DOCUMENT RESUME

ED 303 883 EA 020 696

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TITLE Measuring the Effects of a Peer Coaching Project.
PUB DATE Apr 88
NOTE 26p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 5-9, 1988).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Improvement; Educational Innovation; Elementary Secondary Education; *Inservice Teacher Education; *Instructional Effectiveness; Peer Groups; *Teacher Attitudes; Teacher Improvement; *Teaching Methods; Urban Schools; *Writing (Composition)
IDENTIFIERS *Peer Coaching

ABSTRACT

This paper describes a peer coaching study that was conducted in a large urban school district. Discussion focused on the training model and the means used to measure the effects of inservice training on teacher attitudes toward a writing process model. Using instruments from the Concerns Based Adoption Model (CBAM), the researcher evaluated the degree of implementation of the writing innovation and the nature of teacher concerns during implementation as recorded by teachers who participated in the study. Twelve volunteer teacher pairs were randomly assigned to treatment groups and to comparison groups which received peer coaching training for 14 weeks. However, only the the treatment group teachers were formally trained in the observation cycle--a 5-step teaching of writing sequence that included presenting, composing, revising, editing, and publishing. Descriptive statistics, ANOVA, and chi square tests were used to measure teacher implementation of writing process strategies and teacher concerns about the new teaching model during one school year. Findings demonstrated that inservice peer coaching maximizes participant learning, implementation of curriculum content, and teacher comfort with the new curriculum. The treatment group teachers demonstrated more proficient implementation of the writing process strategies in terms of quality and quantity than the comparison group. (JAM)

MEASURING THE EFFECTS OF A PEER COACHING PROJECT

by

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Paper presented at the Annual Meeting of the

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

New Orleans, LA

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At a time when funding for schools is limited, those responsible for designing and providing teacher inservice programs need to know that the resources allocated achieve the results intended (Gall and Renchler). Recent research indicates that new concepts and skills are usually not implemented by teachers unless training is followed by practice and feedback in the classroom (Joyce & Showers, 1983). This paper presents a description of a peer coaching study that was conducted in a large urban school district. Discussed will be 1) the training model used, and 2) the means used to measure the effects of that training. Following theory and methods training in writing instruction, teachers were expected to assist one another in applying new techniques in their classrooms. Using instruments from the Concerns Based Adoption Model (CBAM), the researcher measured the degree of implementation of the writing innovation and the nature of teacher concerns during implementation.

THE TRAINING MODEL

Joyce and Showers (1982) surveyed the staff development literature and identified five elements that are necessary for maximizing adult learning: 1) presentation of theory, 2) skills modeling/demonstration, 3) practice in

simulated situations, 4) structured feedback/support, and 5) coaching. They concluded that the coaching component which is built upon a collaborative relationship between observer and teacher significantly increases classroom application of newly acquired skills following inservice training (Joyce and Showers, 1982). Because the cost and personnel requirements necessary for supervisors to coach teachers are often prohibitive, some have suggested the implementation of peer supervision, also called "peer coaching," as one solution (Russell & Spafford, 1986). In this situation, classroom teachers are trained to function as "coaches" for other classroom teachers. Servatius and Young (1985) define coaching as "in-class follow-up by a supportive advisor who helps a teacher correctly apply skills learned in training" (p. 50).

Joyce and Showers (1983) describe the content learned in workshops as the "tools" teachers need for the classroom application of new ideas. However, the actual implementation and problem-solving required in becoming proficient with these tools is much more complex. "Transfer of teaching skill involves much new learning -- where to use the skills, how to modulate them to students, etc. -- learning which has to take place in the process of transfer" (Joyce & Showers, 1981, p. 170). Providing for learning during the transfer process must become a regular part of inservice teacher training if new methods are to be implemented successfully.

The typical cycle begins when two or three teachers meet and one suggests an area of personal concern in teaching. A mutual decision is made regarding data collection criteria and instruments to be used. The observation is done in accordance with the pre-agreed arrangements, (e.g., time, focus, instruments). Following the observation the coach analyzes the data and looks for salient qualities/patterns to be discussed in the conference. The coach arranges information and plans the feedback so that it is positive, concise, and has a

behavioral focus. At the conclusion of the feedback conference, the coach elicits feedback from the teacher with regard to what was helpful and not helpful in the coach's behavior. The plans made lead to another cycle.

A writing process approach used with experienced elementary language arts teachers was selected to compare transfer and the process of peer coaching. Descriptive statistics, analysis of variance, and chi square tests, were used to measure teacher implementation of writing process strategies, and teacher concerns about the new teaching model during one school year. Information was gathered on the process used by the formally coached group to investigate fidelity to the clinical supervision coaching model and relationships between teachers in the classroom.

During the first semester, performance was structured through use of writing process inservice to be sure all teachers were familiar with the required concepts/skills. In addition, teachers in the treatment group received formal training in a clinical supervision model of coaching. During the second semester performance was dependent on the teachers making connections between knowledge of the writing and coaching processes and appropriate use in their own schools.

