DOCUMENT RESUME

ED 151 927 EA 010 423

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TITLE A Study of Goal Preferences Regarding an Energy Crisis Contingency Plan: The School Without Schools Program.
PUB DATE 31 Mar 78
NOTE 32p.; Paper presented at the Annual Meeting of the American Educational Research Association (Toronto, Ontario, March 27-31, 1978); Last page may be marginally legible due to light print

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Administrative Personnel; Boards of Education; *Contingency Management; Educational Alternatives; *Educational Objectives; Elementary Secondary Education; *Emergency Programs; *Energy Conservation; Rating Scales; *School Personnel; School Surveys; Statistical Analysis; Teachers
IDENTIFIERS Columbus Public Schools OH

ABSTRACT

The study examines goal preferences regarding emergency educational programs such as the Columbus School Without Schools Program conducted during the energy shortages of 1977. Preferences of diverse educator groups were analyzed by the multi-dimensional scaling program MDPREF. A two-dimensional solution was obtained, the first dimension being an ideal vs. practical dimension, the second being an administrative vs. social concerns dimension. Consensus existed on the ideal program goals; however, ideal goals were perceived as having less chance of succeeding during alternative emergency programs than more practical, short-term goals. These outcomes are of import for persons concerned with crisis-related school closings. (Author)

A STUDY OF GOAL PREFERENCES REGARDING AN ENERGY CRISIS CONTINGENCY PLAN: THE SCHOOL WITHOUT SCHOOLS PROGRAM

Presented to the American Educational Research Association Meeting
Toronto, Canada
March 31, 1978

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Printed in the United States of America

A Study of Goal Preferences
Regarding an Energy Crisis Contingency Plan:
The School Without Schools Program

Complex organizations, such as schools, normally have multiple goals due to the variety of individuals and functions in both the organizational system and the environment. When forced to adapt to fluctuations in the environment, organizations often prioritize these multiple goals, concentrating on the basic ones needed for immediate organizational survival. Lack of goal consensus and dissimilarity in goal orientation may prove dysfunctional during such periods when an integrated effort is essential for coping with environmental change. Consensus on goal priorities is therefore highly desirable.[1,2,3]

The fuel shortage experienced by schools in the United States during the winter of 1977 is an example of fluctuation in the organizational environment. The School without Schools Program in Columbus, Ohio, was one attempt to cope with this change.

School without Schools Program

The Schools without Schools (SWS) Program was the response of the Columbus School District to an 85% curtailment in natural gas supplies which forced many Ohio schools to close for four weeks - February 7 to March 7, 1977. The SWS program operated for three weeks, the fourth week being accounted for by a rescheduled spring vacation.[4]

During the three weeks, Columbus students, numbering over 95,000, attended classes once a week on a rotating basis in buildings heated by alternative fuel sources. Twenty-nine out of the 160 district buildings were used. At this weekly meeting teachers collected assignments, reviewed materials and distributed new assignments. Attendance at this weekly meeting was mandatory. Between these weekly meetings, students were expected to watch and/or listen to educational

programs produced by Columbus teachers and aired over local radio and television stations. Students were directed to read the extra classroom supplement published daily for elementary and secondary schools in the Columbus Dispatch, the local newspaper. Students were also expected to attend special field trips or classes organized by their teachers and held in local community facilities. Classes met in libraries, museums, United Way agencies, local manufacturers, theaters, etc.[5]

The local media - newspapers, television, and radio stations - carried daily and weekly announcements of SWS activities. The central administration published a resource manual for all administrators and teachers which listed alternative facilities in the community, procedures for establishing field trips, plus periodic updates on activity schedules.[6] An open letter from the superintendent urged parents and students to cooperate in the SWS program.

For such a program to operate successfully however, full cooperation would be necessary not only from community members, but also from all school personnel - board of education members, administrators, and teachers at all levels. Agreement on program goals and priorities would seem to be an ingredient of such cooperation.

Objectives

The primary purpose of this exploratory study was to examine the goal preferences of educational groups typically having diverse goal orientations: board of education members, administrators, and teachers. A second purpose was to determine the acceptance of SWS goals and methods in smaller school districts in the metropolitan Columbus area. Specifically this study focused on the following questions:

1. Do board members, administrators, and teachers differ in their preferred goals for a School without School type program?

2. What dimensions underlie these differences in goal preferences and are these dimensions consistent across local school systems?

3. What demographic variables, if any, are related to differences in goal preferences?

4. What relationship exists between goal preferences and anticipated goal success? Between goal preferences and perceived importance?

5. What barriers might prevent successful adoption of this program in smaller school districts?

METHOD

Sample

Three school districts bordering the Columbus School District (Districts A, B, and C) supplied rosters of personnel and board of education members from which the sample was drawn. All board of education members, central administrators, and building principals from the three districts were included in the sample. A proportionate sample of elementary, middle school, and senior high school teachers was randomly selected in each of the three districts. Approximately fifty individuals were sampled and surveyed in each district for a total of 150 subjects.

Eighty-one subjects responded to the survey questionnaire, with 77 usable questionnaires being returned. The final sample consisted of 7 board of education members, 21 administrators, 40 teachers, and 9 area specialists. Over half of the respondents were male (56%), in their twenties or thirties with eleven years teaching experience, seven of which had been spent in the present district. 54% had earned a masters degree.

The districts had coped with the gas shortage by implementing a variety of programs. District A, with approximately 5200 students, operated a "school family education program" similar to the SWS program. Only 1 of its 7 school

buildings could be used for classes. The four buildings of District B, with approximately 1700 students, had heating systems which could be switched from natural gas to alternative fuels. Two of the buildings were converted to alternative fuel. District B remained open by shifting to split sessions schedule. District C, with approximately 4700 students, closed all 9 buildings, conducting a home-study program based on individual study packets and using available alternative locations.[7,8]

Procedure

A questionnaire was distributed to subjects through the three school mail systems at the end of the school year. Follow-up questionnaires were mailed to subjects' homes. The low response rate, 54%, was probably due to the timing, schools having just closed for summer vacation.

