

## DOCUMENT RESUME

ED 105 446

CS 001 786

AUTHOR Hudson, Beverly S.  
TITLE An Assessment of the Attitudes of Secondary Level Teachers toward Incorporating Reading Skills with Content; Report from the Project on Conditions of School Learning and Instructional Strategies. Technical Report 10. 329.

INSTITUTION Wisconsin Univ., Madison. Research and Development Center for Cognitive Learning.

SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.

REPORT NO TR-329  
PUB DATE Mar 75  
CONTRACT NE-C-00-3-0065  
NOTE 29p.

EDRS PRICE MF-\$0.76 HC-\$1.95 PLUS POSTAGE  
DESCRIPTORS \*Content Reading; Reading; \*Reading Research; \*Reading Skills; Secondary Education; \*Secondary School Teachers; \*Teacher Attitudes

## ABSTRACT

This study assessed the attitudes of secondary school teachers toward incorporating the teaching of reading skills with content. The subjects were all social studies teachers working with grade levels nine through twelve. Two groups of these teachers were administered a questionnaire--group A was composed of 21 teachers at one of four high schools in a city school system who had the services of a reading consultant; group B was composed of ten teachers in the social studies department of a suburban high school who did not have the services of a reading consultant. The questionnaire used to assess the attitudes of the teachers was a fourteen-statement inventory which asked the subjects to indicate whether they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with various statements. The results indicated that teachers from both groups saw the necessity of incorporating the teaching of reading skills in their classes, but generally, content area teachers felt inadequate to the task of incorporating reading skills without aid.

(WR)

ED105446

U.S. DEPARTMENT OF HEALTH  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIGIN-  
ATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT  
OFFICIAL NATIONAL INSTITUTE OF  
EDUCATION POSITION OR POLICY.

Technical Report No. 329

AN ASSESSMENT OF THE ATTITUDES  
OF SECONDARY LEVEL TEACHERS TOWARD INCORPORATING  
READING SKILLS WITH CONTENT

Report from the Project on Conditions of  
School Learning and Instructional Strategies

by Beverly S. Hudson

Wayne Otto  
Principal Investigator

Wisconsin Research and Development  
Center for Cognitive Learning  
The University of Wisconsin  
Madison, Wisconsin

March 1975

001 786

Published by the Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred

Center Contract No. NE-C-00-3-0065

## WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

### MISSION

The mission of the Wisconsin Research and Development Center for Cognitive Learning is to help learners develop as rapidly and effectively as possible their potential as human beings and as contributing members of society. The R&D Center is striving to fulfill this goal by

- conducting research to discover more about how children learn
- developing improved instructional strategies, processes and materials for school administrators, teachers, and children, and
- offering assistance to educators and citizens which will help transfer the outcomes of research and development into practice

### PROGRAM

The activities of the Wisconsin R&D Center are organized around one unifying theme, Individually Guided Education.

### FUNDING

The Wisconsin R&D Center is supported with funds from the National Institute of Education; the Bureau of Education for the Handicapped, U.S. Office of Education; and the University of Wisconsin.

## TABLE OF CONTENTS

	Page
Purpose . . . . .	2
Review of the literature . . . . .	3
Subjects . . . . .	7
Inventory . . . . .	8
Results and Discussion . . . . .	8
Conclusions . . . . .	19
References . . . . .	21

List of Tables

Table 1	Grade levels taught by responding social studies teachers . . . . .	7
Table 2	Years of teaching experience of responding social studies teachers . . . . .	8
Table 3	Statements of attitude survey and percentage of response for each . . . . .	9
Table 4	Do teachers who do not have the services of a reading consultant immediately available to them view the responsibility for the teaching of reading differently from those teachers who do have ready access to a reading consultant? . . . . .	15
Table 5	If teachers recognize a need for the content area teacher to be involved with the teaching of reading, do they feel they need assistance? . . . . .	17
Table 6	Has the active presence of a reading consultant in any way changed the views of social studies teachers toward the teaching of reading in the content area? . . .	18

## List of Figures

- Figure 1 Distribution of total scores for  
Groups A and B . . . . . 11
- Figure 2 Total scores distribution on the  
basis of grade level taught . . . . . 13
- Figure 3 Total scores distribution on the  
basis of years of teaching  
experience . . . . . 14

## ABSTRACT

The attitudes of secondary level teachers toward incorporating the teaching of reading skills with content were assessed. Two groups of teachers were contacted: (1) those who have the services of a reading consultant, and (2) those who do not have such assistance. The assessment was accomplished by means of an attitudinal inventory.

