A functional approach to reading was investigated in seventh grade social studies classes to determine the effectiveness of guiding students in the adaptation of two essential comprehension abilities needed to read the text materials. Specifically, the investigation evaluated the use of reading guides prepared to aid students in the recognition of patterns of organization in text materials and in making interpretations about their readings. A sample of students heterogeneously grouped according to classes was used to investigate the reading strategy. Part 1, conducted over one month's time, pitted direct, skills-centered instruction in reading class against a strategy of functional reading in social studies. Part 2, conducted over six month's time, evaluated the extent to which the same strategy facilitated students' acquisition of content, social studies achievement, and general reading achievement. It was concluded that through prepared guide materials, functional instruction in the reading of textbook selections can be valuable in a social studies class. The study also suggests a reevaluation of current approaches to reading instruction at the secondary school level. (TS)
At one time the call to teach reading in subject matter classes remained an empty imperative to many classroom teachers. That star-crossed cliche -- every teacher, a teacher of reading -- conveyed little meaning and stirred considerable occupational dissatisfaction among content specialists. If reading instruction is to become a workable and sensible aspect of content area methodology, emphasis must be placed on the development of functional strategies whereby teachers can incorporate the application of basic reading skills into instructional routines without sacrificing their influence on content learning.

In the winter of 1973, a functional approach to reading was investigated in seventh grade social studies classes. The purpose of the study was to determine the effectiveness of guiding students in the adaptation of two essential comprehension abilities needed to read social studies text material. Specifically, the investigator evaluated the use of reading guides prepared to aid students in the recognition of patterns of organization in social studies text materials and in making interpretations about their readings. As part of lesson structure, the reading guides were discussed in small groups with provisions established to maintain effective group behavior during the discussions.
Rationale and Problem

The recognition of organizational patterns, i.e., thought relationships, in single sentences, in paragraphs and in selections of varying length has been considered a basic comprehension skill by many authorities in the field of reading. Niles (1964), for instance, claimed that there were three abilities "that are really basic;" that is, "clearly differentiate between the reader who comprehends well and the reader who does not (p. 8)." Among these skills she listed, "the power to find and understand various kinds of thought-relationships... (p. 5)." Later, Niles (1965) explained that the important teaching goal related to recognizing patterns of organization "is to teach a student enough so that he forms the habit of looking for structure in everything he reads and knows what to do with it when he finds it (p. 61)." As part of his rationale for providing instructional guidance in the skill of recognizing patterns in writing, Herber (1970) wrote that reading at an interpretive level of comprehension required a search for intratext relationships. "These relationships," he maintained, "fall into patterns that are identifiable (p. 105)." With guidance provided, "Students will learn to focus on information that contributes to the organizational patterns which formulate intrinsic (inferences, conclusions) concepts (p. 106)."

It appears, then, that a knowledge of the organizational structure that a writer uses should facilitate students' interpretation of text material. Key questions, then, ask how and where this skill and the subsequent act of interpretation can best be taught with economy and efficiency of instruction.

While expert opinion asserts the value of perceiving organization, there's little research support related to classroom instruction that corroborates...
this assertion. As a result, there's minimal evidence to guide teachers in the development of materials and/or functional, content-centered strategies.

Furthermore, the concept of teaching skills functionally presumes a content-centered strategy, in that a teacher shows students how to adapt those skills implicit in the subject matter of his discipline. As opposed to a direct or skills-centered approach in a reading class, functional reading instruction suggests that a classroom teacher is as responsible for guiding the process of content learning as he is for influencing the learning that content.

Herber (1972), however, points out, "There is no clear evidence from the research to indicate that it is more effective to teach the reading of social studies in a social studies class... than in a reading class (p. 193)." In light of the equivocal nature of the research in this area, the study was designed, in part, to compare the effectiveness of direct skills instruction in a reading class and functional reading instruction in social studies.

Procedures, Major Findings

The functional reading strategy was investigated in two separate parts involving the same sample of students heterogeneously grouped to classes according to school policy. Intact classes were assigned randomly to one of four treatment groups:

Group E₁: Exposed to the functional reading strategy in social studies throughout the two parts of the study.

Group E₂: Exposed directly to reading instruction in a reading class setting in the first part of the study, followed by exposure to functional reading in social studies in the second part of the study.

