The purpose of this study was to specify and test a methodology for deriving competency statements for the role of principal, using a need assessment technique derived from system theory. A national sample of secondary school principals was selected from a group of principals previously identified for their overall excellence in developmental activities. Respondents were asked to rate the importance of each of 39 competency statements that were developed in an earlier job analysis of the principalship. The 39 competencies were then grouped into seven competency areas, and the data were analyzed to calculate the relative importance of each category area as perceived by the respondents. Principal as school climate leader and principal as leader in community relations ranked as the highest of seven areas of competence. Principal and management and principal and student personnel ranked lowest of the seven and were significantly lower (at the .01 level) than the highest two areas. (Author/JG)
A major movement is underway to reorder pre-service and in-service preparation, certification requirements, and on-the-job performance of public school administrators in terms of specified competencies. The movement stems from the recognized need for more precision in training programs and more valid assessment procedures for measuring the performance of administrative officers. Whether a suitable interface is accomplished between profession definition of competence and pressures for accountability will likely be determined by the development of adequate methods for identifying and validating competencies needed for various job roles.

Attention to the specification of competencies in the principalship was begun seriously on a nationwide scale by a national conference sponsored by NASSP and the Danforth Foundation which resulted in an entire issue of the NASSP Bulletin (March 1972) devoted to the "Preparation of the Secondary School Principal." An Interest Group on the Competency Based Curriculum in Educational Administration was formed in August of 1972 by the National Conference of Professors of Educational Administration, and CFK Ltd. aided the founding of the CCBC Notebook, a quarterly published at the University of Utah. The Notebook, begun in January 1972, links a national network interested in competency based administration. With state and foundation support, an R & D Laboratory was established in the Department of Educational Administration at the University of Utah and a series of studies on competency begun. This report concerns that effort and deals with the methodology and findings of a study which attempts to state and prioritize competencies for the secondary school principal.

Rationale

The case for specifying competencies in the form of statements deriving from need assessment surveys and the use of judgments relative to those statements to guide preparation program planning is well documented. Webster (1959) studies competencies needed by superintendents using a need assessment survey. Laurence (1958) developed a source book of competencies based upon judgments of principals, supervisors, and professors of school administration. Trebias (1966) studied priorities of listings of competencies in educational administration as perceived by school superintendents. Alberto (1970) carried the need assessment survey approach to a number of groups such as government and university officials, superintendents, and principals. Roger Kaufman has perhaps published the most useful theoretical works relating to need assessment in education (1965, 1968, 1970).

The need for this study arose from two sources. First, earlier studies contained no validation procedures and were limited surveys which terminated with publication of results. Second, no effort has been made to conduct a needs assessment of administrative competencies, within the system concept, and carry through to program planning and implementation. Kaufman (cited above) advocates this approach for education. Marshall Frinks (1972), Sheehan (1967), McCleary and Brown (1972), among others, have proposed system models. The application of a system

*Paper presented at the meeting of the NCPEA Interest Group on Competency-Based Education for Administration, Bozeman, Montana, August 22, 1975.
model to program planning now becomes a possibility, and the assessment of competency needs as exemplified by this study begins that process.

Development of the Study

The study is conceived as one phase of an extended process, in fact a second phase, for an extensive job analysis of the principalship which preceded it. Under the direction of E. T. Demars, Kenneth Van Otten and Halsey Cook each completed a dissertation (1972) which provided the initial competency identification. From the job analysis thirty-nine competency statements were identified. The statements conformed to criteria established by Parsons (1972) and were grouped into seven categories.

The seven categories of competencies dealt with (1) The principal and climate; (2) The principal and public relations; (3) The principal and staff personnel; (4) The principal and instruction; (5) The principal, program and planning; (6) The principal and student personnel; and (7) The principal and management.

In order to relate what is reported here, it may be helpful for the reader to review McCleary and Brown's System Model for a Competency-Based Curriculum process (see Figure 1).
Figure 1 -- A System Model for the Development of a Competency-Based Curriculum

0.0
Competency-based education

1.0
Assess competency needs

2.0
Specify competencies

3.0
Determine competency components and performance levels

4.0
Identify competency attainment procedure

5.0
Establish assessment of competency attainment

6.0
Validate competencies, attainment, procedures, assessment system
The total model indicates that a necessary first step in developing university based or in-service instruction program based on competencies is to assess competency needs. An analysis of functions which should occur to assess competency needs is shown in figure 2.

