5-1982

An Investigation of Junior High School Teachers’ and Students’ Attitudes Toward Content Area Reading and School Subjects

Carol K. Ernsthausen

The College at Brockport

Follow this and additional works at: https://digitalcommons.brockport.edu/ehd_theses

Part of the Language and Literacy Education Commons, and the Secondary Education Commons

To learn more about our programs visit: http://www.brockport.edu/ehd/

Repository Citation

Ernsthausen, Carol K., "An Investigation of Junior High School Teachers' and Students' Attitudes Toward Content Area Reading and School Subjects" (1982). Education and Human Development Master's Theses. 998.
https://digitalcommons.brockport.edu/ehd_theses/998

This Thesis is brought to you for free and open access by the Education and Human Development at Digital Commons @Brockport. It has been accepted for inclusion in Education and Human Development Master’s Theses by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmyers@brockport.edu.
AN INVESTIGATION OF JUNIOR HIGH SCHOOL
TEACHERS' AND STUDENTS' ATTITUDES TOWARD
CONTENT AREA READING AND SCHOOL SUBJECTS

THESIS

Submitted to the Graduate Committee of the
Department of Curriculum and Instruction
Faculty of Education
State University College at Brockport
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Education

by
Carol K. Ernsthausen
State University College at Brockport
Brockport, New York
May, 1982
SUBMITTED BY:

Lorrie K. Endothalson

APPROVED BY:

Arthur E. Smith  5/20/82
Thesis Advisor

France Moroney  5/20/82
Second Faculty Reader

Chair,  5/21/82
Graduate Policies Committee
Acknowledgments

The investigator wishes to acknowledge family and friends who have contributed to the conduction of this study.

Love and appreciation are given to my parents for their scholarly inspiration.

Thanks and gratitude are given to my husband and children for their support and encouragement.

Special thanks are given to Dr. Frank Ferris for his assistance in collecting the data.

Sincere appreciation is given to Dr. Arthur E. Smith and Dr. F. Moroney Whited for their time, advice and encouragement at all stages of the study.
Abstract

The primary purpose of this study was to investigate the attitudes of junior high school teachers toward content area reading. A secondary purpose was to investigate eighth grade students attitudes toward English, math, reading, science and social studies.

Two attitude scales were developed by the researcher for assessing teachers' attitudes. The Statements Survey, using a Likert scale, was a direct measure of teachers' attitudes toward theoretical statements about content area reading. The Situations Survey, using the semantic differential technique, assessed teachers' attitudes toward specific situations and plans which illustrated content area reading strategies. The Estes Attitude Scales, a commercial, Likert type scale, was used to assess students' attitudes toward school subjects.

The junior high school teachers expressed positive attitudes toward content area reading philosophies and strategies on both of the scales. Teachers expressed strongly positive attitudes toward developing awareness of skills needed in their subjects, teaching the skills students need in order to get meaning from reading materials, and toward evaluating both content and skills. Teachers felt less positive about grouping students for instruction and individualizing instruction. Teachers
indicated a lack of confidence in their abilities to diagnose students' skills needs.

The mean scores for students' attitudes toward school subjects fell within the positive range. However, in all subjects, except English, the attitudes expressed by these students were significantly below the stated norms. Most positive attitudes were expressed toward math, while least positive attitudes were directed toward social studies.
Table of Contents

List of Tables

Table 1. Mean Percentages of Teachers' Responses to Attitude Surveys...... 44
Table 2. Comparison of Mean Scores of Boys' and Girls' Attitudes Toward School Subjects................. 51
Table 3. Analysis of Mean Scores of Combined Students' Attitudes Toward School Subjects.................... 52

Chapter

I. Statement of the Problem......................... 1
Purpose............................................. 1
Questions.......................................... 1
Need for the Study................................ 2
Summary............................................. 7

II. Review of the Literature......................... 9
Purpose............................................. 9
Attitudes.......................................... 9
Content Area Reading......................... 16
Inservice Programs..................... 22
Summary............................................. 27

III. Design of the Study......................... 30
Purpose............................................. 30
Background........................................ 30
Methodology....................................... 34
Subjects........................................... 34
Instruments........................................ 34
Pilot Study......................................... 37
Procedures........................................ 38
Summary............................................. 40

IV. Analysis of the Data......................... 41
Purpose............................................. 41
Findings and Interpretations................. 41
Table of Contents (Continued)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV. Analysis of the Data (continued)</td>
<td></td>
</tr>
<tr>
<td>Teachers' Attitudes</td>
<td>41</td>
</tr>
<tr>
<td>Students' Attitudes</td>
<td>49</td>
</tr>
<tr>
<td>Summary</td>
<td>53</td>
</tr>
<tr>
<td>V. Conclusions and Implications</td>
<td>57</td>
</tr>
<tr>
<td>Purpose</td>
<td>57</td>
</tr>
<tr>
<td>Limitations</td>
<td>57</td>
</tr>
<tr>
<td>Conclusions</td>
<td>59</td>
</tr>
<tr>
<td>Teachers' Attitudes</td>
<td>60</td>
</tr>
<tr>
<td>Students' Attitudes</td>
<td>65</td>
</tr>
<tr>
<td>Implications for Research</td>
<td>66</td>
</tr>
<tr>
<td>Implications for Schools</td>
<td>67</td>
</tr>
<tr>
<td>References</td>
<td>71</td>
</tr>
<tr>
<td>Reference Notes</td>
<td>79</td>
</tr>
</tbody>
</table>

Appendices

A. Statements Survey                        | 81   |
B. Situations Survey                        | 88   |
C. Estes Attitude Scales (Secondary Form)   | 99   |
D. Demographic Data of Teachers Participating in the Content Area Reading Project | 102 |
E. Statements Survey: Percentage of Teachers' Responses | 104 |
F. Situations Survey: Percentage of Teachers' Responses | 106 |
G. Feasibility Scores: Percentage of Teachers' Responses | 108 |
H. Perceived Skill Scores: Percentage of Teachers' Responses | 110 |
Chapter I

Statement of the Problem

Purpose

The primary purpose of this study was to investigate the attitudes of content area teachers toward integrating reading instruction into their classrooms. The subjects of this study were junior high school teachers who had been involved in a three-year content area reading program in a suburban school district. A secondary purpose of the study was to investigate eighth grade students' attitudes toward reading, English, math, social studies, and science. The students had been exposed to content area reading instruction for one or more years.

Questions

Teachers' Attitudes

1. What are junior high school teachers' attitudes toward content area reading (CAR) after an extended inservice training program?
2. What specific CAR strategies and techniques do the junior high school teachers consider to be useful?
3. What specific CAR strategies and techniques do the junior high school teachers consider to have little usefulness?
4. What are junior high school teachers' attitudes about
the feasibility of CAR strategies and techniques?

5. How confident do junior high school teachers feel about their ability to include content area reading instruction in their classes?

**Students' Attitudes**

6. What are the attitudes toward English, math, reading, science, and social studies of eighth grade students who have been exposed to content reading instruction for one or more years?

7. Are there significant differences between the attitudes of eighth grade boys and girls toward English, math, reading, science, or social studies?

8. Are there significant differences between the attitudes of these eighth grade students and the students of the norming population for the *Estes Attitude Scales*?

**Need for the Study**

One of the most important issues emerging in reading education over the past decade is a concern about the inadequate reading abilities of many secondary school students. While teachers have noted this inadequacy for many years, only recently has research been directed toward the problem. In an early survey of secondary students and teachers in Michigan, McGinnis (1961) found that, according to the teachers, only 67% of the students
could read well enough to do the required work. Teachers commented that students needed developmental reading instruction. Ninety percent of the students surveyed said they had had little or no instruction in reading at the high school level. In 1974, Fisher stated that one of every four secondary students had some difficulty understanding his/her assigned reading.

In recent years public attention has focused on the reading problems of secondary students. A number of parents and students have brought lawsuits against school districts claiming that schools have allowed students to graduate without sufficient reading skills for succeeding in today's world (Roeder & Roeder, 1974). In response to such attention and to an increased interest in secondary reading, twenty state education departments have examined decreasing SAT scores and other indicators of poor reading ability and have established minimum competency requirements for high school graduation (Readance & Moore, 1979). Some of these states have mandated that schools provide additional reading instruction for those students who do not meet the minimal requirements. As a result, many school districts have expanded their reading programs to include secondary level instruction.

In an effort to prevent serious reading problems and
a need for extensive remedial instruction, and in recog-
nition of the fact that learning to read is a continuous
process with many levels of difficulty, school districts
and teachers have become interested in content area read-
ing. Herber (1978), the author of one of the earliest
textbooks about the subject, stated "finally we seem to
be moving toward a sensible alternative: providing in-
struction at each successive level of education so that
students learn how to apply their skills at the level of
sophistication demanded by the materials they are re-
quired to read" (p. 2). Smith, Smith, and Mikulecky
(1978) stressed that it is each teacher's responsibility
to help students become "more and more able to interact
reasonably and efficiently with authors in all fields of
endeavor" (p. 11). Secondary teachers thus have been
presented the challenge of fusing the teaching of con-
tent with the teaching of those reading skills necessary
for understanding that content.

While many teachers recognize students' inabilities
to read well enough to succeed in school, there is dis-
agreement about how and by whom the problem should be addressed. Some educators have indicated that the reading problems of high school students are frequently too great to be dealt with by content teachers, and these educators sug-
gest that reading specialists should accept the primary responsibility for reading instruction at the secondary level (Duffy & Jacoby, 1979; Russell, 1974). On the other hand, considerable emphasis has been given to the theory that content area teachers can and should integrate reading instruction into their content teaching. It has been noted that such instruction can promote the continued growth of students' reading abilities and may prevent many of the problems which develop when students meet the more difficult reading materials of secondary schools (Burmeister, 1978).

Advocates of this functional teaching of reading in content areas suggest that secondary teachers should identify the concepts they wish to stress, should determine what reading skills are necessary for acquiring those concepts, then should create reading and learning tasks that will lead both to the acquisition of the concepts and the development of strategies for independent learning (Herber, 1978; Riley, 1979). Research has shown, however, that secondary teachers generally are not prepared to teach reading, do not feel confident about teaching reading, and do not think it is their responsibility (McGinnis, 1961; Roeder & Roeder, 1974; Stoot & Balbo, 1979). Dupuis, Askov, and Lee (1979) stated
that negative teacher attitudes provide serious obstacles to the integration of reading instruction into content classes. They further stated that, "A critical first step in changing behavior is changing teacher attitudes" (p. 66). The resolution of many secondary students' reading problems and the improvement of their reading abilities may well depend upon content area teachers' attitudes toward reading instruction. An investigation of those attitudes could provide useful information for persons responsible for planning school reading programs. This study focused on the measurement of junior high school teachers' attitudes after the teachers had been involved in a three-year inservice content area reading program.

