Self-Perception of Teachers and Their Verbal Behavior in the Classroom

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THE relationship between man's perception of himself and his behavior has interested writers for centuries. A central theme in many of Shakespeare's tragedies, for example, is the role that the self-perceptions of such leading characters as Macbeth, King Lear, Hamlet, Julius Caesar, and Othello played in determining their actions and ultimate destinies. This subject has continued to serve as the theme of many modern plays and novels, including *Love Story*, the 1970 top-selling novel by Erich Segal.

The significance of self-perceptions has also been a topic of considerable interest to educators for many years in the study of children and adolescents. As a result, the relationships between the student's self-concept and his aspirations, behavior, and achievement have been investigated in numerous studies. However, despite the apparent need for extensive research to determine whether or not relationships also exist between various facets of a teacher's self-concept and his teaching and, if so, to define and describe such relationships, comparatively little research has been conducted in this area. For that reason, the study described here was devoted to some aspects of that problem.

Procedures

The specific problem investigated in this study was to determine whether or not a relationship exists between the perceptions teachers have of themselves as teachers and their patterns of verbal interaction in the classroom.

The self-perceptions of teachers were determined by their scores on the *Occupational Characteristics Index* (12), and their patterns of verbal interaction were ascertained by using Flanders' system of interaction analysis (6).

For the purpose of this study, the following null hypothesis was formulated: There are no differences in the patterns of verbal interaction in the classroom between (a) teachers who perceive themselves as interactionists and those who perceive themselves as leaders, (b) teachers who perceive themselves as managers and those who perceive themselves as innovators, (c) teachers who perceive themselves as interactionists and those who perceive themselves as innovators, and (d) teachers who perceive themselves as managers and those who perceive themselves as leaders.

The study was conducted in an elementary school district in the western suburban area of Chicago. The school district enrolls approximately 4,300 students in kindergarten through the eighth grade.

Included in the investigation were all of the teachers in the kindergarten through the sixth grade and the social studies teach-

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		Category Number	Description of Verbal Behavior
Teacher Talk	Indirect Influence	1.	Accepts and clarifies the feeling tone of the students
		2.	Praises or encourages student action or behavior
		3.	Accepts or uses ideas of the students
		4.	Asks questions
	Direct Influence	5.	Lectures
		6.	Gives directions
		7.	Criticizes student behavior or uses teacher authority
Student Talk		8.	Student talk in response to teacher
		9.	Student talk initiated by the students
		10.	Silence or confusion

Figure 1. Categories for Flanders' System of Interaction Analysis

ers in grades 7 and 8 (N=124). The mean age of the 124 teachers was 38, ranging from 22 to 64 years. The mean number of years of teaching experience was ten, and the mean number of years in the school district was five, ranging from less than one year to 25 years.

The 124 teachers were asked to rate themselves on the *Occupational Characteristics Index* (OCI) as they actually perceived themselves to be. A total of 110 returns (89 percent) were usable. The other 14 returns were rejected because errors were made in completing the index.

The OCI was developed at the University of Illinois by Simpson, Slater, and Stake. It has been the subject of several doctoral dissertations which have been primarily concerned with correlating the teacher ratings obtained from the OCI with other types of rating scales. In addition, Sapone (10), Nylin (7), and Dieken (5) reported almost identical mean factor scores for the OCI clusters used in their research. After four administrations of the OCI over a 12-week test-retest period, Auger (4) recommended its use as a reliable measuring instrument.

The OCI consists of 21 characteristics or traits which form 12 descriptive clusters. This study was concerned with only the four clusters which describe the innovator, manager, interactionist, and leader. Teachers who scored at least one standard deviation below the mean for any of the four clusters (the lower the score the greater the strength of the trait) were selected for the purpose of classroom observation. This gave a total of 59 teachers, including 16 innovators, 14 managers, 14 interactionists, and 15 leaders.