The results of the study indicated that teachers from both groups see the necessity of incorporating the teaching of reading skills in their classes, but generally, content area teachers feel inadequate to incorporate reading skills without aid. The reading consultant's role is to aid the teacher in seeing what can be done and then assisting and encouraging the teacher to accomplish that end.



An Assessment of the Attitudes of  
Secondary Level Teachers Toward Incorporating  
Reading Skills With Content

The responsibility for the teaching of reading has traditionally been placed on the elementary teacher. It has been assumed that the ability to read was mastered by the end of sixth grade. Operating under this assumption the more sophisticated reading skills (beyond decoding) may have been incorporated in the well defined "reading group" of the upper elementary level. The concern for the poor reader, or the below grade level reader, seldom was voiced in the secondary schools. Secondary teachers as a whole remained relatively unconcerned with the reading process.

In recent years, however, increased emphasis has been placed on the more sophisticated reading skills, those skills necessary for the understanding of content area materials. Reading is beginning to be considered a process - "a thinking process that differs with the subject matter being studied" (Bragstad, 1971). As a "thinking process" the teaching of reading has been introduced into some schools with the help of a reading consultant. In other schools an occasional in-service reading session has been presented for the faculty. Research reports, when they have been prepared, have indicated varying amounts of success for such courses (Herber, 1970; Marani & Tivvis, 1970; Steed & Katrein, 1970; Smith & Bragstad & Hesse, 1970).

Professional reading people recognize the importance of viewing reading at the secondary level as a thinking process. They see the

necessity of adapting rates of reading, of reading for purpose, of learning to read critically at one's own level. Several basic questions, however, still remain: What are the secondary level teachers' views of reading as a thinking process? Are the secondary level teachers convinced reading is indeed a "thinking process"? Do they see a need for continuing reading instruction at the secondary level? Do they feel that they, themselves, have a responsibility for giving such instruction?

#### Purpose

The purpose of this study was to assess the attitudes of content area teachers toward their role in developing reading skills at the secondary level.

In March, 1973, an attitudinal inventory was administered to two groups of content area teachers. Three fundamental questions formed the basis for the inventory:

- 1) Do teachers who do not have the services of a reading consultant immediately available to them view the responsibility for the teaching of reading differently from those teachers who do have ready access to a reading consultant?
- 2) If teachers recognize a need for the content area teacher to be involved with the teaching of reading, do they feel they need assistance?
- 3) Has the active presence of a reading consultant in any way changed the views of social studies teachers toward the teaching of reading in the content area?

## Review of the Literature

An IDEA report (Administrators and teachers reactions, 1967) of a study sponsored by the Charles F. Kettering Foundation indicated that teachers generally do recognize their responsibility for the teaching of reading. The IDEA study surveyed 637 individuals representing school board members, school administrators, teachers and parents from all fifty states plus Washington, D.C. The subjects were asked to respond to a series of questions to assess their reactions to educational innovations. An analysis of the responses showed that: "There is general agreement among all major groups that added emphasis needs to be placed today on teaching students how to think, that is, how to concentrate, organize their work, analyze problems, think creatively, and think objectively" (p. 7). A majority of parents and educators felt that the home and the school should share the responsibility for developing the ability to think creatively and objectively as well as the ability to concentrate, organize one's work and thoughts, and analyze a problem and work out solutions. Both parents and educators, however, viewed the responsibility for the development of the ability to read with speed and understanding quite differently. Of the parents who rated this ability of prime importance in the educational system, 65% of them felt that the sole responsibility for the development of reading skills belonged to the schools. Eighty-four percent of the educators who rated this skill as being essential felt that the schools alone are responsible for developing reading skills.

Olson (1967) conducted a study of 585 teachers representing seven different content areas. The teachers were asked to indicate on a twenty

item checklist their classroom practices as concerned reading skill development. Olson reported that the teachers indicated they were using text materials suited to the reading level of their students. When asked to indicate how they knew the reading level of the text, the usual response was that the publisher had specified it. In response to other items the teachers reported they were grouping for differentiated instruction and that they knew the special reading skills required for their content area. It should be noted, however, that the teachers in Olson's study were responding to a checklist. Had they been asked to state specific methods they used in their classroom, Olson's results may have been quite different.

In a study conducted earlier Olson (1967) asked similar questions concerning the suitability of textbook materials to students reading levels and teacher activities in teaching the reading skills needed for the content area. He reported that female teachers were more positive that they almost always used textbook materials suited to the reading level of their students than were male teachers. Female teachers also indicated, with greater frequency than did male teachers, that they taught the reading skills needed for their content area. The principals, however, on both questions were not certain that either male or female teachers as a group were doing an adequate job. Although the results of this study are interesting, again it should be noted that the surveying techniques used may have influenced the teacher's reactions. A checklist with ready answers may produce very different results than a question demanding specific teacher statements.