The questionnaire contained a list of 15 emergency program goals, some derived from publicized goals of the Columbus SWS program, others resulting from conversations with parents and teachers.[9] The fifteen goals are listed in TABLE I. Subjects were instructed to rank the goals in terms of their individual preference. Subjects also rated each goal on its relative importance and chance of success on a Likert scale (7=High, 1=Low). Subjects supplied the following demographic data: age, sex, total years teaching experience, years with the present district, position (board of education, administration, etc.), level building in which employed. In addition subjects indicated their willingness to conduct a SWS type program in their own districts and suggested potential barriers to the successful adoption or completion of a SWS type emergency program.

TABLE I

Fifteen Emergency Program Goals

1. To allow seniors to graduate on time
2. To allow teachers to experiment with new learning environments
3. To develop student skills in self-directed study
4. To help provide supervision for children of working mothers
5. To increase teacher and student awareness of community learning resources
6. To show that schools can function in time of crisis
7. To avoid make-up days in the school calendar
8. To allow more individualized instruction
9. To insure continuance in federal funding/subsidies
10. To keep students busy while schools close
11. To involve parents more in the educational experience
12. To demonstrate the importance of continued education
13. To prevent possible increases in juvenile crime
14. To provide continuous employment for teachers
15. To allow students to keep up with the basic areas of study

Data Analysis

An internal analysis of the preference data was performed using the MDPREF computer program developed by Carroll and Chang.[10] This non-parametric multi dimensional scaling program utilizes a point vector model whereby stimuli, in this case goals, are represented as points and subjects as vectors in a common space.[11] Preference rankings for each individual are recaptured by projecting stimulus points on subject vectors. The data is judged to fit the scaling model if the projected preferences correlate significantly with the original preference data for each subject. Basically it is a multi-dimensional version of the unfolding model, the ideal point for each subject being at the tip of the subject vector.[12]

Because the MDPREF program sets a maximum of 70 subjects for each analysis, seven subjects were randomly deleted from the sample. The preference data for the total sample (n=70) were analyzed to determine the underlying dimensions. Separate analyses of each district (n_A=22, n_B=23, n_C=25) were performed to investigate consistency of dimensions across districts. Two and three dimensional solutions were obtained. Output included matrices of goal and subject coordinates on each dimension and multi-dimensional plots locating subjects and stimuli in the common space.

To assist in the identification of underlying dimensions, median ratings on goal importance and potential goal success were correlated separately with goal coordinates on each of the underlying dimensions (n=15). Consistency of preferences across districts was examined by correlating the goal coordinates between all district pairs. Differences between preferences of board of education members, central administrators, building administrators, classroom teachers and other educational staff (e.g. reading specialists) were studied by examining the distribution of subjects in the dimensional space. Chi-square tests were

employed to detect possible associations between system position and dimensional position. Finally subjects' position on each of the underlying dimensions was regressed on demographic variables to aid interpretation of subject preferences.

RESULTS

Underlying Dimensions

Two and three dimensional solutions were obtained for the total sample (n=70), respectively accounting for 55% and 63% of the variance in preference. Since only two of the three dimensions were interpretable, the two dimensional solutions was retained. Spearman rank correlations between subject original preferences and projections on the fitted vectors indicated the data fit the scaling model, 64 of the 7 correlations being significant at the .05 level or better. Mean correlation coefficient was .73.

Having examined the appropriateness of the scaling model, the dimensionality of goal preferences was analyzed. Figure 1 illustrates the two dimensional plot of stimulus points (goals). Dimension 1 (the horizontal axis) seems to be an ideal dimension, goals such as keeping up with basics, self-directed student study, graduation on time, parental involvement being ranked as more ideal than goals such as continued employment for teachers, prevention of juvenile crime, etc. This ideal dimension accounted for 45% of the subject variance.

Dimension 2 (the vertical axis) was less clearly identified. Since goals such as graduation as scheduled, maintenance of school calendar, continued teacher employment ranked highest on this dimension, and goals such as experimental learning environments, more individualized instruction, increased community awareness ranked lowest, this dimension may be labeled an essential priority dimension. Goals high on dimension 2 were practical, essential for the maintenance of normal patterns of life. Goals low on dimension 2 were less essential, extras that might result from a SWS type program.

