DOCUMENT RESUME

ED 217 389 CS 006 701

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TITLE Teacher Reflections on the Use and Adaptation of Instructional Innovation Presented during Staff Development.
PUB DATE Mar 82
NOTE 26p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March 19-23, 1982).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Attitude Change; Change Strategies; *Content Area Reading; *Faculty Development; *Instructional Innovation; *Reading Research; Secondary Education; Secondary School Teachers; *Teacher Attitudes; Teacher Response

ABSTRACT

A study examined the factors that seemed to affect the way teachers adapted the critical components of content area reading innovations that were presented to them in a 3-year staff development project. In the first year of the project, 23 high school content area teachers were interviewed concerning their use, in content area reading instruction, of such critical components as reading guides, devices to introduce and reinforce content area vocabulary, ways of establishing purposes for reading, ways for involving students in class discussions about their reading, and ways to elicit responses from students concerning their answers to questions in reading guides. During the following two years, these components were presented and developed in workshop sessions and demonstrated in classrooms. In addition, participating teachers worked with a staff developer in devising content area reading lessons for use in their classrooms, and many were also hired to develop content area reading lessons during the summer. At the end of the project, the teachers were again interviewed to determine why, to what extent, and under what conditions they had used the innovative lessons. The interviews were supported with observations and an analysis of materials developed by the teachers. The findings revealed that most of the teachers only use components of the content area reading innovation in a mechanical way. Interview data suggested that this was due to the pressures of time and energy that most teachers felt. (A copy of the interview form is included.) (FL)

TEACHER REFLECTIONS ON THE USE AND ADAPTATION OF INSTRUCTIONAL INNOVATION PRESENTED DURING STAFF DEVELOPMENT

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Paper presented at the annual meeting of the American Educational Research Association, New York

March 20, 1982, Session 19.16

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Implementation of educational innovation is at best a complex and dynamic process. How teachers use, adapt, and incorporate an innovation into instructional routines follows no easy path or preestablished operational pattern of behavior, even when the innovation calls for a high degree of fidelity during implementation. (Heck, et al., 1981). Even the most specific, clearly delineated innovation often succumbs to some sort of adaptation and modification when used in an instructional situation. Recent evaluation research on implementation supports the phenemenon that there does not exist an innovation that cannot or will not be adapted and modified by those who use it (Rutherford, 1978; Heck, 1979).

In this study we attempted to get closer to an understanding of why, to what extent, and under what conditions a group of ninth grade content area teachers in a large, urban school district implemented a particular set of reading innovations (Herber, 1978; Vacca, 1981) within the context of helping students learn from textbooks. Content area reading as a curriculum innovation is a composite of many major features

or critical components which are reflected in teacher behaviors, student learning activities, and adjunct materials devised by teachers to facilitate learning-from-text objectives. Moreover, there are no prepackaged, set patterns of use for the components of content area reading innovation. Variations, the different ways in which the components can be operationalized during teaching, are often recommended to teachers by staff development leaders or professional textbook writers.

From the point of view of implementation, then, content area reading must be looked at from a process perspective as opposed to a fidelity perspective (Fullan and Pomfret, 1977). As an innovation, reading in content areas reflects broadscope change which encourages teachers to transform innovative strategies to meet the conceptual and structural demands inherent in their text materials. Since these demands will vary from content area to content area and from textbook to textbook, it is unrealistic, if not undesirable, to prepackage content area reading innovation or to specify highly prescribed procedures for implementation.

The teachers who particpated in this study were introduced to content area reading innovation through a building-initiated staff development project which employed a full-time reading consultant/developer as part of the teaching staff. The staff development project was based on four assumptions derived from recent research on the change process on adopting educational innovation (Hall, et al., 1975; Joyce and Showers, 1980):

1. School-wide change is accomplished by individuals.
2. Change in individuals occurs in stages.
3. Different staff development procedures impact individuals differentially.
4. The stages of the participating teachers need to be considered in the planning of staff development activities.