Students' attitudes toward reading and content subjects were also a focus of this study. There is little disagreement in the literature about the importance of positive attitudes for successful reading and learning (Alexander & Filler, 1976). Wilson and Hall (1972) stated that positive attitude was "essential for successful mastery of the printed page" (p. 11). Alexander and Filler (1976) noted, however, that research in attitude
development and maintenance had been limited. It is thought that the teacher, his/her instructional strategies, and the general classroom atmosphere may effect students' attitude development (Healy, 1963; Kemper, cited in Alexander & Filler, 1976; Squire, 1969). Schofield (1980) reported that high reading achievement and positive attitudes in teachers were positively associated with high achievement and positive attitudes in pupils. Many of the strategies that have been suggested for developing and maintaining positive attitudes toward reading and learning are also advocated by content reading specialists (Alexander & Filler, 1976; Herber, 1978). With the premise that content reading instruction may aid the development of positive student attitudes toward reading and school subjects, this study explored the attitudes of eighth grade students' who had been exposed to one or more years of content area reading instruction.

Summary

There has been much public and professional concern over the inadequate reading abilities of many secondary school students. Content area reading instruction has been suggested as one method for addressing this problem. However, research has shown that content area
teachers often are unprepared to teach reading and have negative attitudes about integrating reading instruction into their classrooms. Studies have suggested that teachers' attitudes toward content area reading may be crucial in determining the attitudes and achievement of students. Investigation of junior high teachers' and students' attitudes may supply important information about the affective functioning of the school and its programs.
Chapter II

Review of the Literature

Purpose

This study investigated the attitudes of junior high teachers toward content area reading instruction after they had participated in a three year content area reading program. The study also explored the attitudes of students who had been exposed to content area reading instruction for one or more years. This review of the literature will concentrate upon the importance and measurement of attitudes, a description of content area reading instruction, and a discussion of inservice reading programs.

Attitudes

Attitudes may be defined as consistent, learned tendencies to react to persons, objects, or concepts. While not all researchers would concur with this or any other single definition, most would agree that attitudes must be inferred from behavior, that they are learned, that they predispose an individual to a particular response, and that they are evaluative in nature (Epstein, 1980). Attitudes are thought to involve three components--cognitive, affective, and behavioral. The cognitive component includes an individual's knowledge and beliefs about a concept, particularly his/her evaluative beliefs. The affective com-
ponent involves a person's emotions or feelings about a concept. Behavioral readiness, or a tendency to react negatively or positively, is the third component of attitude. Summers (1970) states that these components are all closely linked and combined to form an attitude. Alexander and Filler (1976) emphasized the behavioral component as they described reading attitudes to be "a system of feelings related to reading which causes the learner to approach or avoid a reading situation." (p. 1). In this study Alexander and Filler's definition was used as a basis for describing students' and teachers' attitudes.

The influence that affective factors such as attitude have on learning and behavior has received increased attention in recent years. Healy noted in 1963 that it was becoming more and more apparent that cognitive growth was related to affective growth. More recently, in a discussion of students' affective development, Burmeister (1978) commented that, "The processes of valuing, being interested in, and being involved with an idea frequently spark a higher level of cognitive understanding or response to an idea than would otherwise occur. This higher level intellectual response may, in turn, cause increased affective involvement, and so on" (p. xiii). Smith, Smith,
and Mikulecky (1978) also emphasized the importance of positive attitudes when they stated that the primary goal of education was to foster the development of literate individuals who have the ability and the inclination to be interesting, informed, responsible citizens. In practical terms, these writers defined the schools' role as the development of people who are able to read and who choose to read.

A number of factors are thought to be related to the development and maintenance of students' attitudes toward reading. However, research in the area has been minimal. A few studies have suggested a relationship between higher achievement and more positive attitudes. Ransbury (1973) and Askov and Fishbach (1973) found in their studies with elementary grade students that good readers held positive attitudes toward reading. The researchers attributed the positive attitudes to the students' abilities to read well. On the other hand, Groff (1962) noted that fifth and sixth grade pupils' attitudes toward the content of their reading affected their achievement on a test of critical reading. Research has also suggested that achievement and attitude may improve concurrently, that attitudes toward the content of a passage may affect comprehension, and that improving attitudes toward reading
may influence achievement and encourage more reading (Alexander & Filler, 1976). Some research, however, has shown no significant relationships between achievement and attitudes. For example, Bernstein (1972) found that children participating in a Right to Read program showed an increase in their level of comprehension, but showed no measureable change in attitudes. It was suggested that teachers' unenthusiastic participation in the program may have affected pupil attitudes.

While it is commonly thought that teachers' attitudes may affect students' attitudes toward reading, there has been little research to support this contention. McGinnis (1961) and Mueller (1973) noted negative reading attitudes among teachers and preservice teachers, but the writers did not relate these attitudes to pupil attitudes. In an effort to investigate the matter, they surveyed 149 university students who were enrolled in reading methods classes. While these preservice teachers seemed to have positive attitudes toward reading, and while significant positive correlations were found between their attitudes and reading competence, the authors cautioned that no set definition existed for what constituted positive attitudes and, further, that the effects of those attitudes and competence in the classroom were unknown.
In 1980 Schofield explored the relationship between pupils' and teachers' attitudes toward and achievement in reading. She noted that high reading achievement and positive attitudes in teachers were positively associated with high achievement and positive attitudes in pupils. She also noted that low achieving teachers with negative attitudes produced students who were low achievers, but who had positive attitudes toward reading. Students with the most negative attitudes were found in classes of middle achieving and indifferent teachers. Schofield suggested that "compared with teachers of moderate reading ability, teachers of low reading ability may be less likely to communicate a negative evaluation of the pupils' reading ability, and hence be less likely to evoke in them the unfavorable attitudes toward reading" (p. 118). She stressed that teachers' attitudes toward reading may determine the "force" put on their students to read and, consequently, the development of negative or positive attitudes.

Instructional strategies and the classroom environment are two other variables which have been associated with the development of students' reading attitudes and achievement (Healy, 1963). Many of the strategies such as grouping, selecting materials of interest to and
appropriate to the ability of students, and setting purposes for reading that are listed by Alexander and Filler (1976) as suggestions for developing and maintaining positive attitudes toward reading are strategies that are also advocated by content area reading specialists. Further research, however, is needed to define the effects of these variables on student attitudes.

A number of assessment techniques have been used for measuring affective factors in reading. Interviews, observation rating scales, projective techniques, and peer appraisal have been suggested as informal tools for classroom teachers. Unobtrusive measures such as observation of students' behavior in a library, wear on books, the number and kinds of books purchased, and the number of books read, may provide supplementary information about students' reading attitudes (Alexander & Filler 1976). The most frequently used method for measuring attitudes, however, requires subjects to indicate their agreement or disagreement with a set of statements (Shaw & Wright, 1967). This self-report technique is based on the assumption that subjects know their feelings and are willing to express them (Nunnally, 1978). Attitude scales, the most common example of this technique, usually measure both the direction and the magnitude of attitude.
Such scales provide a quick, easily scored, objective measurement for individuals or groups (Epstein, 1980; Nunnally, 1978).

For purposes of research, self-report measures offer the most valid approach currently available for attitude measurement (Nunnally, 1978). Epstein (1980) lists the following advantages of self-report measures: subjects may respond anonymously and may take time to consider their responses, the scales can be standardized and adapted to large scale assessment, and scales can provide quantified data which can be computerized. A number of cautions must be considered when using self-report attitude measures. Readability may confuse or affect responses (Epstein, 1980). Subjects may indicate expected or desirable responses, rather than true attitudes (Nunnally, 1978). Attitude scales often lack validity (Vaughan, 1980). Scores for grouped items are usually more reliable than scores for single ratings. Group scores have higher reliability than scores for individuals (Heise, 1970). Items must be specific to encourage universal interpretation (Newfield, 1980). The situation in which the assessment is made may affect the individual's attitude (Dupuis & Askov, 1977). In spite of these cautions, educators believe that attitudes are so important to reading that an attempt must
be made, whether formally or informally, to measure them. Summers (1970) notes that due to the complexity of attitudes and the limitations of attitude measures, researchers should use multiple indicators for assessment and should be able to see some consistency among those indicators.

**Content Area Reading**

Riley (1979) has defined content area reading instruction as teaching that facilitates the learning of content area concepts through the careful design and implementation of lessons that focus on needed processes and skills. Herber (1978) states that content area reading instruction is the functional teaching of reading in content classes. Most definitions of content area reading agree that it first involves the identification of key concepts and ideas of the subject curriculum. Skills and processes necessary for acquiring the concepts are then selected. The teacher next analyzes the students' needs and plans instruction accordingly. The reading skills taught are determined by the content of the material assigned (Burmeister, 1978; Herber, 1978).

Reading instruction, and its place in content area teaching, has been a subject of debate among educators for many years. In 1937 Snedaker and Horn, in a chapter of
the National Society for the Study of Education Yearbook, discussed the responsibility of all teachers to direct reading pertinent to their content fields. Early (1973) noted that current appeals for secondary teachers to teach reading in the content area are the same appeals as those noted in a 1946 reading textbook by Strang, McCullough, and Traxler. Early suggested that while students, teachers, and schools have changed significantly since that time, there has been very little change in the status of reading instruction in secondary schools. Even though research has shown that reading growth occurs whenever time is allocated and instruction provided, Duffy and Jacoby (1979) commented that reading is the only common branch subject not systematically taught in both elementary and secondary schools. Freed (1973), in a survey of over 200 school systems, found that only fifty-five percent of the junior high schools and twenty-two percent of the senior high schools required that some students take a reading course. It was assumed that the reading development of other students was left to content teachers.

Many educators believe that the most effective method for providing reading instruction at the secondary level is through content area teachers (Burmeister, 1978; Herber,
1978; Readance & Moore, 1979; Stoodt & Balbo, 1979). Secondary students' reading difficulties come from two sources -- a lack of basic reading and study skills and/or an inability to transfer these skills to new assignments (Stoodt & Balbo, 1979). When instruction in reading is incorporated into other classes, students see a need to learn these skills. Immediate application of reading skills in content subjects reinforces the skill learning and provides a transfer to studying content material (Askov & Dupuis, 1981).

Key factors in successful content area reading programs are teachers' awareness of needed skills, their competence in implementing reading instruction in their classrooms, and their attitudes toward teaching reading in content classes (Dupuis & Askov, 1977). Secondary teachers are often inadequately prepared to deal with reading instruction, frequently are unaware of the reading skills needed for mastering their content area, and may even lack personal competence in those skills (Braam & Roehm, 1964; Estes & Piercey, 1973; Roeder & Roeder, 1974). In addition, much of the literature has indicated that secondary teachers often hold negative attitudes toward integrating reading instruction into their courses (Dupuis, Askov, & Lee, 1979).
A number of studies have investigated teachers' competence in reading and in developing the reading skills of their students. McGinnis (1961) reported that less than ten percent of the secondary teachers she surveyed had received any training in teaching reading to high school students. In a national survey of English teachers, McQuire (cited in Estes & Piercey, 1973) found that barely one third of the teachers had ever had a course in teaching reading. A survey by Roeder and Roeder (1974) provided information about graduation requirements for secondary education majors in 972 colleges and universities in the United States. Approximately seventy-five percent of these institutions reported that secondary teachers were not required to enroll in any reading methods course. In 1979 Thomas and Simpson found that twenty-eight states had established a requirement of training in reading instruction for certification of secondary teachers. This number indicates a gain of twenty-four over the number of states requiring reading training in a 1973 survey by Estes and Piercey. Although studies of teachers' reading competence have been varied, they generally have shown very low scores for teachers on standardized reading tests (Dahlke, 1973; Geeslin & York, 1971; Gentile & McMillan, 1977). The findings of Mikulecky and Ribovich (1977) were some-
what more encouraging with teachers averaging in the sixty-third percentile for total reading on the Nelson Denny Reading Test. Mikulecky and Ribovich cautioned, however, that the sample population for their study represented very able student teachers rather than average school teachers. Much of this research implies that it may be unreasonable to expect secondary teachers to provide reading instruction unless they receive necessary additional training.

