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THE CONTEXT OF COMPREHENSION

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We enter the teachers' lounge at Woodmere School, where Mrs. Stephens and Ms. Kelly are asking Mrs. Forester, the reading teacher, for advice in developing an effective program in reading comprehension. Mrs. Stephens describes the comprehension ability of each of her students. She is confident that she accurately diagnosed her students as either good comprehenders or poor comprehenders. To do so she administered a test and interpreted the results. Ms. Kelly administered the same test but she is not as comfortable as her colleague in categorizing her readers' abilities.

Ms. Kelly, in an apologetic tone, explains to the reading teacher that several of her students did poorly on the test, but perform well in group discussion. She mentions that the lowest scoring student in her class is able to retell satisfactorily the contents of a story he has read on fishing. Ms. Kelly adds that she is particularly puzzled by two of her students who did well on the test yet contribute very little when asked questions in their small reading group discussions.

After listening attentively, the reading teacher pauses for a moment. Her task is to find a way to reinforce and extend Ms. Kelly's intuitive notions about assessing reading comprehension, and simultaneously, to get Mrs. Stephens to realize that the test she gave is only one piece in the diagnostic puzzle she is constructing. The reading teacher's task and the purpose of this paper is to inform or remind teachers that the comprehension product they elicit from their readers such as answers to questions or retelling a story is a very sensitive entity. It is chameleon-like in nature and it may change depending on the environment in which it is produced. In other words the context creating the comprehension product must be considered if the teacher is going to make the most sense out of the reader's responses and formulate an accurate diagnosis.

The Comprehension Process

Recent investigations of the reading comprehension process have indicated that it is a dynamic activity which demands that readers, based on their prior experience and knowledge of language, actually construct or reconstruct the author's intended meaning. Given this view of comprehension, the nature of the product of comprehension becomes more understandable. The product is the specific result of a reader's interaction with the text and the context in which the interaction occurs. Several features which might form the context of comprehension are: (1) methods of measurement; (2) the instructional environment; (3) the text itself; and, (4) individual differences within the reader.

The teacher, in assemblying a diagnosis must be especially aware of the context of reading comprehension to avoid being misled by too limited a sample of products. Indeed, in order to improve the reliability of assessment, the teacher should systematically vary the contexts in which reading comprehension occurs. To do this, teachers need to recognize the effects of at least four major features of the context of reading comprehension shown in Figure 1.

Method of Measurement

Text

Comprehension Product (estimate of outcome of complete interaction between the reader and print from tasks such as answering questions or retelling a story)
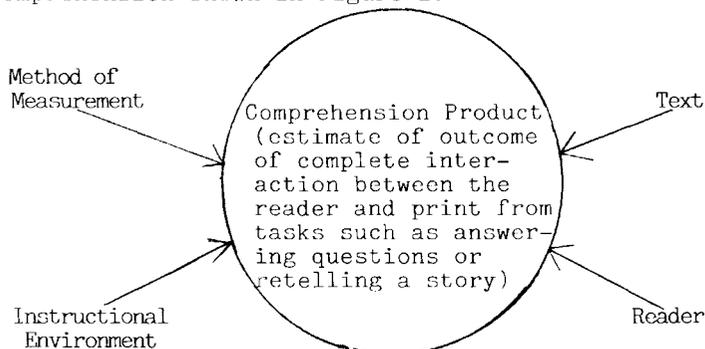
Instructional Environment

Reader

Figure 1
The Context of Comprehension

This figure illustrates that comprehension assessment entails making judgments about the reader and his or her comprehension from a product, which is only an estimate of an outcome of a very complex interaction, while simultaneously considering a number of factors to be examined here. There are no recipes and no easy methods for completing this task. Yet, the difficulty of adequately assessing comprehension should not keep good teachers from giving it their best efforts. If readers must submit their comprehension to a teacher's scrutiny, they should have the right to perform for someone who can knowledgeably appreciate the subtleties

of their efforts.

Method of Measurement

The manner by which the comprehension product is elicited is a feature of the context of comprehension which can affect the product in a number of ways. The most commonly used technique for determining a reader's comprehension is asking questions. This would seem to be a straightforward way to monitor a reader's comprehension. However, there are several dimensions of this method of the measurement to be considered. The format, response mode, level, and quality of the question are four dimensions discussed here.

