-.14	1.00							
6 Sensitivity	.52*	.62**	.45*	.24	.69***	1.00						
7 Range of Interests	.34	.16	.12	.07	.42*	.47*	1.00					
8 Personal Motivation	.58**	.30	.35	.18	.47*	.68***	.80***	1.00				
9 Educational Values	.76***	.53*	.63*	.14	.72***	.68***	.55**	.63**	1.00			
10 Stress Tolerance	.49*	.35	.33	.34	.45*	.33	.41*	.61**	.53**	1.00		
11 Oral Communications	.70***	.59**	.51*	.24	.58**	.47*	.40*	.57**	.76**	.70***	1.00	
12 Written Communications	.56**	.37	.65**	.35	.35	.52*	.51*	.50*	.69***	.31	.62**	1.00

* Correlation significant at .05 level

** Correlation significant at .01 level

*** Correlation significant at .001 level

and the fact that the sample group scores were slightly lower and less variable than a reported NASSP study population may have contributed to inflating the intercorrelations. Overall, however, the intercorrelations among skill dimensions are moderate to high, indicating that those individuals who score high on one skill dimension will likely score high on other skill dimensions. This finding, although the intercorrelations are slightly higher, was similar to the conclusion of an internal validity study of the NASSP Assessment Center by Schmitt, (1984).

Correlation of API and NASSP Assessment Center Performance

Both the Administrator Perceiver Interview and the NASSP Assessment Center appear to present information appropriate for use in the selection of school administrators. Certain theme areas and skill dimensions appear to be very similar. For example, a person who scores high on the API theme of Discriminator is said to be an "administrator who differentiates according to a well-defined value system which focuses of the worth and dignity of human beings...especially students, and who has an ability to identify priorities" (Administrator Perceiver Technical

Manual, 1980, p.23). This description appears similar to the definition of one who rates high on the NASSP Assessment Center skill dimension of Judgment, i.e., an administrator who has "skill in identifying educational needs and setting priorities; ability to reach logical conclusions and make high quality decisions based on available information,..." (NASSP, 1982, p.12). Similarly, the API theme of Audience Sensitivity and the NASSP Assessment Center skill dimension of Sensitivity are said to describe administrators' ability to perceive needs, concerns and problems from the viewpoint of patrons, faculty and students. Further, an administrator's motivation and involvement in work are similarly described by the API theme of Work Orientation and the NASSP Assessment Center skill dimension Personal Motivation. Such on-the-face similarity was one of the underlying reasons for attempting to determine the concurrent validity of the API and the NASSP Assessment Center.

Two procedures were used to determine the degree of association between performance on the API and performance in the NASSP Assessment Center. First, correlation coefficients were computed between individual API theme scores and total score and the NASSP Assessment Center skill dimensions. The

correlation coefficients were reported in a correlation matrix (see Tables 5-1 and 5-2). The second step was a stepwise multiple regression procedure to determine if combinations of API themes were related to NASSP skill dimensions and to what degree. The resulting multiple correlation coefficients (R) are presented in Table 6.

If concurrent validity between API performance and NASSP Assessment Center performance was to be established, then significant correlation coefficients would have to exist between the scores of a sample group who had taken both procedures. Tables 5-1 and 5-2 contain the correlation coefficients. Only six of the possible 156 correlation coefficients were statistically significant at or beyond the selected .05 level. All of these were moderate. The correlation coefficients between the NASSP Assessment Center Skill dimensions and the API total score were non-significant and generally near zero. Four of six of the significant correlation coefficients were negative, indicating an inverse relationship. Even the obvious on-the-face similarities between API themes and NASSP Assessment Center dimensions (e.g., Discriminator-Judgment, Audience Sensitivity-Sensitivity, and Work Orientation-Performance Orientation) were not significantly correlated.