The study sought to investigate if adding a coaching component which utilized the clinical supervision observation cycle with a writing process teaching model would increase teacher implementation and create more positive teacher attitudes toward writing. Pairs of teachers from 12 schools volunteered to attend four 3-hour after-school training sessions in writing process curriculum theory and teaching strategies (a total of 12 hours). Teachers were presented with theory and research about writing process instruction -- a five step sequence which includes presenting, composing, revising, editing, and publishing and were provided with many opportunities to actually follow the

sequence in writing themselves. As conferencing with students about their compositions is a major focus of the process approach to writing, teachers role-played teacher-student and student-student conferences using their own and student samples of writing. All sessions included many opportunities for sharing personal experiences, suggestions, and concerns. Video-taped lessons from writing process classrooms provided opportunities for teachers to see the techniques employed with students and to discuss classroom management techniques. At the end of each session, teachers were invited to react to the evening in a writing journal. The instructor used these reactions to gauge teacher assimilation of the content and to monitor teacher concerns with regard to the techniques/training.

Following the last writing session, 12 volunteer teacher pairs were randomly assigned to treatment or comparison groups. Those in the treatment group received 2 full days of training in "formal" peer coaching, adapted from a clinical supervision model. Training included the presentation of research and theory about clinical supervision and coaching, videotaped demonstrations of the observation cycle, and role plays in which teachers oelivered and received feedback based on data they gathered while viewing videotaped lessons. On the second day, teachers were provided with opportunities to practice observation cycles based upon the writing process in which they had received training in November and December.

Peer coaching was conducted by teachers in both the treatment and comparison groups for 14 weeks between January and May. Teachers alternated between observing or being observed for approximately one-half hour each week. Observations took place while the teachers were engaged in writing process instruction. However, only the treatment group teachers were formally trained in the observation cycle. Comparison group teachers conducted informal

coaching.

In order to ensure that the five step observation cycle was used by teachers in the treatment group, they were directed to use a "Peer Coaching Checklist" and audiotape their pre/post observation conferences with one another. They were expected to use all 5 steps in the cycle: 1) pre-observation conference, 2) observation/data collection, 3) analysis/strategy, 4) post-observation conference, and 5) planning/post- cycle evaluation. The checklists and audiotapes were mailed to the investigator regularly throughout the study. Comparison group teachers received no formal training in coaching but were required to visit one another and provide mutual help as appropriate during the 14 weeks of the study.

Teachers in both groups were provided with notebooks in which to record regularly their thoughts and experiences during the study. Sample pages were submitted periodically to this researcher for comment and immediately returned. In addition, teachers were invited to mail successful writing process tips and methods for inclusion in a monthly newsletter that was sent to all twenty-four writing inservice participants. This researcher visited and telephoned all teachers regularly throughout the study. It was intended that in this way, problems would be addressed making the study sensitive to participant needs throughout the process. Because of the small number of participants, this continued contact and encouragement was considered to be of particular importance for maintaining teacher enthusiasm and participation and should be regarded as a process variable. Comparison group teachers were asked to observe in their partner's classrooms once per week following training for the purpose of enhancing their own learning about the writing process approach and helping their partners in any way they wished. Visits were documented in a log. No data collection or formal discussion was required. In addition, teachers in

both groups were asked to keep journals and submit successful writing instruction ideas to this researcher for publication in a newsletter to be sent to all writing inservice participants. The use of treatment and comparison groups of teachers and students minimized the extraneous variables of history (more county inservice) for teachers and maturity for students (would they have done this well without my treatment?)

MEASURING TRAINING EFFECTS

Hall and Loucks (1975) describe implementing innovation as a developmental process that occurs at an individualized pace over time as teachers apply new methodologies in their classrooms rather than a single "decision point." Inservice must make the individual the primary focus and be personalized to accommodate teacher needs, feelings and experiences if implementation is to take place. The Concerns-Based Adoption Model (CBAM) was developed to provide information about teacher concerns, understanding and behavior with regard to materials and training during the implementation process (Hall et. al., 1975).

Hall and Hord (1987) indicate that traditional post hoc evaluations used to measure innovations are insufficient for the job. "Evaluators were right to report 'no significant differences' with regard to implementation, but incorrect to conclude that the innovations were at fault. . ." because the evaluators had failed to measure partial implementation. "Seemingly there was more to change than simply delivering the innovation 'box' to the classroom door; rather, a process was involved" (p. 7). They created an instrument that could measure the developmental stages of implementation that teachers moved through in becoming sophisticated and skillful users of the innovation.

The Innovation Configuration Checklist (IConC), Levels of Use of the

Innovation (LoU) interview, and Stages of Concern (SoC) questionnaire are components of the Concerns-Based Adoption Model (CBAM) (Hall & Loucks, 1978). The Concerns-Based Adoption Model (CBAM) was developed at the Research and Development Center for Teacher Education at the University of Texas in Austin under the direction of Gene E. Hall. The underlying assumption of the model is that change is not accomplished just because a decision-maker announces it. The adoption of an innovation is a developmental process rather than a decision-point. The users of an innovation demonstrate a wide variation in their use of that innovation. This variation must be identified and measured in order to understand how to maximize the use of innovations.