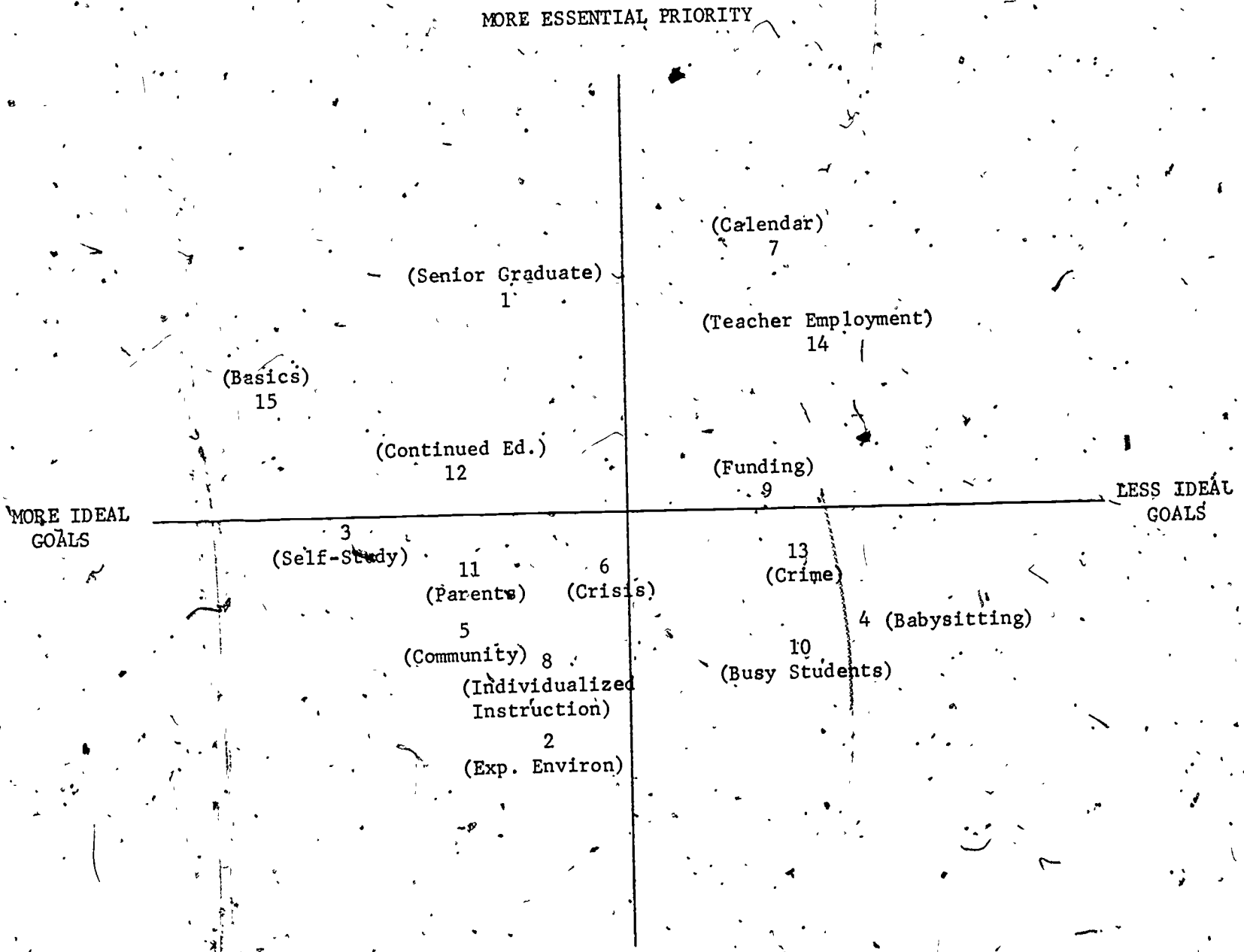

Figure 1
Plot of Goals in Two Dimensional Space

TABLE II presents Spearman rank correlations of dimension coordinates with median importance and success ratings for the fifteen goals. The significant correlation of goal importance with goal location on the ideal dimension (r=.99) supports the identification of dimension 1. Ideal goals obviously would be rated as more important. No significant relationship was observed between goal importance and the priority dimension (dimension 2). In contrast, goal success potential was significantly correlated with the priority dimension (r= .56) but not with the ideal dimension. Goals high in essential priority were perceived as having a higher chance of success. As expected dimension 1 (ideal) and dimension 2 (priority) were not significantly correlated, a function of the scaling solution.

To determine if these underlying dimensions were consistent across districts, a two-dimensional solution was obtained for each district. Figure 2 presents the District A solution; Figure 3, District B; and Figure 4, District C. A visual comparison of goal preferences suggest that consensus exists on the ideal ranking of the 15 goals. On the priority dimension (dimension 2), however, consensus exists more for goals positioned at the extremes of the priority dimension with more discrepancy occurring for less clear-cut goals located at the middle of the dimension.

To confirm this visual comparison, interdistrict Spearman rank correlations were computed for each dimension (N=15). Table III-A presents these inter-district correlations for Dimension 1 (ideal). The districts demonstrate high agreement on the ideal goal preference, the median correlation being .95 ($p \leq .001$). Inter-district correlators on Dimension 2 (priority) are presented in Table III-B. As visual comparison indicated, less agreement exists across districts on the second dimension. Solutions for Districts B + C (r=.56).

TABLE II

Spearman Rank Correlation Matrix of Perceived Goal Importance, Perceived Goal Success, Goal Position on Dimension 1 and Goal Position on Dimensional 2 (N=15)

	Importance	Success	Dimension 1	Dimension 2
Importance	----	.2273	.9884**	.1180
Success		-----	.2531	.5224*
Dimension 1			-----	.1679
Dimension 2				-----

* ($p \leq .02$)
** ($p \leq .001$)