The statistically significant correlations were:

1. Human Resource Development and Decisiveness ($r=-0.47$). The API theme of Human Resource Development is defined as the administrator's ability to receive satisfaction from the personal and professional growth of staff members. The NASSP Assessment Center skill dimension of Decisiveness is defined as the ability to recognize when a decision is required (disregarding the quality of the decision) and to act quickly.
2. Group Enhancer and Leadership ($r=+0.47$). The API theme of Group Enhancer is defined as an administrator who believes his/her staff has great potential, who looks for the strengths in individual staff members, who builds pride through the accomplishments of staff and who plans ways to maintain a supportive group climate. The NASSP Assessment Center skill dimension of Leadership is defined as the ability to get others involved in solving problems; ability to recognize when a group requires direction and the ability to effectively interact with a group to guide them to accomplish a task.

3. Performance Orientation and Judgment

($r=-0.50$). The API theme of Performance Orientation is observed in an administrator who is goal directed, who has goals stated in terms of specific practical outcomes for self and others and who is interested in measurable results. The NASSP Assessment Center skill dimension Judgment is defined as skill in identifying educational needs and setting priorities; the ability to react logically conclusions and make high quality decisions based on available information; and the ability to critically evaluate written communications.

4. Delegator and Written Communications

($r=+0.41$). The API theme of Delegator is defined as an administrator who wants to know each teacher's strengths and interests in order to extend responsibilities in a way which helps each teacher grow and be successful. The NASSP Assessment Center skill dimension of Written Communications is defined as the ability to express ideas clearly in writing; to write appropriately for different audiences--students, teachers, parents.

5. Discriminator and Oral Communication

($r=-0.66$). The API theme of Discriminator is defined as an administrator who differentiates according to a well-defined value system which focuses on the worth and dignity of human beings, especially students and who is characterized by an ability to identify that the most important aspect of a school is what happens between teachers and individual students. The NASSP Assessment Center skill dimension of Oral Communication is defined as the ability to make a clear oral presentation of facts or ideas.

6. Work Orientation and Oral Communication

($r=-0.53$). The API theme of Work Orientation is defined as an administrator who is intensely involved in work and is almost continuously thinking about it by rehearsing and reviewing activities related to work, family and special interest commitments and by having an active lifestyle which integrates these areas of priority into his/her actualization. The NASSP Assessment Center skill dimension of Oral Communication is defined as the ability to make a clear oral

presentation of facts or ideas.

An analysis of the statistically significant correlations provided little support for the concurrent validity of the API and the NASSP Assessment Center. Only the API theme Group Enhancer and the NASSP Assessment Center skill dimension Leadership purported to measure similar information about administrator candidates and had a positive and significant correlation.

The stepwise multiple regression analysis also provided little support for the concurrent validity of the API and the NASSP Assessment Center (see Table 6). The stepwise multiple regression procedure was used to determine the correlation between NASSP Assessment Center skill dimensions and combinations of API themes. The first step in the multiple regression was to compute the correlation between the most powerful predictor (API theme) and criterion variable (NASSP Assessment Center skill dimension); second, third, and so on, predictors were added until no further improvement in the correlation could be made. Stepwise multiple correlation coefficients (R) were significant for only two skill dimensions--Decisiveness and Leadership. A multiple correlation coefficient (R) measures the magnitude of a relationship and varies

Table 5-1

Correlation Between API and NASSP Assessment Center Performance

API Themes	Problem Analysis	NASSP Skill Dimensions			
		Judgment	Organizational Ability	Decisiveness	Leadership
Mission	-.21	-.05	-.05	.02	.00
Human Resource Development	-.33	-.35	-.35	-.47*	.03
Relator	.01	-.18	.19	.19	-.23
Delegator	.12	-.08	.10	-.14	-.01
Arranger	.03	.00	.22	.38	-.15
Catalyzer	.18	.21	.28	.30	-.06
Audience Sensitivity	-.02	-.04	-.03	-.14	.05
Group Enhancer	.20	.15	.08	-.35	.47*
Discriminator	-.26	-.34	.02	-.17	-.26
Performance Orientation	-.17	-.50*	-.23	-.24	-.18
Work Orientation	-.23	-.14	-.18	-.08	.01
Ambiguity Tolerance	.13	-.02	.27	.13	-.08
API Total	-.07	-.15	.05	-.02	-.04
					-.05

NOTE. Underlined correlations indicate statistical significance.