Group C₁: Exposed to direct skills instruction in reading class in the first part of study, followed by content-only instruction in social studies in the second part of the study.
Group C2: Neither functionally nor directly exposed to skills instruction in the first part of the study, followed by content-only instruction in a social studies class in the second part of the study.

Part I, conducted over a one month's period of time, pitted direct, skills-centered instruction in reading class against a strategy of functional reading in social studies. Direct instruction centered around a set of skill activities organized to teach seventh graders how to recognize and use organizational patterns in expository materials. Skill development sessions were arranged in a logical sequence and taught in an individually prescribed manner by a qualified reading teacher. Students in social studies, on the other hand, were shown how to find and utilize patterns of organization functionally. Hence, the social studies teacher used reading guides within small groups to help students recognize patterns that were implicit in the reading selections actually assigned in class during a unit of instruction on the American Indian. At the conclusion of Part I, all students were administered an experimenter-constructed Patterns of Organization Test (POT). The POT was designed to measure students' ability to classify paragraph selections according to pattern types and to sense relationships within each pattern type. Prior to use in the study, the POT was field-tested and validated on a similar sample of students in a near-by community.

Part II of the study was conducted over a six-weeks' period of time. This phase evaluated the extent to which the same functional reading strategy facilitated students' acquisition of content, their social studies reading achievement, and their general reading comprehension. Evaluation measures included a multiple-choice unit test on colonial life (Kuder-Richardson...
Reliability of .77), pooled reading passages from Form 3A and 3B of STEP: Social Studies (1956) (Kuder-Richardson Reliability of .88), and STEP: Reading, Form 3A (1956).

Hypotheses were tested by a two-way analysis of variance (Winer, 1962). Where there were significant differences among the experimental groups, appropriate post-hoc analyses of the data were computed.

The principal findings of the study are summarized below:

1. There were significant differences on a measure of ability to recognize organizational patterns (Table 1) which favored students in E1 over control students in C1 and C2.

2. There were significant differences on a measure of content acquisition (Table 2) which favored students in E1 over students in C1 and C2. Furthermore, post hoc analysis of mean differences indicated that E2 students also performed significantly better than control students in C2.

3. There were significant differences on a measure of social studies reading achievement (Table 3) which favored E1 students over E2 students and C1 students.

4. There were no significant differences among the treatment groups on a measure of general reading comprehension (Table 4).

5. There were no significant observed interactions for any of the criterion measures.

Conclusions

Within the limits of the study it appears that the functional reading strategy increased E1 students' ability to recognize patterns of organization to a significantly greater degree than did (a) a method of direct skills instruction in a reading class for C1 students and (b) an absence of skills instruction -- either functionally or directly -- for C2 students. Such evidence, then, lends support to the notion that a content-centered approach
to reading instruction -- an approach that utilizes the actual subject matter materials assigned in class -- can be an effective means of developing per se a comprehension tool for understanding text materials.

In addition, the functional reading strategy seemed to positively influence content acquisition as opposed to a content-only strategy wherein the social studies teacher carried on discussions of content without establishing provisions for guiding the process of learning that content. The evidence, therefore, suggests that a content teacher can efficiently and effectively fuse content and process without sacrificing either.

Moreover, $E_1$ students exposed to the reading strategy in social studies from the outset of instruction performed better than students in $E_2$ and $C_1$ on a test of social studies reading achievement. A content-centered strategy of reading apparently can provide continual reinforcement in how to read social studies materials that are assigned as part of total lesson structure. It should be noted, however, that there was no statistically significant mean difference between $E_1$ and $C_2$ students during the post-hoc analysis of data. Conclusions, therefore, regarding the apparent success of a functional reading approach in influencing the process of reading social studies content should be interpreted cautiously until further evidence is available.

Finally, the functional approach did not seem to produce a positive outcome on the performance of students on a test of general reading comprehension. It would appear that a reading strategy in a social studies class is not a viable approach to developing ability to read a wide variety of material of a general, informative nature. Such a conclusion is consistent with previous correlational findings which suggest that specific factors influence the reading of subject matter materials. A reading strategy developed to guide
students in the process of reading material in a subject area such as social studies does not necessarily insure that general reading comprehension will be affected to a significant extent.

Discussion

Not only did the experimental treatment affect the development of a basic tool for comprehending textual materials, but it also seemed to (a) facilitate content learning and (b) have a qualified effect on the process of reading social studies material. To the extent that the functional reading strategy represented a viable approach to secondary school reading instruction, the following educational implications are posited.