With respect to the first assumption, Brandt (1979) has suggested that "We remember that school programs are implemented one teacher at a time. They are successful and long lasting to the extent that each teacher understands them, accepts them and knows how to make them work." (p. 195) Thus, the content area reading staff development project focussed on the individual teacher as she or he initially perceived various components of the innovation and later attempted to use reading strategies during subject matter instruction.

Secondly, as teachers acquire skills needed to use an innovation, they go through stages in their affective orientation to the innovation, and in their skill and sophistication in using it. Research from the Concerns Based Adoption Model (Hall et. al, 1975) has identified seven "stages of concern" and seven corresponding "levels of use" that individuals experience as they implement change. Joyce and Showers (1980) outline a similar set of stages which they have termed "levels of impact" that are actually outcomes of training. These two models differ in the way they detail the stages teachers experience in relation to an innovation. But they are both similar in describing teachers as becoming aware of an innovation, gaining knowledge of the innovation, beginning to use the innovation in their classrooms, and finally devising ways to improve the effect of the innovation on their students.

Moreover, Joyce and Showers (1980) have described "components of training" such as the presentation of theory, modeling or demonstration, practice in simulated or classroom settings, structured feedback, and coaching to application. These different "training components" have different "levels of impact" on individuals.

For example, if a group of high school teachers were presented the theory behind an innovation perhaps, at the most, 5% would be able to go back to their classrooms and actually use the innovation. But suppose some dimension of the innovation was demonstrated to the same group of teachers. This would have considerable impact on their awareness of the potential utility of the innovation, but most of the teachers probably would still not use it in the classroom unless they were given opportunitites to practice as well as given structured feedback by a staff developer or supervisor. Joyce and Showers (1980) have stated that probably nine out of every ten teachers would reach skill acquisition level with demonstration of unfamiliar models of teaching combined with discussions of theory which are followed by practice with structured feedback.

Finally, in the planning of the content reading staff development activities, the "stages of concerns" of the teachers involved needed to be considered. The phrase "stages of concerns" refers to concerns of teachers in the stages presented previously, i.e. becoming aware of content area reading strategies in the classroom, and improving the effect of the content area reading strategies on the students.

It is important to note that involvement in staff development activities will not necessarily change teachers' attitudes and behaviors. However, staff development activities planned with the concerns of the individuals in mind can facilitate this change, but individuals ultimately determine whether or not change will occur. Generally, providing cognitive and affective experiences which are not related to the teachers' stages of concerns will increase the intensity of lower stage concerns. (Hall, George & Rutherford, 1979, p. 6-7)

CONTENT AREA READING AS AN INNOVATION

The development and use of instructional innovation in content area reading situations date back to at least the 1930's(McCallister, 1930). However, it was not until the mid-sixties that classroom-centered research initiated at Syracuse University provided the first long-term attempt to study reading instruction systematically in content areas (Herber and Sanders, 1969; Herber and Barron, 1973; Herber and Vacca, 1977; Herber and Riley, 1979).

The studies of reading innovation in content areas were anchored in curriculum and learning theory as well as a theory of reading instruction which supports functional teaching (Vacca and Herber, 1977). The research was guided foremost by the belief that an innovation evolving from a theory of functional reading instruction allowed content area teachers to influence reading skill acquisition and knowledge acquisition without sacrificing either to the other. Vacca and Herber (1977) maintained that because the research was conceptually sound from an instructional standpoint, "It has helped us develop practical responses to a pressing educational problem, i.e., reading instruction in secondary schools" (p. 1).

The Syracuse University studies essentially explored the use of innovative vocabulary and comprehension strategies within the context of carefully developed content area reading lessons. The various studies explored different components of lesson structure, including provisions for prereading, guiding reader/text interactions, and postreading teacher extensions of a lesson. The experimentally-developed lessons were planned

for use in "real" teaching situations in English, social studies, science and mathematics lessons.

