With knowledge about leadership, the selection of leaders can be improved.

Locating Principals Who Are Leaders: The Assessment Center Concept

by Lloyd E. McCleary and Rodney T. Ogawa

Leadership is a major, at times dominant, interest in applied fields such as management and public and educational administration. The more foundational fields of social psychology, sociology and political science give leadership an important place as well. This attention to leadership is in large part rooted in the assumption that leadership bears a direct and casual relationship to organizational effectiveness (Pfeffer, 1978). People, practitioners and scholars alike, hold to this assumption despite the existence of a vast literature that has yet to reveal much that is definitive in terms of a concept of leadership or its dimensions (see for example Smith, Mazzarella and Piele, 1981; Stogdill, 1974). Given the assumption regarding leader influence the syllogistic reasoning follows that with knowledge about leadership, the selection of leaders (and potential leaders) can be improved which, in turn, will lead to more effective organizations.

Thus, it is not surprising that applied fields, including educational administration, have invested research and development capital in attempts to clarify the essential meaning of leadership and to measure leadership in those terms. A most significant effort to develop means to measure leadership has resulted in the assessment center concept. In this paper, we will examine knowledge about leadership as it relates to the assessment center concept and describe the development of assessment centers per se. We will then turn our attention to an application of the assessment center concept to education, the National Association of Secondary School Principal's Principal Assessment Center Project.

Arriving at a Working Definition of Leadership

Definitions of leadership that seek the highest level of generality have not been found to be useful as a basis for designing assessment instruments and methods (Yukl, 1981). The task and maintenance, initiating structure and consideration and concern for people and concern for production dichotomies are at too high a level of abstraction to be of practical use in assessing leadership in individuals. The same is true of highly specific job analyses. This is because job analyses are employed to describe specific positions in specific situations and at specific points of time. This level of specificity does not lend itself to the identification of skills or attributes that will apply to positions other than ones for which they are intended.

Intermediate level analyses have proven to be more useful in creating a working definition of leadership. They typically take the form of taxonomies that are broad enough to capture most relevant leader behaviors and yet are useful in specific situations. In addition, there exists some theoretical and empirical foundation to the dimensions now in use in assessment centers. Although far from adequate, evidence does establish two important points. First, some commonality of leadership functions is shown across types of organizations: business, public-political, military and educational. Second, discriminate and convergent validity has been established for the dimensions of leadership as measured in a variety of assessment centers. Discriminate validity establishes the extent to which a given (leader) behavior is differentiated from measures of other behaviors, and this is a necessary condition to the determination of construct validity. Convergent validity is the confirmation of the presence of a trait or a behavior through use of independent measures (Thompson, 1970).

By using an intermediate level of analysis, the matter of arriving at dimensions to be measured as predictors of leader behavior is resolved by use of a phenomenological approach. That is, measures based upon performance in simulated situations become the bases for predicting leader behavior in the actual work setting. The simulated situations are designed and validated based upon predetermined dimensions that have been agreed upon as being critical to effective functioning in a given position, such as the principalship. Examples of simulated situations are: in-basket exercises, case analysis, problem solving exercises, leaderless group situations and the like. The *predetermined dimensions* represent what is meant by leadership in an assessment center.

Some Predetermined Dimensions of Leadership and Their Adequacy

Dimensions of leadership that are being measured in assessment centers can best be classified as traits and skills. Researchers who are seeking an integrated theory of leadership, largely avoided traits and skills (Hoy and Miskel, 1983; Stogdill, 1974). They focused upon leader behavior, leadership styles and the relationship of characteristics of these to organizational variables. Industrial psychologists, evaluation specialists and scholars involved with personnel management problems continued to conduct trait research relating to managers and administrators. Their concern was with the relation of leader traits to *effective performance* rather than upon comparisons of leaders and nonleaders. This distinction led to the identification of specific traits and skills that could be shown to affect performance in an administrative role.

Stogdill (1974) reviewed 163 trait studies and identified the following traits as characteristics of organization leaders (p. 81):

—self-confidence and personal identity
—strong drive for responsibility and task completion
—persistence in pursuit of goals

Drs. Lloyd E. McCleary and Rodney T. Ogawa are professors at the University of Utah, Salt Lake City.