As there was no writing process classroom observation instrument in existence, this researcher worked with Dr. Gene Hall, University of Florida, to develop the Innovation Configuration Checklist (IConC), a list of teacher behaviors and management characteristics likely to be seen in a writing process classroom. Although organizations have traditionally used one definition when describing expectations for teacher implementation of an innovation, CBAM suggests that implementation varies from user to user. Innovations are adapted operationally as they are used by different users. These adaptations may vary from slight to sizeable and are made to satisfy user (teacher) or client (student) needs. These different operational forms of the innovation are called "configurations."

To measure different configurations of an innovation, the major "components" and the variations possible must be identified. A checklist of these components and variations is then created to diagnose, monitor, and measure implementation activity.

The IConC incorporated an interview and an observation schedule. Data were used to rate teachers on a scale of 1-5 (1 being low) in the implementation

of the writing process model. The first draft of the checklist included items selected by this researcher from her review of the literature. These items were discussed with two experts, a supervisor of language arts from Pinellas County Schools and a professor from the University of South Florida. The checklist was revised and piloted in Polk and Pinellas counties with 8 teachers who represented varying levels of implementation of the writing process model. It was revised again based upon these interviews and observations.

The Stages of Concern (SoC) questionnaire reveals teacher feelings about the innovation. CBAM has defined "concerns" as aroused states of interest associated with an issue or task and the questioning, analyzing, and consideration given to alternative actions. The object, task, or issue of concern is called the "innovation." Intensity and focus of concern vary among users depending upon one's knowledge about and experience with the innovation. These variations have been identified as "stages of concern" about the innovation. They are predictable and seem to develop from lack of awareness to "self," "task," and finally to "impact" (upon client) concerns with time, successful experience, and the acquistion of new skill/knowledge.

The Levels of Use (LoU) interview was designed to elicit information with regard to teacher implementation. Teacher responses to a series of increasingly specific, probing questions are rated providing an individual profile of teacher utilization of the innovation.

RESULTS AND DISCUSSION

Implementation of the Writing Process Model

Implementation of the writing process model was measured using two Concerns-Based Adoption Model (CBAM) diagnostic dimensions: Innovation Configuration and Levels of Use.

Pre and post-treatment scores were derived for teachers from interviews, observations, and document analysis. Teachers were assigned a score of 1-5 (five indicating the highest degree of implementation) per component. Scores of 1 or 2 indicated little or no use of the writing process method and were determined to represent unsatisfactory implementation. Scores of 3 represented satisfactory and 4 and 5 represented advanced implementation, indicating that a majority of the concepts and techniques per component were used. Scores obtained were summarized in terms of group frequencies.

Examination of Table 1 suggests that there were differences in the quality of implementation by treatment and comparison group teachers. Although the treatment or formally coached (FC) teachers had somewhat lower pretreatment scores than comparison teachers (more scores of 1 or 2), they scored higher on 10 of the 13 components at the conclusion of the study. Further examination of these post scores indicates that FC teachers more frequently received notably more scores of 4 and 5 on each component than comparison or informally coached (IC) teachers. These higher post-treatment scores suggest that FC teachers demonstrated more proficient implementation of the writing process strategies in terms of quality and quantity.

Table 2 reveals some patterns which are of particular interest. Teachers in both FC and IC groups demonstrated greater variety in publishing of student writing (component #2), variety in kinds of classroom writing done (component #10), and evaluating student writing (component #12) at the conclusion of the study. However, in addition FC teachers made large gains and exceeded IC teachers in implementation of almost all components. At the end of the study a higher percentage of FC teachers demonstrated they were notably more proficient than IC teachers in the frequency with which they: published student work (component #3), held collaborative or student-centered writing conferences

Table 1

Percentage of Teachers Rated at Each Level on the Innovation Configuration: Pre-Post Scores for Teacher Treatment and Comparison Groups

Writing Components	Groups	Scores: Pre- 1	2	3	4	5	Post- 1	2	3	4	5
1. Sequence of Steps	T*	0	8	42	42	8	0	0	25	42	33
	C*	0	0	25	58	17	0	17	25	42	17
2. Publish: variety	T	67	17	17	0	0	0	33	25	25	17
	C	25	58	8	8	0	0	25	33	25	17
3. Publish: frequency	T	25	42	33	0	0	0	25	58	0	17
	C	8	25	58	0	8	8	50	17	25	0
4. Writing folders	T	25	50	17	8	0	8	33	33	25	0
	C	8	58	33	0	0	0	50	42	8	0
5. Conference: frequency	T	17	67	0	17	0	0	75	8	8	8
	C	8	67	8	17	0	0	83	8	8	0
6. Conference: content	T	17	25	42	8	8	0	25	17	42	17
	C	8	17	58	17	0	0	25	33	33	8
7. Conference: focus	T	33	25	33	8	0	0	17	50	17	17
	C	25	25	42	8	0	33	0	33	25	8
8. Conference: peer	T	67	25	0	8	0	25	17	8	42	8
	C	42	33	8	17	0	8	42	33	17	0
9. Writing: frequency	T	25	17	25	33	0	25	25	33	8	8
	C	50	8	25	8	0	50	0	42	8	0
10. Writing: variety	T	42	17	33	8	0	0	8	33	33	25
	C	8	25	67	0	0	0	0	25	42	33
11. Skills instruction	T	17	42	17	25	0	17	33	0	42	8
	C	8	42	17	33	0	33	33	0	25	8
12. Evaluation	T	58	17	25	0	0	33	0	25	33	8
	C	83	8	8	0	0	50	8	8	17	17
13. Parent/aide use	T	100	0	0	0	0	75	0	8	17	0
	C	67	8	17	8	0	67	8	17	8	0