Much of the research activity followed an "iterative" process for improving a promising innovation component. That is to say, the researchers were not initially concerned with a particular innovation component being better than another instructional treatment, but instead, posed the question, "How can a promising instructional feature of the innovation be improved?" This iterative approach, proposed by Levin(1966), suggested that educational innovations must be clearly understood and modified before being subjected to comparative study in classroom-centered research. According to Levin (1966), "Data must include the conditions ... teacher behavior and materials ... and the learners' responses to them, and, in turn the teachers' behavior because the stream of influence is certainly continuous." (p. 145)

Thus the Syracuse University studies built in the opportunity to "tinker" with promising instructional innovation in situ. As Levin (1966) noted,

> If some presentation does not work, immediate modifications are really hypothesis tests about the teaching - learning sequence ... These observations performed by skilled researchers might be devoted to the accumulation of wisdom. (p.145)

Even though an iterative research process was applied to the content area reading studies, the ultimate focus of the resarch rested with the outcomes of implementation. Once a reading researcher "improved" or "fine tuned" the innovation under study, it was then subjected to comparative analysis to determine its effects on students' recall and

interpretation of text.

Many of the components of content area reading innovation that were studied are now offered to content area teachers as theoretically sound instructional strategies and techniques (Herber, 1978; Vacca, 1981). Moreover, many of these strategies and techniques have formed the instructional core of staff development programs involving content area reading innovation.

Evaluation research in reading staff development has more often than not focussed on the outcomes of implementation in terms of student achievement and attitudes rather than on the process by which teachers have attempted to incorporate the innovation into actual instructional routines. Present research, however, on innovation configurations -- the operational patterns of the innovation that result from use -- suggests that teachers adapt and modify in different ways the components and variations of an innovation (Hall and Loucks, 1981). This study in particular looked at the factors which seemed to affect the way innovation users modified and adapted the critical components of content area reading innovation that were presented during a three-year staff development project.

DESCRIPTION OF THE STAFF DEVELOPMENT PROJECT

At the beginning of the 1981-82 school year, twenty-four participating teachers in the staff development project were interviewed on their use of critical components during content area reading instruction. Figure 1 delineates these critical components.

(Insert Figure 1 Here)

Figure 1

Critical Components of Content Area

Reading Innovation

in the

Staff Development Project

1. Different types of reading guides are used to focus students attention on major concepts.
    a. anticipation guides (focus attention prior to reading)
    b. concept guides (focus attention after reading)
    c. three-level guides (focus attention during reading)
2. Important content vocabulary words are introduced and reinforced.
    a. structured overviews (graphic organizers prior to reading)
    b. vocabulary reinforcement exercises (before or after reading)
3. Purposes for reading are set before reading.
    a. previewing
    b. prediction
    c. curiosity arousal
4. Students are involved in structured group work and/or whole class discussion
5. Students are asked to support their answers to reading guides using appropriate parts of the text.

The innovation components were presented and developed in workshop sessions and demonstrated in the teachers' classrooms over a two-year period of time. In addition, teachers collaborated with the staff developer and one another in devising content area reading lessons for use in their classrooms. One-to-one support and structured feedback were provided to many of the teachers at various points in the on-going staff development project. Moreover, some of the teachers were hired in the summer of 1981 to develop content area reading lessons which were tied to their individual curriculum objectives.

It should also be noted that the staff developer also frequented the teacher's lounge and had many informal exchanges with the teachers. Also, in the school system an adversarial relationship existed between the building and central administration and the teachers. However, since the staff developer was on a teacher's salary and had joined the union, she generally was identified and accepted as a teacher even though she had the support of her immediate supervisor and the principal.

RESEARCH PLAN

To better understand why, to what extent, and under what conditions the participating teachers used and adapted content area reading innovation, we used personal interviews, field observations, and also analyzed teacher-developed materials which were constructed to facilitate learning-from-text objectives.