—venturesome and originality in problem solving
—initiative in social situations
—acceptance of consequences of decisions and actions
—high tolerance of stress
—ability to influence the behavior of others
—ability to structure interaction to the purpose at hand

Modern trait researchers avoid the claim that certain traits or skills are essential but rather argue that the possession of certain traits greatly improves the likelihood that the leader will be effective. In the assessment center concept, the reality that contingencies of specific organizational settings may require certain combinations of traits and skills is not denied. The matching of the individual leader to the specific position is left to the judgment of those who select and place the administrator. In this sense the contribution of the assessment center is to increase the information available in the selection process.

The first comprehensive study of assessment center procedures was begun in 1956 by AT&T and named the Management Process Study (Byham, 1970). This was a longitudinal study involving 422 managers and was conducted over a four-year period. All information was retained for research purposes; none has ever been made available to company officials. In this way, predictive validity could be determined and related research undertaken (Huck, 1973). A factor analysis of assessment variables produced the factors listed below along with the variables loading most highly in each:

—General Effectiveness: Overall Staff Prediction, Decision Making, Organization and Planning, Creativity, Need for Advancement, Resistance to Stress, and Human Relations Skills
—Administrative Skills: Organizing and Planning, and Decision Making.
—Interpersonal Skills: Human Relations Skills, Behavior Flexibility, and Personal Impact.
—Control of Feelings: Tolerance of Uncertainty and Resistance to Stress.
—Intellectual Ability: Scholastic Aptitude and Range of Interests
—Work-Oriented Motivation: Primacy of Work and Inner Work Standards.
—Passivity: Ability to Delay Gratification, Need for Security, and Need for Advancement (negative).
—Dependency: Need for Superior Approval, Need for Peer Approval, and Goal Flexibility (p. 203).

This study has become the basis for most, if not all, of the subsequent development work related to assessment centers.

An assessment center employed by the city of Philadelphia to select administrative interns, following from the AT&T model, and adding later refinements, contains procedures for assigning candidates upon the following dimensions (Strausbaugh and Wagman, 1977, pp. 264-265).

—Oral communication
—Written communication
—Perceptivity
—Leadership
—Stress tolerance
—Initiative
—Analytical ability
—Decision making
—Organizing and planning
—Use of delegation
—Management and control
—Cooperativeness
—Originality
—Judgment
—Receptivity
—Accuracy
—Perseverance
—General intelligence

The designers of Philadelphia's assessment center have expressed the belief, albeit an empirically untested one, that the assessment center concept promises to be an improvement over previous methods for selecting interns. They cite the fairness and job relatedness of the assessment center process (Strausbaugh and Wagman, 1977).

Assessment Center Concept of Leadership

Some reasons for ambiguity in the definition of leadership have been noted. A clarification of the concept of leadership as employed in assessment centers can now be attempted. Note first that in the list of the city of Philadelphia's assessment center leadership is given as only one dimension out of eighteen that are rated. This arises from a highly restrictive definition which equates leadership with special acts that directly influence the behavior of others. Examples of this definition of leadership can be cited such as "leadership is the activity of influencing people to strive for goals (Terry, 1960, p. 21); "The natural and learned ability, skills, and personal characteristics to influence people to take desired actions (Welte, 1978, p. 30); and "leadership is that behavior which initiates changes in goals, objectives, configurations, procedures, input, process, and ultimately the outputs" (Lipham, 1974, p. 182). These three definitions (from management, industrial psychology, and educational administration) emphasize influencing others toward desired actions or goals. These definitions square most closely with the single dimension of leadership in the Philadelphia assessment center list.

The assessment center concept of leadership, however, is holistic. It assumes that ability, as measured by the skill dimensions taken together, provided an assessment of potential leaders. The skill dimensions and the exercises that measure them in a center are derived through phenomenologic analyses. Validity studies give a strong indication that the exercises do, in fact, measure competence which is related to performance in the role assessed. An analogy can be made with the concept of intelligence. What is measured by intelligence tests is highly correlated with what observers conclude to be intelligence behavior. In a given instance, intelligence may not be employed to guide action, or the circumstances in a specific situation may negate what would, *a priori*, be considered to be an intelligent course of action. Predictive validity studies indicate that the skill dimensions are those which make a difference in performance as a leader and that the exercises in a properly constructed assessment center does measure these skills.