The attitudes teachers hold toward content area reading have also been a topic for study. Secondary teachers often assume that students who have been taught to read in elementary school will automatically develop and apply those skills in content classes (Estes & Piercey, 1973). A survey by Braam and Walker (1973) revealed that an average of only two or three skills were listed by each teacher as necessary to reading subject matter materials. The researchers suggested that teachers seemed to be unaware of the reading skills needed by their students. Content teachers frequently state that teaching reading is not their responsibility (Estes & Piercey, 1973; Vaughan, 1977). Schlich (1971) reported that teachers responded to an opinion survey with the belief that any reading instruction at the secondary level should be considered remedial, and should be taught in special classes. Otto
(1968) found that those content teachers who did indicate a willingness to include reading instruction in their courses often expressed a need for more training. Criscuolo, Vacca, and LaVorgna (1980) reported that the secondary teachers they surveyed held positive attitudes toward teaching reading strategies that facilitated comprehension and efficient use of textbooks. However, those teachers held negative attitudes toward teaching decoding skills such as syllabication and phonemic analysis. Even though teachers may be aware of, and familiar with, content area reading strategies, their attitudes toward fusing reading and content instruction may determine how successfully that knowledge is used. Teacher training in content area reading methods and strategies must focus on improving both competence and attitudes (Dupuis, Askov, & Lee, 1979).

While all of the above issues are important factors in a discussion of content reading, the most critical issue is the effect of content reading instruction, or the lack of it, on students' attitudes and achievement. It has been suggested that a primary cause of students dropping out of school is their lack of competence in the reading skills necessary for success in an academic setting (Rubin, 1974; Singer, 1972). The goal of content area reading instruction is to promote students' abilities to process
written information and thus increase their success in subject areas (Smith, Smith & Mikulecky, 1978). Research into the effectiveness of incorporating instruction in reading skills into content teaching has, however, been inconclusive. Some studies have found significant improvement in students' abilities and attitudes and others have not (Smith, 1973; Stoodt & Balbo, 1979; Turner, Zais, & Gatewood, 1974).

Inservice Programs

Inservice education has been defined by Edelfelt and Johnson (1975) as "any professional development activity that a teacher undertakes singly or with other teachers after receiving her or his initial teaching certificate and after beginning professional practice" (p. 5). Inservice programs in the nineteenth century reflected the lack of education of most teachers of the time and were targeted at remediation of teachers' deficiencies in subject matter. This emphasis continued into the middle of the twentieth century. In more recent years, stress on the schools' responsibility to educate all students has broadened the content of inservice programs. A shift toward a view of inservice education as a means of continuing professional development, rather than remediation, has been evident (Edelfelt & Lawrence, 1975).
Inservice education today is similar in many ways to that of the past: teacher attendance is usually required; little effort is made to relate the inservice programs to the needs of the participants; there is a failure to select appropriate activities for implementation, if indeed the goal is implementation; and too often the projects are low level and piecemeal (Edelfelt & Lawrence, 1975; Otto & Erickson, 1973). The consensus seems to be that staff development often is "ineffective and a waste of time" (McLaughlin & Marsh, 1978, p. 70).

Since 1970, however, there has been an increased interest in improving inservice education. Declining student enrollments have led to teachers choosing to remain in their present positions. Many school districts, thus, have a stable, tenured staff. Schools no longer can rely on new teachers to bring fresh ideas into the district, but must depend upon upgrading the knowledge and attitudes of present teachers. Inservice programs have become an important means for improving public school programs (McLaughlin & Marsh, 1978; Otto & Erickson, 1973). Research has aided the schools by concentrating upon describing the characteristics of good staff development programs.
McLaughlin and Marsh (1978), in a report based on evaluations of a number of federally funded educational programs, found four crucial factors in the implementation of inservice programs. (1) Most successful programs were planned in collaboration with the people responsible for implementation, were large in scope, and appealed to teachers' sense of professionalism. (2) Staff training activities were directed toward specific goals and support was given as teachers adapted the new practices to fit their classroom situations. (3) A competent, enthusiastic building principal was critical for establishing and encouraging long term change. (4) Teachers' positive attitudes and an awareness of their own competence had significant positive effects on project outcomes, while over seven years teaching experience often had a negative effect.

Similar findings were reported by Hutson (1981) in a summary of research and references about inservice education. He differentiated three domains of inservice; the procedural, the substantive, and the conceptual. The procedural domain included questions of control, support, and delivery of staff development activities. Hutson noted these questions were usually decided by collaboration and consensus and received principal focus in the literature. The substantive domain included technical questions
about the content and process of inservice programs. Hutson noted these questions needed to be decided by expertise derived from research. The conceptual domain included philosophical questions such as theories and rationales which could be answered by logical reasoning. Hutson stated that all three domains needed to be understood and properly aligned or an inservice program would result in little professional development.

Inservice education to improve reading instruction has special pertinence to this study. While educators recognize that developing reading skills beyond the elementary grades is essential to students' success in high school and college, they also realize that many teachers are not prepared to guide this development (Schlich, 1971). Otto and Erickson (1973) noted that public schools provided the ideal location for improving reading instruction because the necessary components—students, teachers, and principals—were there in the daily school environment. The writers stated that the goals of such instruction should be a change in teaching behavior. Aaron, Callaway, and Olson (1965) noted that the purpose of inservice programs should be to improve the skills and attitudes of both teachers and students. They stressed that the effects of staff development should be visible in the classroom.
Criteria for inservice programs in reading have been described and discussed in the literature and are similar to those considered important for general staff development. Well defined, realistic goals which address the needs of participants; flexible programs which allow for individual differences; appropriate training activities and follow-up work; planned application and incorporation of new ideas into the classroom; and suitable evaluation of results were considered to be important for successful inservice reading programs (Aaron, Callaway & Olson, 1965; Otto & Erickson, 1973; Schlich, 1971). The importance of finding out how much teachers actually use the information and ideas presented in staff development programs was emphasized by Wilson and Blum (1981). Stein (1981) stressed that teachers need lesson-planning and decision-making guidance to help them transfer their inservice experiences into the routine of their classes.

An important study of the effectiveness of an inservice education model was reported by Dupuis and Askov in 1977. The study centered on whether secondary teachers' attitudes and knowledge of reading skills could be positively changed by inservice education. Instruction in content area reading was given to volunteer junior high school teachers from three different areas. The year-
long program consisted of fifteen bimonthly sessions taught by the authors. A competency-based format was used and model teaching materials were created for demonstration. Additional support was given to participants through the establishment of a professional library at each site and by staff aides assigned to each school. Significant changes in attitudes and knowledge of reading skills were found. In addition, in a follow-up study conducted one year later, the researchers found the gains made during the 1976-77 school year were maintained even though there had been no additional intervention (Askow & Dupuis, 1981). This study indicated that inservice education may positively influence secondary teachers' attitudes and competence in providing reading instruction. Further research is needed to explore what specific components of the inservice model contributed to the changes and what effect these changes may have on student behavior.

Summary

Affective factors such as attitudes have received increased attention in educational research in recent years. A number of factors, such as achievement, instructional strategies, and the classroom environment are thought to be related to the development and maintenance of attitudes.
Teachers' reading attitudes as they relate to students' attitudes have also been investigated in a limited number of studies. Research in this area has centered primarily on describing teachers' and students' attitudes.

The most frequently used method for measuring attitudes is the self-report technique. In this method subjects indicate their agreement or disagreement with a set of statements. When subjects are given anonymity, and when the statements are administered and used in non-threatening situations, responses are considered to be accurate indications of attitudes. Researchers are encouraged in the literature to use a multi-measure approach when assessing attitudes.

Incorporating reading instruction into content area classes has been discussed for many years. Many educators believe that this is an effective method for improving reading abilities of secondary students. Key factors in content area reading instruction are teachers' competence in implementing it and their attitudes toward using it in their classes. Studies have shown that secondary teachers frequently are unprepared to provide reading instruction and also have negative attitudes about it.

Inservice education has been suggested as one method for addressing teachers' needs for additional training in
content reading. Studies of staff development programs, however, have found that they often are not directed toward the needs of the participants, are frequently poorly planned, and too often receive little support for long term change. Effective inservice reading programs must set realistic goals, be flexible, provide appropriate training and follow-up support, and must plan for an evaluation of the results. Limited research has shown that well planned inservice education can change teachers' attitudes toward content reading and can improve teachers' competence in using content reading strategies.
Chapter III

Design of the Study

Purpose

The primary purpose of this study was to examine the attitudes of junior high school teachers toward content area reading. A secondary purpose was to describe the attitudes of eighth grade students toward reading, math, science, social studies, and English.

Background

During the 1979-1980 school year a suburban school district in upstate New York initiated a three-year plan to increase and improve reading instruction in content area classes at the junior high level. The goals of the plan were to develop, implement, and evaluate a Content Area Reading Project which would improve teachers' knowledge of, attitudes toward, and confidence in using content area reading techniques. The first phase of the plan, developed by the district's Director of Reading and the junior high reading teacher, involved the school principal, department coordinators, and several other teachers in a four day content reading workshop. Participants were guided through a variety of simulated exercises that could be used with students in content
classes. The workshop was patterned after the Model Content Area Reading Program developed by Dr. Harold Herber of Syracuse University. Emphasis was placed on the need for and theories about content area reading, group techniques, identification of key concepts and needed reading skills, and the construction of various study guides. Reactions to this pilot effort were cautiously optimistic and plans were made to include all other school staff—teachers, administrators, and support people—over a three year period.

Staff requirements and follow-up activities evolved from this workshop and those that followed. Staff requirements for the workshops included the development of a unit of instruction which contained the following: a concept statement, a structured overview, a reading/reasoning guide, a vocabulary exercise, and a unit test. Participants were also required to invite one or more of the other group members to observe the teaching of some component of the unit, and later to share reactions. Additionally, each teacher was expected to regularly use a specially designed lesson plan format and to develop or improve upon one unit of study each semester. Follow-up activities included group discussions of the effects of planned units and content reading instruction, faculty
and team meetings to clarify procedures, on-the-spot assistance by two teacher-trainers, summer curriculum work, and analyses and development of criteria for construction of midterm and final tests.