To determine the extent to which the teachers were using critical components of content area reading innovation, they were individually interviewed following an interview schedule adapted from the Levels of Use Interview (Hall, et al., 1975). Figure 2 depicts the questions which

were asked to probe the extent to which teachers used and modified content area reading innovations.

(Insert Figure 2)

According to Hall, et al. (1975), innovation users may incorporate an innovation into instructional routines at different levels. Figure 3 depicts these levels as they would apply to content area reading.

(Insert Figure 3)

It was determined from the interviews that a majority of the teachers (18 out of 23) used content reading strategies at a "mechanical level" at the end of the school year. In their interviews they discussed the "how to's" of using the strategies and of increasing the number of formats they would use. Only 5 of the teachers expressed impact concerns, i.e. made statements which indicated they were reflecting on how they could refine and adapt content reading strategies to more effectively teach their students.

These five teachers were at the "refinement" level and, as a result, were interviewed more extensively and were observed in their classrooms. The focus of these interviews and classroom observations was to determine why and how these teachers adapted the content area reading strategies presented in the staff development workshops and the factors which seemed to affect these adaptations.

Figure 2

Content Area Reading Innovation Interview

Directions to the Innovation User:

I would like you to choose a specific strategy or technique that has been presented and demonstrated in the staff development workshops and which you feel that you use in your classroom on a fairly regular basis.

(Once the user identifies a particular innovation component for further discussion, the following probes are made)

1. Describe how you use (the innovation component)? What do you do? What do your students do?
2. What do you see as the strengths and weaknesses of using (the innovation component)?
3. Did you do anything different in your use of (the innovation component) from what we discussed in the content area reading sessions?
4. Did you do anything to make the use of (the innovation component) more appropriate for students in your classroom?
5. Did the way you used (the innovation component) vary from class to class that you teach?
6. How do you go about preparing lessons to use (the innovation component)?
7. How do you decide that (the innovation component) is needed for a particular text selection?
8. How do you decide what portions of the text need to be emphasized through the use of (the innovation component)?
9. How do you decide what form (the innovation component) will take?
10. Is there anything that you consciously do to get students ready for (the innovation component)?

11. Were there any ideas presented in the content area reading sessions which you disagreed with? If so which ones?

12. Which ideas presented in the content area reading sessions did you think were particularly useful to you as a content teacher?

13. Are there any changes you plan to make or have made in the way you use (the innovation component)?

14. When the staff development project is discontinued, will you continue to use (innovation component)?

15. What was the most effective aspect of the staff development project?

Figure 3

LEVELS OF USE OF AN INNOVATION:

CONTENT AREA READING

Levels of Use		Content Area Reading
0	NON-USE	Not doing anything in relation to content area reading.
I	ORIENTATION	Oriented to change. Have not decided to use content area reading practices, but these people think about how using content reading practices differs from present practices.
II	PREPARATION	Have decided to use content area reading teaching practices. They gather materials needed to use content reading practices. They are planning how to incorporporate it.
III	MECHANICAL USE	Began using the content area reading practices, often in a mechanical way. Usually very tied to using a practice excactly how it was explained to them, but they are learning about the innovation.
IVA	ROUTINE	Have established a level of routine in using content area reading practices. Refining use of the innovation.
IVB	REFINEMENT	Make adaptations within their own classrooms to increase impact.
V	INTEGRATION	Work with others in using content area reading so that coordination of efforts will increase impact.
VI	RENEWAL	Focus on drastic changes or are moving into using new innovations related to content area reading

ANALYSIS OF DATA

The data were analyzed to answer these two questions:

1) What factors seem to affect the level of use of content reading strategies of the participating high school teachers.

2) What factors seem to affect the innovation configurations or adaptations of content reading strategies made by the participating high school teachers?

As a result of the analysis, major themes emerged concerning the extent of use and the adaptations made by the teachers.

1. The extent of use of content area reading strategies was affected by time pressures on the teachers.

2. The extent of use of content area reading strategies was affected by informal friendship systems which in turn seemed to be influenced by organizational patterns.