The NASSP Principals Assessment Center

A prime example of the application of the assessment center concept in the selection of school administrators is the Principals Assessment Center of the National Association of Secondary School Principals (NASSP). In this section, we will describe NASSP's Assessment Center and discuss its potential for selecting leaders. We will show that

this assessment center measures skills that are related to the work of school principals and, therefore, shows promise for identifying individuals who can function effectively in that role. We will also discuss the advantages that the assessment center provides to school districts that employ it in the selection of principals.

Assessment center operations. As its name suggests, the NASSP Principals Assessment Center is aimed at determining the extent to which participants possess skills needed to succeed as a principal. At last count, 25 projects were operating Assessment Centers under the auspices of NASSP. These projects are scattered across the United States, reaching from Maine to California. In addition, one project was recently begun in Canada.

The NASSP Assessment Center is comprised of six exercises: two leaderless group exercises, two in-basket simulations, a fact-finding exercise and a personal interview. Six trained assessors observe 12 participants as they complete these exercises over a two-day period. After compiling written reports on the performance of each participant in each exercise the assessors discuss and rate the performance of the candidates. They rate each candidate's performance on 12 skill dimensions, as well as his/her overall performance. A profile is written for each candidate. Profiles contain ratings and descriptions of the evidence considered by assessors in making the ratings. The final element of an Assessment Center is an individual debriefing interview usually conducted by the project director.

The 12 skill dimensions that are evaluated in the Assessment Center and definitions of each dimension are listed below. The definitions are taken from NASSP's Assessor's Manual.

Administrative Skills

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

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

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

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

Interpersonal Skills

—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.

—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.

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

Communication

—Oral Communication: Ability to make a clear oral presentation of facts of ideas.

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

Other Dimensions

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

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

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

Validity and Reliability. The characteristics of the NASSP Assessment Center as a measurement instrument have been examined in some detail. One characteristic that is readily apparent is the similarity of NASSP's list of skill dimensions to those used in other assessment centers. For instance, both the NASSP and Philadelphia Assessment Centers evaluate oral and written communication, leadership, stress tolerance, problem analysis, organizational ability, and judgment. This is consistent with the general notion that the skills and attributes of successful managers are fairly consistent across types of organizations.

A study commissioned by NASSP determined the validity and reliability of its Assessment Center (Schmitt, Noe, Meritt, Fitzgerald and Jorgensen, 1983). With regard to internal validity, the team of researchers found high levels of interrater reliability and that significant differences existed between the 12 skill dimensions. Further, they found that non-white participants fared less well than their white counterparts, men performed less well than women, and that participants serving in non-teaching roles (e.g., counselors and specialists) performed better than teachers.

The research team also examined the criterion-related validity (the extent to which assessment center ratings correspond to ratings of on-the-job performance on the same skills) of the Assessment Center. Generally, they found that the ratings of superiors corresponded to those obtained in the Assessment Center, but that the ratings of teachers and support staff were not as highly related to Assessment Center ratings. In general, then, the results of the study showed that the NASSP Assessment Center is a valid and reliable instrument.

Relationship to the work of principals. Beyond confirming the internal and criterion-related validity of the NASSP Assessment Center, the research team also found that students' perceptions of school climate were significantly related to ratings of the following skills: problem analysis, judgment, decisiveness, sensitivity, written communication and the overall placement recommendation. Although teachers' and other staff members' perceptions of climate were not found to be significantly correlated to Assessment Center ratings, the finding on students' perceptions remains intriguing. It suggests that, as we asserted earlier, assessment centers can provide a holistic rendering of a can-

didate's competence to perform as a principal.

An examination of the findings of research on the work done by principals reveals that many of the skills included in the NASSP Assessment Center would be useful to incumbents of the principalship. Several researchers have employed structured observational techniques to study the behavior of principals (O'Dempsey, 1976; Peterson, 1977; Willis, 1980; Martin and Willower, 1981; Kmetz and Willower, 1982). At least three themes are common to all of these studies. First, it is clear that principals work long hours. Estimates range from 50 to 60 hours per week.

Second, the work of principals is characterized by variety, brevity and fragmentation. Principals are called upon to do everything from managing budgets, to evaluating teachers and responding to concerned parents. What's more, the typical activities in which principals find themselves involved are brief, averaging about five minutes. And, the activities are fragmented. Many are interrupted; there is little consistency from one activity to another. A principal might have a conversation with the custodian about setting up chairs for an assembly interrupted by a phone call from a parent concerned about a student's performance on an achievement test.