Evaluation of the Content Area Reading Project had focused upon teachers' knowledge of content reading instruction, their competence in using such instruction in their classes, and their attitudes toward content reading. Informal evaluation occurred throughout each phase of the project. During the third year of the project, however, more formal assessment centered upon the effectiveness of the project in terms of student and teacher behavior. Methods of assessment included a study of students' scores on unit tests, standardized achievement tests, the district's diagnostic Criterion Referenced Tests, and an attitude inventory. A review of workshop evaluations and the completion of requirements by participants, classroom observations, summations of data from teachers' lesson plans, and the administration of an attitude survey were used to measure the teachers' integration of the philosophy and strategies of content area reading into their classrooms. This thesis study was a part of that final assessment and is a description of the attitudes of teachers and students who were involved in the project.
Research Questions

Teachers' Attitudes
1. What are junior high school teachers' attitudes toward content area reading (CAR) after an extended in-service training program?
2. What specific CAR strategies and techniques do the junior high school teachers consider to be useful?
3. What specific CAR strategies and techniques do the junior high school teachers consider to have little usefulness?
4. What are junior high school teachers' attitudes about the feasibility of CAR strategies and techniques?
5. How confident do junior high school teachers feel about their ability to include content area reading instruction in their classes?

Students' Attitudes
6. What are the attitudes toward English, math, reading, science, and social studies of eighth grade students who have been exposed to content reading instruction for one or more years?
7. Are there significant differences between the attitudes of eighth grade boys and girls toward English, math, reading, science, or social studies?
8. Are there significant differences between the attitudes of these eighth grade students and the students of the norming population for the Estes' Attitude Scales?

Methodology

Subjects

The teacher-subjects of this study were all of the faculty members of a suburban junior high school. (See appendix A for demographic data about the teacher-subjects.) The forty teachers, administrators, and support personnel had participated in a three-year project targeted at improving content area reading instruction in the school. The student-subjects were 280 eighth graders who attended the school. These students included all of the eighth graders who were in attendance on the day the attitude scale was administered.

Instruments

Three instruments were used in this investigation. Two attitude scales, the Statements Survey and the Situations Survey, were adapted by the investigator and the school district's Director of Reading for measuring attitudes of the teachers. The third instrument, Estes' Attitude Scales: Measures of Attitudes Toward School Subjects, secondary form, was administered to the students.

The Statements Survey was adapted from the Statements Survey: Teaching Reading In Content Areas (Dupuis & Askov,
1977) which was developed for the Content Area Reading Project directed by Dupuis and Askov at Pennsylvania State University, with funding from the Pennsylvania Department of Education. This survey is a Likert type scale which allows subjects to respond to statements by selecting one alternative from a group of five choices ranging from "strongly disagree" to "strongly agree." One neutral, or "not sure" choice is included. Each item reveals both the direction (negative or positive) and the intensity (neutral, slight, strong) of the subjects' feelings about that statement. The Statements Survey includes twenty statements about the philosophy and instructional procedures of content area teachers.

The investigators followed carefully the format and design of the Pennsylvania Statements Survey when planning the attitude survey to be used in this study. Since it was considered important that the instrument for assessment closely match the training given, some items were reworded or changed to reflect the emphasis of this school's program. Of the twenty original items, five remained unchanged, twelve were reworded or received a slightly different emphasis, and three items were completely rewritten. The modified instrument was presented to the project coordinators and to a university professor who
teaches courses in content area reading in an attempt to establish content validity. Based on the judgments of these professionals, minor revisions in wording were made and a pilot study was conducted.

The Situations Survey was modified in a similar manner. It was adapted from the Situations Survey: Teaching Reading In The Content Areas (Dupuis & Askov, 1977) which was developed for the Pennsylvania Content Area Reading Project. This survey used a twelve item semantic differential scale. Each item of the scale consists of a brief description of a content area classroom "situation" and a possible "plan" which might be followed. The subjects were asked to rate each plan on five pair of bipolar adjectives. Each pair of adjectives was rated on a seven point scale, with the mid-point representing a neutral attitude. Responses indicated both the direction and intensity of attitudes from "very closely related" to "quite closely related" to "only slightly related." Two additional questions followed each situation and plan. One question asked the respondents to rate the plan on the basis of its feasibility in the classroom, and the other question asked the respondents to rate their skill in executing such a plan. Subjects' attitudes were inferred on the basis of their reactions to both the situations and the questions.
The investigators followed closely the format and design of the Situations Survey from the Pennsylvania study when planning the second attitude survey for this research. A number of situations and/or plans were revised to more clearly reflect the techniques stressed in this project. Two items were unchanged, eight were reworded or received different emphasis, and two new situations were developed. The investigators decided to use the same adjective scales that were used by the Pennsylvania study since these were words often used in literature to describe content area reading. The modified Situations Survey was examined by a university professor who teaches content reading courses and by the coordinators of the school's program. Minor revisions were made and the instrument was used in a pilot study.

Pilot Study

A pilot study was conducted in February 1982. The purpose of the study was to refine the Statements Survey and Situations Survey and to investigate the administration procedures for the scales.

The subjects for this pilot study were twenty-four graduate students who were enrolled in a reading seminar. All were candidates for a Master's degree in reading and had twelve to thirty hours of reading course credits.
Eight of the subjects had less than five years teaching experience. Eleven of the subjects were secondary teachers, five were elementary teachers, and eight were teaching reading at the time.

The attitude surveys were administered during a regular class by the investigator. Following the administration of the surveys, subjects were asked to discuss and/or write their suggestions for improving the instruments and the administration procedure. As a result, a change was made in the order the instruments were given, directions were clarified, and three questions for demographic data were added to the Statements Survey.

Procedures

The Statements Survey and the Situation Survey were administered to all of the teachers, administrators, and support personnel of the participating junior high school in March 1982. The administration of the surveys was included as part of a school conference day devoted to content area reading. The Director of Reading administered the surveys to the group of forty faculty members. He first established a purpose for the surveys through a brief discussion of the three-year content area reading project. Then the Statements Survey and the machine scorable answer sheets were distributed. In an effort to
assure anonymity, teachers were asked to choose a four digit code number to identify their survey. The directions printed on the survey were read aloud and a sample item was completed. Subjects were requested to complete the survey honestly and carefully, but were asked not to ponder over any of the items. The Situations Survey was administered in a similar manner. Teachers were asked to use the same code number so that demographic information included as the first three statements of the Statements Survey could be applied to the Situations Survey. No time limits were set for the surveys and teachers were assured they would receive information about the results of the assessment.

The Estes Attitude Scales were distributed to all of the eighth graders in attendance at the junior high school on April 7, 1982. Faculty members administered the scales to their homeroom students. An explanation of the study and specific directions were given to the teachers prior to distribution of the scales. Students' names were included on the scales since the measures were intended to be included as part of student profiles for other research.

Statistical Analysis

Responses to the Statements Surveys were machine
scored and responses to the Situations Surveys were tallied by the investigator. Data were collected and analyzed through item analysis. The Estes Attitude Scales were hand scored and were analyzed descriptively and by means of a t-test.

Summary

The purpose of this study was to investigate the attitudes of junior high school teachers and students who had been involved in an extended inservice content area reading project. The content area reading attitudes of the total school faculty (40) were surveyed through two researcher-designed attitude scales. The attitudes toward reading and major school subjects of all eighth grade students were also measured. A descriptive analysis was made of the assessed attitudes of the two groups.
Chapter IV

Analysis of the Data

Purpose

The primary purpose of this study was to explore the attitudes of junior high school teachers toward content area reading. A secondary purpose was to investigate eighth grade students' attitudes toward reading and four major content area subjects. Attitudes of both teachers and students were assessed through the use of self-report attitude scales.

Findings and Interpretations

Teachers' Attitudes

Responses to all items of both attitude surveys were adjusted so that they could be scored on a continuum from negative to positive (low to high scores). Four scores were tabulated for each item. The Statements Survey yielded one score and provided a direct measure of teachers' attitudes toward theoretical statements about content area reading. The Situations Survey provided three somewhat indirect scores. One score indicated teachers' general attitudes toward the use of content area reading strategies in specific situations. Two additional scores, the feasibility score and the perceived skill score, were
obtained through responses to separate questions following each situation and plan.

Items of the *Statements Survey* and the *Situations Survey* were grouped by the investigator into four categories for analysis—diagnosis, structure and organization, processes and skills, and evaluation. Diagnostic items included references to teachers' need to assess the skills necessary in a particular subject and students' mastery of the necessary skills (*Statements Survey*, items 6, 7, 9, 19 & 21; *Situations Survey*, item 1). Structure and organizational items referred to adapting materials to students' abilities, motivating and grouping students for instruction, and pre-teaching concepts and skills (*Statements Survey*, items 8, 13, 14, 17 & 22; *Situations Survey*, items 3, 4 & 6). Process and skills items included references to instructional strategies such as the use of vocabulary and study guides, and to instruction in specific study skills (*Statements Survey*, items 5, 10, 12, 15, 16, 20 & 23; *Situations Survey*, items 2, 5, 7, 8, 9 & 11). Evaluative items referred to a need to evaluate mastery of both concepts and skills, and a need to use assessment measures which reflect how the content has been taught (*Statements Survey*, items 4, 11 & 18; *Situations Survey*, items 10 & 12).
The first question asked what were the attitudes of junior high school teachers toward content area reading. Analysis of responses to the Situations Survey and the Statements Survey indicated that nearly sixty percent of the total responses were strongly positive and nearly ten percent were strongly negative. Table 1 displays the mean percentages of teachers' responses to each category of items on the two surveys. Strongly positive attitudes were indicated by over fifty percent of the teachers for thirteen of the sixteen grouped scores. All four scores for the evaluation items and the skills items indicate strongly positive responses from over sixty percent of the teachers. Fewer strongly positive responses were noted in the feasibility and the perceived skill scores for diagnostic items, and for organizational items of the Statements Survey. Less than ten percent of the teachers expressed strongly negative attitudes toward any category of items on the Statements or Situations surveys. More negative responses were expressed to the questions about the feasibility of suggested plans than to the questions about perceived skill or to the statements and situations.
Table 1
Mean Percentages of Teachers' Responses To Attitude Surveys

<table>
<thead>
<tr>
<th>Statements Survey</th>
<th>Situations Survey</th>
<th>General Attitude</th>
<th>Feasible</th>
<th>Perceived Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td></td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>diagnosis</td>
<td></td>
<td>Strongly</td>
<td>Strongly</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>57</td>
<td>8</td>
<td>53</td>
</tr>
<tr>
<td>organization &amp; structure</td>
<td></td>
<td>38</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>skills &amp; processes</td>
<td></td>
<td>63</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>evaluation</td>
<td></td>
<td>70</td>
<td>4</td>
<td>64</td>
</tr>
</tbody>
</table>

a. Responses of six and seven on the scales were considered strongly positive.

b. Responses of one and two on the scales were considered strongly negative.
The second question asked which specific content area reading strategies and techniques teachers judged most useful. (Appendices E and F indicate the percentages of teachers' responses to items on the Statements Survey and the Situations Survey.) Over seventy percent of the teachers expressed strongly positive attitudes toward the following concepts:

**Diagnosis**
1. Teachers should be able to identify skills and processes needed by students to master specific content.
2. It is important for teachers to be able to identify students who have difficulty with unfamiliar words.