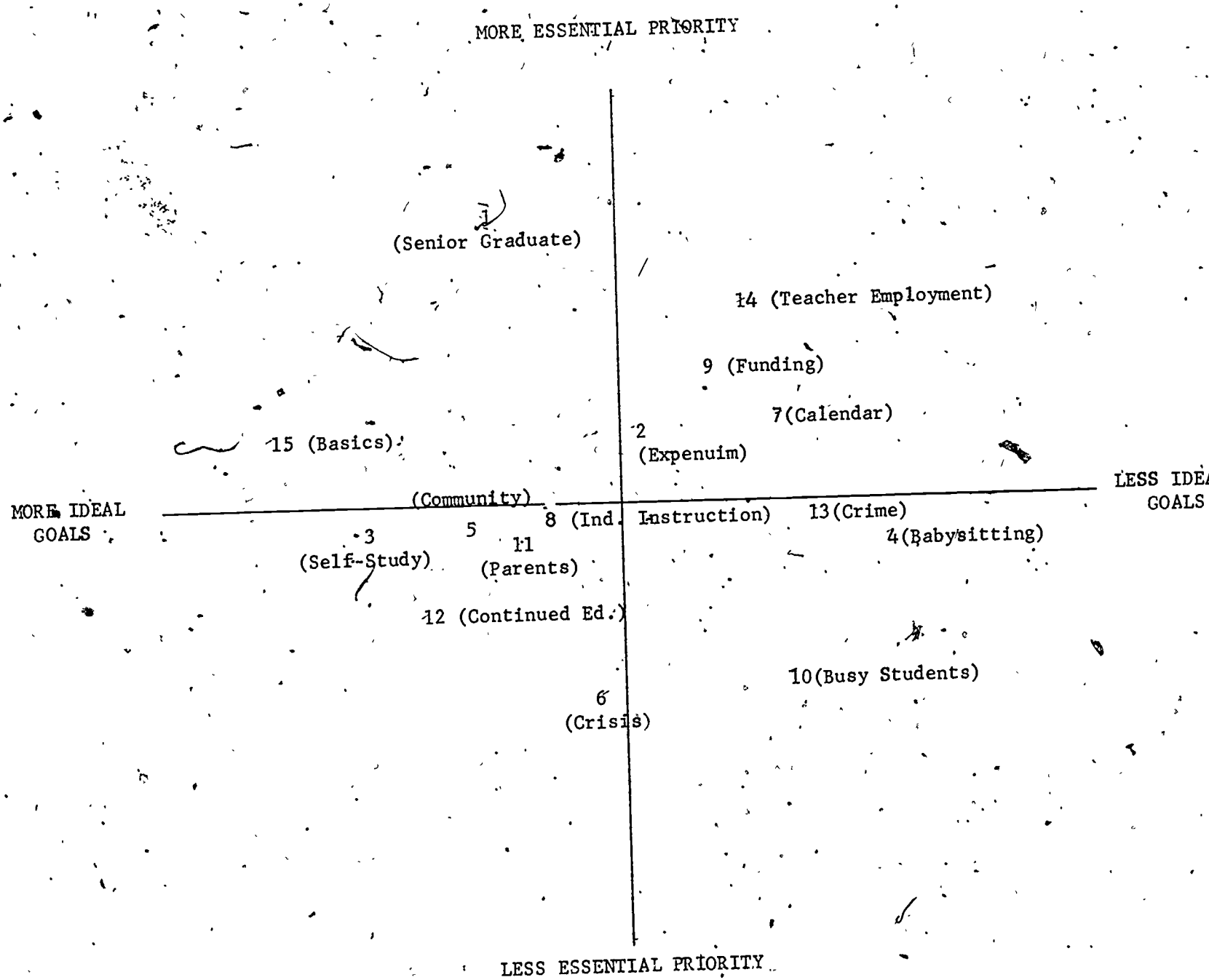

Figure 2
Two Dimensional Solution of
Goal Preferences for District A

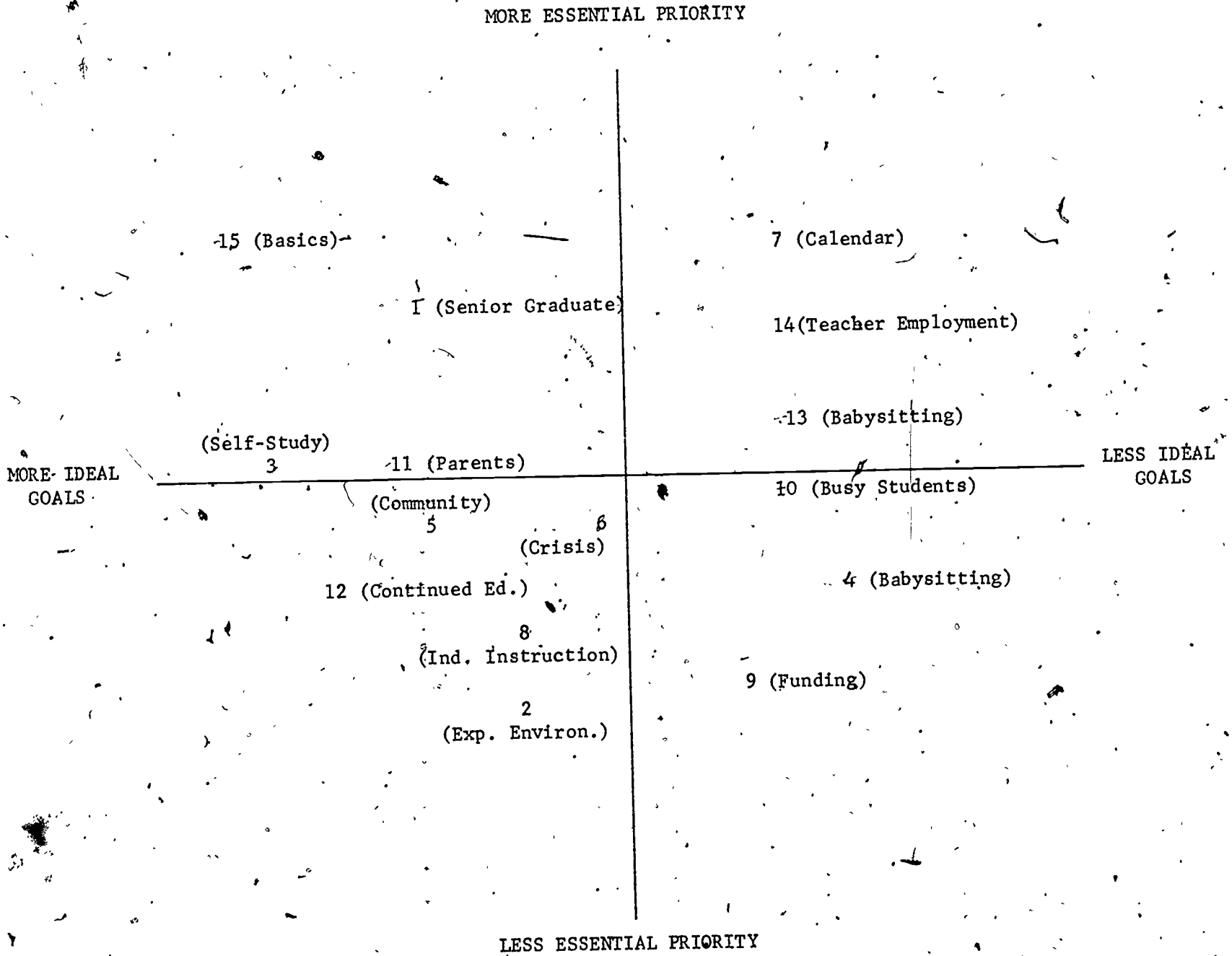

Figure 3
Two Dimensional Solution of
Goal Preferences for District B

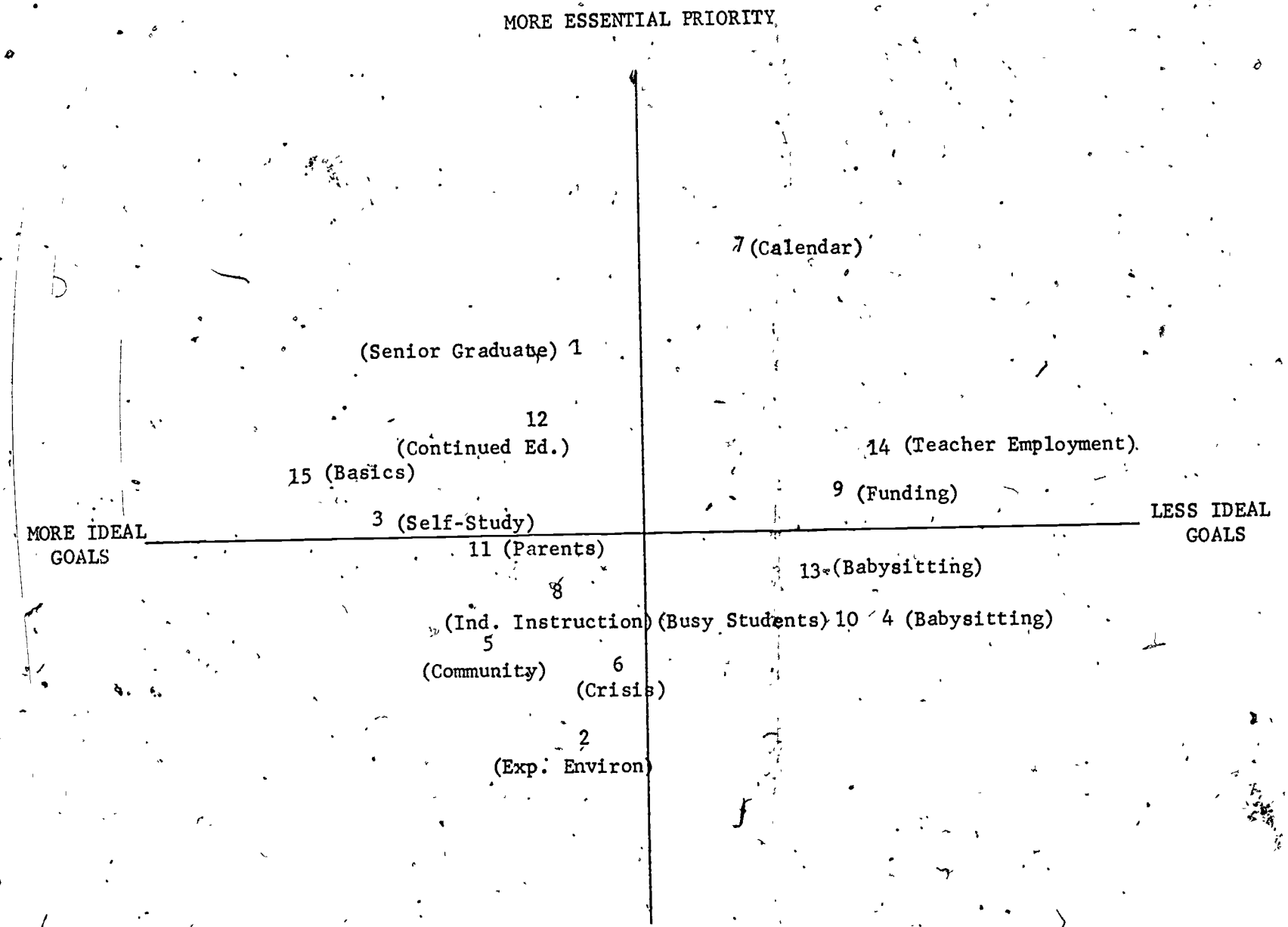

Figure 4
Two Dimensional Solution of
Goal Preferences for District C

TABLE III-A

Spearman Rank Correlations of District Goal Solutions on Dimension 1 (N=15)

	A	B	C
A	----	.96*	.89*
B	----	----	.95*
C	----	----	----
	*($p \leq .001$)		

TABLE III-B

Spearman Rank Correlations of District Goal Solutions on Dimension 2 (N=15).

	A	B	C
A	----	.19	.435*
B	----	----	.56**
C	----	----	----
	*($p \leq .05$) **($p \leq .01$)		

and Districts A and C (r=.43) were significantly correlated; however, solutions for Districts A and B showed little agreement (r=.19). District consensus on the two dimensions collectively was interpreted as sufficient, however, to justify utilizing the total sample solution (N=70) for remaining data analysis.