Figure 2 -- Functional Analysis for Assessing Competency Needs
As previously mentioned, a "job analysis" was completed; and, based on such information, "content of relevant fields" was examined which led to the placing of the 39 identified competencies into the seven categories which have already been noted. The task required to "survey characteristics of those involved," then, was the next required step.

A national sample was obtained from a group of secondary school principals identified and invited to participate in CFK Ltd. projects because of "overall excellence" in developmental activities. This sample, it was assumed, would provide a group of principals who were proven administrators, oriented to the future, and capable of judging competencies important to the principalship and who were exemplars of the kinds of persons who should characterize the principalship. Nothing relative to these assumptions was questioned from interviews following completion of the instruments or from an analysis of responses to the Instrument itself.

Data were collected in the form of responses to the thirty-nine competency statements. Each competency was rated on a scale of importance from 0.0 to 4.0 and categorized in terms of competency level required for entry to the principalship as "not needed" (0 rating option), "familiar with" (1 rating option), "understanding" (2 rating option), and "able to apply" (3 or 4 rating options). Therefore, the higher the number assigned by the rater to the competency rating, the higher the rating for that competency.

Findings

The approach taken in tabulating the data was to employ the mean and standard deviation of each area of competence as ranking and concurrence indicators. The mean was considered the "Index of Importance." A high mean indicated an important area of high priority. The standard deviation was regarded as the "Index of Consensus." A low sigma (standard deviation) indicated substantial agreement by raters of the rated competency.

By using these indices, the areas of competence were ranked in order of their perceived importance using high means as one criteria and lowest sigmas as a second criteria. The results are shown in Table I. The first five areas of competence are considered reasonably important by those sampled in spite of the fact that the degrees of consensus were somewhat low (high sigmas). It is interesting to note that in these data the degree of consensus generally declines with the degree of importance, suggesting that the broader range of ratings assigned by respondees lowered the importance of lower ranked areas of competence. This does not necessarily have to occur as is seen in the third ranked area of competence, "Principal and Staff Personnel." The comparative lack of agreement as to the importance of this competence did not result in its being ranked as a competence of low importance.
Table 1

RANKING THE AREAS OF COMPETENCE BY THEIR MEANS

<table>
<thead>
<tr>
<th>Rank</th>
<th>Area of Competence</th>
<th>Index of Importance (M)</th>
<th>Index of Consensus (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Principal and Climate</td>
<td>3.39</td>
<td>.70 (^2)*</td>
</tr>
<tr>
<td>2</td>
<td>Principal and Public Relations</td>
<td>3.37</td>
<td>.64 (^1)</td>
</tr>
<tr>
<td>3</td>
<td>Principal and Staff Personnel</td>
<td>3.22</td>
<td>.87 (^5)</td>
</tr>
<tr>
<td>4</td>
<td>Principal and Instruction</td>
<td>3.14</td>
<td>.78 (^3)</td>
</tr>
<tr>
<td>5</td>
<td>Principal, Programs and Planning</td>
<td>3.14</td>
<td>.79 (^4)</td>
</tr>
<tr>
<td>6</td>
<td>Principal and Student Personnel</td>
<td>2.78</td>
<td>.87 (^6)</td>
</tr>
<tr>
<td>7</td>
<td>Principal and Management</td>
<td>2.75</td>
<td>.91 (^7)</td>
</tr>
</tbody>
</table>

Overall Mean = 3.04 (low area in "able to apply" category)

Overall Standard Deviation = .86

*Rank of Index of Consensus, e.g., the lower the standard deviation, the better, or more important, the rank (1 = highest rank, 2 = second-highest rank, etc.).

Competency statements that make up each category are available from the authors.
The areas of competence as ranked were compared with each other to determine whether or not a higher ranked area of competence was significantly different (defensibly dissimilar) when compared with its neighbors. The results obtained through use of the t-Test are reported in Table 2.