Schleich (1971), after surveying the members of one school faculty, reported that a substantial number of teachers recognized the need for developing reading skills. These teachers felt, however, that either they did not have the time to develop such reading skills or that these skills should have been taught earlier. Some faculty members felt reading problems should be taught only in a special class and, therefore, more remedial classes should be added. Only a few teachers indicated they saw a necessity for all teachers to aid in the development of sound reading skills.

The importance of incorporating reading skills with content is reported by Crews, Sargent, and Earp. Crews states that "A teacher of subject matter cannot avoid teaching reading and study skills if he is effective at teaching his field of study (Crews, 1972)."

Sargent (1969) gives several reasons why the content area teacher is the best qualified for teaching reading in his field. The author states that the content area teacher is:

- " 1) Most capable in teaching the new vocabulary in his subject,
- 2) Most knowledgeable in setting purposes for reading,
- 3) Most able in developing and motivating student interest,
- 4) Most adept in identifying important concepts to be arrived at,
- 5) Most conversant with multiresources, their use and value in developing background experiences,
- 6) Familiar enough with the text to know how best to read and study it (p. 17)."

Earp, in a review of studies conducted to compare the effectiveness of groups of teachers who were specifically trained in teaching reading

skills for mathematics and those who were not, states that the results show "The teacher of mathematics at any level should also be a teacher of reading (Earp, 1970, p. 531)." Indicating that more emphasis must be placed on reading in all the content fields he further states:

"Preparing teachers in general word attack and comprehension skills is no longer adequate; methods of teaching skills pertinent to areas such as mathematics must be given significant attention in courses in the teaching of reading (p. 531)."

Robinson, Carter and Hokanson recognize the necessity for the business education teachers to teach reading skills. Their point seems to sum up the problems for the further development of reading as a "thinking process" amongst secondary school faculty members.

"The most important factor in the improvement of reading skills is the attitude of the teacher. Numerous studies and research projects confirm the critical role of the teacher in this process. Methods, materials, and techniques are important; but only the teachers can make them work effectively. Until business teachers, as well as other secondary instructors, fully realize their role in reading development, real progress will be hindered (Robinson, Carter, and Hokanson, 1969, p. 202)."

To sum up, the literature suggests that (1) teachers feel the sole responsibility for the teaching of reading lies with the schools; (2) while some teachers feel they are attempting to incorporate the development of reading skills with content not all are convinced an adequate job is being done; (3) some teachers feel either ill-equipped or pressured by lack of time to incorporate the teaching of reading skills with content material; (4) reading experts for numerous reasons are convinced that the content area teacher is the logical person to develop reading skills within their disciplines; and (5) content area

teachers must develop an awareness towards their role in developing reading as a "thinking process".

### Subjects

The individuals contacted were all social studies teachers working with grade levels nine through twelve. Group A was composed of twenty-one teachers at one of four high schools in a city school system. A reading consultant has been part of the staff for over two years and has worked closely with this group in developing reading skills in the classroom. Fourteen teachers from Group A responded. Ten teachers made up the social studies department of Group B, a suburban high school. No reading consultant is present in the high school building to work with this group. There were nine responses from Group B.

Responses from both groups represented grade levels nine through twelve. The percentage of responses at each level for both groups can be seen in Table 1. For Group B almost equal numbers responded at each grade level. For Group A more tenth grade teachers, the grade level receiving the most aid from the reading consultant, responded.

The distribution of teachers by percentage for number of years of teaching experience is shown in Table 2. Group B represents a larger number of more experienced teachers than does Group A.

Table 1: Grade levels taught by responding social studies teachers.

	9	10	11	12
Group A	21%	43%	14%	21%
Group B	22%	22%	22%	33%

Table 2: Years of teaching experience of responding social studies teachers.

	0-5 yrs.	6-10 yrs.	11-15 yrs.	16+ yrs.
Group A	36%	21%	29%	14%
Group B	33%	11%	11%	44%

### Inventory

Fourteen statements composed the inventory used to assess the attitudes of the teachers contacted in this study. The majority of items included in the instrument were originally devised by Smith and Otto (1969). Permission was granted for the use of these items with some minor adaptations, deletions, and additions. To each of the statements the teachers were asked to indicate whether they "strongly agreed", "agreed", were "neutral", "disagreed" or "strongly disagreed".