The third characteristic of the work of principals uncovered by research is that principals work by talking. In fact, various studies have found that principals spend anywhere from 67 percent to 83 percent of their time talking with individuals or groups. Most of this time is spent in face-to-face encounters, but also includes telephone conversations and announcements over the P.A. system. Principals use talk to both inform others and to gain information.

Some skills evaluated in the NASSP Assessment Center seem to be reflected in each of the three characteristics of principals' work. The ability to work effectively over the course of a 50- to 60-hour work week would seem to require both stress tolerance and personal motivation. Fatigue certainly accompanies long hours on the job and can produce a type of stress familiar to managers. Thus, a lack of tolerance to stress would make it difficult for an individual to work effectively as a principal. Personal motivation, which includes the qualities of receiving satisfaction from work and being self-policing, also seems to be a necessary quality for working successfully on a job that requires long hours. Since principals are not compensated on an hourly basis, it is reasonable to expect that implicit rewards of the job are a factor in explaining the willingness of principals to work on evenings and weekends. Moreover, since principals are rarely supervised, self-policing is clearly at work.

Assessment Center skills are also apparently related to the ability of principals to handle the variety, brevity and fragmentation which characterizes their work. For example, organizational ability and judgment, the latter of which includes the ability to set priorities, would be enhance the ability of principals to manage the variety and volume of the activities they encounter. Similarly, decisiveness, which includes the ability to act quickly, and stress tolerance would be required to respond adequately to the occasional crisis that punctuates the work of principals.

Finally, the tendency of principals to spend so much of their time communicating directly with individuals and groups indicates that two additional Assessment Center skills, oral communication and sensitivity, are skills that can enhance the effectiveness of principals. The necessity of possessing oral communication skills seems obvious. Further, sensitivity, as defined by NASSP, seems no less important. Sensitivity includes the "ability to perceive the needs, concerns, and personal problems of others . . . tact in dealing with persons from different backgrounds . . . knowing what information to communicate and to whom." Since principals communicate as much to receive information as to transmit it, sensitivity would seem to be an important attribute. Similarly, the ability to work with people of varied backgrounds and a sense for how to appropriately communicate with different audiences would enhance the ability of principals to communicate with the diverse communities served by many public schools.

This suggests that the NASSP Assessment Center does focus on skills related to the work of principals and, thus, could serve as a useful tool in the selection and assignment of principals.

How Assessment Center Profiles Are Used

To fully understand the contribution that NASSP's Assessment Center can make to the process of selecting principals we must look beyond the Assessment Center, itself, and consider how it is employed by school districts. Since research on the use of the Assessment Center has yet to be published, we will draw upon our experiences with the Intermountain-NASSP Assessment Center Project of the University of Utah in the following discussion.

We currently hold contracts with nine school districts in Utah. Each of these districts sends participants to be assessed. The process by which Assessment Center participants are selected varies from district to district. For example, one district employs conventional methods to screen applicants for vacant principalships. After narrowing the field, the district sends the finalists to the Assessment Center. Other districts use formal, conventional screening techniques to select from individuals who have applied to participate in the Assessment Center. Finally, some districts refer individuals to the Assessment Center who have been identified as prospective administrators through informal means.

The manner in which districts use Assessment Center profiles is typically related to the process by which they select participants. The district that refers finalists for principalships, weighs the information in the profiles with other available information (e.g., interviews, letters of recommendation) in making its final selections and appointments. The districts that either formally screen applicants for participation in the Assessment Center or informally select and refer prospective administrators typically place the profiles of participants in the participants' personnel files. When Assessment Center participants become candidates for principalships, their profiles are considered along with other data in selecting and assigning principals. When the profile is used in this latter fashion, pools of candidates for principalships usually include both individuals who have participated in the Assessment Center and those who have not.

In all cases the districts use Assessment Center profiles as just one source of information in making personnel decisions. They also consider candidates' work records, interviews and letters of recommendation. As a result, districts typically appoint individuals who both have good work records and performed well in the Assessment Center to principalships. However, some individuals have been appointed to principalships largely due to their outstanding performance in the Assessment Center, while others have been appointed on the strength of their work records and despite lackluster Assessment Center performances.