As can be seen in Table 2, the two highest ranked areas of competence were significantly different from the two lowest ranked areas of the seven top-ranked areas of competence. The areas of competence falling between the two highest and two lowest areas of competence are not statistically distinguishable from either end of the ranking scale, unless a person is willing to accept the lower levels of significance used for the matrix.
Table 2

MATRIX OF t-TESTS' LEVELS OF SIGNIFICANT DIFFERENCES BETWEEN AREAS OF COMPETENCE

<table>
<thead>
<tr>
<th>Rank</th>
<th>Area of Competence</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Principal and Management</td>
<td>.01*</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Principal and Student Pers.</td>
<td>.01</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Principal, Programs-Plan.</td>
<td></td>
<td></td>
<td>.01</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Principal and Instruction</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Principal and Staff Pers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Principal and Pub. Rel.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>1</td>
<td>Principal and Climate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

*The p-value is significant at the .01 level or beyond that the first two ranked competence areas differ from the last two ranked competence areas for the seven-ranked competence areas. All other intersects were found to be below the .01 level of significance.
Summary and Implications

The intent of the study was to develop procedures that would identify and validate statements of competence that could then be used in satisfying the need for data-based planning of pre-service and in-service educational programs. These same validated statements of competence could also be used as criteria for personnel selection, or for advancement and merit considerations.

The procedure reported here may be applied to produce data that can be used for helping to determine which competencies ought to be priority in a pre-service educational program for preparing principals, or with in-service programs that seek to improve the quality of the principalship. Most important, however, this procedure may be most useful for setting priorities as to which in-service educational programs or pre-service educational programs should be first emphasized. Use of other techniques could lead to rational changes, or rational decisions to retain exemplary programs, within a learning system. Such changes or decisions could be made through use of surveys, interviews, etc., to determine adequacy of present programs and levels of learner competence. One may hypothesize that more efficient and effective use of limited resources for training purposes could thus be achieved and that change would be possible without unnecessary elimination of excellent learning programs already in use.

Unless studies of this nature are conducted, we shall not be able to justify why we teach certain areas over other areas. Without meaningful input of information of this nature from the professional in the field, professors and directors of in-service growth programs at the school district level will not remain creditable.


Parsons, Michael, "The Notion of Competency as an Educational Objective," unpublished paper, Department of Educational Administration, University of Utah, 1972.


AREAS AND STATEMENTS DESCRIBING
COMPETENCE FOR THE PRINCIPALSHIP

A. Working Relationships with Central Office; Policy Development for the District

1. The principal works with the school board, superintendent and central office staff in the defining, coordinating, interpreting, and implementing the educational policy of the district.

2. The principal consults with central office staff on educational and organizational matters.

3. The principal serves as a liaison between the school, the district office and the state Office of Education.

4. The principal collects and interprets statistical information periodically requested by the district office.

5. The principal provides the central office staff with the information needed to clarify his position when complaints are brought against his school.

B. Climate

6. The principal knows and is able to employ model(s) that identify organizational conditions (variables) important to the building of self actualization in the staff and the satisfaction of ego needs of individuals.

7. The principal knows about and is able to employ procedures for establishing organizational goals, clarifying roles, planning and otherwise providing structure in order for individuals to relate to each other on cooperative and supportive ways.

8. The principal knows about and is able to work-through conflict situations with students, parents, teachers, and others related to school activity involving role conflict, value conflict, goal conflict, and interpersonal conflict.

9. The principal knows about and how to apply rational decision-making models, and, through participatory procedures, develop with the students and staff rational approaches to problem solving; focusing both on problem content and on process.

10. The principal understands both the structure and process aspects of formal and informal communication systems and is able to involve the staff in consciously building communication systems appropriate to the tasks in ways that contribute to self actualization and the satisfaction of "esteem needs." (Maslow)

C. Management

11. The principal applies problem identification and analysis procedures.

12. The principal applies rational decision making models and procedures in his management of school programs.
13. The principal employs managerial planning tools and procedures in managing his school.

14. The principal applies management control models, tools and processes in implementing his school programs.

15. The principal is familiar with and knows how to implement organizational designs in his school's programs.

D. Financial Management

16. The principal organizes, supervises, and manages the financial affairs of the school.

17. The principal provides resources and money for the educational programs of his school.

18. The principal makes resources available to the staff (for supplies, money, equipment, etc.)

19. The principal is familiar with the projected budgetary needs of his school, including salary, operation and maintenance costs.

20. The principal knows the financial situation of his school and analyzes cost by student, grade, by total enrollment, by number graduating, and by number failed or dropping out.

E. Community Services and Community Relations

21. The principal plans for and establishes public relations programs with the community.

22. The principal mediates disputes between parents, teachers, staff and students.

23. The principal identifies the community forces that affect the operation of the school and the implications of those forces.