By assigning values to the responses it was possible to obtain a total score for each subject. The values were assigned with one integer difference in ascending order for the negatively stated items and one integer difference in descending order for the positively stated items. A higher total score indicated a more positive attitude toward reading.

### Results and Discussion

The fourteen statements used and the percentage of each response for each group is shown in Table 3.

Figure 1 indicates the distribution of total scores for each group. The highest possible score, seventy points, would indicate a perfectly positive attitude toward incorporating the teaching of reading skills



Table 3: Statements of Attitude Survey and Percentage of Response for each.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
A	43%	36%	7%	14%	-	1. In the secondary school the teaching of reading should be the responsibility of reading teachers only.
B	44%	22%	22%	11%	-	
A	7%	7%	36%	43%	7%	2. The teaching of reading skills can be incorporated into content area courses without interfering with the major objectives of these courses.
B	11%	11%	33%	11%	33%	
A	-	29%	21%	36%	14%	3. Any secondary school teacher who assigns reading should teach his or her students how to read what is assigned.
B	22%	11%	22%	22%	22%	
A	7%	21%	7%	43%	21%	4. With rare exceptions, students should know what there is to know about reading before they are permitted to leave the elementary school.
B	22%	-	33%	22%	22%	
A	29%	36%	14%	21%	-	5. Only remedial reading should be necessary in the secondary school and that should be done by remedial reading teachers in special classes.
B	33%	22%	33%	-	11%	
A	-	64%	7%	29%	-	6. Secondary school teachers cannot teach reading without special materials designed for that purpose.
B	11%	22%	22%	22%	22%	
A	-	14%	29%	50%	7%	7. Teaching reading is a necessary and legitimate part of teaching any content course in the secondary school.
B	-	22%	22%	22%	33%	
A	21%	29%	36%	7%	7%	8. Teaching reading takes all the fun out of teaching at the secondary school level.
B	33%	11%	44%	-	11%	
A	7%	14%	21%	57%	-	9. Every secondary school teacher should be a teacher of reading.
B	-	22%	44%	22%	11%	

Table 3 (cont.)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
A	14%	14%	57%	14%	-	10. At the secondary school level students want to learn content, not how to read.
B	22%	-	67%	-	11%	
A	7%	7%	71%	14%	-	11. Integrating the teaching of reading with the teaching of specific content can be as exciting for the content area teacher as teaching content only.
B	-	11%	44%	33%	11%	
A	-	57%	29%	14%	-	12. Content area teachers in the secondary school are probably more competent to teach the reading skills needed for their subjects than special reading teachers.
B	56%	-	33%	-	11%	
A	14%	79%	7%	-	-	13. Most secondary teachers do not need and do not desire the services of a reading specialist.
B	67%	22%	11%	-	-	
A	29%	36%	14%	7%	14%	14. The legislative bill presently under consideration to require that all teachers at the secondary level must have completed a reading methods course is a waste of the legislators time.
B	44%	22%	33%	-	-	

Figure 1: Distribution of total scores for Groups A and B.

(A higher total score indicates a more positive attitude towards incorporating reading in the content area.)

	Group A Mean=46.857	Group B Mean=47.555
65		X
64		
63		
62		
61		
60		
59		
58		
57		
56		
55	XX	X
54	X	
53		X
52		
51	X	
50		
49	X	X
48	XXX	
47	X	
46		
45	X	
44		
43		
42		XX
41	X	
40	X	
39	X	
38		
37		
36	X	
35		
34		
33		
32		
31		
30		
29		X
28		
27		
26		
25		

	<table border="0"> <tr><td>Mean,</td><td></td></tr> <tr><td>Group A:</td><td></td></tr> <tr><td>46.857</td><td></td></tr> </table>	Mean,		Group A:		46.857		<table border="0"> <tr><td>Mean, Group B,</td><td></td></tr> <tr><td>47.555</td><td></td></tr> </table>	Mean, Group B,		47.555	
Mean,												
Group A:												
46.857												
Mean, Group B,												
47.555												

with course content. It is interesting to note that the highest score for all teachers responding was in Group B, those teachers who do not have a reading consultant. A midpoint score of 35 could be interpreted as indicating a neutral viewpoint. No teacher from Group A was below the midpoint; only one teacher from Group B was below it.

A distribution of total scores on the basis of grade level taught and years of teaching experience can be found in Figures 2 and 3. The ninth grade level teachers in both groups registered scores within the same range (40 to 50 points). Group A tenth grade level teachers total scores are uniformly higher (45 to 55 points). Only two of the eleventh grade teachers in Group A responded and their scores are lower than for any other grade level. All of the twelfth grade level teachers responding in both groups scored above 45 points.