* Correlation significant at .05 level

** Correlation significant at .01 level

Table 5-2

Correlation Between API and NASSP Assessment Center Performance

API Themes	Range of Interests	NASSP Skill Dimensions			
		Personal Motivation	Educational Values	Stress Tolerance	Oral Communications Written Communications
Mission	.30	-.19	.08	-.00	-.10 .01
Human Resource Development	.18	-.16	-.14	-.21	-.32 -.18
Relator	.02	-.32	.07	-.16	-.11 .17
Delegator	.34	.06	.08	-.15	-.05 <u>.41*</u>
Arranger	.14	-.08	.11	.15	-.02 .20
Catalyzer	-.01	-.22	-.13	.05	-.13 .07
Audience Sensitivity	.19	.00	.08	-.02	-.15 -.18
Group Enhancer	.16	-.07	.21	-.20	-.19 .07
Discriminator	-.12	-.36	-.33	-.36	<u>-.66**</u> -.27
Performance Orientation	.11	.12	-.19	.13	-.23 -.33
Work Orientation	-.08	-.35	-.23	-.28	<u>-.53**</u> -.38
Ambiguity Tolerance	.04	-.06	.00	.02	-.21 .19
API Total	.11	-.21	-.05	-.15	-.38 -.02

NOTE. Underlined correlations indicate statistical significance.

* Correlation significant at .05 level

** Correlation significant at .01 level

from 0.00 to 1.00 with the larger the R the stronger the association between the variables. The coefficient of determination (R squared) was also computed as a part of the multiple regression procedure. The coefficient of determination (R squared), in this study, indicated the amount of variance in the NASSP Assessment Center skill dimension that could be explained by the combination of API themes. The multiple correlation of the combination of API themes, Human Resource Development and Arranger, and the NASSP Assessment Center skill dimension, Decisiveness, was +0.79. This relatively high correlation, when squared, resulted in a coefficient of determination of .62. In other words, the combination of API themes, Human Resource Development and Arranger, could explain up to .62 of the variance of the NASSP Assessment Center skill dimension Decisiveness. Because of the lack of content similarity between these themes and the skill dimensions the practical association between these variables can not be established. A second combination of API themes, Group Enhancer and Discriminator, could explain up to .50 of the variance of the NASSP Assessment Center skill dimension Leadership. Still, the practical linkages between these themes and dimensions would, except for the content similarity of

the theme Group Enhancer and the skill dimension of Leadership, require an item analysis beyond the scope of this study.

The lack of significant correlations between Administrator Perceiver Interview theme and total scores and NASSP Assessment Center scores resulted in the acceptance of the null hypothesis of this study. The null hypothesis tested was that there will be no significant correlations between scores on a structured interview procedure used in school administrator selection and scores on an assessment center procedure used in school administrator selection. No significant correlations existed between the API total score and the NASSP Assessment Center skill dimensions. Only six moderate correlation coefficients out of the possible 156 correlation coefficients were significant at or beyond the .05 level. Further, only two skill dimensions correlated with combinations of API themes. Concurrent validity between the API and the NASSP Assessment Center was not supported by the findings of this study. In addition, because of the small number of significant correlations and the mixed direction of the correlations (95 negative, 61 positive), the interchangeability of the two procedures was not supported. Overall, the lack of correlations seemed to

Table 6

Multiple Regression Analysis of Skill Dimensions and Combinations
of Themes

Variable	(r)	Stepwise Multiple Correlation Coefficient (R)	Stepwise Coefficient of Determination (R ²)
Decisiveness			
Human Resource Development	-.47	.47	.22
Arranger	.38	.79	.62
Leadership			
Group Enhancer	.48	.48	.23
Discriminator	-.26	.71	.50

Note. Only correlations significant at .05 level were reported.

indicate that for the sample group in this study performance on the API provided different information concerning a candidate's potential for public school administration than did the NASSP Assessment Center.

