Developing needed reading skills within the content area

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DEVELOPING NEEDED READING
SKILLS WITHIN THE CONTENT AREA

by

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CHAPTER I

THE PROBLEM

Introduction

Many content area teachers seem mildly repelled or at least indifferent to the sight and sound of the slogan, "Every teacher is a teacher of reading." The hostilities registered toward reading personnel are justifiable. In spite of significant findings regarding the importance of reading instruction, experts have not convinced subject area teachers that it is their responsibility to teach the reading skills related to their own content area.

Researchers have made excellent contributions showing statistically the need for proper reading instruction, but only limited research has informed the teacher how to incorporate the needed skills in his daily lessons. Research which explores and categorizes basic principles of reading is necessary if we are to convince subject area teachers that incorporation of reading skills will aid them in teaching their subject area with greater efficiency.
Statement of Problem

Numerous investigations regarding the importance of teaching reading skills with the subject content has occurred since the 1940's. It is true that these studies have made educators aware of the relationship between the reading field and the subject matter area, but we are still at the stage of doing very little about it.

The writer feels that research must turn from general principles to specific principles, thus allowing the teacher to see the development of a given skill. The subject area teacher is hampered in teaching the needed skills because he focuses on an isolated skill instead of looking to the prerequisites required to become proficient in the skill at hand. The writer wishes to investigate the skills involved in reaching proficiency in order to develop an outline to be used at the junior high level.

Limitation of Study

This investigation will be limited to outlining, which is a reading study skill. The author wishes to list the various reading skills that are utilized when making an outline and to demonstrate how content teachers can make use of this knowledge.

Assumptions

The writer makes the following assumptions:

1. Every teacher is confronted with students who read at various degrees of proficiency. Culliton reports
that a study made by Lazar revealed that only fourteen per cent of eighth grade pupils read at eighth grade level, eight per cent less than fifth grade level, and almost seven per cent had twelfth grade reading ability. The remaining pupils were distributed between the two extremes. The gap in reading ability increases with each grade level.¹

2. Content area teachers feel their primary obligation is to teach their subject matter. Simpson states that, "As a specialist, her (subject-matter teacher) prime responsibility is to aid her students both in acquiring and applying knowledge in the field in which she is an expert."²

3. Content area teachers recognize the need for reading instruction, but haven't been convinced that it is feasible for them to use this means of instruction. They do admit, however, that too many students are experiencing reading difficulties which are detrimental to learning and qualified personnel should be employed to help them.

4. Content area teachers would willingly teach reading skills if they felt it would enhance the subject


matter. The writer feels that it is logical to assume that any means which helps the teacher to put across the subject material would be welcome.

5. A background of skills needed to teach the skill at hand would facilitate understanding and application of skills to the subject matter area.
CHAPTER II

REVIEW OF LITERATURE

Overview

"Learning begins where the child is now, not where he was yesterday or where he will be tomorrow."\(^3\)

The above statement could appropriately be paraphrased as follows: Teaching begins where the child is now, not where he was yesterday or where he will be tomorrow. The writer feels that teaching effectiveness is based on the following principles:

1. The teacher must accept the child's limitations as well as his strengths. The fact that a child has been exposed to numerous approaches and techniques is no guarantee that he will become accomplished in utilizing this knowledge. He will need guidance in reinforcing old skills and acquiring new skills. Fay states,

   ... It is never safe to assume that because a particular skill has been taught before that children can be expected to have no trouble with it. A concert pianist

would never expect to remain accomplished without continued practice. A teacher must continue practice if children are to be accomplished in their use of study skills.4

2. The teacher must have knowledge of the subject area to be taught. We may assume that the teacher is competent in his particular field, but we cannot assume that he is competent in teaching reading skills related to his subject matter. McGinnis concludes from her study that "At the present time, secondary teachers as a whole are not providing instruction in reading, nor are they adequately prepared to do so."5

3. The task of every teacher is to present information to his pupils in a logical order so that they can assimilate and apply the material given them. Teaching a child to read effectively will help him to extend his knowledge beyond the classroom. Robinson reports the following comment made by Artley. "The improvement of reading ability is part of the content area curriculum, for the acquisition of reading skills becomes the acquisition of power within the content area itself."6

4 Leo Fay, "How Can We Develop Reading Study Skills for the Different Curriculum Areas?" The Reading Teacher, VI, No. 4 (March, 1953), pp. 12-18.