From Figure 3 it is possible to see that the number of years of teaching experience bears little relationship to the teacher's attitude toward incorporating reading skills with course content. A wide range of scores is shown at each level. The widest range, however, is noted at 6.D among those teachers with sixteen or more years of teaching experience.

The three basic questions underlying the survey can be evaluated by examining more closely the responses to certain of the items.

Seven items, 1, 3, 4, 5, 7, 9, 10 indicate the teachers' views toward accepting the responsibility for the teaching of reading within the content area. Table 4 shows the percentage of responses for each group plus the mean score response for individuals within that group.

Figure 2: Total scores distribution on the basis of grade level taught.  
 (A higher total score indicates a more positive attitude toward incorporating reading in the content area.)

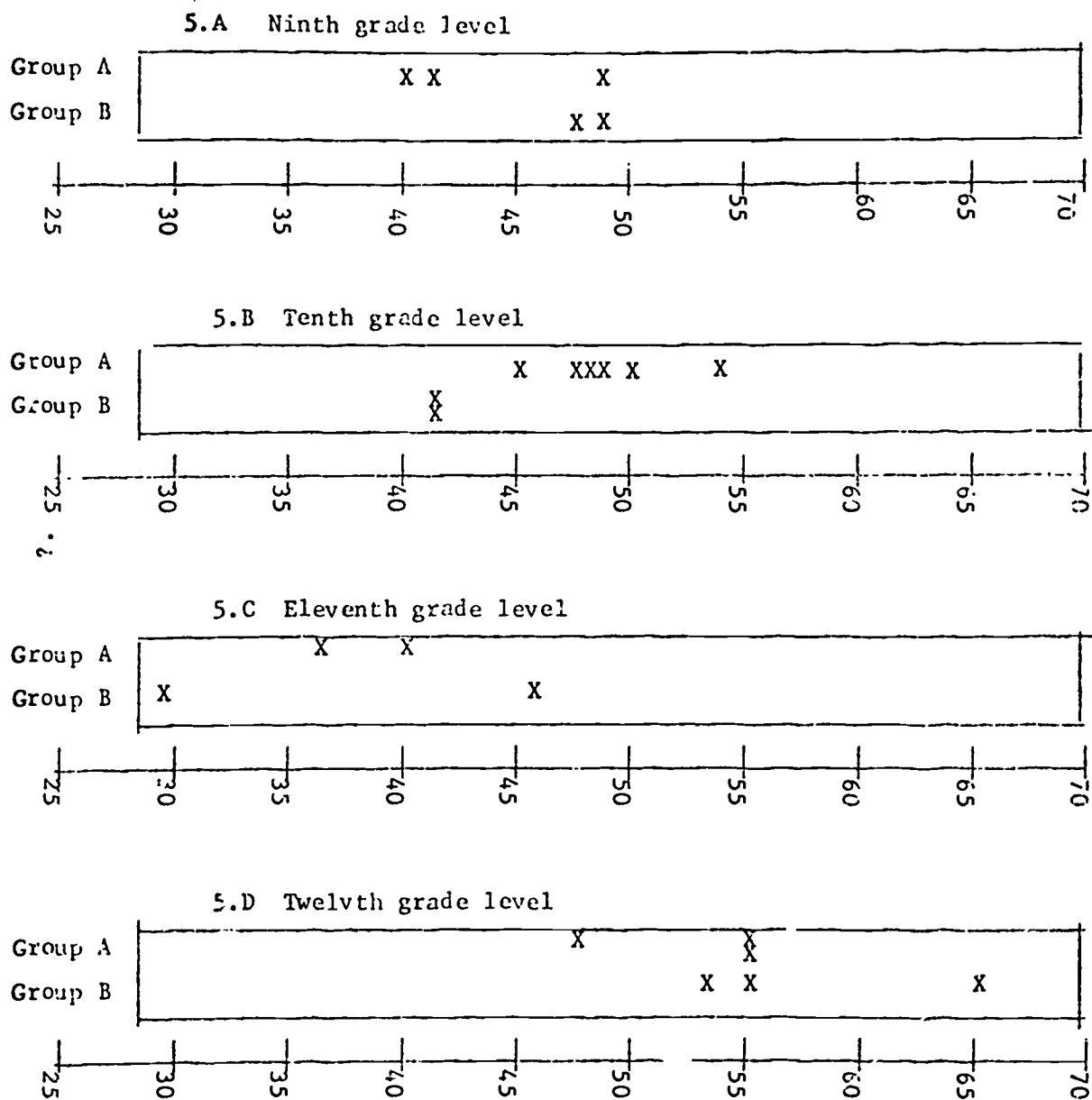


Figure 3: Total scores on basis of years of teaching experience.  
 (A higher total score indicates a more positive attitude toward incorporating reading in the content area.)