**Organization**
1. Teachers should consider the reading levels of students when selecting classroom materials to use or to adapt.

**Skills**
1. Teachers should teach the reading/thinking skills needed in their subject areas.
2. It is appropriate for teachers to match their teaching strategies to the identified needs of their students.
3. Needed skills such as identifying relevant details, following a sequence, using problem solving techniques, interpreting graphs and charts, locating information, com-
piling a bibliography, taking notes, and organizing a research paper should be pre-taught as the need arises.

4. It is necessary for teachers to identify and teach key concepts and vocabulary that are specifically needed in a unit of instruction.

Evaluation
1. Teachers should assess mastery of both content and skills needed in their subject areas.
2. Tests should be designed to measure mastery of specific information, interpretation, and application of concepts.

The third question asked what specific content area reading strategies and techniques had little usefulness, according to the teachers. (Appendices E and F indicate teachers' negative as well as positive responses to the Statements Survey and the Situations Survey.) Ten percent or more of the teachers expressed strongly negative attitudes toward the following ideas.

Diagnosis
1. Content teachers should develop skill in assessing students' abilities to use concept statements and structured overviews.

Organization
1. Teachers should instruct students in how to use
structured overviews and concept statements.

2. Teachers should use concept statements and structured overviews to assist students in comprehending difficult material.

3. Teachers should provide small group lessons in using study guides.

4. Teachers should include statements at various comprehension levels on worksheets, study guides, and tests.

5. Teachers should provide appropriate instructional materials for groups of students with differing reading abilities.

Skills

1. When necessary, teachers should instruct groups of students in how to use prefixes and suffixes to help identify unfamiliar words and should provide materials for practice.

Evaluation

1. As a review technique teachers could provide partially developed structured overviews for students to complete.

The fourth question asked how feasible did teachers think content area reading strategies and techniques were in suggested situations. Responses to this separate question were noted for each of the situations and suggested plans of the Situations Survey. (Appendix G notes
the percentages of these responses as feasibility scores.) Fifty percent or more of the teachers expressed strongly positive attitudes toward the feasibility of eight of the twelve situations. These situations involved pre-teaching needed study skills and vocabulary, considering students' reading levels when selecting materials, grouping students for assistance in vocabulary and concept development, and evaluating mastery of concepts on literal, interpretive, and applied levels. Strongly negative attitudes were expressed by ten percent or more of the teachers toward the feasibility of eight of the twelve situations. These situations involved diagnosing students' skill levels, grouping students for special instruction, considering reading levels of students when selecting materials, and using concept statements and structured overviews for instruction or review. The data indicates that for five items, over fifty percent of the teachers gave strongly positive responses while ten percent or more of the teachers gave strongly negative responses. Strongly negative attitudes were more often expressed to this question than on the initial scales for each situation and plan.

The fifth question asked how confident teachers felt about their ability to include content area reading instruction in their classes. (The perceived skill scores,
responses to a separate question asked about each item on the Situations Survey, are indicated in Appendix H.) Strong feelings of confidence in their own skill were expressed by over fifty percent of the teachers for ten of the twelve suggested situations and plans. Teachers indicated confidence in their abilities to organize and plan instruction, teach needed skills, and evaluate students' mastery of concepts and skills. However, a lack of confidence was noted in diagnosing students' skill levels and needs, individualizing assignments for groups of students within a class, and using structured overviews for review.

Students' Attitudes

The sixth question asked what were the attitudes toward English, math, reading, science, and social studies of eighth grade students who have been exposed to content area reading instruction for one or more years. All mean scores fell within the positive range and represent fairly typical attitudes toward basic school subjects (Estes, Estes, Richards & Roettger, 1981). The most positive attitudes were expressed toward math, followed by reading, science, English, and social studies, respectively.

The seventh question expressed as a null hypothesis,
stated that there are no significant differences between the attitudes of eighth grade boys and girls toward English, math, reading, science, or social studies. A *t* test for independent means was used to analyze the data. (Table 2 presents the analysis of mean scores for boys' and girls' attitudes toward school subjects.) The null hypothesis was rejected for three subject areas. However, data failed to reject the null hypothesis for two subject areas. Girls had significantly more positive attitudes than boys toward English and reading. Boys, however, had significantly more positive attitudes than girls toward science. There were no significant differences in boys or girls attitudes toward math or social studies.

The eighth question, expressed as a null hypothesis, stated that there are no significant differences between the attitudes of eighth grade students in this study and students of the norming population for the *Estes Attitude Scales*. The data failed to reject the null hypothesis for the area of English in which *t* tests indicated no significant difference. The hypothesis was rejected, however,
Table 2
Comparison of Mean Scores of Boys' and Girls' Attitudes Toward School Subjects

<table>
<thead>
<tr>
<th>Group</th>
<th>Group</th>
<th>English</th>
<th>Math</th>
<th>Reading</th>
<th>Science</th>
<th>Social</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Girls (n=140)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean</td>
<td>54.19</td>
<td>55.21</td>
<td>56.08</td>
<td>51.52</td>
<td>48.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>7.10</td>
<td>7.51</td>
<td>9.42</td>
<td>8.27</td>
<td>10.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boys (n=140)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean</td>
<td>50.26</td>
<td>55.01</td>
<td>50.25</td>
<td>54.33</td>
<td>48.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>7.23</td>
<td>8.29</td>
<td>9.93</td>
<td>7.12</td>
<td>9.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>4.04*</td>
<td>.21</td>
<td>5.04*</td>
<td>3.05*</td>
<td>.53</td>
<td></td>
</tr>
</tbody>
</table>

Note: Possible range = 15-75

crit. t (2,80) = 2.58, *p.<.01
Table 3  
Analysis of Mean Scores of Combined Students' Attitudes Toward School Subjects.

<table>
<thead>
<tr>
<th>Group</th>
<th>English</th>
<th>Math</th>
<th>Reading</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-subjects (n=280)</td>
<td>52.23</td>
<td>55.11</td>
<td>53.16</td>
<td>52.93</td>
<td>48.66</td>
</tr>
<tr>
<td>Norming sample for Estes Attitude Scales (n=1,815)</td>
<td>52.</td>
<td>57.</td>
<td>57.</td>
<td>54.</td>
<td>53.</td>
</tr>
</tbody>
</table>

$t$ values: 0.54 4.02* 6.64* 2.32* 7.21*

Note: Possible range = 15-75

crit. $t$ ($\infty$) = 1.96, * $p < .05$
for the areas of math, reading, science, and social studies. The mean scores of subjects of this study fell at the following percentile ranks on the national norms—English, 50th; math, 41st; reading, 35th; science, 45th; and social studies, 30th. Students in this study indicated significantly less positive attitudes toward math, reading, science, and social studies than did the norming population.

Summary

This study investigated the attitudes of junior high school teachers and students after participation in an extended content area reading program. Item analysis of the Situations Survey and the Statements Survey indicated that nearly sixty percent of the total responses were strongly positive and nearly ten percent were strongly negative. Seventy percent or more of the teachers responded positively to eight of the twelve items of the Situations Survey and to seventeen of the twenty items in the Statements Survey.
Teachers' attitudes about the usefulness of specific content area reading strategies and techniques were investigated. Teachers expressed positive attitudes toward the identification of learning skills needed by students and of students abilities to use those skills. Teachers also felt positively about considering students' reading levels when selecting and adapting materials, about matching instruction to the needs of students, and about teaching reading and thinking skills as they are needed in classes. In addition, teachers indicated positive attitudes toward evaluating students' mastery of concepts and skills on three levels of comprehension--literal, interpretive, and applied. However, teachers in this study expressed strongly negative attitudes toward using structured overviews for instructional or review purposes, grouping students within classes for special instruction, teaching and providing practice materials for word analysis, and including various comprehension levels on worksheets and study guides.

This study also explored teachers' attitudes toward the feasibility of including content area reading in their classes. When asked how feasible specific content area reading plans were, fifty percent or more of the teachers responded with strongly positive attitudes to
eight of the twelve situations. However, strongly negative responses were also noted by over ten percent of the teachers to eight of the twelve situations.

Perceived skill scores indicated teachers' confidence in their ability to carry through with suggested content area reading plans. Confidence in their own ability was expressed by over fifty percent of the teachers for ten of the twelve situations. Lack of confidence was indicated by ten to twenty percent of the teachers for four plans involving diagnosing students' skills, grouping students for instruction, and using structured overviews for review.

Students in this study held positive attitudes toward reading and four major subject areas. The most positive attitudes were expressed toward math, followed by reading, science, English, and social studies. Girls indicated significantly more positive attitudes than boys toward English and reading, while boys indicated significantly more positive attitudes than girls toward science. No significant differences were noted in attitudes of boys or girls toward math or social studies. Even though all mean scores fell with the range of typical attitudes toward school subjects, students in this study indicated significantly less positive attitudes toward math, reading, science,
and social studies than did the norming population of the Estes Attitude Scales.
Chapter V

Conclusions & Implications

Purposes

The purpose of this study was to investigate the attitudes of teachers and students attending a suburban junior high school in western New York. The primary focus of the study was the teachers' attitudes toward content area reading. A secondary focus was eighth grade students' attitudes toward English, math, reading, science, and social studies.

Limitations

The conclusions of this study apply specifically to the populations investigated and the instruments used. The teacher-subjects (40) were all of the faculty of a suburban junior high school for seventh and eighth grade students. Fifty-five percent of the teachers taught academic courses, fifty-three percent held a Master's degree, and forty-eight percent noted over fifteen years of teaching experience. This stable, tenured staff illustrates one of the principal reasons given by McLaughlin and March (1978) for the recent increased interest in inservice education. These teachers had, in fact, participated in an extended content area reading program.
However, while some of the teachers had been involved in the project voluntarily for nearly three years, others had only been unenthusiastically involved for six months. Since it is not known what specific effect these variables may have had on teachers' attitudes toward content area reading, and since no pre-program attitude data were available, no conclusions can be drawn about the causes of existing teacher attitudes.