Crane estimates that reading constitutes eighty-five per cent of a typical assignment. It is pointless for any subject matter teacher to work against these odds. The interest the child generates toward the subject matter being taught will be influenced by his degree of proficiency in handling the reading materials.

Fay and his associates report that in 1937, Gray and others served on the Committee on Reading of the National Society for the Study of Education. A point of discussion among them was how reading instruction might be improved. The Committee concluded that:

In the judgment of the Committee, the greatest opportunity for progress in teaching reading during the next decade lies in an intelligent attack on the reading problems that arise in the content field.

More than a quarter of a century later, these words give us the direction we must take if every child is to realize his reading potential.

Defining Reading

Teachers teach reading according to their conception of what constitutes the reading act. The writer feels that

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it is appropriate to include some definitions of reading
to clarify the complexity of this act.

Marksheffel's definition of reading is limited, but
practical. He states that:

... reading may be defined as a highly complex, pur-
poseful, thinking process engaged in by the entire
organism while acquiring knowledge, evolving new ideas,
solving problems, or relaxing and recuperating through
the interpretation of printed symbols.9

Stauffer reports that Gates made the following ob-
servation, also noting that the reading act is essentially
a thinking process. He comments:

Reading is not a simple mechanical skill; nor is it a
narrow scholastic tool. Properly cultivated, it is
essentially a thoughtful process. However, to say
that reading is a 'thought-getting' process is to give
it too restricted a description. It should be developed
as a complex organization of patterns of higher mental
processes. It can and should embrace all types of
thinking, evaluating, judging, imagining, reasoning,
and problem solving... 10

Realizing the complexity involved in the reading act,
Robinson is quick to caution that:

... the complex process of reading matures as a unit
rather than in a fragmented manner because each aspect
of reading complements and adds significance to all
others.11

9Ned D. Marksheffel, Better Reading in the Secondary

10Russel G. Stauffer, "Reading A Thinking Process,"
Reading and Thinking, eds. Marjorie Seddon Johnson and Roy
A. Kress, 22nd Annual Reading Institute Proceedings, Vol. IV

11Helen M. Robinson, "Unity of the Reading Act," Se-
quenced Development of Reading Abilities, ed. Helen M. Robin-
son, Supplementary Educational Monographs, No. 90 (Chicago:
Therefore, teachers must be aware of the nature of reading and the need to simultaneously develop the various skills necessary in this process.

**Reading Versus Subject Matter**

Some content teachers mistakenly have created a paradox in their minds regarding reading instruction. They see the urgency of teaching the necessary reading skills, but feel that their primary, if not their total obligation, is to teach the subject matter at hand. Research tells us that conflict is not necessary.

Courtney states:

"... If we accept that study is a 'process of acquiring by one's own efforts, knowledge of a subject,' it is then our primary responsibility to lead our students to independence or self-dependence in their learning. ... A simple explanation of better techniques, whether content or study is inadequate without continuing supervised practice to fix the skill. ..." ¹²

DeBoer and Whipple report that studies conducted by Rudolf, Howell and Brownell clearly show that guidance of reading in a curriculum area yields returns in the subject matter outcomes of that area, as well as in reading skills. They further state:

reading is not a generalized skill that, once developed in an English class, can be applied in a special field. Rather, reading involves the ability to interpret this or that particular area of experience. Basic instruction, no matter how excellent, is not enough. Reading abilities must be developed in the areas where they are to be used. 13

Schiller conducted a study to determine experimentally the effects of the systematic and functional use of work-study skills on mastery of the skills and on achievement in the social studies. She reports that:

The study demonstrated that the systematic and functional use of work-study skills in the social studies results in mastery of the skills and promotes a significant increase in geography achievement. 14