CHAPTER V

Summary, Conclusions and Recommendations

The purpose of this study was the determination of the degree of concurrent validity between performance on two procedures used in the selection of school administrators. The two procedures were a structured interview (SRI Administrator Perceiver) and an assessment center (NASSP Assessment Center). A literature review was conducted to ascertain the status of administrator selection in the 1980s as well as the research available concerning selection criteria and selection procedures, particularly the structured interview and the assessment center. The study consisted of gathering two sets of scores (one from the structured interview and one from the assessment center) on a sample of subjects ($n=19$) and the computation of correlation coefficients between these scores. Inferential statistics were used to analyze the data and to determine the extent of the relationship between performance on the structured interview and performance in the assessment center.

Findings from the Literature

1. Present administrator selection practices are in many aspects deficient. School district personnel

often operate without written administrator selection policies; use unsystematic practices; and place a heavy reliance on information obtained from sources lacking in validity and reliability (such as application forms, letters of recommendation and interviews).

2. The impact of local aims and competing interests can not be underestimated in administrator selection. Local goals (such as affirmative action or tougher school discipline) often constrain the development and application of administrator selection criteria and procedures. Further, after initial screening, fit between a candidate and the local image of a school administrator often dominate the final selection decision.

3. Little evidence existed in the literature that administrator selection criteria were competency based, scientifically developed from administrative job requirements, or locally validated. Leadership and human relations skills were the most often mentioned criteria along with prior teaching and administrative experience. Irrelevant selection criteria such as age, sex, marital status and amount of experience continue to be used by many school districts.

4. Educational, political and legal pressures are building to force development and implementation of

reliable and valid administrator procedures. The public push in the early 1980s for educational excellence and accountability impact heavily on the selection of public school administrators who are perceived as key personnel in meeting both goals. Further, federal equal employment opportunity guidelines require that a rational relationship between selection criteria and administrator jobs must exist and that school district officials must be able to demonstrate the fairness of selection procedures to legally protected groups.

5. The belief that one of the best indicators of one's future performance in a job is one's present and immediate past performance in a similar job is common. This belief coupled with the influence of local situational factors on selection criteria and the paucity of established, valid selection criteria indicate an increased value of administrator internships, assessment centers or other methods of training and identifying potential school administrators.

6. There is no one way of selecting principals which will be effective for all school districts. Each selection procedure (application forms, tests, letters of recommendation and interviews) can be used to

contribute effectively in the selection of school administrators. Further, each selection procedure, if used improperly, can be detrimental to the selection process. Still, several methods to reduce bias and improve the objectivity of administrator selection procedures were documented. These included: a) involving a variety of trained individuals, b) using multiple, standardized procedures, c) developing and validating selection criteria based on job analyses, and e) evaluating and refining the selection process continually.

7. The most commonly used selection procedure by far is a semi-structured interview. Interviews have been widely studied and can be a functional component in the selection process particularly in the assessment of interpersonal relations skills. Standardized, job-related, structured interviews accomplished more than superficial, unplanned interviews; however, the interview has limited value because of its consistently low predictive validity and numerous possibilities for error.

8. A properly designed and implemented assessment center represented the state-of-the-art in selection procedure recommendations. Assessment centers have multiple assessment techniques, multiple trained

assessors, standardized methods, job-related exercises and objective, validated criteria. Assessment centers were reported as having the validity and reliability heretofore lacking in other selection procedures and could result in improved selection effectiveness and in better compliance with equal employment opportunity guidelines.

Findings from the Study

1. The small sample size in this study limited the likelihood that true significant relationships would be observed.

2. Correlation coefficients computed among Administrator Perceiver Interview theme and total scores were positive and generally high. Significant correlations at the .05 level were indicated in 43 of 78 possible correlations. Correlations of the theme scores with the API total score were significant at the .05 level ranging from .52 to .80 with the exception of the theme Performance Orientation. These intercorrelations indicated that the total API score, rather than any individual theme score should be used when determining concurrent validity between performance on the API and the NASSP Assessment Center.

3. NASSP Assessment Center skill dimension intercorrelations were moderate to high. Forty-four of

the 66 possible intercorrelations were positive and significant at the .05 level indicating that those individuals who score high on one skill dimension will likely score high on the other skill dimensions.