Subject Preferences

The position of subject vectors in the two dimensional space was examined to determine if board of education members, administrators, and classroom teachers and area specialists varied in goal preferences and their underlying dimensions. Figure 5 illustrates the distribution of board of education members, central administrators, and building principals; Figure 6 the distribution of elementary, middle school, and high school teachers. Area specialists were labeled as classroom teachers according to principal grade level affiliation. Figures 5 and 6 demonstrate that subjects did not differ greatly in preferring the more ideal goals over the less ideal goals, all but one being located in the ideal half of the dimensional plot. Subjects were, however, differentially distributed over the priority dimensions.

In Figure 5, board of education members and central administration members consistently appear in the high ideal-high priority quadrant, while building principals cluster in the high ideal-low priority quadrant. Figure 6 suggests that elementary, middle school and high school teachers do not differ greatly in goal preferences, being distributed over both the upper and lower left hand quadrants. A comparison of Figure 5 and Figure 6 indicates however, that classroom teachers may differ from building principals, with more classroom teachers having high ideal-high priority preferences than principals.

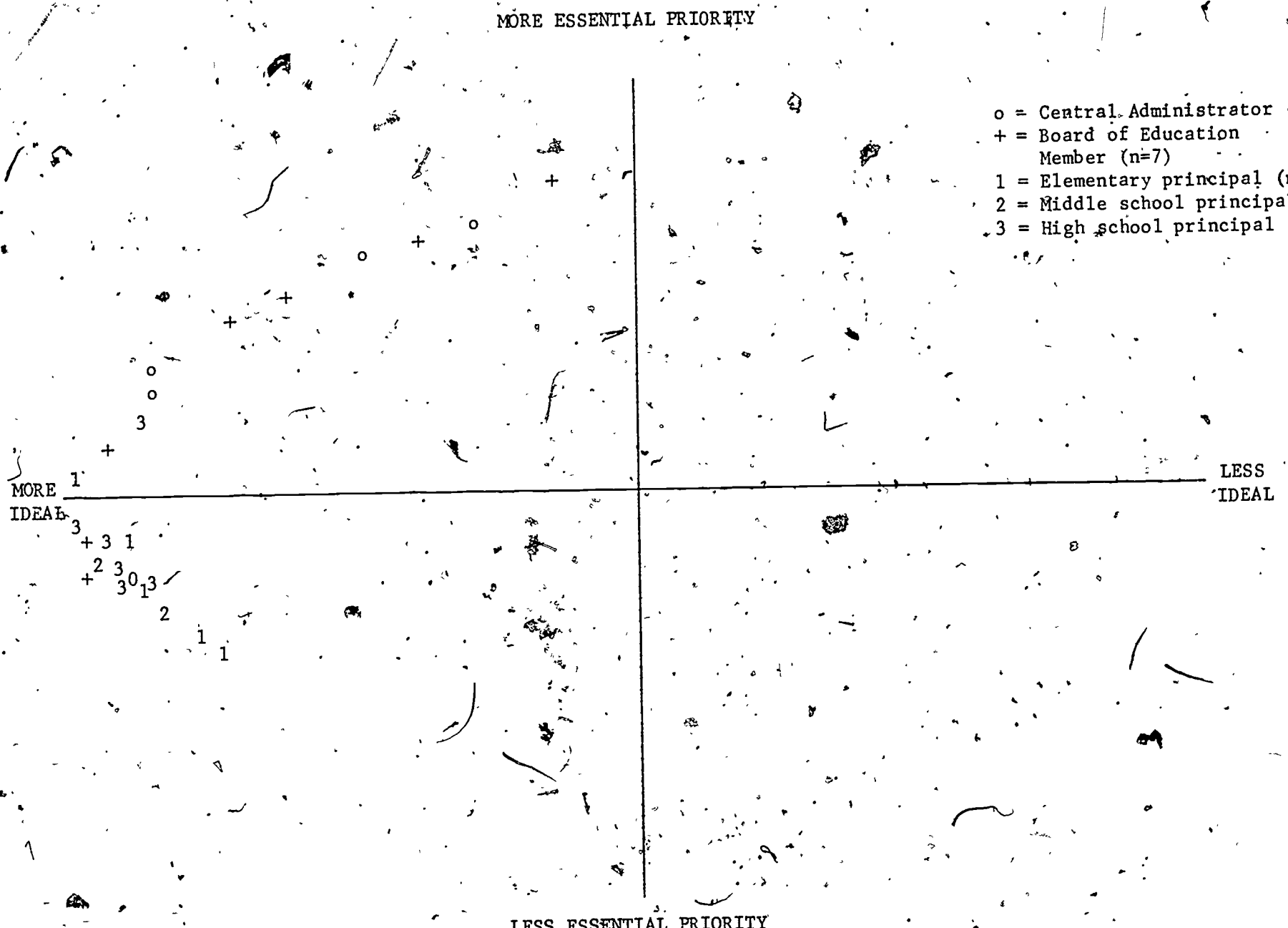

Figure 5
Plot of Administrators and Board of Education Members - Two Dimensional Space