*T = treatment (FC) group, C = comparison (IC) group

Table 2

Percentage of Teachers in Each Group Exhibiting Satisfactory Implementation of Writing Process: Pre- and Post Study

	Groups					
	Formally Coached Treatment			Informally Coached Comparison		
Writing Components	Pre	Post	Difference	Pre	Post	Difference
1. Sequence of steps	92	100	+ 8	100	84	-16
2. Publ: variety	17	77	+60	24	75	+51
3. Publ: frequency	33	85	+52	66	42	-24
4. Writing folders	25	58	+33	33	50	+17
5. Conference: frequency	17	24	+ 7	25	16	- 9
6. Conference: content	58	76	+18	75	74	- 1
7. Conference: focus	41	84	+43	50	66	+16
8. Conference: peers	8	58	+50	25	50	+25
9. Writing: frequency	58	49	- 9	33	50	+17
10. Writing: variety	41	91	+50	67	100	+33
11. Skills instruction	42	50	+ 8	50	33	-17
12. Evaluation	25	66	+41	8	42	+34
13. Parent/aide use	0	25	+25	25	25	0

(component #7), and implemented peer conferencing (component #8).

Figure 1 illustrates the percentage of teachers in the treatment and comparison groups who obtained satisfactory scores at the beginning and end of the study. A review of these changes suggests that on the average FC teachers surpassed the growth of IC teachers on all but two components.

This would suggest that FC teachers experienced more success in employing a greater number of the strategies presented in the training workshop.

Conclusion. The greater frequency of higher scores obtained by formally coached teachers suggests that the coaching component effected a qualitatively more advanced, or sophisticated, implementation of the writing process teaching model.

Pre and post-treatment "level of use" scores obtained from analyzing interview data were summarized. Scores for all teachers were obtained in the LoU categories of "knowledge," "acquiring information," "sharing," "assessing," "planning," "status reporting," and "performing" with regard to the writing process innovation. In addition, an "overall" implementation score was assigned. Teachers were identified at one of the seven levels: 0) Non-use; I) Orientation; II) Preparation; III) Mechanical use; IVa) Routine use; IVb) Refinement; V) Integration; or VI) Renewal.

Graphing the frequencies of teachers at each level provides valuable information about the change process. When treatment and comparison groups were compared, efficient and refined use of writing process instruction occurred more often in the FC group of teachers than those in the IC group (Figure 2). A key finding in terms of levels of use is that 50% of the comparison teachers were functioning at Level III, "Mechanical Use," at the end of the study. These teachers planned and prepared for students on a day-to-day basis. This would indicate that there was some disjointedness and confusion in their writing