4. When correlation coefficients were determined between Administrator Perceiver Interview scores and NASSP Assessment Center skill dimension scores, few significant correlation coefficients were found. Only six of the possible 156 correlation coefficients were significant at the .05 level. The correlation coefficients between the API total score and the NASSP Assessment Center skill dimensions were non-significant and near zero. Four of six of the significant correlation coefficients and 95 of 156 correlation coefficients overall were negative, indicating inverse relationships. Only the API theme Group Enhancer and the NASSP Assessment Center skill dimension Leadership purported to measure similar information about administrator candidates and had a positive and significant correlation ($r=+0.47$).

5. When correlations between NASSP Assessment Center skill dimensions and combinations of API themes were determined through a stepwise multiple regression procedure, moderate and significant multiple correlation coefficients were found for two skill

dimensions--Decisiveness and Leadership. The multiple correlation coefficient between the combination of API themes Human Resource Development and Arranger and the NASSP skill dimension Decisiveness was +0.79. The multiple correlation coefficient between the combination of Group Enhancer and Discriminator themes and the NASSP skill dimension Leadership was +0.71. The practical linkage between these themes and skill dimensions, except for the content similarity of the theme Group Enhancer and the skill dimension Leadership, was not established and would require an analysis beyond the scope of this study.

Conclusions

1. Based on the literature, both the Administrator Perceiver Interview and the NASSP Assessment Center represent acceptable procedures for use in the selection of school administrators. The API, as a structured interview, has standardized procedures and requires administration and scoring by trained interviewers. The NASSP Assessment Center has multiple assessment techniques, standardized methods, validated criteria, job-related exercises and uses multiple trained assessors.

2. Concurrent validity between performance on the Administrator Perceiver Interview and performance in

the NASSP Assessment Center was not supported in the findings in this study. The null hypothesis tested was that there will be no significant correlations between scores on a structured interview procedure used in school administrator selection and scores on an assessment center procedure used in school administrator selection. The lack of significant correlations between Administrator Perceiver Interview theme and total scores and NASSP Assessment Center scores resulted in the acceptance of the null hypothesis.

3. The interchangeability of all or parts of the Administrator Perceiver Interview and the NASSP Assessment Center was not supported in the findings of this study. The small number of significant correlations, the mixed direction of the correlations (95 negative, 61 positive) and the finding that only two skill dimensions correlated with combinations of API themes mean that parts of the two procedures can not be interchanged.

4. Overall, for the sample group in this study, performance on Administrator Perceiver Interview seemed to provide different information concerning a candidate's potential for public school administration than did the NASSP Assessment Center.

Recommendations

1. The selection of effective school administrators is essential to the vitality of the public schools and as such should be given priority in practice and in future research, particularly in identifying validated selection criteria.

2. The use of any administrator selection procedure should be examined by systematic study to determine its effectiveness in each local district or setting in which it will be used.

3. Caution should be exercised in allowing any one selection procedure or information source (such as the selection interview) to dominate the selection decision--multiple procedures and sources are preferred.

4. Various administrator selection procedures all purporting to measure potential for school administration may not measure the same things. As in this study, a structured interview (the Administrator Perceiver Interview) and an assessment center (NASSP Assessment Center) had few significant points of association. School district officials should avoid assuming that because selection procedures appear similar in content and purpose that the procedures will actually provide the same information.

5. School district officials should include the following factors in developing and implementing an effective administrator selection process:

- a. written board policies outlining the goals and guidelines for administrator selection;
- b. standardized methods of gathering and assessing information;
- c. job-related, scientifically developed and locally validated selection criteria;
- d. individuals trained to use the adopted selection procedure, to avoid biases where possible and to avoid illegal selection practices; and
- e. multiple selection exercises or information sources.

6. Presently, a properly designed and implemented assessment center meets the requirements of having valid criteria, multiple assessors, multiple exercises and standardized methodology as well as having the validity and reliability heretofore lacking in other selection procedures. School district officials should investigate using assessment centers as part of their administrator selection procedure.