Collection of the verbal behavior data

	Interactionists* (N=14)		Leaders** (N=15)			
Dimensions	M	SD	M	SD	t (60 d.f.)	Level of significance
Category 1	0.16	0.34	0.08	0.20	.400	NS
Category 2	10.48	4.74	8.51	3.52	9.656	.001
Category 3	3.78	2.90	3.90	3.53	.764	NS
Category 4	20.89	6.86	20.47	6.90	.386	NS
Category 5	12.05	6.87	19.02	15.78	3.715	.001
Category 6	2.23	3.11	2.27	2.44	.294	NS
Category 7	1.83	1.64	2.46	2.52	6.110	.001
Category 8	12.11	11.34	16.68	12.03	2.536	.02
Category 9	33.29	19.01	21.11	16.39	4.448	.001
Category 10	3.18	2.97	5.38	8.32	7.230	.001
Steady State	44.880	15.042	47.978	13.746	1.395	NS
Content	32.934	9.878	39.499	14.369	3.451	.001
Teacher Talk	53.188	13.433	59.925	13.980	3.186	.01
I/D	68.368	12.200	60.476	19.208	3.179	.01
R I/D	78.619	16.017	72.727	16.696	2.335	.02
8-9 I/D	86.595	9.926	82.719	11.360	2.356	.01
Row 8 I/D	84.804	25.541	81.137	26.745	3.055	.01
Row 9 I/D	87.245	12.040	78.738	22.499	3.055	.01

* Data are summaries of 84 individual matrices.
** Data are summaries of 84 individual matrices.

Figure 2. A Comparison of Interactionists and Leaders in Each of the Dimensions of Interaction Analysis

Dimensions	Managers* (N = 14) M	SD	Innovators** (N = 16) M	SD	t (60 d.f.)	Level of significance
Category 1	0.09	0.19	0.18	0.40	.004	NS
Category 2	8.35	3.14	9.66	4.11	7.237	.001
Category 3	3.87	3.39	3.85	2.93	.100	NS
Category 4	21.38	6.51	20.58	6.16	.800	NS
Category 5	18.73	10.37	13.95	9.62	3.031	.01
Category 6	3.15	3.55	3.30	3.23	.887	NS
Category 7	3.12	6.42	2.25	2.18	3.609	.001
Category 8	14.05	12.34	14.44	9.40	.002	NS
Category 9	20.59	14.55	27.26	17.45	2.641	.01
Category 10	6.68	8.59	4.52	4.36	1.998	NS
Steady State	45.683	11.643	42.060	15.220	1.703	NS
Content	40.108	10.680	34.533	10.707	3.308	.005
Teacher Talk	63.355	12.213	56.369	12.708	3.560	.001
I/D	58.259	15.955	64.398	13.894	2.599	.01
R I/D	71.727	22.353	72.699	16.477	.312	NS
8-9 I/D	82.603	10.470	84.559	8.034	1.325	NS
Row 8 I/D	78.710	31.104	81.590	24.784	.651	NS
Row 9 I/D	77.622	27.440	82.453	17.755	1.311	NS

* Data are summaries of 78 individual matrices.
** Data are summaries of 83 individual matrices.

Figure 3. A Comparison of Managers and Innovators in Each of the Dimensions of Interaction Analysis

was accomplished by using Flanders' categories of interaction analysis (see Figure 1). In addition to the ten categories described in Figure 1, eight other dimensions of verbal behavior were used for comparing the four groups identified in the null hypothesis: (a) Steady State, (b) Content, (c) Teacher Talk, (d) Indirect/Direct (I/D), (e) Revised Indirect/Direct (R I/D), (f) Rows 8 and 9 I/D, (g) Row 8 I/D, and (h) Row 9 I/D. The development and validation of interaction analysis as an observation tool, descriptions of the interaction dimensions, and procedures for interpreting interaction matrices are reported in detail by Amidon and Flanders (1, 2, 3, 6).

All ratios of indirect to direct teacher talk (I/D) are expressed as percentages in this study. Because rows 8 and 9 indicate the type of teacher behavior which follows student talk, emphasis was placed upon those rows by computing I/D percentages for each of the two rows separately and for the two rows combined.

Each of the 59 teachers was observed for 20 minutes during six separate observations, for a total observation time of approximately 120 minutes. The number of recorded tallies for each observation period was approximately 400; therefore, the combined number of recorded tallies for each teacher was approximately 2,400. The observations were restricted to social studies instructional periods.

One district supervisor and three elementary principals who were trained in the use of Flanders' system of interaction analysis were the observers. The principals did not observe in their own buildings. Inter-observer reliability was established by using both tape-recorded and live classroom situations, and was computed on four separate occasions during the classroom observation phase of the study. The inter-observer reliability coefficients, computed with a formula suggested by Scott (11), ranged from .72 to .86.