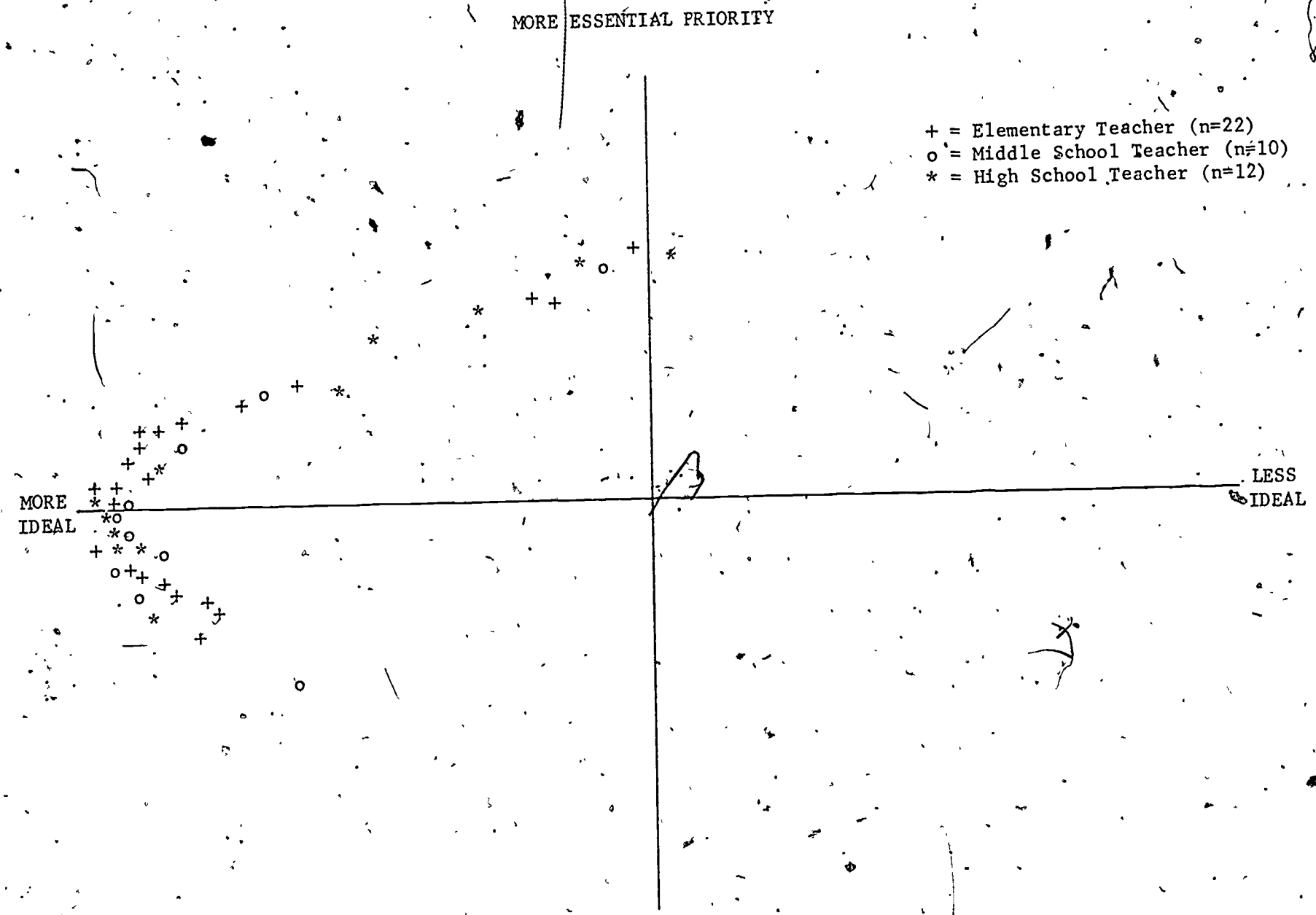

Figure 6
Plot of Classroom Teachers
in Two Dimensional Space

To test these differences, chi-square tests of association were performed. Subjects appearing in the upper left hand quadrant were classified as high priority, those appearing in the lower left hand quadrant as low priority. The chi-square analyses confirmed the association between position and priority as indicated in Table IV. Board of eduoation members and central administrators were higher in practical priorities than building principals (chi-square=5.46, $p < .02$). Classroom teachers were also higher in practical priority than building principals (chi-square=4.00, $p < .05$). Further analysis however, revealed no significant relationship between subject ideal-priority preferences and other individual differences (i.e., age, sex, years of teaching experience, years in present district, and education).

Barriers

Fifty-six percent of the subjects expressed willingness to try a SWS type program if their districts were forced to close again; 17% were undecided and 19% were unwilling to adopt the program. Several potential barriers to implementing the SWS program were repeatedly listed, as follows: 1) lack of financial resources, 2) lack of school and/or community facilities heated by alternative fuel, 3) lack of public transportation, especially in rural areas, 4) lack of parental cooperation, 5) lack of media programs focusing on specific district needs (SWS monopolized the airwaves, so neighboring schools had to adapt these programs to their respective curricular needs, 6) lack of adequate communication among school personnel and between personnel and parents.

Subjects observed that SWS programs should not be substitutes for planning. Extended calendar years or revised calendars with planned winter shutdowns were seen as superior to SWS type programs, by some, the advantage being the continuity of instruction absent in SWS type programs. Opinions on the value of the SWS type

TABLE IV

Chi-Square Values to Test Differential
Location of Educators on Dimension 2 (Priority)*

DIMENSION 2

	High Priority	Low Priority	
Board of Education & Central Administrators	9 (5.5)	3 (6.5)	12
Building Principals	3 (6.5)	11 (7.5)	14
	12	14	N=26

$x^2=5.46$; p .02
(corrected for continuity)

DIMENSION 2

	High Priority	Low Priority	
Building Principals	3 (6.7)	11 (7.2)	14
Classroom Teachers	25 (21.2)	19 (22.5)	44
	28	30	N=58

$x^2=4.00$; p .05
(corrected for continuity)

*Expected values for each cell enclosed in parentheses.

program ranged from "a waste of time," "more sensational than educational," to a highly successful program. Several subjects noted that although there would be no barriers to implementing a SWS type program, its potential for success was questionable.

DISCUSSION

This study has not attempted to evaluate the effectiveness of SWS type programs. Instead it has focused on one of the potential barriers to success - lack of goal consensus among educators. Two underlying dimensions of educational goal preferences were identified - an ideal dimension and a priority dimension. Goals high on the ideal dimension were perceived as more important but having little chance of success. Goals high on the priority dimension were viewed as less important but having a higher chance of success in a SWS type program.