Advantages Offered by the Assessment Center

The NASSP Assessment Center offers two related advantages to districts in the selection of principals: a source of objective data on candidates and a basis for selection on merit. It is well documented that the selection of principals is often guided by the personal impressions that administrators have of subordinates (Baltzell and Dentler, 1983). Moreover, data gathered through conventional means are of questionable value. For example, personal interviews often fail to gather comparable information from different candidates. Similarly, letters of reference come from sources with whom those making the selections are unfamiliar and often provide incomplete or inaccurate information. The Assessment Center, on the other hand, provides information about job candidates that is reasonably objective and related, as we argued earlier, to the work of principals.

If the Assessment Center provides objective information about the extent to which candidates possess job related skills and attributes, then it might be assumed that it could be used to select principals on the basis of merit. That is, those candidates who proved themselves to be most able through their superior performance in the Assessment Center would be selected to become principals. There are two problems with this use of the Assessment Center. First, more is involved in the assignment of principals than whether or not candidates possess particular skills. Many contingencies must be considered when a principal is assigned. For example, there are the norms of the community served by a school, the superintendent's preferences regarding administrative style and conditions in the school (e.g., a perceived need for change versus the desire to maintain the status quo). To simply select the candidate with the highest Assessment Center rating would fail to recognize the importance of situational factors.

A second problem with using the Assessment Center to select principals on the basis of "merit" involves the point in the selection process at which the Assessment Center is employed. As we noted above, the school districts with which we work employ conventional formal and informal processes to select individuals for participation in the Assessment Center. Thus, the extent to which merit, even as narrowly defined by the Assessment Center, determines selection and appointment to a principalship is greatly compromised. For, it is possible that other, more meritorious individuals are eliminated from the pool by the conventional, often subjective means employed to screen candidates and never have the opportunity to exhibit their skills.

References

Baltzell, D. C. and R. A. Dentler. (1983). **Selecting American school principals: A sourcebook for educators.** Washington, D.C.: United States Department of Education, National Institute of Education.

Byham, W. C., (1970). Assessment center for spotting future managers. **Harvard Business Review, 48,** 150-160.

Hoy, W. K. and C. G. Miskel. (1982). **Educational administration: Theory, research and practice.** New York: Random House.

Huck, J. R. (1973). Assessment centers: A review of the external and internal validities. **Personnel Psychology, 26,** 191-212.

Kmetz, J. T. and D. J. Willower. (1982). Elementary school principals' work behavior. **Educational Administration Quarterly, 18,** 62-78.

Lipham, J. M. and J. A. Hoeh, Jr. (1974). **The principalship: Foundations and functions.** New York: Harper and Row.

Martin, W. J. and D. J. Willower. (1981). The managerial behavior of high school principals. **Educational Administration Quarterly, 17,** 69-90.

National Association of Secondary School Principals. **Assessors Manual.** Reston, Virginia: the author.

O'Dempsey, K. (1976). Time analysis of activities, work patterns and roles of high school principals. **Administrator's Bulletin, 7,**1-4.

Peterson, K. D. (1977). The principal's tasks. **Administrators Notebook, 26,** 1-4.

Pfeffer, J. (1978).The ambiguity of leadership. In M. W. McCall and M. M. Lombardo (Eds.) **Leadership: Where else can we go?** Durham, North Carolina: Duke University Press.

Smith, S. C., J. Mazzarella, and P. K. Piele. (1981). **School leadership.** Eugene, Oregon: University of Oregon.

Stogdill, R. H. (1974). **Handbook of leadership.** New York: Free Press.

Terry, G. R. (1960). **Principles of management.** Homewood, Illinois: Irwin.

Strausbaugh, D. and B. L. Wagman. (1977). An assessment center examination to select administrative interns. **Public Personnel Management,** 263-268.

Thompson, H. A. (1970). Comparison of predictor and criterion judgments of managerial performance. **Journal of Applied Psychology, 54,** 496-502.

Welte, C. E. (1978). Management and leadership: Concepts with an important difference. **Personnel Journal, 57,** 630-632.

Willis, Q. (1980). The work activity of school principals: An observational study. **Journal of Educational Administration, 17,** 27-54.

Yukl, G. A. (1982). **Innovation in research on leadership behavior.** Baltimore: Eastern Academy of Management.