7. All selection procedures should be periodically reviewed, including some evaluation of

administrators selected, to determine the continued effectiveness of the selection procedures.

8. University officials charged with the training and in-service of school administrators should incorporate in their programs instruction about the validity, reliability and sources of bias in administrator selection procedures and criteria.

9. This study should be duplicated with a larger sample group and expanded to include additional administrator selection procedures to see if the results would be consistent with the findings in this study.

Discussion

One of the underlying reasons for this study was the idea that the use of a structured interview might achieve similar administrator selection results as an assessment center. The idea was that a structured, one to two hour interview, administered and scored by trained interviewers, would match the selection validity of a complex, two-day assessment center, using standardized methods, trained assessors, job-related exercises and validated criteria. For reasons of time and cost efficiency the implications of using the structured interview instead of the assessment center were obvious. Both the structured interview

(Administrator Perceiver Interview) and the assessment center (NASSP Assessment Center) purported to yield information on probable job-related performance of potential school administrators. The assumption was made that if both procedures are measures of potential administrator performance, then, if an administrative candidate does well on one selection procedure that candidate should also do well on the other.

This study, though limited by a small sample size, indicated little support for the use of the Administrator Perceiver Interview in lieu of the NASSP Assessment Center. Simply stated, the API and NASSP measure different information about administrator candidates.

An individual's responses in an interview setting may reflect traits, beliefs or personal characteristics. The importance of personal characteristics and qualities in administrator selection was documented in several studies (Teitlebaum, 1972; Wagstaff & Spillman, 1974; Deever & Jurs, 1975 and Kahl, 1980). The value of tapping these personal characteristics and qualities may be the value of the structured interview. An assessment center, however, measures skills and performance in job-related situations. The realm of the assessment center may

well be professional characteristics, or, in other words, the observable behaviors of a candidate in job-related situations.

One may speculate and argue the relative importance of personal characteristics as measured by a structured interview and professional characteristics as measured by an assessment center. The evidence of this study, however, strongly rejects the interchangeability of the two procedures and encourages school district officials to adopt selection criteria and procedures which have established validity for local goals.

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APPENDIX

Table A-1

Raw Scores of Sample Group on Administrator Perceiver Interview

Subjects	API Themes												API TOTAL
	Mission	Human Relations Development	Relator	Delegator	Arranger	Catalyzer	Audience Sensitivity	Group Enhancer	Discriminator	Performance Orientation	Work Orientation	Ambiguity Tolerance	
01	3	0	3	3	4	5	3	2	1	2	3	2	31
02	3	1	2	2	2	3	4	0	4	3	2	2	28
03	4	4	5	3	5	5	2	2	2	3	4	3	42
04	5	4	1	1	4	4	5	2	4	5	4	2	41
05	3	2	3	5	3	4	3	4	3	3	2	3	38
06	0	2	0	1	0	2	2	1	0	4	2	0	14
07	0	3	0	3	3	4	4	3	3	4	4	4	45
08	4	3	3	2	2	5	4	3	4	2	3	4	39
09	3	4	2	4	3	2	4	1	1	4	2	1	31
10	3	4	4	4	4	4	5	3	3	4	4	4	46
11	2	5	1	5	4	4	2	3	2	5	3	4	40
12	1	1	1	4	2	4	3	1	2	3	2	2	26
13	1	0	3	0	3	3	2	1	3	5	3	2	26
14	3	5	3	5	3	4	3	3	4	5	4	3	45
15	4	5	4	3	5	4	4	3	3	4	4	4	47
16	3	3	4	3	4	5	5	2	2	4	4	3	42
17	4	5	4	3	3	4	4	4	5	3	5	3	47
18	2	1	1	0	0	0	2	2	1	2	2	1	14
19	2	3	1	4	0	4	4	5	4	4	4	0	35