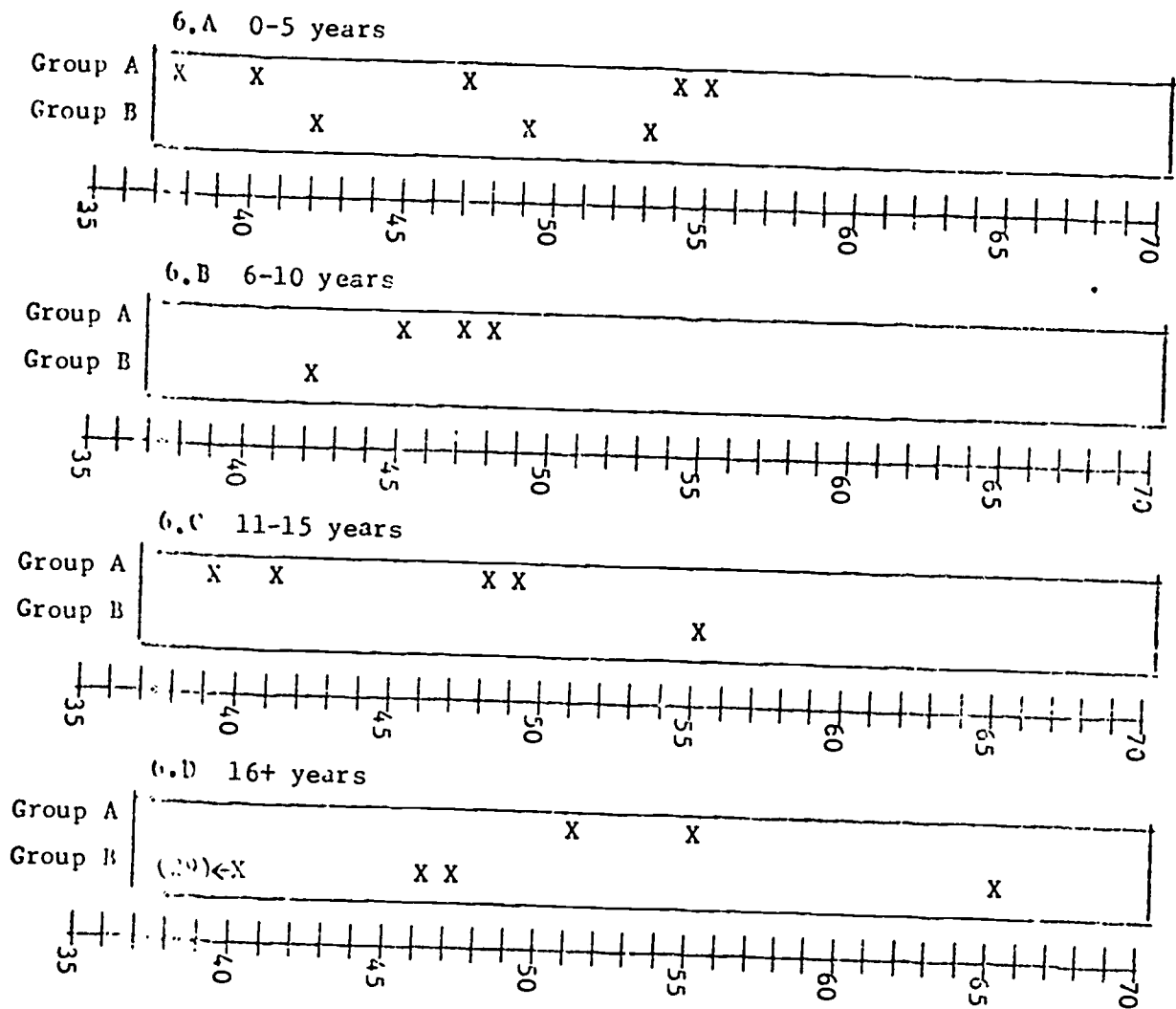


Table 4: Do teachers who do not have the services of a reading consultant immediately available to them view the responsibility for the teaching of reading differently from those teachers who do have ready access to a reading consultant?