3. The extent of use of content area reading strategies was affected by social/political factors in the school.

4. The extent of use of content area reading strategies was affected by the existence of and the nature of the inservice support system.

5. The type of adaptations made was affected by time pressures on the teachers.

6. The type of adaptations made was affected by the nature of the content that was taught by teachers.

Time Pressures

Many of the teachers made statements indicating that time pressures caused by the school schedule affected both the extent they used content reading strategies and the type of strategies they used. Most of the teachers used non "paper-and-pencil" tasks such as previewing an assignment or helping students make predictions and devised vocabulary reinforcement exercises much more extensively than they used three-level guides and anticipation guides. Three-level guides and anticipation guides take time and thought to construct. Only five of the teachers actually devised

anticipation and three level guides on a regular basis during the school year. An analysis of these reading guides suggested that the teachers varied the format and, in a sense, "experimented" with the original prototype format that were presented during the workshops. Interestingly, when the staff developer devised a specific type of reading guide for classroom use, it was always used by the teachers. Their use, however, often stayed within a mechanical level. Observations of the greatest variations in implementation were closely linked with the five users who constructed their own guide materials regularly.

Informal Friendship Systems

The participating teachers in the project taught in what is called a "unit system", i.e. a unit of a science teacher, an English teacher, a social studies teacher, and a mathematics teacher taught the same group of students. The twenty-four teachers in the project had similar schedules, generally frequented the teachers' lounge, and were all members of the teachers' union. Because the informal leaders of their "friendship" groups which formed became enthusiastic about content area reading innovation, there appeared to be an increase in the credibility of the staff developer and in turn an increase in the extent the teachers used components of content area reading innovation.

Since the staff development project was discontinued last year, the staff developer is presently working with vocational teachers in the same high school. The vocational teachers are not in a unit system and thus have little reason to collaborate. They also do not frequent the teachers' loungebecause they each have an office of their own with a telephone. In addition most of the vocational education teachers do not

belong to the union. The impact that the staff developer seems to have on this group of teachers appears to be less than it was on the 24 teachers in the project that has been previously described. We hypothesize that a major factor in this appears to be the organizational pattern and in turn, the lact of observable friendship patterns among the vocational teachers.

Social Political Factors

The social-political factors associated with the school climate also seemed to have affected the extent to which some of the teachers perceived and used content area reading innovation. For example, two teachers who had been enthusiastic about the reading staff development project were informally interviewed just after they had received a tentative "R.I.F." notice. Their interview responses were very pessimistic and negative. The next school year the same two teachers were re-hired and were extensively using and adapting the content area reading strategies they had developed during the summer.

Another example of how the social-political nature of the school climate affected the teachers' participation in the staff development program occurred at the beginning of the 1980 school year. Immediately after a strike, the administration instituted a new policy for teachers to have their lesson plans evaluated. The teachers spent much of their time at staff development sessions in the weeks immediately following the enactment of this policy discussing its effect on their attitudes toward their work. During this time there was little noticeable use of reading innovations in the teachers' classrooms or effort to develop content area reading lessons.

Existence and Nature of
In-service Support System

Many of the participating teachers said that they would use content reading strategies to a lesser extent the next year if the program was discontinued. However, the five teachers who were adapting and refining innovation components responded they would continue using content area reading strategies whether the staff development project continued or not. Their level of commitment was so high that the strategies seemed to have become a natural part of their teaching.

The teachers were also asked which aspect of the staff development they felt were the most effective. In general they felt that demonstration lessons extending into team teaching situations aided them the most in incorporating content area reading lesson into their teaching.