The study illustrated, first of all, that provisions for functional instruction in the reading of textbook selections through prepared guide material can be a valuable aspect of lesson structure in a social studies class. With respect to content areas other than social studies, one can only speculate presently on the effectiveness of similar reading guides in facilitating the reading/learning of subject matter material. To the extent that texts in other subject areas contain expository materials, reading guides may facilitate students' reading/learning of same. However, the use of guide material in the present experiment suggested that classroom teachers should analyze their subject matter carefully for purposes of adapting basic reading skills to the peculiarities of their content. Such an analysis can then be followed by the development of materials -- prepared to meet the special needs of each content area.

Moreover, provisions that allowed guide material to be discussed within the framework of small groups doubtlessly contributed to the successful
reading/learning outcomes exhibited by the experimental students. The small group interactions of these students probably did, in the words of Durrell (1964), "provide for mutual aid in the product, and also in the progress, (p. 9)" of social studies learning. This investigation, then, implies that one of the keys to effective small group performance may lie in the ability of a classroom teacher to create and maintain a climate that is conducive to small group learning.

A major implication of the present study suggested a re-evaluation of current approaches to reading instruction which predominates at the secondary school level. The development of functional reading strategies in content classrooms can be an efficient and economical means of reading skills development in the secondary school setting in contrast to providing reading instruction for relatively few students in separate reading classes. Part of the confusion over functional instruction, however, has been a continual desire to impose what is known about elementary reading skills development onto the secondary curriculum. Consequently, there remains at present a heavy emphasis on direct skills instruction in reading classes in secondary schools at the expense of application of basic skills where it evidently counts the most, in content classrooms. Needed, as the present study suggests, is an attitude which widely recognizes that content determines the process by which students should read class assignments; that reading instruction in the secondary school involves a set of unique circumstances apart from the instructional practices of the elementary curriculum. Coupled with this attitude is the suggested need for approaches to functional reading instruction which acknowledge that classroom teachers are in the most strategic position to show students how to apply reading skills implicit in their subject matter materials.
### Table 1

**Unweighted Means Analysis of Variance: Patterns of Organization Test**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of Verbal Ability (A)</td>
<td>313.93</td>
<td>2</td>
<td>156.47</td>
<td>14.00*</td>
</tr>
<tr>
<td>Treatments (B)</td>
<td>134.97</td>
<td>3</td>
<td>44.99</td>
<td>4.02*</td>
</tr>
<tr>
<td>A x B</td>
<td>51.11</td>
<td>6</td>
<td>8.51</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Within Cell</td>
<td>893.93</td>
<td>80</td>
<td>11.17</td>
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</tr>
</tbody>
</table>

*p < .05

### Table 2

**Unweighted Means Analysis of Variance: Social Studies Content Test**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of Attitude (A)</td>
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<td>1</td>
<td>7.57</td>
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<tr>
<td>Treatments (B)</td>
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<td>73.14</td>
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<td>A x B</td>
<td>89.70</td>
<td>3</td>
<td>29.90</td>
<td>1.8</td>
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<td>Within Cell</td>
<td>1455.13</td>
<td>88</td>
<td>16.53</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
Table 3

Unweighted Means Analysis of Variance:
Social Studies Reading Achievement Test

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>ss</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of Verbal Ability (A)</td>
<td>1325.92</td>
<td>2</td>
<td>662.96</td>
<td>15.48*</td>
</tr>
<tr>
<td>Treatments (B)</td>
<td>644.83</td>
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<td>214.94</td>
<td>5.01*</td>
</tr>
<tr>
<td>A x B</td>
<td>131.15</td>
<td>6</td>
<td>21.86</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Within Cell</td>
<td>3810.87</td>
<td>89</td>
<td>42.82</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Table 4

Unweighted Means Analysis of Variance:
STEP: Reading, Form 3A

<table>
<thead>
<tr>
<th>Source of Variation</th>
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<th>df</th>
<th>MS</th>
<th>F</th>
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</thead>
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<td>Levels of Verbal Ability (A)</td>
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<tr>
<td>Within Cell</td>
<td>4670.99</td>
<td>82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Herber, H., Reading in the Social Studies: Implications for Teaching and Research. Reading in the Content Areas, ed. J. Laffey, Newark, Delaware: International Reading Association, 1972.