Individual districts consistently ranked goals such as development of student skills in self-directed study and provision of more individualized instruction as ideal goals for SWS type programs. Goals such as supervising children of working parents and preventing increase in juvenile crime were consistently ranked low on this dimension.

Far less consensus existed on the priority of goals across districts. Districts did agree on the high priority for the system to provide basic instruction, allow seniors to graduate on time, avoid make-up days and provide employment for teachers. Discrepancies occurred in ranking goals of middle and low priorities, such as developing student self-direction and fostering parental involvement. Since perceived goal success and goal priority were significantly related, priorities for individual districts would logically vary depending on the determinants of success in each district (e.g. facilities, community characteristics, transportation, student population, etc.).

Similar patterns of dimension consensus were observed for educators as a whole. Educators in the three districts surveyed concur on the degree of importance and ideal educational value of the goals enumerated for the SWS program. Experimental learning environments and increased parental involvement are more important goals than keeping students busy or providing free babysitting services to working parents. Obviously educators would hope that temporary emergency programs might acheive the more ideal educational goals.

Some discrepancy exists as to priority level that should be assigned to these goals. Most educators agreed that maintaining basic skill levels should be the top priority. Board of education members and central administrators, however, tend to focus on priorities essential for maintaining as normal an educational routine as possible. Short term goals, such as allowing seniors to graduate on time, or avoiding extension of the school year into the summer months, are stressed more than long term goals such as increasing individualized instruction or experimenting with new learning environments. In contrast building principals emphasize the ideal more than the practical essentials, that is goals which have long term impact such as increased community awareness, self-study skills. Classroom teachers differ from building principals by demonstrating less group focus, some stressing the basic essentials, others leaning towards the educational extras.

As the data suggests, goal preference is largely a function of educational position and role. Top decision makers are concerned with issues that affect the total system. They appear more responsive to public concerns. Goals that have the highest chance of success are preferred, temporary programs being designed primarily as maintenance programs and not innovative programs. On the other hand building principals are responsible for maintaining daily educational activities, locating alternative meeting places, etc. They search for creative

alternatives to standard education. Perhaps they stress the ideal educational priorities since these are the key to temporary programs being educationally innovative as well as administratively successful.

Although classroom teachers, the people who actually make the program work, vary in their preferences, they are less concerned with the educational priorities, when compared to building principals. Most of the comments questioning the value of SWS type programs were made by classroom teachers. Since all districts had conducted some type of temporary program, all teachers had experienced the problems associated with accomplishing more ideal, innovative goals. Perhaps this is why more teachers leaned towards the more administrative, essential priorities that had a higher perceived chance of success.

These differences in goal priorities among educator groups were anticipated. As Miller, Madden, and Kinchelor observe, the three levels of educational organization - the board level, the administrator level, and the instructional level all have different expertise and different functions in the educational organization. Each level sets different goals. The board and, to a lesser degree, the administration level goals reflect the needs of the community and societal demands. Instructional level goals are expressed more in terms of educational outcomes.[13] The findings of the present study confirm these level differences and suggest they hold for temporary organizational goals as well. Board members and central administrators concentrate on community demands while building principals focus on instructional outcomes. The only source of conflict exists at the teacher level, teacher priorities ranging from societal concerns to instructional concerns. Since teachers must implement temporary programs, this potential conflict must be considered by program planners.

Goal consensus does seem to exist, at least among educators. While priorities may differ, most educators stress the importance of maintaining basic skill levels.

Priorities reflect more the function of the position, the duties assigned, rather than conflict over importance of goals. Ideal educational priorities are realistically assessed as having less chance of success, their being perhaps too many barriers such as inadquate transportation, lack of alternative facilities and parental apathy. Extended calendar years and improved planning are suggested alternatives for succeeding with more education-related, long term outcomes.

References

1. Thompson, J.D. Organizations in Action. New York: McGraw-Hill, 1967.

2. Katz, D. and Kahn, R.L. The Social Psychology of Organizations. New York: John Wiley and Sons, 1966.

3. Perrow, C. Organizational Analysis: A Sociological View. Belmont, California: Wadsworth Publishing Company, 1970.

4. Columbus Dispatch (Ohio), January 28, 1977, p. A-1.

5. Columbus Dispatch (Ohio), February 1-3, 1977, p. A-1.

6. Handbook for Schools Without Schools. Columbus, Ohio: Columbus Public Schools, February, 1977.

7. State Board of Education, Ohio. Ohio Educational Directory, 1976-77. Columbus, Ohio: Ohio Department of Education, 1976.

8. Williams, J.W. and Ward, S.L. Educational Directory: Public School Systems 1975-76. Washington, D.C.: National Center for Education Statistics, 1976.

9. Rodosky, R.J. Parent, Student Perceptions of Participation in an Energy Created Emergency Instructional Program. Dissertation Prospectus Faculty of Educational Development, The Ohio State University, Columbus, Ohio, March 15, 1977.

10. Chang, J.J. and Carroll, J.D. How to Use MDPREF, a Computer Program for Multidimensional Analysis of Preference Data. Unpublished report, Bell Telephone Laboratories, 1968.

11. Green, P.E. and Rao, V.R. Applied Multi-dimensional Scaling. New York: Holt, Rinehart, and Winston, Inc., 1972.

12. Coombs, C.H. "Theory and Methods of Social Measurement," in L. Festinger and D. Katz, eds., Research Methods in the Behavioral Sciences. New York: Dryden Press, 1953.

13. Miller, V., Madden, G.R., and Kincheloe, J.B. The Public Administration of American School Systems. 2nd ed. New York: The Macmillan Company, 1972.