Table A-2

Raw Scores of Sample Group on NASSP Assessment Center

Subjects	NASSP Assessment Center Skill Dimensions											
	Problem Analysis	Judgment	Organizational Ability	Decisiveness	Leadership	Sensitivity	Range of Interests	Personal Motivation	Educational Values	Stress Tolerance	Oral Communication	Written Communication
01	3.67	4.33	4.50	4.83	3.67	4.50	3.33	4.50	4.33	4.00	4.33	4.33
02	2.50	2.17	3.50	3.83	2.00	3.00	3.00	3.83	3.17	3.17	3.33	4.00
03	2.17	2.50	2.33	4.00	2.00	2.17	2.00	1.67	2.50	2.67	3.17	3.17
04	2.17	2.83	2.00	3.00	3.17	3.00	2.83	3.17	3.00	4.00	3.17	2.00
05	3.50	3.00	4.50	3.17	3.67	3.33	2.83	3.50	4.67	4.00	4.33	5.00
06	3.00	2.83	2.67	2.17	3.50	3.00	2.00	3.50	3.30	4.00	4.33	2.66
07	2.83	3.00	3.17	3.83	3.00	4.00	2.00	3.50	3.17	3.17	2.83	3.00
08	3.17	3.17	3.33	3.00	3.00	3.00	2.67	3.50	3.00	3.33	3.33	3.00
09	2.66	2.17	2.83	3.00	2.17	3.33	3.17	4.00	3.67	3.00	3.83	3.50
10	3.17	2.50	3.00	2.00	2.83	3.00	3.00	3.50	3.67	2.83	3.17	3.17
11	3.17	3.00	3.67	3.00	3.50	4.17	3.83	5.00	3.67	3.67	4.00	4.67
12	2.33	2.00	2.17	3.00	2.17	2.66	2.00	2.50	2.17	2.50	3.00	3.33
13	3.00	2.17	3.83	3.83	1.83	2.83	2.00	3.33	3.00	3.17	3.00	2.83
14	2.00	1.33	1.50	2.83	2.00	2.50	3.17	3.50	2.33	3.17	2.00	2.67
15	3.00	3.17	3.00	3.00	4.00	3.67	3.17	3.67	4.17	3.33	3.67	3.83
16	3.00	2.66	3.17	4.00	3.17	3.67	3.33	4.17	3.67	4.17	4.17	4.00
17	2.17	2.33	3.17	2.33	2.67	3.50	1.83	2.00	2.83	2.00	2.33	3.00
18	2.50	3.00	2.00	3.00	3.83	4.17	3.17	4.17	3.83	3.17	3.67	3.67
19	3.00	3.00	2.66	2.50	3.67	3.33	3.17	3.50	3.33	2.50	3.17	3.00

NOTE. NASSP Assessment Center scores are mathematical averages of the six assessor ratings.

Table A-3

API Theme Characteristics from Selection Research IncorporatedSample (N=913)

Theme	Mean	S.D.	r to Total (N=185)
Mission	1.64	1.32	.66
Human Resource Development	1.61	1.42	.62
Relator	2.60	1.48	.68
Delegator	1.85	1.24	.60
Arranger	2.11	1.31	.65
Catalyzer	2.47	1.13	.57
Audience Sensitivity	2.07	1.14	.60
Group Enhancer	1.73	1.30	.63
Discriminator	1.86	1.25	.42
Performance Orientation	2.49	1.14	.56
Work Orientation	2.56	1.24	.55
<u>Ambiguity Tolerance</u>	<u>1.52</u>	<u>1.31</u>	.63
API TOTAL	24.51	8.74	

NOTE. From API Technical Manual, 1980, p.30.

Table A-4

Assessment Center Skill Dimension Characteristics from
NASSP Sample (N=350)

<u>Skill Dimension</u>	<u>M</u>	<u>SD</u>
Problem Analysis	2.89	.76
Judgment	2.83	.71
Organizational Ability	3.11	.79
Decisiveness	3.54	.69
Leadership	3.05	.83
Sensitivity	3.26	.69
Range of Interests	3.27	.72
Personal Motivation	3.55	.74
Educational Values	3.18	.71
Stress Tolerance	3.24	.74
Oral Communications	3.42	.66
Written Communications	3.33	.75

NOTE. From Criterion Related and Content Validity of the NASSP
Assessment Center, 1984, p.13.