		Percentage of Responses					Mean Score Response
*Item 1	A	43%	36%	7%	14%	-	4.07
	B	44%	22%	22%	11%	-	4.00
Item 3	A	-	29%	21%	36%	14%	3.36
	B	22%	11%	22%	22%	22%	3.11
*Item 4	A	7%	21%	7%	43%	21%	2.50
	B	22%	-	33%	22%	22%	2.78
*Item 5	A	29%	36%	14%	21%	-	3.71
	B	33%	22%	33%	-	11%	3.67
Item 7	A	-	14%	29%	50%	7%	3.50
	B	-	22%	22%	22%	33%	3.67
Item 9	A	7%	14%	21%	57%	--	3.50
	B	-	22%	44%	22%	11%	3.22
*Item 10	A	14%	14%	57%	14%	-	3.14
	B	22%	-	67%	-	11%	3.22
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

\* Negatively stated item.

A comparison of the means for Group A and Group B indicates little difference in the responses. Both groups accept the idea that the content area teacher at the secondary level should share in the teaching of reading.

The second basic question considered was: If teachers recognize a need for the content area teacher to be involved with the teaching of reading, do they feel they need assistance? This is answered specifically by items 13 and 14. Table 5 shows the percentage of responses and the mean score response for individuals within each group. A slightly higher mean score is indicated on question 13 for Group B, the teachers who at present do not have a reading consultant available to them.

The most interesting responses can be seen in relation to the third basic question: Has the active presence of a reading consultant modified the views of social studies teachers toward the teaching of reading in the content area? Table 6 shows the responses to items 1, 2, 3, 4, 6, 8, 11, and 12, those statements relating to this question. The responses are listed in the form of percentages for each response and mean score responses for each group. Group B teachers realize that incorporating the teaching of reading in content courses does not interfere with the major objectives of the course (item 2). Group B also has a slightly higher mean score on the item which suggests teaching reading takes all the fun out of teaching at the secondary level (item 8). A higher mean score for Group B is also recorded on item 11 which states that integrating the teaching of reading with specific content can be as exciting for the teacher as teaching content alone.



**Table 5:** If teachers recognize a need for the content area teacher to be involved with the teaching of reading, do they feel they need assistance?

		Percentage of Responses					Mean Score Responses
*Item 13	Group A	14%	79%	7%			4.07
	B	67%	22%	11%			4.33
*Item 14	Group A	29%	36%	14%	7%	14%	3.57
	B	44%	22%	33%	-	-	4.11

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

\* Negatively stated item.

Table 6: Has the active presence of a reading consultant in any way changed the views of social studies teachers toward the teaching of reading in the content area?

		Percentage of Responses					Mean Score Response
*Item 1	A	43%	36%	7%	14%	-	4.07
	B	44%	22%	22%	11%	-	4.00
Item 2	A	7%	7%	36%	43%	7%	3.14
	B	11%	11%	33%	11%	33%	3.44
Item 3	A	-	29%	21%	36%	14%	3.36
	B	22%	11%	22%	22%	22%	3.11
*Item 4	A	7%	21%	7%	43%	21%	2.50
	B	22%	-	33%	22%	22%	2.78
*Item 6	A	-	64%	7%	29%	-	3.35
	B	11%	22%	22%	22%	22%	2.44
*Item 8	A	21%	29%	36%	7%	7%	3.50
	B	33%	11%	44%	-	11%	3.56
Item 11	A	7%	7%	71%	14%	-	2.93
	B	-	11%	44%	33%	11%	3.44
Item 12	A	-	57%	29%	14%	-	2.57
	B	56%	-	33%	-	11%	2.11

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

\* Negatively stated item

Slightly higher mean scores for Group A can be seen in items 3, 6, and 12. Group A teachers are more fully aware that (1) it is essential that teachers giving reading assignments should teach the student how to read what is assigned; (2) reading can be taught without specific materials designed for that purpose; and (3) content area teachers are probably more competent to teach reading skills for their subjects than are special reading teachers.

### Conclusions

Although the population of this study is small it does show that (1) teachers aided by a reading consultant, as well as those who are not, do see the necessity for the content area teacher to incorporate the teaching of reading skills in his classes; (2) content area teachers feel inadequate to incorporate reading skills without aid; and (3) the reading consultant serves two basic purposes. First, the reading consultant aids the teacher to see specifically what he as a classroom teacher is able to do to further the development of reading skills. Secondly, the reading consultant inspires confidence in the content area teacher than he can, in fact, adapt his teaching expertise to include pertinent reading skills.

Studies such as this need to be administered on a wider scale, to include not only larger populations but also additional content areas. To this point little has been done to examine how the secondary teacher looks at and responds to the teaching of reading skills at the secondary level.