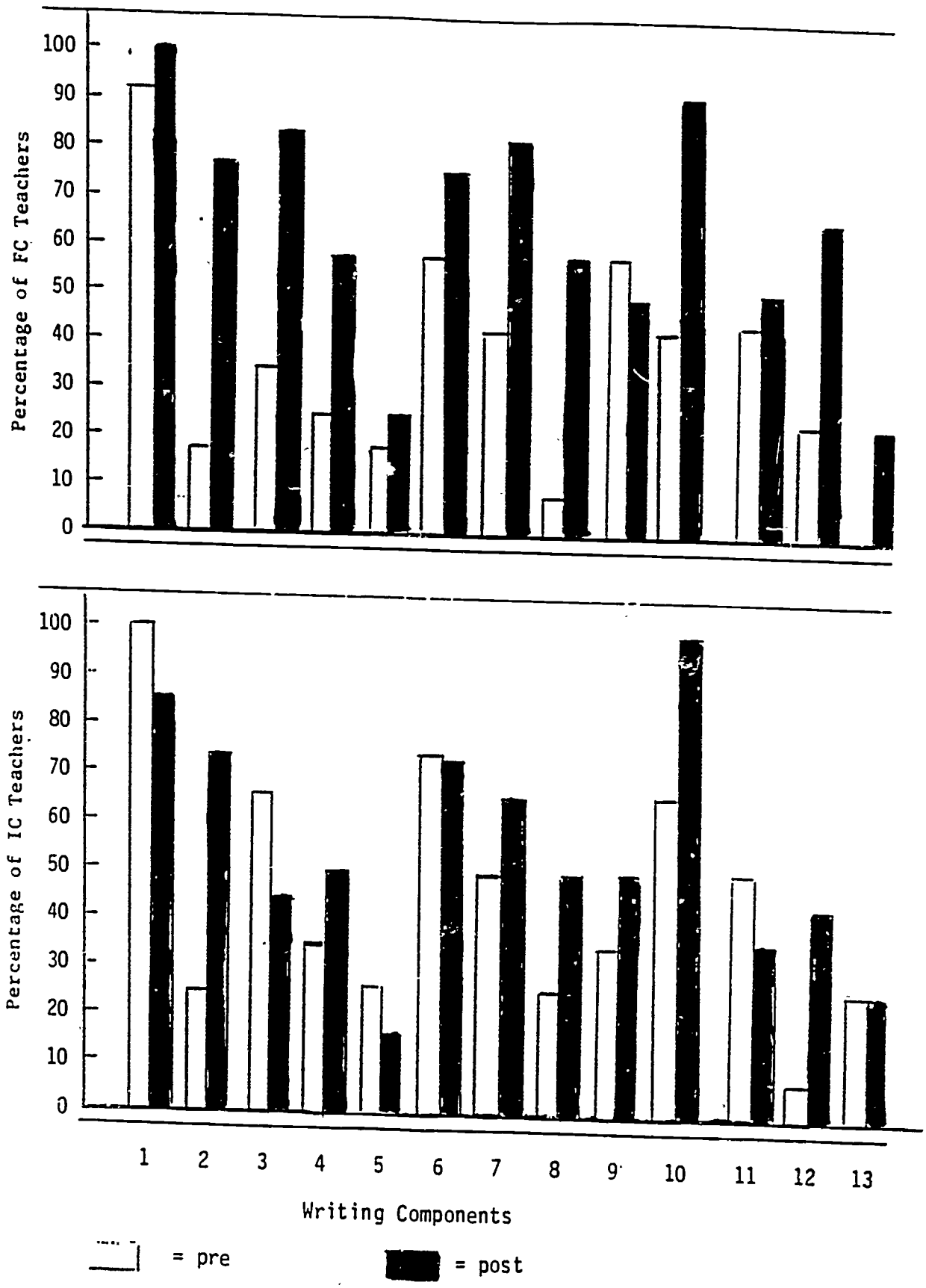


Figure 1. Percentage of Treatment and Comparison Teachers Exhibiting Satisfactory Implementation of Writing Process: Pre-Post Treatment