Two other aspects of the content reading program were reflected upon by the teachers. When they were asked for specific feedback on the way the program was run, the participating teachers commented on the importance of having coffee at the workshop sessions and on the opportunity of sharing ways of teaching with their colleagues along subject matter lines. Staff development sessions in previous years had been within the unit groups, i.e. a group which included a social studies teacher, a English teacher, a science teacher, and a mathematics teacher. The teachers were much less responsive in unit groups than when working across groups with specialists in their own area of expertise. A main reason the "content" groups (e.g. all science teachers) were more responsive in inservice sessions was because they could share and collaborate ways to teach specific topics. In the interviews many of the readers expressed that they rarely shared ways of teaching with their colleagues. Two of the teachers at the refinement

level reported they did share and collaborate on their own.

An analysis was made of the content area reading materisl which were developed by the participating teachers during the school year and by the three teachers who were paid for summer curriculum development. The type of content area reading materials devised was affected by the nature of the content. For example, because the science texts contained a great number of technical vocabulary terms unfamiliar to the students, the science teachers used vocabulary reinforcement activites extensively. Another format often used by the science teachers was an adjunct material called a "concept guide" in which subordinate information is categorized under superordinate concepts. For example, in using a concept guide, students were asked to categorize in a chart information related to body structure, food source, method of reproduction and living environment of algae and fungi. By way of contrast, the English teachers were apt to devise anticipation guides and three-level guides, or involve students in making predictions because narrative text lends itself to these strategies. The English material devised in the summer included content reading lessons for Romeo and Juliet which began with an "anticipation guide" in which the students discuss such ideas as "Loyalty to family is more important than friendship." and "A young lady of fourteen would not be able to recognize true love." Also several three level guides were constructed in which students responded to scenes at different levels of conceptual difficulty. Other adaptations frequently involved charting such aspects of a story as rising action, climax, and denouncement.

The social studies materials devised included vocabulary reinforcement exercises, anticipation guides, three-level guides, cloze, and

concept guides similar to the science teachers' concept guides. In using one concept guide the students were asked to compare the concepts of monarchy, oligarchy, dictatorship, democracy etc. on such dimensions as "Who has the power?", "How did they receive the power?" and "How much power do they have?" Another variation in reading guides used by the social studies teachers required students to apply principles to specific cases or situations. For example, after learning about the system of checks and balances, the students decided cases like the following and cited the appropriate powers of the branches of government involved:

> The President appoints a woman to the Supreme Court. However, Congress will not approve her. The President says the only reason for their disapproval is because they are a bunch of male chauvinist pigs. He says since Congress is just prejudiced, she can sit on the Supreme Court anyway. Can she still get the job?

The staff developer also encouraged the teachers to have their students write about ideas they studied in content area texts. The kinds of writing assignments also differed along content lines. Science teachers tended to have a topic like "Disease of Your Choice" and their students would write essays answering common questions like "What causes the disease?","What are the symptoms of the disease?" etc. A similar procedure was used by another science teacher in which the students chose a Black scientist, and wrote essays answering questions concerning the Black scientists they chose. Social Studies teachers, on the other hand, tended to have their students write the pros and cons of issues like "Capitol Punishment" and "Gun Control". In contrast, English teachers had their students write essays on themes from literature read. For example, after reading "The Scarlet Ibis" in which a

boy tries to change his physically and mentally handicapped brother to a disastrous end, the students were given choices to write about such themes as "Pride that Helps and Pride that Hurts" or "Trying to Transform Someone to Be More Like You."

IMPLICATIONS

The staff development project in this study incorporated many of the components of effective training programs, i.e., discussing theory and practice through a variety of delivery techniques, modeling teaching behaviors through demonstration, establishing conditions for collaboration, providing structured feedback. Nevertheless, even with these factors supporting the staff development effort, most of the teachers in the program only progressed to the point where they were using components of content area reading innovation at a mechanical level. These same teachers by and large suggested that despite several years of continual inservice support, they would probably not use the innovation components on a regular basis if the project was discontinued by the school administration. At this point, we can only speculate on why only a handful of the teachers (five of twenty-three) actively sought ways to refine and experiment with their use of content area reading innovation or why only a few teachers shared and collaborated with one another with respect to the innovation outside the staff development sessions.