## References

- Administrators and teachers reactions to educational innovations. An /I/D/E/A/ report. Dayton, Ohio: Institute for the Development of Educational Activities, 1967.
- Bragstad, B. The role of the secondary school reading consultant. Paper presented at the meeting of the International Reading Association, Atlantic City, 1971.
- Crews, R. More myths on the teaching of reading. Journal of Reading, 1972, 15, 411-414.
- Earp, N. Observations on teaching reading in mathematics. Journal of Reading, 1970, 13, 529-532.
- Herber, H. Reading in content areas: A district develops its own personnel. Journal of Reading, 1970, 13, 587-592.
- Marani, S. & Tivvis, J. An in-service program in content area reading. Reading Improvement, 1970, 7, 49-50.
- Olson, A. Attitude of high school content area teachers toward the teaching of reading. Paper presented at the meeting of the National Reading Conference, Tampa, 1967.
- Robinson, R. & Carter, J. & Hokanson, D. Business teachers are reading teachers. Journal of Business Education, 1969, 44, 201-202.
- Sargent, E. Integrating reading skills in the content areas. In H. Robinson & E. Thomas (Ed.), Fusing Reading Skills and Content, Newark, Del.: International Reading Association, 1969.
- Schleich, M. Groundwork for better reading in content areas. Journal of Reading, 1971, 15, 119-126.
- Smith, R. & Bragstad, B. & Hesse, K. Teaching reading in the content areas - an in-service model. Journal of Reading, 1970, 13, 421-428.
- Smith, R. & Otto, W. Changing teacher attitudes toward teaching reading in the content areas. Journal of Reading, 1969, 12, 299-304.
- Steed, S. & Katrein, R. Teaming up with content area teachers. Reading Improvement, 1970, 7, 16-17.

## National Evaluation Committee

Francis S. Chase, Committee Chairman  
Emeritus Professor, Department of Education  
University of Chicago

Helen Bain  
Past President  
National Education Association

Lyle E. Bourne, Jr.  
Institute for the Study of Intellectual Behavior  
University of Colorado

Sue Buel  
Dissemination and Installation Services  
Northwest Regional Educational Laboratory

Ronald Campbell  
Emeritus Professor, Department of Educational  
Administration  
The Ohio State University

George E. Dickson  
College of Education  
University of Toledo

L. R. Goulet  
Departments of Educational Psychology and Psychology  
University of Illinois—Champaign-Urbana

Chester W. Harris  
Department of Education  
University of California—Santa Barbara

W. G. Katzenmeyer  
Department of Education  
Duke University

Hugh J. Scott  
Department of Education  
Howard University

Barbara Thompson  
Superintendent of Public Instruction  
State of Wisconsin

Joanna Williams  
Department of Psychology and Education  
Teachers' College, Columbia University

---

## Executive Committee

Richard A. Rossmiller, Committee Chairman  
Director  
R & D Center

William R. Bush  
Deputy Director  
R & D Center

M. Vere DeVault  
Professor of Curriculum and Instruction  
School of Education

David D. Johnson  
Assistant Dean  
School of Education

Karlyn Kamm  
Developmental Specialist  
R & D Center

Herbert J. Klausmeier  
Principal Investigator  
R & D Center

Joel R. Levin  
Principal Investigator  
R & D Center

James M. Moser  
Senior Research Scientist  
R & D Center

Len VanEss  
Associate Vice Chancellor  
University of Wisconsin—Madison

---

## Faculty of Principal Investigators

Vernon L. Allen  
Professor  
Psychology

B. Dean Bowles  
Professor  
Educational Administration

Marvin J. Fruth  
Professor  
Educational Administration

John G. Harvey  
Associate Professor  
Mathematics

Frank H. Hooper  
Professor  
Child and Family Studies

Herbert J. Klausmeier  
V. A. C. Henmon Professor  
Educational Psychology

Gisela Labouvie Vief  
Assistant Professor  
Educational Psychology

Joel R. Levin  
Professor  
Educational Psychology

Joseph Lins  
Professor  
Institutional Studies

James Lapham  
Professor  
Educational Administration

Wayne Otto  
Professor  
Curriculum and Instruction

Robert Petzold  
Professor  
Curriculum and Instruction

Thomas A. Romberg  
Professor  
Curriculum and Instruction

Richard A. Rossmiller  
Professor  
Educational Administration

Dennis W. Spuck  
Assistant Professor  
Educational Administration

Richard L. Venezky  
Professor  
Computer Sciences

Larry M. Wilder  
Assistant Professor  
Child and Family Studies