An interesting experiment in the content area of mathematics was conducted by Call and Wiggin. A unit involving linear equations was taught to two groups of second year algebra students. The control group was taught by an experienced mathematics teacher, whereas the experimental group was taught by an English teacher with a limited amount of training in reading and with no training in the teaching of mathematics. In fact, he never had a course in Algebra II. The major difference in instruction


being that the experimental group was taught to get the meaning from the words and translate it into mathematical symbols. It was approached in the manner of teaching reading rather than that of teaching mathematics. The results of the experiment seem to indicate that the experimental group did better, even when reading abilities and mathematical aptitude were controlled. The following inference was made:

If by teaching reading, instead of mathematics we can get better results, it seems reasonable to infer that the competent mathematics teacher might get considerably better results if he were trained to teach reading of the kind encountered in mathematics problems.15

Summary

Research findings clearly indicate that application of reading skills to the content area nurtures academic progress. Indeed, the subject area teacher cannot afford to ignore the results of research. Personnel in the field of reading need to further illustrate to the teacher how these skills can be applied.

15Russell J. Call and Neal A. Wiggin, "Reading and Mathematics," The Mathematics Teacher, LIX, No. 2 (February, 1966), p. 156.
CHAPTER III

OUTLINING AND RELATED SKILLS

Explanation

In this chapter the author wishes to give a broad view of the reading skills, explain the value and basic principles of outlining, identify skills related to outlining, analyze an outline in relation to the related reading skills, and make further recommendations.

General Reading Skills

It would seem appropriate, for the sake of clarity, to look at the common skills that are used when a student is presented with content material. Nila Banton Smith categorizes reading skills into three areas: (1) The common reading skills, such as pronunciation techniques, the meaning-gathering techniques, the rate techniques, and the eye-adjustment techniques. These skills are used when reading any type of material. (2) Common study skills; these are common to all study situations, such as selection and evaluation, organization, recall, location and following directions, and (3) Specialized factors which
include vocabulary and skills peculiar to certain subjects.  

All of the above skills are important if the student is to successfully read and comprehend subject matter.

These categories are helpful insofar as they offer a general idea of what reading skills are needed in order to comprehend content material; however, teachers need more than a general guide to follow. Since many teachers are no more than vaguely aware of the complexity of the reading act, they have a tendency to see just the obvious. Colored by their own reading proficiency, they are unable to distinguish points of difficulty. It is not only frustrating for the pupil to be asked to produce something he is incapable of doing, but it is equally frustrating for the teacher to be aware of a pupil's needs and be unable to give him some type of direction.

The Outline

As a means of illustrating how a detailed listing of related skills can aid the content teacher, the writer has selected outlining, which is one of the organizational skills. Outlining is a popular assignment which has the appearance of being a relatively uncomplicated task.

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The outline enables the reader to grasp the author's plan and understand the relationship between ideas. It can be an effective tool when trying to remember material, study, make a report, and understanding the meaning of a whole selection. The student who has become proficient in making a written outline is frequently capable of recognizing the author's organization while he is reading. This skill has a distinct value when attempting to comprehend subject matter.

The formal structure of an outline is relatively simple to teach and for the student to memorize. Essentially, the outline is composed of the following steps: (1) the title; (2) the main ideas; and (3) the supporting details. Basically, the appearance of the outline skeleton would look like this:

Title
I. Main Point
II. Main Point
   A. Important subpoint.
   B. Important subpoint.
      1. Detail
      2. Detail
      3. Detail

The outline may take either of two forms: (1) sentence outline, which requires each point to be written in a complete sentence, or (2) a topic outline, which does not require sentence structure.
Supporting Skills

The outline is deceiving in appearance. The formal structure of it is not as simplified a task to accomplish as one is led to believe. Analyzing the skills which are used in making an effective outline, one would have to agree it is no small task.

Leading reading authorities note that depending upon the material to be outlined, the student will need to know several of the following skills:

1. Ability to gain meaning from words.
2. Ability to gain meaning from sentences.
3. Ability to gain meaning from paragraphs.
4. Ability to gain meaning from the whole selection.
5. Ability to find key words in a sentence.
6. Ability to find the main idea-stated.
7. Ability to find the main idea-implied.
8. Ability to select the supporting details.
9. Ability to recognize and organize facts and details.
10. Ability to put together ideas from various sources.
11. Ability to arrange events and items in sequence.
12. Ability to recognize patterns that appear within paragraphs - simple listing, chronological order, comparison-contrast and cause-effect.
13. Ability to find the unifying idea of a selection.
15. Ability to recognize signal words and phrases.
16. Ability to recognize topic.
17. Ability to formulate an outline structure.