A similar limitation must be observed when viewing students' attitudes. While some of the students may have had many classes with teachers who enthusiastically supported content area reading theories and integrated them into their content teaching, other students may have had only a few classes with such teachers. Although it has been suggested that content area reading instruction, teachers' attitudes, and a number of other factors may be related to the development of positive student attitudes (Alexander & Filler, 1976; Burmeister, 1978; Schofield, 1980), the research has not been definitive. In addition, no previous data about the attitudes of these student-subjects were available. Therefore, no generalizations about the causation of the students' attitudes can be made.
A further limitation for this study is the instruments used for assessment. Numerous cautions have been expressed about the use of attitude scales, including: readability, specificity of items, respondent anonymity, attention to the situation in which assessment is made, increased reliability of grouped items and scores, and lack of validity and reliability data (Epstein, 1980; Nunnally, 1978; Vaughan, 1980). While attempts were made to account for these factors and to validate the investigator-designed instruments, no validity or reliability data are available for the Statements Survey or the Situations Survey as they were modified. Normative information for the Estes Attitude Scales indicates that characteristics of the standardization sample were similar to the students in this study (Estes, Estes, Richards, & Roettger, 1981). In addition, the data indicates that this is a reliable, valid instrument for measuring students' attitudes toward school subjects. However, the scales were administered by eleven different teachers, and the students used their names to identify their answer sheets. It is not known what effect these factors may have had on the responses given.

Conclusions

Although several limitations to this study have been
noted, some generalizations can be made about the existing attitudes of teachers and eighth grade students from the participating school.

**Teachers' Attitudes**

Junior high school teachers in this study expressed positive attitudes toward content area reading philosophies and strategies on both of the attitude scales. An average of all of the responses to both surveys and both extra questions indicated that three fourths of the responses were positive. Nearly sixty percent of the total responses were strongly positive, while only ten percent were strongly negative. Thirty percent of the responses were neutral or of low intensity. Summers (1970) noted that multiple indicators should be used for attitude assessment and that there should be some consistency among those indicators. The consistency of the percentages of strongly positive responses, which is seen across all four scores of both the Statements Survey and the Situations Survey, contribute to the conclusion that these responses accurately reflect the teachers' attitudes toward content area reading.

These positive attitudes are in contrast to the negative attitudes reported in much of the research concerning the incorporating of reading instruction into secondary
classrooms (Estes & Piercey, 1973; Schlich, 1971; Vaughan, 1977). If, as Dupuis, Askov, and Lee (1979) suggest, positive teacher attitudes are critical to the integration of reading instruction in content classes, then the positive attitudes found here indicate that an important aspect of a successful content area reading program has been established in this school.

It was thought that there might be differences in teachers' attitudes toward content area reading according to their years of teaching experience, the amount of formal education beyond a Bachelor's degree, or their teaching area (academic courses or special subjects). A review of responses to the surveys was made with these groupings in mind. While there were some group differences in response to some of the items, no distinct patterns were revealed. This fact, and the small numbers of teachers within some of the groups caused the investigator to conclude that no inferences about possible group differences should be made.

Teachers in this study expressed strongly positive attitudes about the need to know what skills are necessary for mastery of their content area. Many also felt it was important for teachers to be able to assess students' skills and to provide needed instruction. However, a
large number of teachers indicated that they did not feel confident about making such assessments and questioned the feasibility of those assessments. The investigator speculated that a lack of confidence in diagnosing students' skill needs may influence teachers' feelings about the feasibility of such diagnosis, or vice versa.

Organizing classes for group instruction and planning for individual differences were areas of concern for many of the teachers. Responses to items in this category were quite mixed. While seventy-five percent of the teachers indicated a need to provide materials with a wide range of readability, ten to twenty percent felt such planning was not feasible. Twenty to thirty percent of the teachers expressed negative attitudes toward the concept of grouping students for instruction. Only fifty percent responded that such grouping was desirable. Individualizing instruction conflicts with the whole-class, lecture method of teaching traditionally used in secondary schools. Individualization and grouping also involve the highly personal factor of teaching style. In fact, change in thinking about these areas may be one of the biggest changes content area reading programs require of teachers. Considering these factors,
more training, support, and time should be given for teachers to adapt and integrate these ideas into their teaching styles and classrooms.

The junior high school teachers expressed highly positive attitudes toward teaching students the skills and processes necessary for learning the content of their subjects. Teachers felt it was appropriate and feasible to teach such skills as identifying relevant details, following a sequence, interpreting charts and graphs, compiling a bibliography, taking notes, locating information, and using problem solving techniques. They also felt that teaching needed vocabulary was a useful strategy. In addition to noting that such instruction was useful and feasible, teachers indicated confidence in their abilities to provide such instruction. This finding supports similar findings of Criscuolo, Vacca, and LaVorgna (1980) and implies that teachers are in favor of those strategies which help students get meaning from their reading materials.

In contrast to the generally positive attitudes expressed toward most of the suggested content area reading strategies, twenty-five to fifty percent of the teachers indicated quite negative attitudes toward survey
items which referred to the use of structured overviews and/or concept statements. This negative feeling toward these two learning aids was also seen during a training workshop which this investigator attended. At that time some of the teachers had difficulty deciding which concepts should be stressed and how to show the relationships between ideas or vocabulary terms. Analysis of the responses to survey items referring to structured overviews and concept statements shows that all of the strongly negative responses were noted by teachers of academic courses. It could be concluded that teachers in this study do not feel that structured overviews and concept statements are equally useful or applicable across all subject areas.

Over ninety percent of the teachers expressed positive attitudes toward the philosophies of evaluating mastery of both content and skills and of designing tests to measure interpretation and application of concepts, as well as specific information. The teachers seem to have accepted responsibility for teaching students how to learn in their content areas. In addition, these teachers seem to recognize that students must be able to interpret the concepts to be useful.
Students' Attitudes

The attitudes of the eighth grade students in this study fell within the positive range and can be considered to be fairly typical attitudes toward school subjects. The most positive attitudes were expressed toward math, toward which both boys and girls had similar attitudes. Least positive attitudes were directed toward social studies, and again boys and girls noted very similar feelings. Girls indicated more positive attitudes than boys did toward English and reading, while the reverse was true about attitudes toward science.

Even though the attitudes noted on the Estes Attitude Scales were within the positive range as measured by standard scores, there is some cause for concern. In all subjects except English, the attitudes expressed by students in this study were significantly below the stated norms for the scales. Mean scores for science fell at the forty-fifth percentile, for math at the forty-first percentile, for reading at the thirty-fifth, and for social studies at the thirtieth percentile. While research into the relationships between students' attitudes and achievements has not been definitive, perhaps Smith, Smith, and Mikulecky (1978) summed up the general feeling of many educators when they stated that the role of schools
was to develop people who not only could achieve, but would choose to achieve. If the attitudes expressed on this scale are accurate indicators of the feelings of these students, this investigator wonders whether these students will choose to achieve.

**Implications for Research**

This study was limited to a specific population of junior high school teachers and students. The purpose was to explore and describe the existing attitudes. Follow up research could provide useful information about teachers' adjustments to the content area reading program and could reveal differences among groups of teachers according to teaching area, education, or experience. Further research might also investigate the differences in responses of teachers of specific subjects.

Study of the relationships of teachers' attitudes to their behaviors in the classroom is another area in which additional knowledge is needed. Aaron, Callaway, and Olson (1965) stated that the purpose of inservice education should be to improve the attitudes and skills of both teachers and students. The effectiveness of such programs could be determined better through correlating teachers expressed attitudes and their actual behaviors. In addi-
tion, investigating the relationships of teachers' attitudes and behaviors to the attitudes and achievement of students could provide insights into the development and maintenance of positive attitudes toward school subjects and the effectiveness of particular instructional strategies.

The measurement of students' and teachers' attitudes toward school and school subjects has received limited attention. The development and validation of additional instruments which accurately assess attitudes could contribute an important dimension to attitude research. The truth and soundness of conclusions about affective areas depend upon the validity of the instruments used and the methods of assessment.

Implications for Schools

Several implications for schools emerge as a result of a review of the literature and an analysis of the findings of this study. A principal implication is the importance of positive attitudes. School programs need to give attention to the attitude development of both teachers and students. All components of attitude should be considered--knowledge and beliefs, feelings, and the tendency to react negatively or positively. In recent years, research has increased its focus on the influence of affective factors such as attitudes on learning and be-
School personnel need to be aware that teachers' and students' attitudes may have a considerable effect upon their cognitive development and behavior.

Data from this study indicate that the teachers in this junior high school have positive attitudes toward content area reading. They have accepted the philosophy and many of the teaching strategies recommended by content reading specialists. Maintaining these positive attitudes and supporting teachers in their adjustments to the new and unfamiliar requirements established as part of the content area reading program will have a significant impact upon the success or failure of the program. Some flexibility in the requirements established for teachers may be one way to aid the maintenance of positive attitudes. In addition, McLaughlin and Marsh (1978) noted that continuing, enthusiastic, encouraging support from the building principal and other school administrators is critical for successful long term change in school programs.

The attitudes that students in this study expressed toward school subjects were within the positive range, but were lower than the national norm for four subject areas. For this reason, other informal indicators of student attitudes, such as interviews, observation rating
scales, or projective techniques, might be considered to validate the accuracy of these findings. Examination of the school program and environment could determine possible causes for the existing attitudes, and strategies for developing more positive attitudes might be formulated. Many of the strategies suggested for content area reading instruction are thought to aid in the development and maintenance of positive attitudes toward school subjects. (Alexander & Filler, 1976; Burmeister, 1978; Herber, 1978)

This study also points out the need for base line data about teachers' and students' attitudes. Such data is essential if inferences are to be drawn about desired or expected changes in attitudes. As increased attention is given to affective influences within the school environment, comparisons of the "before" and "after" data can help guide the persons responsible for planning school programs.

While the attitudes of teachers in this study cannot empirically be attributed to the school's content area reading program, due to a lack of pre-program data, involvement in the three-year inservice program is thought to have had some influence on teachers' attitudes toward content reading instruction. With this in mind, some implications about inservice programs might be appropriate.
This program followed many of the guidelines established by research for good inservice programs. The program was directed toward specific, stated needs and goals, was planned in cooperation with those responsible for carrying out the desired change, was broad in scope, and was designed to provide for follow-up activities, support, and classroom application. Evaluation, both formal and informal, should continue to be a part of this program and similar staff development programs. Assessment of inservice programs should consider teachers' growth in knowledge and understanding, the development of positive attitudes, and the transfer and application of the new understandings to the classroom. Continuing evaluation should not only measure the effectiveness of the program in terms of teacher and student behaviors, but should also describe modifications and improvements for the program itself.
References
References

Aaron, I., Callaway, B., & Olson, A. *Conducting in-service programs in reading*. Newark, Del.: International Reading Association, 1965.


Reference Notes


Appendix A

Statements Survey
STATEMENTS SURVEY: TEACHING READING IN CONTENT AREAS

Adapted from the Statements Survey: Teaching Reading in Content Areas by Joyce W. Lee, Carlotta Joyner Young, Eunice N. Askov, and Mary M. Dupuis (1976). From the Content Area Reading Project, sponsored by the Pennsylvania Department of Education.
Over the past several years the faculty at the Cosgrove Junior High has been actively involved in a number of projects such as skill identification, development of instructionally related tests (CRT's), and most recently the use of a variety of instructional strategies for improving learning in all content areas. To help us evaluate the impact of these projects we have adapted for our use two surveys developed at The Pennsylvania State University. Your frank and careful responses to these surveys are needed and will be appreciated. When the data has been analyzed, we will be sharing that information with you.