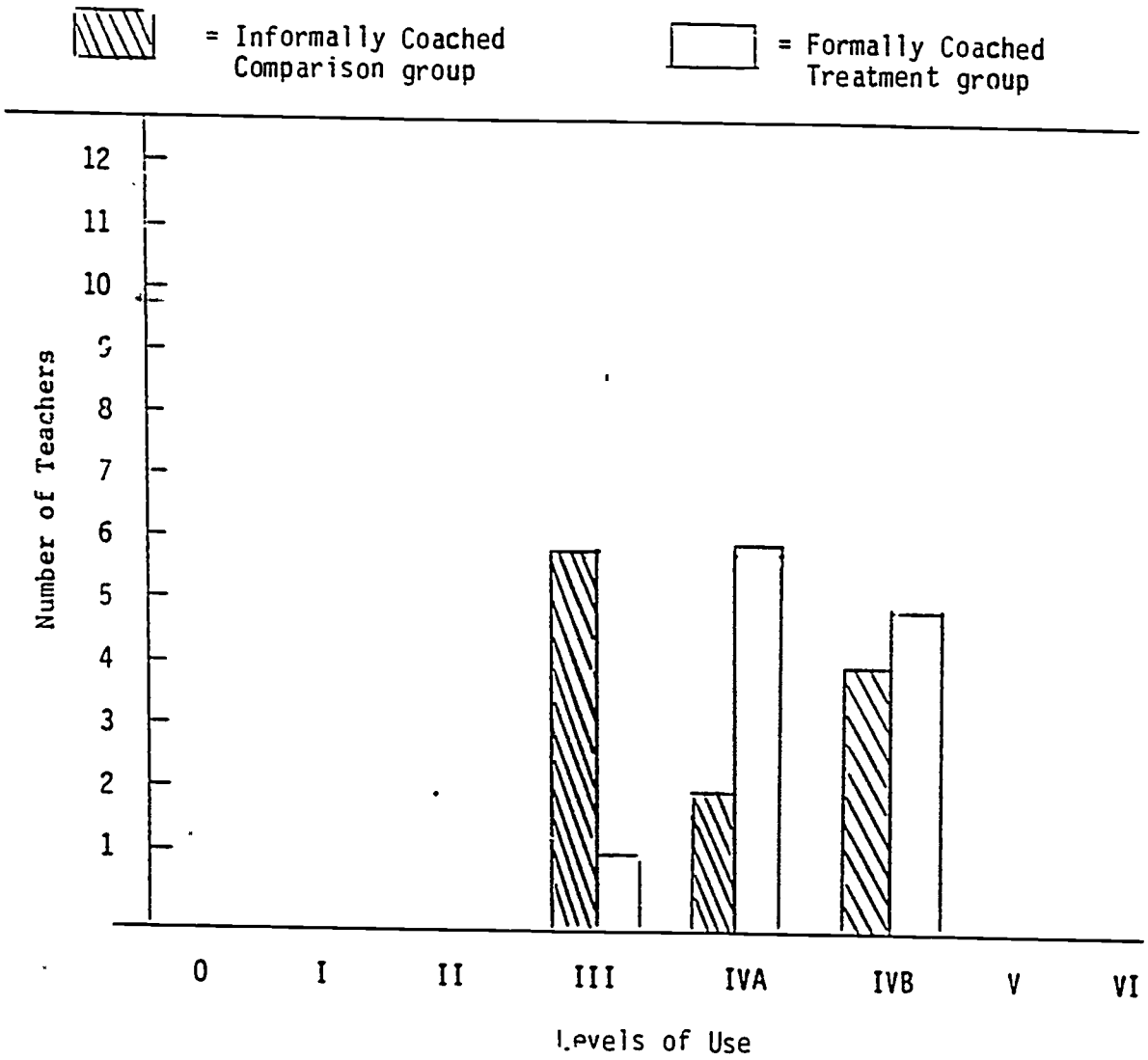


Figure 2. Teachers Overall Level of Use of Writing Process at End of Treatment Period.

programs.

In contrast, only 8% of the treatment teachers functioned at Level III; 92% of the FC group operated at a stable and routine level or above following the treatment period. Their assessed IVA Routine and IVB Refinement levels indicate that more efficient and well-organized use of the writing program were evident in these teachers' classrooms.

To determine if there was a significant relationship between levels of use and group membership, data were compared using the Chi Square Test of Independence. Some results of this analysis are presented in Table 3. The obtained Chi Square value (P = .058) just fails to reach the established statistical level of significance.

Conclusion. The greater frequency of higher and more proficient Levels of Use by the FC group would seem to indicate that the coaching component effected more transfer of training of the writing process model into classrooms.

Teacher Concerns and Attitudes About Writing

Teacher concerns and attitudes with regard to implementation of the writing process model were measured using a third CBAM instrument. Pre and post-treatment scores obtained from teacher responses to the Stages of Concern Questionnaire were analyzed. Using established procedures, responses were categorized into the seven stages as follows: Stage 0, Awareness; Stage 1, Information; Stage 2, Personal; Stage 3, Management; Stage 4, Consequences; Stage 5, Collaboration; and Stage 6, Refocusing. Scores reflect relative intensity of concern about the innovation. As individuals move from Awareness and Non-use of an innovation into beginning use and more sophisticated use over time, their concerns are expected to progress from being more intense at Stages 0, 1, and 2, to more intense at Stage 3, and finally to most intense

Table 3

Overall Level of Use: Chi Square Test

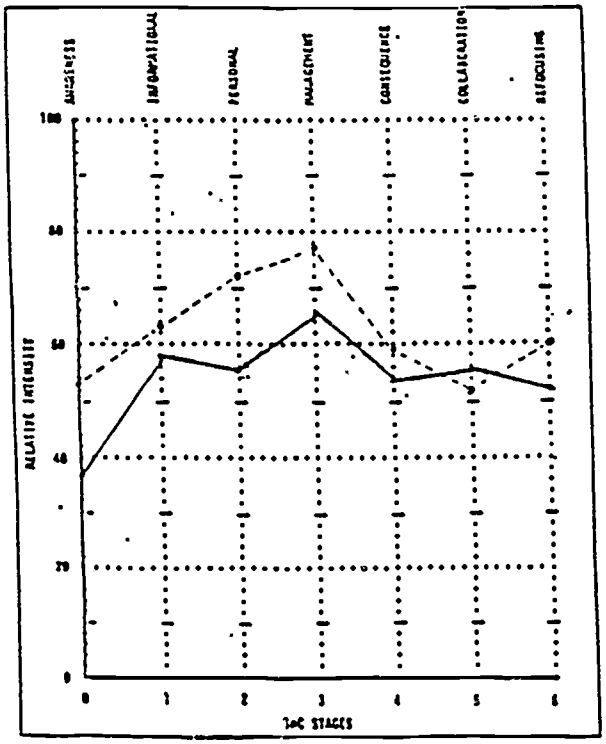
Group	Level Categories III	IVA	IVB	Total
Formally Coached Treatment	1 (4)	6 (25)	5 (21)	12 (50)
Informally Coached Comparison	6 (25)	2 (8)	4 (17)	12 (50)
n = 24	$\chi^2_{(2)} = 5.683$, $p = .058$			

at Stages 4, 5, and 6. According to the instrument authors, a difference of 10 percentile points indicates a substantial difference in concern intensity. Percentile scores plotted over time on a grid would result in a profile that would form a "wave-like" shape from left to right.