To illustrate the value of having a listing of related skills, the writer used two outlines made by junior high students. The students were to outline Section One, pages 46-48, in the social studies text, "Our Changing World," by Oliver and Sobel. The selection contained three important concepts: (1) environment is composed of all the conditions and circumstances that affect men, (2) culture influences how man uses his physical environment, and (3) geography limits man's activities.

The students were asked to read the selection and then outline it so they would be able to use the outline to help them remember the material. They were reminded that they were to outline only those points which were important. They indicated they knew how to outline because they had made outlines previously. They were also able to fluently read the lesson.

Sample one reveals a well-structured outline with no learning value. (Refer to Appendix II) The student completely missed the three important concepts stressed in the selection. It was a fruitless task for both student and teacher. This does not mean that the teacher should abandon the idea of using the outline as a means of studying,
but it does mean that the teacher must postpone this skill until a later date.

By consulting the list of related skills, the teacher can select those skills which would help the student most at this stage. In this particular case, the very first step would be to help the student discover the topic. After having established the topic, the teacher might choose a skill, or a combination of skills, depending upon the student's ability.

The teacher might approach the problem by suggesting that the student:

1. Reread the selection.
2. Underline the key words in paragraphs one, two and eight. (These paragraphs contain the key ideas of the selection.)
3. Underline the sentence that contains the main idea.

(Refer to Appendix I for a more detailed plan.)

The content area teacher may feel that to teach this youngster to outline would be too time-consuming; however, the pupil may know how to use many of the skills in isolated drill and needs only to be shown how to apply them within the subject matter. Furthermore, the child will be able to grasp at least some of the ideas the author is stressing as he gradually uses skills that are part of outlining.
The second sample (refer to Appendix III) reveals a less perfect outline structure, but a better organization of ideas. This student would perhaps make a fair grade on the usual factual test, but would not have a clear understanding of the desired concepts. Using the list of skills once again, the teacher can see that the student obviously did not observe the signal words and phrases and, therefore, found it difficult to locate the main idea. A discussion of their relationship and instruction in the formation of an outline may be all that the student needs to develop an effective outline.

Conclusion

The author fully realizes that she has merely skimmed the surface of what needs to be accomplished. It is necessary to conduct a study with greater depth and scope in order to thoroughly analyze each skill and establish, if there is one, a priority of sequence. We have conducted too many studies just to prove to the teacher that gains are made when reading skills are taught.

Today, when complexity seems to be a way of life, it is easy to forget that complex problems had their beginnings at a much simpler level. Further, any breakdown of a problem causes the elusion of being too obvious to be worthy of mention or consideration. However, if we are to become effective and cause content teachers to seriously
consider the importance of our research, we must explore the obvious and assume that everyone does not know what is basic to each skill.
APPENDIX I

PRACTICAL PROCEDURES FOR TEACHING OUTLINING
IN THE CONTENT AREA

Note: The writer wishes to emphasize that proficiency in using skills comes with time and reinforcement. Therefore, the teacher must suppress the urge to move too rapidly. The student must realize what he knows so that he can approach the next step with confidence.

Let's consider the student in sample one (Appendix II). At this time the subject matter teacher should abandon the idea of using the formal outline with this student until he has acquired the skills which are basic to outlining. This does not mean that the teacher must remain on the same lesson until the pupil is capable of organizing the material. The teacher need only to be alert to the particular skill that needs attention and apply that skill to the lesson material.

A suggested procedure for the student in sample one would be:

1. Discontinue use of the formal outline until a later date. Choose a graphic representation instead.
2. Teach difference between general and specific words. Use words from the text.

Example:

vegetation - general
grass - specific
shrubs - specific

landforms - general
plains - specific
hills - specific
mountains - specific
climate - general

semiarid - specific

3. Locate the sentence which expresses the main idea in each paragraph. The main idea sentence contains the most general statement in a paragraph.