INTRODUCTION

PART A

Directions: Do not use your name but instead choose any four digit number and write it in the student number section of the enclosed general purpose answer sheet and follow directions for filling in the corresponding bubbles. The number you selected will be used to relate the two surveys to each other.

1. Teaching Area
   a) _____ Academic (English, Foreign Language, Math, Science, Social Studies)
   b) _____ Special Subjects (Art, Home Ecom., Ind. Arts, Music, Physical Education, Health, Typing, Special Education)
   c) _____ Support Staff (Guidance, Library, Administration)

2. Total Years Teaching Experience
   a) _____ Less than 5 Years
   b) _____ 5-15 Years
   c) _____ Over 15 Years

3. College Credits Beyond Undergraduate
   a) _____ Bachelor's Degree
   b) _____ Bachelor's Degree Plus 30 Hours
   c) _____ Master's Degree
   d) _____ Master's Degree Plus 30 Hours
STATEMENTS SURVEY

PART B

INSTRUCTIONS:

The following are statements about instructional procedures of content area teachers. The intent of this survey is to determine how you feel about these procedures in relation to your own teaching situation.

Read each statement and rate it according to your experience in your classroom. Please note that the general term teachers which appears in each statement is meant to include all teachers in the content areas such as in English, social studies, science, math, practical arts, fine arts and music, health education, foreign languages, and special areas.

You are to rate each statement on the following scale which appears below each item; the scale appears for each item in your booklet, but do not mark the booklet. Use the separate answer sheet provided.

(a) : (b) : (c) : (d) : (e)
Strongly Disagree Slightly Disagree Not Sure Slightly Agree Strongly Agree

Here is how to use the scale:

If you "strongly disagree" with the statement, fill in the space marked (a) on your answer sheet; if you "slightly disagree" with the statement, fill in the space marked (b) on your answer sheet; if you are "not sure" about the statement, fill in the space marked (c) on your answer sheet; if you "slightly agree" with the statement, fill in the space marked (d) on your answer sheet; and if you "strongly agree" with the statement, fill in the space marked (e) on your answer sheet.

REMEMBER: DO NOT PLACE YOUR RESPONSES IN THIS BOOKLET. USE THE SEPARATE ANSWER SHEET PROVIDED.
4. It is important that teachers develop tests which reflect the content taught in the same manner it was taught and at the same levels.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

5. It is inappropriate for teachers to devote class instruction time to vocabulary development.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

6. Each teacher should be able to identify skills and processes needed by students to master specific content in his/her discipline.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

7. It is not appropriate for teachers to assess students' specific comprehension skills such as making inferences, following sequence, detecting bias or recognizing main ideas.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

8. It is important that teachers provide a variety of materials which cover similar content but which represent a wide range of readability.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

9. It is important that teachers be able to identify those students who are having trouble figuring out unfamiliar words.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree

10. It is not important for teachers to use reading and/or reasoning guides with students having difficulty reading the text on their own.

(a) Strongly Disagree (b) Slightly Disagree (c) Not Sure (d) Slightly Agree (e) Strongly Agree
11. It is not necessary for teachers to develop and use evaluative instruments for assessing mastery of concepts and skills needed in their subject area(s).

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

2. Teachers should include statements at various comprehension levels on worksheets, study guides, and tests.

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

3. It is not important for teachers to be able to develop and use specific strategies for adapting a text to the needs of students.

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

4. Teachers should not spend class instruction time teaching students to use structured overviews and/or concept statements.

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

5. Prior to instruction it is desirable for teachers to identify difficult concepts and to develop appropriate reading, reasoning and/or reaction guides.

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

6. Teachers should teach those reading/thinking processes needed in their subject area(s).

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

7. Only reading teachers should provide instructional materials for groups of students with differing reading abilities.

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
18. Teachers should know how to evaluate mastery of concepts and processes needed in their subject area(s).

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

19. Only reading teachers should be concerned with diagnosing vocabulary development of students beyond the elementary school level.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

20. It is necessary that teachers be able to identify and teach key concepts and vocabulary that are specifically needed in a unit of instruction.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

21. Content teachers should not need to develop skill in assessing students' abilities to use concept statements and structured overviews.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

22. It is not desirable for teachers to conduct small group lessons in using 3-level guides.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

23. It is appropriate for teachers to match their teaching strategies to the identified needs of their students.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
<th>(e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Not Sure</td>
<td>Slightly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
Appendix B

Situations Survey
SITUATIONS SURVEY: TEACHING READING IN CONTENT AREAS

Adapted from the Situation Survey: Teaching Reading in Content Areas by Joyce W. Lee, Carlotta Joyner Young, Eunice N. Askov, and Mary M. Dupuis (1976). From the Content Area Reading Project, sponsored by the Pennsylvania Department of Education.
PART C

SITUATIONS SURVEY

INSTRUCTIONS:

In this part of the survey, we are interested in your reactions to a series of hypothetical classroom situations and plans that various content area teachers might implement in these situations. Read each situation and plan, on the basis of your experience as a classroom teacher, rate the plan on each of the scales listed below the item.

Here are the different scales you will be using:

practical __________ impractical
ineffective __________ effective
inefficient __________ efficient
useful __________ useless
desirable __________ undesirable

You are then asked to rate each plan on the basis of its feasibility in the classroom. For this part of the survey, you will also use a scale. This is how the scale will appear:

feasible __________ not feasible

Finally, you are asked to respond on a scale which indicates how skilled you are at this time for executing a plan like the one described. Here is how this will appear:

skilled __________ unskilled

Here is how to use the scales:

If you feel that the plan or question is very closely related to one end of the scale, you should place your mark like this:

practical X __________ impractical

OR

practical __________ X impractical

If you feel that the plan or question is quite closely related to one end of the scale (but not extremely), you should place your mark like this:

practical ____ X __________ impractical

OR

practical __________ X impractical

If you feel that the plan or question is only slightly related to one side or the other, place your mark this way:

practical __________ X __________ impractical

OR

practical __________ X __________ impractical
INSTRUCTIONS: (continued)

Finally, if you feel that the plan or question is equally associated with either side of the scale or if you feel that the scale is completely irrelevant or unrelated to the plan, place your mark like this:

practical _____:_____:_____ X:_____:_____:_____ impractical

IMPORTANT:

1. Do not place your mark between the boundaries; mark the middle of the spaces.

2. Do not omit any of the scales; note that there are seven scales to mark for each item.

3. Do not put more than one mark on a scale.

The following is a sample item to demonstrate the format of this survey:

SAMPLE ITEM:

SITUATION: A home economics teacher is preparing questions to ask during a guided discussion about menu planning, a topic on which the students have been doing independent reading since the last class meeting.

PLAN: The teacher plans to ask questions that represent various levels of comprehension during the discussion.

practical _____:_____:_____:_____:_____:_____:_____ impractical
ineffective _____:_____:_____:_____:_____:_____:_____ effective
inefficient _____:_____:_____:_____:_____:_____:_____ efficient
useful _____:_____:_____:_____:_____:_____:_____ useless
desirable _____:_____:_____:_____:_____:_____:_____ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is:

feasible _____:_____:_____:_____:_____:_____:_____ not feasible

How skilled are you at this time for executing a plan like the one above?

skilled _____:_____:_____:_____:_____:_____:_____ unskilled

You will find that a variety of content areas are represented in the hypothetical situations that follow. Rate each plan according to its appropriateness for the content area described even though this may differ from the one in which you have had had experience.
INSTRUCTIONS: (continued)

Sometimes you may feel as though you've had the same item before on the inventory. This will not be the case so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the inventory. Make each item a separate and independent judgment. Work at a fairly high speed through this inventory. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

PLACE YOUR RESPONSES IN THIS BOOKLET. DO NOT USE A SEPARATE ANSWER SHEET.
SITUATION: A science teacher is preparing a unit on plants based on a chapter from a text labeled at the students' grade level.

PLAN: The teacher refers to group diagnostic tests which were administered earlier in the year. The tests are teacher-made and are intended to give information about: students' vocabulary, ability to locate information, and levels of comprehension.

practical impractical
ineffective effective
inefficient efficient
useful useless
desirable undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?
feasible not feasible

How skilled are you at this time for executing a plan like the one described above?
skilled unskilled

SITUATION: A math teacher is preparing a worksheet of word problems for a class of students who have previously had difficulty with this type of work.

PLAN: Before assigning the worksheet, the teacher plans to work with the students on such comprehension skills as identifying relevant details, following a sequence, and using efficient problem solving techniques.

practical impractical
ineffective effective
inefficient efficient
useful useless
desirable undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?
feasible not feasible

How skilled are you at this time for executing a plan like the one described above?
skilled unskilled
SITUATION: An English teacher is preparing to teach a short story from the anthology suggested in the curriculum guide.

PLAN: The teacher plans to assign those who are competent readers to read the story on their own and engage in several individualized assignments. The less competent readers will read the story using a 3-level guide. The teacher also will provide considerable help in vocabulary and concept development.

practical ____________________________ impractical
ineffective ____________________________ effective
inefficient ____________________________ efficient
useful ____________________________ useless
desirable ____________________________ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?
feasible ____________________________ not feasible

How skilled are you at this time for executing a plan like the one described above?
skilled ____________________________ unskilled

SITUATION: A social studies teacher is making plans for teaching a new unit.

PLAN: The teacher intends to consider the reading levels of students when selecting materials to use or adapt.

practical ____________________________ impractical
ineffective ____________________________ effective
inefficient ____________________________ efficient
useful ____________________________ useless
desirable ____________________________ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?
feasible ____________________________ not feasible

How skilled are you at this time for executing a plan like the one described above?
skilled ____________________________ unskilled
SITUATION: An English teacher is preparing a unit on the short story with emphasis on the structure of a good story.

PLAN: The teacher plans to divide the class into groups based on reading ability and to assign each group an appropriate reading, reasoning, or reaction guide. When the groups have completed their reading and the discussion of their guides, the whole class will discuss common elements of concern, focusing on elements of structure in short stories.

practical ____________ impractical
ineffective ___________ effective
inefficient ___________ efficient
useful ____________ useless
desirable ___________ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ___________ not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled __________ unskilled

SITUATION: A home economics teacher observes that students are having difficulty comprehending a chapter in the textbook.

PLAN: The teacher identifies several key vocabulary words and major concepts and uses a concept statement and a structured overview to assist the students in comprehending the chapter.

practical ____________ impractical
ineffective ___________ effective
inefficient ___________ efficient
useful ____________ useless
desirable ___________ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ___________ not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled __________ unskilled
SITUATION: A math teacher is planning a unit on comparative measurement which includes problems involving the interpretation of charts and graphs.

PLAN: The teacher plans to spend some time instructing students in the skills needed to interpret various charts and graphs before assigning the math problems in the unit.

practical ___:____:____:____:____:____:____ impractical
ineffective ___:____:____:____:____:____:____ effective
inefficient ___:____:____:____:____:____:____ efficient
useful ___:____:____:____:____:____:____ useless
desirable ___:____:____:____:____:____:____ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ___:____:____:____:____:____:____ not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled ___:____:____:____:____:____:____ unskilled

SITUATION: A science teacher has identified several students as lacking skill in figuring out words containing prefixes and suffixes.