Interaction analysis data for each of the 59 subjects were plotted, and the column totals and percentages were computed by means of a specially prepared computer matrix plotting program using a 7094 computer (9). The computer program produced a matrix for each observation and combined the individual matrices to form a composite matrix for each of the four groups: innovators, managers, interactionists, and leaders. Group means were computed for all dimen-

Dimensions	Interactionists* (N = 14) M	SD	Innovators** (N = 16) M	SD	t (60 d.f.)	Level of significance
Category 1	0.16	0.34	0.18	0.40	.020	NS
Category 2	10.48	4.74	9.66	4.11	.379	NS
Category 3	3.78	2.90	3.85	2.93	.040	NS
Category 4	20.89	6.86	20.58	6.16	.308	NS
Category 5	12.05	6.87	13.95	9.62	1.469	NS
Category 6	2.23	3.11	3.30	3.23	6.900	.001
Category 7	1.83	1.64	2.25	2.18	4.468	.001
Category 8	12.11	11.34	14.44	9.40	1.448	NS
Category 9	33.29	19.01	27.26	17.45	2.135	.05
Category 10	3.18	2.97	4.52	4.36	7.322	.001
Steady State	44.880	15.042	42.060	15.220	1.204	NS
Content	32.934	9.878	34.533	10.707	1.003	NS
Teacher Talk	53.188	13.433	56.369	12.708	1.572	NS
I/D	68.368	12.200	64.398	13.894	1.962	NS
R I/D	78.619	16.017	72.699	16.477	2.354	.01
8-9 I/D	86.596	9.926	84.559	8.034	1.048	NS
Row 8 I/D	84.804	25.541	81.590	24.784	.826	NS
Row 9 I/D	87.245	12.040	82.453	17.755	2.039	.05

* Data are summaries of 84 individual matrices.
** Data are summaries of 83 individual matrices.

Figure 4. A Comparison of Interactionists and Innovators in Each of the Dimensions of Interaction Analysis

sions included in the study. The t-test (two tailed) was used to test the differences between group means on each of the measures of verbal behavior (8).

Results

The findings revealed statistically significant differences between interactionists and leaders in 13 of the 18 dimensions of verbal behavior (see Figure 2). The interactionists praised the students more; lectured less; used less criticism and teacher authority; elicited more student-initiated talk; devoted less time to content (questions and lectures); and utilized more indirect teacher influence (greater use of categories of accepting feelings, praise, and clarification of student ideas).

The findings concerning the managers and innovators showed statistically significant differences in seven of the 18 dimensions of verbal behavior (see Figure 3). The managers used less praise; lectured more; had less student-initiated talk; spent more time on content; devoted a higher percentage of time talking; and used more direct influence (lecturing, giving directions, and criticizing).

The findings indicated statistically significant differences between interactionists and innovators in six of the 18 dimensions of verbal behavior (see Figure 4). Interactionists gave fewer specific directions; spent less time talking; used less criticism and teacher authority; had more student-initiated talk; and utilized greater indirect influence.

Only one significant difference was found between the patterns of verbal behavior of managers and leaders. The managers used more criticism or teacher authority (category 7) than the leaders did. The difference was significant at the .01 level.

An analysis of the interaction matrices for the four groups indicated that the interactionists placed a higher degree of emphasis upon stimulating independent thought than did the other three groups. The basic moves of the interactionists were from teacher question to student-initiated talk, followed by teacher praise. The verbal patterns of the leaders, managers, and innovators were more closely related to the pattern referred to as high content emphasis under close teacher direction.

The pattern of these three groups was from teacher question to student response, to teacher praise, to teacher question.

Discussion

Attention should be called to three limitations of the study. First, it was limited to only that portion of classroom interaction which was of a verbal nature and which could be categorized by Flanders' system of interaction analysis. Second, the designation of teachers as innovators, managers, interactionists, and leaders was based entirely upon their self-perception scores on the *Occupational Characteristics Index*. Third, because of the need for high inter-rater reliability of the observers and the large amount of observation time required, the study was limited to a single elementary school district.

Like most studies, this one did not completely solve the problem investigated. However, the findings do indicate that specific relationships definitely exist between the perceptions teachers have of themselves as teachers and their patterns of verbal interaction in the classroom. Obviously, these findings have many implications for persons concerned with preservice and in-service teacher education programs and for administrative personnel who are responsible for the hiring of teachers.

Hopefully, additional investigations will examine the possible relationships between other aspects of teaching and the teacher's self-concept so that valid generalizations can be made.

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