4. Have the student write the sentence which contains the main idea in some graphic form.

1. The environment in which you live is composed of all the conditions and circumstances that affect you.

2. Geographers study man's physical environment and the relation between his physical environment and his social, economic, and political environment.

3. Implied.

Note: In paragraph three of the sample material the main idea is implied. At this time the pupil
should be alerted to this fact and asked to refer to paragraph two for its implications.

5. Find the key words in the main idea sentence.

Example:

... environment ... composed
... all conditions
... circumstances that affect you

6. Have the student write the main idea in his own words.

Example:

1. Our environment is made up of all the conditions and circumstances that affect us.

7. Introduce the idea of using signal words as an aid to finding important details.

Example:

and for example more than that
more furthermore others
some

8. Have the student select the main idea and the important details. At this time the student should be capable of selecting key words and expressing the idea in his own words.

Example: (This could also be divided into major and minor details. Major details could be underlined twice and minor details underlined once.)
Social conditions and circumstances such as beliefs, habits, customs affect us.

1. Our environment is made up of all the conditions and circumstances that affect us.

After each step has been mastered, greater refinements can be made. The teacher can help the student enlarge his vision from the paragraph, to one section of the unit, to the whole of the chapter.
APPENDIX II

Sample 1

THE GREAT PLAINS

I. ENVIRONMENTAL CONDITIONS
   A. climate
   B. vegetation
   C. soils
   D. resources

II. LANDFORMS
   A. plains
   B. plateaus
   C. mountains

III. NORTHEASTERN UNITED STATES
   A. humid climate
   B. rainfall
   C. cold, snowy winters
   D. hot summers

IV. EASTERN AUSTRALIA
   A. humid, subtropical climate
   B. rainfall
   C. cool winters
   D. hot summers
V. NATURAL VEGETATION
   A. soils
   B. landforms
   C. resources

VI. DOMINANT PEOPLE
   A. beliefs
   B. habits
   C. customs
   D. economic systems

VII. DIFFERENCES BETWEEN TWO REGIONS
   A. land
   B. farms
   C. towns
   D. cities

VIII. GREAT PLAINS
   A. semiarid climate
   B. little rain
   C. cold, snowy winters
   D. hot, dry summers

IX. THEY HAD NO NEED FOR
   A. towns
   B. cities
   C. roads
   D. communication
   E. transportation
X. SETTLERS BUILT
   A. made property boundaries
   B. permanent homes
   C. fences, enclose fields, herds
   D. roads, telegraph lines
   E. cities, towns

XI. BY THE ESTABLISHMENT OF
   A. cattle ranches
   B. farms produced corn, wheat

XII. AMERICANS ALREADY HAD
   A. axes
   B. handsaws *

* Student's outline with corrections.
APPENDIX III
Sample 2

The Settlers Culture
A. Idea of private ownership of land.
B. Economic system based on commercial and subsistence agriculture.
C. They established property boundaries, permanent homes, fences for fields and herds, roads, cities, towns, and telegraph lines.

Settlers Changed Environment
While Indians Didn't
A. Indians culture wasn't changing the land.
B. Settlers culture was changing the land.

Climate Limits Man's Actions
A. Climate limits the vegetation that will grow in an area.
B. Climate affects the quality of soil and landforms.

Man Learned How to Overcome Geographical Barriers
A. Man needed tools first of all.
B. Axes and handsaws were of these tools.
C. Lumbering came to an increase.
D. New and better tools were needed.
E. But the cost of these new tools limited the amount of lumbering done.

Rain Forest in Brazil

A. The rain forest is a barrier to the settlement.
B. This region is full of natural resources.
C. There is no economical means of clearing the forest so this prevented the growth of a strong economy in that area.*

* Student's outline with corrections.
SECTION 1. GEOGRAPHIC ENVIRONMENT

Geography and Environment. The environment in which you live is composed of all the conditions and circumstances that affect you. Some of these conditions and circumstances are social—the beliefs, habits, and customs which make up your culture, or your way of living. Some are economic—the material possessions of your society, and its economic system. Others are political—the type of government under which you live and the relations of your nation with the rest of the world. Still other environmental conditions are geographic—the climate, vegetation, soils, and resources of the region where you live, and landforms such as plains, hills, plateaus, and mountains. Such conditions are a part of your physical environment.