The format for the presentation of the question may be either oral or written. Giving the question to students orally helps eliminate the possibility that they had difficulty reading the question with satisfactory understanding, rather than a difficulty in understanding the text. Most individually administered reading tests and teacher led discussions present the questions to readers in oral form. Group tests and teacher-made exercises generally require the reader to read the question as well as the text. Misunderstanding or misinterpretation is always a potential explanation for an incorrect response, but it is most crucial when the reader has been required to read the questions. Therefore, children should be given opportunities to answer questions presented in both oral and written forms. It is instructive for the teacher to be observant of any differences in comprehension under the two formats, with each reader.

A second dimension of measuring comprehension which is frequently overlooked is the response mode. That is, must the reader recognize the answer to a question as in multiple choice tests, or must the answer be recalled? While the identical product may be elicited by both response modes, the recognition task is easier. Supplying the correct choice can act as a cue for the retrieval of the answer from memory. On the other hand, no such cue is available in the recall question and the inability to retrieve the answer is interpreted as a lack of comprehension. No case is being made here for the use of one response mode over another, as both are appropriate depending on the situation. The point is that teachers need to be wary of equating performances on tasks which have involved different types of processing. If a reader has difficulty answering a question where an answer must be self-generated, the teacher might get a more accurate picture of a reader's comprehension if the question is asked again in a recognition format. In doing this, the teacher can better determine if the comprehension of the idea occurred

or there was a problem in retrieving it from memory.

The level of a question is another dimension of
the measurement feature which can have a significant
effect on the comprehension product. Taxonomies have
been constructed which theoretically represent higher
levels of cognitive functions (Barrett, 1976). While
the specific levels of cognitive functioning and the
corresponding questions remain a source of argument,
the principle of higher and lower level questions seems
to be widely accepted. Observation of the classroom
behavior of teachers and examination of most reading
texts indicate a tendency toward asking questions con-
cerned with literal level cognitive functioning, ideas
which are explicitly stated in the text. More recently
it seems that teachers are being urged to ask higher
level questions more often. This increased emphasis
on differentiating questioning levels places another
responsibility on teachers who are attempting to assess
their readers' comprehension. They must remain alert
to the varied cognitive demands of the question, since
it is quite conceivable that a reader might perform
well on literal level questions but encounter diffi-
culty on questions which call for inferencing behavior.
Care must also be taken to ensure equal performance
demands between instructional and testing settings.
Difficulty arises when a reader is taught to read the
material with the expectancy that lower level questions
will be asked, yet in testing situations items attempt
to elicit higher level processing. This problem may
also occur in the reverse, as in the case of a reader
who may be looking for general features of the text,
such as main ideas, while the task demands attention
to detail. In each instance the comprehension product
may not accurately reflect the actual acquisition of
information by the reader.

Quality is the final dimension to be considered
in examining the effect of questions on the compre-
hension product. Some questions are so confusing that
the reader's failure to answer the question may not
be comprehension difficulty with the passage but an
inability to understand the point of a fuzzy question.
In a group discussion setting, questions can be re-
phrased, but in more formal tesing situations, the
reader is a victim of someone else's inarticulation.
The passage dependency of a question is also important
to its quality. If a question can be answered by common
knowledge without reading the text, such as "Who was
the first president of the United States?" it is not
measuring informations gained from the passage. Ques-
tions, on tests and in discussions usually come in sets
and occasionally the answer to one questions occurs
in the context of a prior or subsequent question. All

of the characteristics of quality can interact, thus obscuring an accurate view of the reader's comprehension ability. An awareness on the part of teachers, of the quality of their own questions and questions on tests is a necessity. There are several helpful discussions which address the issue of good questions, such as Bormuth (1970), Ruddell (1974), and Pearson and Johnson (1978).

Instructional Environment

The teacher and the instructional setting are two dimensions which combine to form the overall instructional environment. This feature of the context of comprehension assumes importance because it is within the parameters of this feature that the who, what, when, where, why, and how of diagnosis occurs. Teachers make the initial decision to elicit the comprehension product. They often:

 1. select the person to read,
 2. select the text to be read,
 3. select the response mode,
    the question format and cognitive level,
    and the type of instructional setting,
 and
 4. evaluate the product.

Given this amount of control, the teacher is highly influential in affecting the product either positively or negatively.