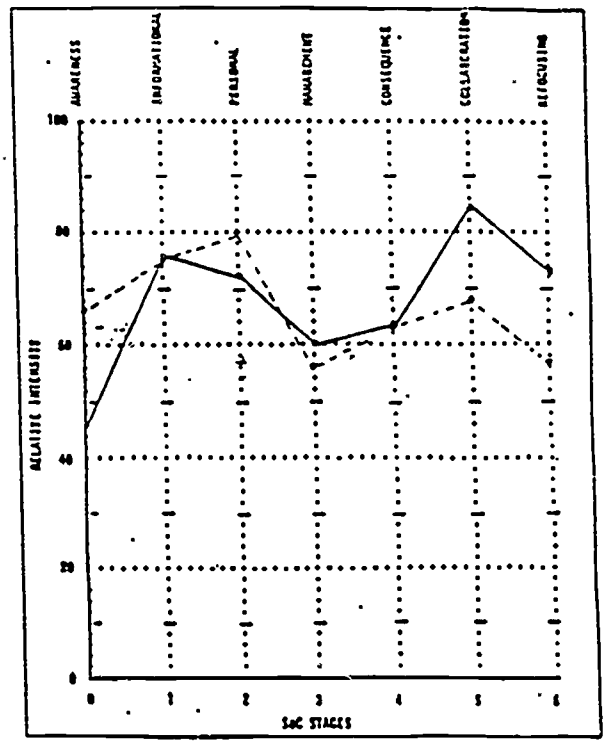
Pre-post treatment mean raw scores on the SoC for comparison and treatment groups were converted into percentiles to create a profile for each group. The group profiles of the comparison and treatment groups reveal that both groups exhibited concerns associated with a typical "nonuser profile" at the beginning of the study (Figure 3). In general, Stage 0, or 2 is the highest score for nonusers. Pre-study profiles reveal that both groups demonstrate a "negative one/two split" (Stage 2 concerns are more intense that Stage 1 concerns) indicating concerns about learning more about the innovation (Stage 1). The individual(s) are much more concerned about personal position and well-being in relation to change than interested in learning more of a substantive nature about the innovation (Hall, et. al., 1977, p. 36). According to instrument authors, Stage 2 concerns must be reduced before the teachers can look at the innovation, in this instance the writing process model, objectively. Any attempt to discuss the model before that is done are apt to intensify personal concerns and reduce those for information.

At the beginning of the study. IC teachers held relatively intense "self" concerns (Stages 1, 2, and 3) and less intense "impact" concerns (Stages 4, 5, and 6). "Task" (Stage 3) concerns were most intense indicating concern with management of time and materials in the classroom. Also of interest is the "tailing up" of this group on refocusing (Stage 6). On a nonuser profile a difference of 7-10 percentile points "should be taken as a potential warning that there may be resistance to the innovation" (Hall, et. al., 1977, p. 40). The difference of 8 points here could be interpreted as a "loud announcement" of

Informally Coached
Comparison Group



Formally Coached
Treatment Group



- - - - - - = Pre-treatment

_____ = Post-treatment

Figure 3. Profiles of Stages of Concern (SoC)

concern about the writing training to be given.

At the conclusion of the study, the FC teachers scored more than 10 percentile points higher than the IC teachers on four of the seven concerns: +27 on collaboration; +18 on information; +17 on personal; and +11 on refocus. These scores are indicative of the intense concerns of treatment teachers about working with colleagues or others in coordinating writing instruction (collaboration); obtaining more information about the writing process model and its effects on them in the classroom (information, personal); and obtaining and trying practical writing instruction strategies (refocus).

The profile for IC teachers at the conclusion of the study indicates management concerns were still predominant, and all but one of the concerns were less intense. Although there was a slight increase in concern for collaboration, it was not large enough to be considered notable. Although there appears to have been some reduction in intensity of concerns for the comparison group, the overall profile remained the same shape. This suggests a relative lack of growth or expansion with regard to implementation of the writing process and is further supported by the lower rates of implementation observed on the Innovation Configuration and Levels of Use dimensions.

The pre-study nonuser profile for FC teachers indicates that "personal" concerns (Stage 2) and a high need for more information (Stage 1) were dominant concerns at the beginning of the study. The higher scores in Stages 0, 1, and 2 and the low score for management (Stage 3) for this group suggest that the treatment group as a whole was less sophisticated than the comparison group in the teaching composition at the beginning of the study. This is consistent with FC teacher self-ratings with regard to experience in teaching composition.

The pre/post study change in the profile of FC teachers was very different

from those of the IC group. Their profile demonstrates a notable post-study shift from the "negative 1/2 split" to a "positive 2/2 split" (Stage 5/6 and 2/1 are high), "multiple-peak" users profile. High Stage 5 scores indicate concern "about working with . . . colleagues or others in coordinating use of the innovation" and a "typical of team leaders and administrators" (Hall et. al., 1977, p. 40). The high Stage 6 concerns generally indicate that teachers have new ideas with regard to the innovation which they wish to put into practice.