PLAN: The teacher plans to take part of several class periods to instruct these students in this skill while the rest of the class is involved in other meaningful activities. They will then practice utilizing this skill independently by using self-instructional materials prepared by the teacher.

practical ___:____:____:____:____:____:____ impractical
ineffective ___:____:____:____:____:____:____ effective
inefficient ___:____:____:____:____:____:____ efficient
useful ___:____:____:____:____:____:____ useless
desirable ___:____:____:____:____:____:____ undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ___:____:____:____:____:____:____ not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled ___:____:____:____:____:____:____ unskilled
SITUATION: An industrial arts teacher is setting up orientation sessions for students without previous experience in the woodworking shop. During a nine week period in this shop, each student will construct one item using written directions following teacher demonstrations of equipment.

PLAN: The teacher plans to examine each set of written directions, selecting those words which occur frequently in most of the plans for use in a group vocabulary lesson to be taught as part of the orientation.

practical ______:_____:_____:_____:_____:____: impractical
ineffective ______:_____:_____:_____:_____:____: effective
inefficient ______:_____:_____:_____:_____:____: efficient
useful ______:_____:_____:_____:_____:____: useless
desirable ______:_____:_____:_____:_____:____: undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ______:_____:_____:_____:_____:____: not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled ______:_____:_____:_____:_____:____: unskilled

SITUATION: A foreign language teacher has taught a unit on French culture and is preparing a unit test.

PLAN: The teacher designs the test to measure mastery of specific information as well as the interpretation and application of the concepts.

practical ______:_____:_____:_____:_____:____: impractical
ineffective ______:_____:_____:_____:_____:____: effective
inefficient ______:_____:_____:_____:_____:____: efficient
useful ______:_____:_____:_____:_____:____: useless
desirable ______:_____:_____:_____:_____:____: undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible ______:_____:_____:_____:_____:____: not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled ______:_____:_____:_____:_____:____: unskilled
SITUATION: A team of English and social studies teachers is making plans for guiding students in the writing of a research paper on one aspect of the Revolutionary War.

PLAN: The teachers identify and pre-teach needed skills such as locating information, compiling a bibliography, taking notes, and organizing the paper.

practical impractical
ineffective effective
inefficient efficient
useful useless
desirable undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled unskilled

SITUATION: A health education teacher is concluding a unit on First Aid and is preparing to evaluate the students.

PLAN: As a review technique the teacher provides a partially developed structured overview for the students to complete.

practical impractical
ineffective effective
inefficient efficient
useful useless
desirable undesirable

On the basis of your classroom experience, how feasible would you say the above plan is?

feasible not feasible

How skilled are you at this time for executing a plan like the one described above?

skilled unskilled
Appendix C

*Estes Attitude Scales:*

*Measures of Attitudes Toward School Subjects*
ECTIONS: These scales measure how you feel about courses taught in school. On the front and back of this sheet are statements about school subjects. Read each statement and decide how you feel about it. Rate each statement on a scale of 1 to 5, as follows:

- 5 will mean "I strongly agree"
- 4 will mean "I agree"
- 3 will mean "I cannot decide"
- 2 will mean "I disagree"
- 1 will mean "I strongly disagree"

Write your answers on the separate answer sheet to indicate your feeling toward each statement. Show your answers by putting an X in the proper box. Please be as honest as possible in rating each statement. Your ratings will not affect your grade in any course.

**English**

1. Work in English class helps students do better work in other classes.
2. The study of English is a waste of time.
3. Writing papers for English class is good practice.
4. Almost any subject is better than English.
5. English courses are some of the worst courses.
6. Studying English is less tiring than studying other subjects.
7. English is a subject with very little real value.
8. English is boring.
9. Studying English in college would be valuable.
10. Students should be required to take English every year.
11. Most literature is dull.
12. English is fun.
13. Time spent in English class is time well spent.
14. English is one class I can do without.
15. English class is too short.

**Mathematics**

16. People who like math are often weird.
17. Working math problems is fun, like solving a puzzle.
18. It is easy to get tired of math.
19. Working math problems is a waste of time.
20. Studying math in college would be a good idea.
21. Being able to add, subtract, multiply, and divide is all the math the average person needs.
22. It is impossible to understand math.
23. Even though there are machines to work math problems, there is still a reason to study math.
24. Math is boring.
25. Only mathematicians need to study math.
26. Knowledge of math will be useful after high school.
27. Without math courses, school would be a better place.
28. A student would profit from taking math every year.
29. Math is easy.
30. Math is doing the same thing over and over again.

Continued
Reading

31. Reading is for learning but not for enjoyment.
32. Spending allowance on books is a waste of good money.
33. Reading is a good way to spend spare time.
34. Books are a bore.
35. Watching T.V. is better than reading.
36. Reading is rewarding to me.
37. Books aren't usually good enough to finish.
38. Reading becomes boring after about an hour.
39. Most books are too long and dull.
40. There are many books which I hope to read.
41. Books should only be read when they are assigned.
42. Reading is something I can do without.
43. Some part of summer vacation should be set aside for reading.
44. Books make good presents.
45. Reading is dull.

Science

46. Field trips in science are more fun than those in other school subjects.
47. An understanding of how the earth changes helps make a better world.
48. Studying science is a waste of time.
49. A deeper love of nature comes from the study of science.
50. There is too much memory work in science.
51. Science is interesting.
52. Science classes are usually fun.
53. Science courses are worth the time and effort they take.
54. Cutting up animals in class is silly.
55. It is fun to figure out how things work.
56. Books about science are boring.
57. Many good hobbies come from the study of science.
58. Science teaches people to think.
59. Students should not be required to take science courses.
60. Exploring outer space may prove useful to mankind.

Social Studies

61. Much of what is taught in social studies is not important.
62. There is too much to worry about in the present for us to worry about the past.
63. Knowledge of the past helps us understand the present.
64. Social studies teachers are usually good teachers.
65. Social studies is the same year after year.
66. The study of history in college would be a good choice.
67. Social studies courses should not be required courses.
68. Social studies is dull.
69. Studying the history of different people of the world helps us understand them.
70. A student can often use what he learns in a social studies course.
71. Man profits little from the study of the past.
72. Social studies is interesting.
73. Social studies has little to offer the average student.
74. Almost any course is better than a social studies course.
75. If social studies changes, it is from bad to worse.
Appendix D

Demographic Data of Teachers Participating in the Content Area Reading Project
Demographic Data of Teachers Participating in the Content Area Reading Project (n=40)

Teaching Area

Academic (English, Foreign Language, Math Science, Social Studies) 22 55

Special Subjects (Art, Home Ec., Ind. Arts Music, Phys. Ed., Health, Typing, Special Education) 12 28

Support Staff (Guidance, Library, Administration) 6 15

Total Years Teaching Experience

Less than 5 years 5 13

5-15 years 16 40

Over 15 years 19 48

College Credits Beyond Undergraduate

Bachelor's Degree 4 10

Bachelor's Degree Plus 30 15 38

Master's Degree 18 45

Master's Degree Plus 30 Hours 3 8
Appendix E

Statements Survey

Percentage of Teachers' Responses
### Statements Survey

**Percentage of Teachers' Responses**

*(n=40)*

<table>
<thead>
<tr>
<th>category</th>
<th>strongly negative</th>
<th>not sure</th>
<th>strongly positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>diagnosis items</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>18</td>
<td>80</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>5</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>10</td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>16</td>
<td>10</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>10</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>structure or organization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>16</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>23</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>processes or skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note: Higher numbers on the scale indicate more positive attitudes toward content area reading.*
Appendix F

Situations Survey

Percentage of Teachers' Responses
### Situations Survey

**Percentage of Teachers' Responses**

(n=40)

<table>
<thead>
<tr>
<th>category</th>
<th>strongly negative</th>
<th>neutral</th>
<th>strongly positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>diagnosis</td>
<td>1</td>
<td>2.5</td>
<td>7.5</td>
</tr>
<tr>
<td>structure or</td>
<td>3</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>organization</td>
<td>4</td>
<td>7.5</td>
<td>17.5</td>
</tr>
<tr>
<td>processes or</td>
<td>6</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>skills</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>evaluation</td>
<td>8</td>
<td>2.5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>2.5</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: Higher numbers on the scale indicate more positive attitudes toward content area reading.
Appendix G

Feasibility Scores

Percentage of Teachers' Responses
Feasibility Scores
Percentage of Teachers' Responses
(n=40)

<table>
<thead>
<tr>
<th>category</th>
<th>not feasible</th>
<th>not sure</th>
<th>feasible</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>diagnosis</td>
<td>12.5</td>
<td>15</td>
<td>7.5</td>
</tr>
<tr>
<td>structure or organization</td>
<td>5</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>processes or skills</td>
<td>2</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>10</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>2.5</td>
<td>7.5</td>
</tr>
<tr>
<td>evaluation</td>
<td>10</td>
<td>12.5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>7.5</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: Columns 1 and 2 indicate strongly negative attitudes toward the feasibility of suggested plans.
Columns 6 and 7 indicate strongly positive attitudes toward the feasibility of suggested plans.
Appendix H

Perceive Skill Scores

Percentage of Teachers' Responses
Perceived Skill Scores
Percentage of Teachers' Responses

<table>
<thead>
<tr>
<th>category</th>
<th>unskilled</th>
<th>not sure</th>
<th>skilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>structure</td>
<td>1 15 7.5 15 22.5 17.5 22.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>3 2.5 5</td>
<td>7.5 17.5 15 27.5 25</td>
<td></td>
</tr>
<tr>
<td>organization</td>
<td>4 2.5 5</td>
<td>17.5 22.5 27.5 25</td>
<td></td>
</tr>
<tr>
<td>processes</td>
<td>6 2.5 2.5 5</td>
<td>10 5 37.5 37.5</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td>2 2.5 2.5</td>
<td>7.5 12.5 35 40</td>
</tr>
<tr>
<td>skills</td>
<td>2 5 10 7.5 10</td>
<td>15 15 17.5 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 2.5 2.5 5 5</td>
<td>30 55</td>
<td></td>
</tr>
<tr>
<td>evaluation</td>
<td>8 5 15 2.5</td>
<td>12.5 12.5 25 27.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9 2.5 2.5</td>
<td>7.5 7.5 20 60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 2.5 2.5 2.5</td>
<td>7.5 20 25 40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 2.5 2.5 5 10</td>
<td>35 45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 5 5 7.5</td>
<td>7.5 12.5 32.5 30</td>
<td></td>
</tr>
</tbody>
</table>

Note: Columns 1 and 2 indicate strongly negative attitudes or lack of confidence in the ability to carry out the suggested plan.

Columns 6 and 7 indicate strongly positive attitudes or strong feelings of confidence in the ability to carry out the suggested plan.