Teachers' ability to generate quality questions has already been emphasized. Closely related to this issue is their ability to frame and ask questions effectively. Often questions a teacher might ask are of a controlling variety and the reader is forced to give the teacher's answers.

Example: Controlling--
           T: Don't you think the town's people in
           the story were being unfair to the new
           family?
           S: Yes

        Alternative:
           T: How would you describe the attitude
           of the town's people towards the new
           family?
           S: They weren't very friendly.

Nonverbal communication is another way teachers can render the comprehension product unreliable. Readers, through years of conditioning, become quite adept at interpreting the meaning of the most subtle movement of the teacher's eyebrow or mouth. Thus, readers become dependent on the cues from facial expressions and body movements to respond to questions rather than sharing their actual perceptions of the text.

An inaccurate picture of a reader's comprehension can develop if a higher level question is asked too soon in a sequence of questions. In this situation readers become confused and their performance may drop off significantly, unless appropriate follow-up questions are asked (Taba, 1965). On the other hand, some sensitive and judicious prompts from the teacher will frequently reveal a much deeper understanding by the reader than an initial response indicated.

Example:

> T: How did the trainer feel about his animals?
> S: I don't know.
> T: Well, what do you think?
> S: He liked them.
> T: Can you tell me why he liked them?
> S: Because they would do tricks for him.
> T: And why were they able to do tricks for him?
> S: Because they were smart and healthy; because the trainer fed them good food and took care of them when they were sick.

Teachers who uncritically accept "I don't know" answers may be overlooking a vast amount of information acquisition by readers who are unaware that they know the answer to the question or are too timid to take risks.

Perhaps one of the most powerful characteristics of teachers in forming the context for comprehension is the affective and intellectual atmosphere which is generated by questioning and discussions. Does the teacher force the reader to live under the tyranny of the right answer (Stauffer, 1975)?

Example:

> T: Bill, what was the cause of the accident?
> S1: John dropped the lantern.
> T: No, can you tell us, Carol?
> S2: John was careless and set the lantern on the floor where he was playing.

On the other hand, responses dealt with in a qualitative sense with follow-up queries are efforts made to gain insight into the way of the student' thinking.

Example:

> T: Bill, what was the cause of the accident?
> S1: John dropped the lantern.
> T: How did he drop the lantern?
> S1: Well it was on the floor.
> T: After he dropped it?
> S1: Well no--he kicked it over when he was playing and his Mother told him never to do that.
> T: Carol, would you describe John's behavior?
> S2: Careless.

If a teacher does not demonstrate respect for the intellectual integrity of responses which differ from the standard, readers will soon feel too threatened to respond unless they are totally certain of their answer. This type of teacher behavior raises the risk factor to the point where a reader will withhold legitimate responses for fear of being wrong. A no-win situation arises as the teachers cannot elicit accurate comprehension products and the frustrated readers cannot share what they think they have comprehended.

In the first example, the teacher was looking for a specific answer and switched to another child to find it. The teacher in this case did not have patience to pursue, with the first student, the quality of the response. The second example illustrates the sensitive teacher who is willing to probe the initial response of the reader. In this instance, the teacher finds that the student did realize that the lantern actually was on the floor and that the character was behaving inappropriately. Instead of calling quickly on another student, this teacher's persistence was rewarding for both--for the student, because he had a chance to demonstrate what he knew, and for the teacher, because she received a more reliable estimate of the student's comprehension. Also, the teacher built on one response in formulating a next question for Carol.

The specific setting in which reading occurs is a second important dimension of the instructional environment. Some readers perform differentially under individual, small group, or large group situations. It is hard to predict how any one reader might react. One can think of some readers who might be terrified when reading alone with the teacher, and other readers become debilitatingly upset when reading or responding in a group situation. In either case the anxiety, which the setting can generate, may grossly affect comprehension.

In addition to the particular setting, we must note whether or not the setting is teacher-controlled or student-controlled. Again, depending on the teacher or the group, a reader might perform better under one setting than another. How often have we all overheard a reader fluently share a retelling of some recently read text to another child, but under more formal class circumstances become more reticent about what has been read?