24. The principal ought to be capable of publically supporting his ideological convictions as well as his opinions concerning the problems confronting the community.

25. The principal cooperates with civic organizations, and maintains good public relations with the communications media.

F. Pupil Personnel: Counseling and Guidance

26. The principal utilizes counseling techniques with, and sees to it that guidance programs are provided for, students.

27. The principal encourages students to participate in developing and implementing student programs.

28. The principal encourages and initiates studies that discover causes for difficulties and failures experienced by students, and helps in finding solutions for those difficulties.
29. The principal is an advocate of the students and communicates with them regarding aspects of their school life.

30. The principal organizes and directs the work of the counselors, as well as the orientation and social services of the school.

G. Student Activities

31. The principal organizes, administers and coordinates all the student activities of his school.

32. The principal evaluates the student activities program.

33. The principal determines and maintains standards for participation in student activities.

34. The principal develops and supervises the organization and functioning of student government.

35. The principal supervises the school's extra-curricular activities (assemblies, sports, etc.).

H. Pupil Control: Discipline, Attendance

36. The principal defines responsibilities in an effort to achieve regular attendance and control of the drop-out rate.

37. The principal establishes adequate control of the student body and provides necessary disciplinary rules with the help and cooperation of teachers, parents and students.

38. The principal maintains discipline, balanced with the normal functioning of instructional and extra-curricular activities.

39. The principal develops relationships of mutual understanding with the student by demonstrating his interest in their welfare.

40. The principal maintains adequate communication with parents so that he is able to communicate timely information to them regarding their children.

I. School Plant Organization and Control

41. The principal plans the school's educational program in accordance with the available facilities and equipment.

42. The principal regularly inspects the grounds and buildings personally.

43. The principal efficiently manages and operates the plant and its facilities and supervises the custodial help.

44. The principal finds the means and resources that make possible reasonable building maintenance; and he coordinates the plans for repairs, additions, and remodeling.
45. The principal maintains a current inventory of the equipment, furniture, and supplies of the school, and establishes and checks on a plan for reasonable periodic inspections.

J. Auxiliary Services

46. The principal organizes and manages the cafeteria service.

47. The principal cares for the health of the students by encouraging the organization and implementation of preventive medical services (vaccination, others)

48. The principal cares for the physical well being of the students by attempting to eliminate potential hazards and by organizing first aid services.

49. The principal provides transportation services making possible regular attendance.

50. The principal supervises and evaluates the auxiliary services of the school.

K. Personnel Administration

51. The principal organizes, coordinates, and supervises both teaching and administrative staff assignments.

52. The principal assists, advises, counsels and provides guidance to the staff in their personal and school problems.

53. The principal identifies the needs and interests of the entire school staff.

54. The principal regularly evaluates the teaching abilities of his teachers.

55. The principal develops and improves the staff by attracting and retaining competent personnel.

L. Personnel Improvement

56. By his own example, the principal stimulates and encourages teachers to keep abreast of current educational developments.

57. The principal encourages teachers to develop educational objectives and to work towards concrete goals.

58. The principal organizes, directs, coordinates, supervises, and evaluates inservice training programs and summer workshops.

59. The principal challenges his teachers to practice innovative and creative educational methods and techniques.

60. The principal supervises instruction by employing modern procedures and techniques of supervision.
M. Evaluation and Planning of the Educational Program: The Development of Curricular and Instruction

61. The principal plans and evaluates the instructional and curricular programs with the help of parents, teachers, and students.

62. The principal assesses the students' educational needs with the help of parents, teachers, and students.

63. The principal provides opportunity, direction and guidance to his teachers in developing curricula.

64. The principal plans for registration and registration procedures, and for opening and closing the school year.

65. The principal sees to it that high levels of academic achievement and maintained, and defines the standards and procedures for evaluating the results of instruction in his school.


66. The principal employs professional research techniques, interprets the results, and applies the conclusions in solving the educational problems of his school.

67. The principal develops long-range educational plans by involving parents, teachers, students, and central office personnel.

68. The principal encourages and supports educational research, especially when teachers show interest.

69. The principal foments and supports experimental, educational projects in order to promote innovation and change in education.

70. The principal organizes seminars, and similar activities, in order to stimulate inquiry in his teachers in testing new learning and teaching theories.