Urban high school teachers have many demands placed on their time and energy. What rang loud and clear throughout the interviews with the teachers was the perceived pressures that they felt in their job roles. The "press of life" in their high school seemed to inhibit teachers from

collaborating and reflecting on ways to "fine tune" or improve their craft as it related to content area reading instruction. They just did not feel that they had enough time during the school day to think through or experiment with the strategies presented in the staff development sessions. They were content to "try out" the strategies and techniques with a high degree of fidelity toward the way they were presented in the inservice workshops, especially if the staff developer prepared the adjunct materials for the teacher. On the other hand, the teachers who were hired in the summer to develop content area reading lessons and adjunct materials were highly reflective and enthusiastic about using the innovation during the school year. Follow-up observations and interview data suggest that these teachers continued to reflect on and experiment with the use of the innovation during the school year.

For staff development programs designed to impact on teachers' use and adaptation of innovations, instructional leaders must take into account and plan for factors which seemingly are not directly related to the innovation per se. At least three specific ways to increase the likelihood that teachers will actively use and seek ways to refine an innovation include:

1. providing time within the teachers' schedules to meet on an on-going basis to "work" with the innovation,

2. organizing staff development sessions that involve teachers who are responsible for similar content and share common concerns related to that content,

3. hiring teachers to work on improving their craft during the summer.

Moreover, contextual factors surrounding the particular group of high school teachers involved in study seemed to greatly affect the

success of staff development efforts. Thus, instructional leaders and staff developers need to think through specifics of their own particular situation such as the frequency of which they use the teachers' lounge, the relationship of the teachers to the administration, the structure of informal friendship systems that exist. These kinds of factors need to be considered in planning both formal and informal staff development efforts.

References

Brandt, R. Overview. Educational Leadership. 1979, 37, 195.

Fullan, M. and Pomfret, A. Research on curriculum and instruction implementation. Review of Educational Research, Spring 1977, 47, 335-397.

Hall, G., et al. Levels of use of an innovation: A framework for analyzing innovation adoption. The Journal of Teacher Education, 1975 34, 226-233.

Hall, G., George, A. & Rutherford, W. Measuring stages of concern about the innovation: A manual for the use of the SoC questionnaire, 2nd ed. The Research and Development Center for Teacher Education, The University of Texas at Austin, 1979.

Hall, G. and Loucks, S. The conceptualization of innovation configurations. Paper presented at the annual meetin of American Educational Research Association, Los Angeles, April, 1981.

Heck, S. Measuring implementation: Its importantce for evaluating outcomes of a parent education program. Paper presented at the annual meeting of American Educational Research Assocation, San Francisco, April, 1979.

Heck, S., et al. Measuring innovation configurations: Procedures and applications. The Research and Development Center for Teacher Education, The University of Texas at Austin, 1981.

Herber, H. Teaching reading in content areas, 2nd ed. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1978.

Herber, H. and Barron, R. (Eds). Research in reading in the content areas: Second report. Syracuse: Syracuse University Reading and Language Arts Center, 1973

Herber, H. and, Riley, J. Research in reading in the content areas: Fourth report. Syracuse: Syracuse University Reading and Language Arts Center, 1979.

Herber, H. and, Sanders, P. Research in reading in the content areas: First report. Syracuse: Syracuse University Reading and Language Arts Center, 1969.

Herber, H. and Vacca, R. Research in reading in the content areas: Third report. Syracuse: Syracuse University Reading and Language Arts Center, 1977.

Joyce, B. and Showers, B. Improving inservice traning: The messages of research. Educational Leadership. 1980, 37, 379-386.

Rutherford, W. The personal interview: A tool for investigating and understanding change in schools. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978.

Vacca, R. Content area reading - Boston: Little, Brown, 1981

Vacca, R. and Herber, H. Research in reading the content areas: A perspective. In Herber, H. and Vacca, R. (eds.) Research in reading in the content areas: Third report, Syracuse: Syracuse University Reading and Language Arts Center, 1977.