Similarly, some readers are more comfortable when reading silently as opposed to orally, and for some, the reverse is true. Oral reading is in a sense a performance and some readers direct so much attention to making themselves sound acceptable that they are not

able to reconstruct much meaning from the text. The reader's failure to obtain meaning under these circumstances is not a sign of inability as much as one of a different purpose. On the other hand, some readers apparently benefit in obtaining meaning by reading orally. Reading orally may help them attend to the text more closely. How many of us find ourselves reading a particularly difficult segment of text orally to aid in comprehension? Most likely we are using the oral reading as a rehearsal technique to aid our memory processing. While reading orally may hinder or help some readers, silent reading can be described in the same way. Silent reading does reduce the production problems of oral reading, and can reduce anxiety because of its privacy. However, some readers in the process of learning to read, experience difficulty in attending to text when reading silently. This behavior may be more a result of a lack of practice than any specific processing deficit, because some instructional programs emphasize oral reading to the exclusion of silent reading. Regardless of the reason, it is always wise to include both an oral and a silent task when assessing beginning and developing readers' comprehension.

Text

The third feature of the context of comprehension is the text itself. It seems when we set out to elicit a comprehension product from a reader, the particular value of the information contained in the text is of small consequence. Intuition says it makes sense to assume that a reader may produce a different product on a topic that is of interest as opposed to uninteresting or even aversive ones.

The specific content and style of the text are also important considerations. For example, if the material is heavily loaded with factual material some readers become overwhelmed and their performance breaks down. For other readers, textual material with much dialogue might be a problem. Generous portions of figurative language can affect a reader's ability to reconstruct the author's meaning. Finally, the simple fact that the text might be poorly written is a factor teachers must keep in mind. Some authors fail to effectively convey their intended meaning because of poor organization, vocabulary selection, or sentence structure that is unusually complex. The reader should not be blamed for the failure of the text to fulfill its part of the communication process.

Every reader will encounter many differing texts, contents, styles, and qualities. The cautions stated above are not meant as suggestions for shielding the reader from simple reality. Rather, they are factors

which the teacher must keep in mind while assembling
the description of the reader's comprehending behavior.
The reader should be asked to demonstrate comprehending
ability within a number of textual situations if an
accurate picture is to be formed. One way to do this
is through thoughtful teacher selection of texts. It
is also vital that readers be given the opportunity
to generate a comprehension product from a selection
of their own choosing.

Reader

All of the features of the context of comprehension
which have been discussed thus far are external and
frequently beyond the readers' control. The context
for comprehension would not be complete without consid-
ering the reader as a feature, and a particularly com-
plex one at that. The reader comes to the text with
a host of individualities such as intelligence, inter-
ests, specific background experiences, prior success
or failure with reading--to list a few. All of these
differences interact with the external features of the
context of comprehension to ultimately yield a reader's
comprehension product. To adequately describe all of
these differences is far beyond the scope of our work,
and such descriptions are readily available in the
literature. However, to interpret the reader's product
qualitatively, the teacher needs to be familiar with
and sensitive to as many reader individual differences
as possible.

Summary

The reading teacher, Mrs. Ferguson, can respond
most effectively to Mrs. Stephens and Mrs. Kelly by
emphasizing the need to approach the diagnosing of
readers' comprehension one a number of features simul-
taneously. In particular she can point out that the
context in which a comprehension product is elicited
is important to the teacher in assessing that product.
To draw sensible instructional implications from the
product, teachers need to be: aware of the measurement
technique; sensitive to the instructional situation
within which the product was fostered; cognizant of
type and quality of the text; and, alert to the per-
sonal and intellectual characteristics of the reader.
Comprehension is a dynamic process and the reader's
product is a sample of the representation of the cur-
rent state of the comprehension process. However, com-
prehension is fundamentally unstable. It varies as the
context varies. Consequently, before a reliable comment
can be made to summarize a reader's comprehension, the
following features must be considered:

    I. Type of Measurement
       1. Were questions used?
       2. Were they recall or recognition?

3. Was the level of question appropriate?
4. What was the quality of the question?

II. Instructional Environment
1. Was it a teaching or a testing situation?
2. Was it oral and/or silent?
3. Was it teacher controlled or student controlled?
4. Was it elicited in a group, with a teacher, or without a teacher?

III. The Text
1. Was the text interesting to the reader?
2. What type of content was in the text?
3. What was the text style?
4. Was the text well written?
5. Was the text within the conceptual ability of the reader?

IV. The Reader
1. Is this a fluent reader?
2. How does the reader interact with the dimensions of the instructional setting?
3. What is the reader's background?

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