Interestingly, Stage 1 information and Stage 2 personal concerns continued to be intense. This profile would seem to indicate that teachers in the treatment group are extremely interested in the innovation. They have continued to be "hungry" for information about the writing process because they are practicing it and find they need to know more about their skills. High Stage 2 "personal concerns" remain because as FC teachers continue to try new techniques, they experience some uncertainty. This should be viewed as positive in light of the high scores in Stages 5 and 6 collaboration and refocusing. FC teachers are interested in expanding their teaching repertoires with regard to the writing process model. They have many ideas that they are anxious to try in their classrooms and are looking for other ideas from their colleagues. Audiotape transcripts support this interest in collaborating to expand their use of the writing process model. The "exposure" experienced in working collaboratively in a formal peer coaching situation may also explain why Stage 2 personal concerns remained intense throughout the study for the treatment group. The SoC results are consistent with the high proficiency scores of the FC group with regard to implementation of the writing process model reflected on the Innovation Configuration and Levels of Use.

Conclusion. The group profiles suggest that both groups have moved from being nonusers in the fall toward more proficient implementation in May. FC

teacher seem more committed to working collaboratively in exploring new ideas and practices.

The higher scores of the treatment group on the thirteen selected components of the writing process model suggests that providing teachers with support and companionship during implementation increases the success rate of those teachers in applying the new techniques in the classroom and extends the research of Joyce and Showers, 1982; Showers, 1984; and Winn, 1986. The lower scores for "management" and higher scores for "routine" and "refinement" levels on the LoU for treatment group teachers as compared to comparison group teachers indicates that they attained greater familiarity and comfort in the teaching of the new writing process than informally coached teachers and supports the findings of Hall et al., 1975.

Results from the Stages of Concern questionnaire indicated that the greater frequency of treatment teacher implementation of publishing student work, conferencing with students and conducting peer conferencing is of particular interest. These steps are least like traditional writing instruction and perhaps the most difficult to actually carry out in the classroom according to Graves, (1983) and Calkins, (1986). Providing collegial support may better prepare teachers to implement even the most difficult aspects of an innovation. Too often, it has been assumed that if teachers "learn the content" taught in the inservice, they will be able to integrate the new strategies into their teaching repertoires. This is seldom the case. Instead, in most instances, teachers find that introducing new techniques into their classrooms is not easy. Smooth routines may be disrupted and student reaction to newly introduced changes may not be positive.

All teachers reduced "mechanical" (management) concerns and treatment group teachers in this study scored substantially higher in the areas of

"collaboration" and "refocusing" (exploring and adapting the new curriculum). In their research on innovative studies, Hall et al., (1977) found that there are seven Stages of Concern through which users progress as they become more skilled in using an innovation. Until teachers' Personal and Management concerns are addressed, movement toward more sophisticated concerns about their impact upon student learning or collaboration with other teachers is slowed. Knowing this, the manager of a specified change/inservice planner, can assess teacher concerns and use that diagnostic data to develop a prescription for inservice and intervention during the implementation period, thereby facilitating teacher progress toward "impact" concerns more rapidly.

The writing process training in this study utilized the research of Hall et al. (1977), as well as that of Sparks (1983) and Zemke and Zemke (1980). Training included methods designed to maximize teacher learning and reduce anxiety: a "needs assessment," spaced practice, and opportunities for teachers to share their personal experiences with writing.

At the first meeting teachers completed a "needs assessment" designed to ascertain which of the elements of the writing process approach they felt were most important for inclusion in the four inservice sessions. The training was adapted to include those areas of interest to participants. The writing training occurred over 4 weeks. In between meetings teachers were encouraged to experiment with new strategies and share their experiences during group discussions at the beginning of each session. In addition, teachers responded in journals at the conclusion of each session so that the trainer could monitor and adapt the training to accomodate teacher concerns and attitudes throughout the training.

The training in clinical supervision for peer coaching was also "interactive." Teacher concerns about the observation cycle were identified

and addressed. Many opportunities for role playing and simulated practice were used in order to practice the new skills while desensitizing participants as much as possible.

During the 14 weeks of implementation, the researcher collected and responded to teacher journals and visited or called teachers in both groups regularly to monitor concerns and to address problems encountered by teachers.The provision of clinical supervision through peer coaching seemed to supply the assistance and support necessary for teachers to move more rapidly toward concerns focused upon student reactions and learning rather than upon their own behavior. These levels are regarded as more complex and sophisticated and would seem to demonstrate that treatment group teachers became more accustomed to discussing and using the innovation than control group teachers who did not receive formal peer coaching training. Hall et al. (1975) found that until teachers feel comfortable with their own behavior and feel successful, they are unlikely to successfully reflect upon student reactions and growth. Assisting teachers to move more quickly to this "impact" level is of value to those in charge of staff development, administrators, supervisors, and teachers themselves.

CONCLUSIONS

Special attention was given in this study to the means of inservice delivery. This researcher hoped to show through this study that using research findings in scheduling and presenting inservice content and then supplementing that content presentation with coaching for classroom application, would maximize participant learning and implementation of the curriculum content. Some dramatic results with regard to changes in teacher behavior appear to have occurred. The Levels of Use, Stages of Concern, and Innovation

Configuration Checklist instruments from the Concerns-Based Adoption Model provided clear indicators of training impact. The process and product data provided were invaluable in measuring training effects in this study. The utilization of theory-based staff development and evaluation are of importance to school districts charged with conducting meaningful and effective training programs.