Geographers study man's physical environment and the relation between his physical environment and his social, economic, and political environment. They have learned that man's reactions and adaptations to his physical environment are greatly influenced by his culture. They have found that societies that have similar cultures may make similar use of different physical environments.

Consider, for example, the regions of northeastern United States and of eastern Australia. Northeastern United States has a humid continental climate—sufficient rainfall, cold and snowy winters, warm to hot summers. Eastern Australia has a humid subtropical climate—abundant rainfall, mild to cool winters, warm to hot summers. The natural vegetation in the two regions is different, ranging from the grasslands of northeastern Australia to the mixed forests of northeastern United States. The soils, landforms, and resources of the two regions also differ. Yet if you were to travel through both of these regions you would see many similarities. The dominant groups of people who settled in these two areas had similar beliefs, habits,
At one time the Great Plains provided food for thousands of buffaloes. These buffaloes, in turn, served as the foundation of the American Indian economy. As a result, the Indians had no need to modify the physical environment. When the settlers entered this same physical environment, they brought with them ideas and practices that changed the face of the Great Plains.

customs, and economic systems. As a result, while you would see differences between the two regions, the land, the use of resources, the farms, the towns, and the cities of one region would remind you of those of the other.

On the other hand, societies that have different cultures may make different use of a similar environment. Consider, for example, the history of the Great Plains region of the United States. This region has a semiarid climate—little rainfall, cold, snowy winters, hot, dry summers. The natural vegetation is grass with some shrubs and, in a state of nature, provides excellent grazing land. Both the Indians of the Great Plains and the settlers who moved there in the years after the Civil War faced the same physical (geographic) environment.

The Indians of the Great Plains developed a nomadic culture based on the buffalo, following the herds as they ranged across the land in search of food. Thus the Indians had no need for permanent dwellings. Because their economy was based on subsistence, or providing just the food they themselves needed, they had no need for the towns and cities, roads, and communication and transportation systems that accompany trade and commerce.

But the settlers brought with them a culture which included the idea of private ownership of land. Their economic system was based on commercial as well as subsistence agriculture. Within a short time they established property boundaries and built permanent homes, fences to enclose their fields and herds, roads and telegraph lines, and cities and towns.

The Indians had established a way of life based on their acceptance of the physical environment with little attempt to change it. But the settlers, by the establishment of cattle ranches and, later, farms that produced wheat and corn, profoundly modified the face of the Great Plains.

The foregoing examples suggest that the geography of a region does not determine
completely how people of that region will live. But geography does limit man's activities. The climate of a region is the geographic factor which more than any other limits man's actions. This is true because climate is not only the most diffic-

Rain forests, such as the one shown below, are one of the most difficult geographic barriers to overcome.

cult geographic influence for man to change; it also has a significant effect on other geographic conditions. Climate limits the types of vegetation that will grow in an area. It affects the quality of the soil and erosion of landforms.

But man has learned to overcome many geographic barriers. For instance, at one time the forests of northeastern United States slowed the westward movement of the pioneers. In order to overcome barriers such as those imposed by vegetation, other limitations first had to be overcome. One limitation was technological—before people could clear the forests they first had to have tools with which to do it. The Americans already had axes and hand saws. But as land clearance and lumbering became increasingly important, new, more efficient tools were called for. As new tools were developed a second limitation was imposed. An axe is comparatively inexpensive, but such tools as power saws and bulldozers cost a considerable amount of money. Thus economic considerations limit man's ability to control his physical environment. Today one of the few areas of dense forest which still acts as a barrier to settlement and economic growth is the rain forest of the Amazon Basin in Brazil. Although the region is rich in resources, the absence of an economical means of clearing the forest has, in part, prevented the growth of a strong economy in that area.

Thus far we have discussed geography and environment in very broad terms. Now let us turn our attention to the specific types of environment in which men live.

1. What conditions and circumstances are part of a social environment? An economic environment? A political environment? A geographic environment?
2. What evidence is there that two societies living in a similar physical environment may use the physical environment in different ways?
3. What types of limitations may prevent a group of people from settling in a particular area?
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