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TEACHING CHILDREN TO USE A CONTEXT—PLUS—PHONICS STRATEGY

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In most basal reading programs, children are taught a variety of word identification strategies, including the use of context, phonics, and structural analysis. The intent of such instruction is to help children develop flexible repertoires of word identification strategies to be used singly or in combination to decode unknown words. However, in spite of the attention given to the development of these strategies, many children do not become successful in using them. Other children emphasize one strategy to the exclusion of others. As a result, their ability to identify words in connected text is often diminished.

The main purpose of this article is to describe in detail a procedure which teaches children to integrate two word identification strategies, use of context and of phonics. A study was conducted which tested the effectiveness of this integrative strategy, and a secondary purpose of this article is to present the results of the study.
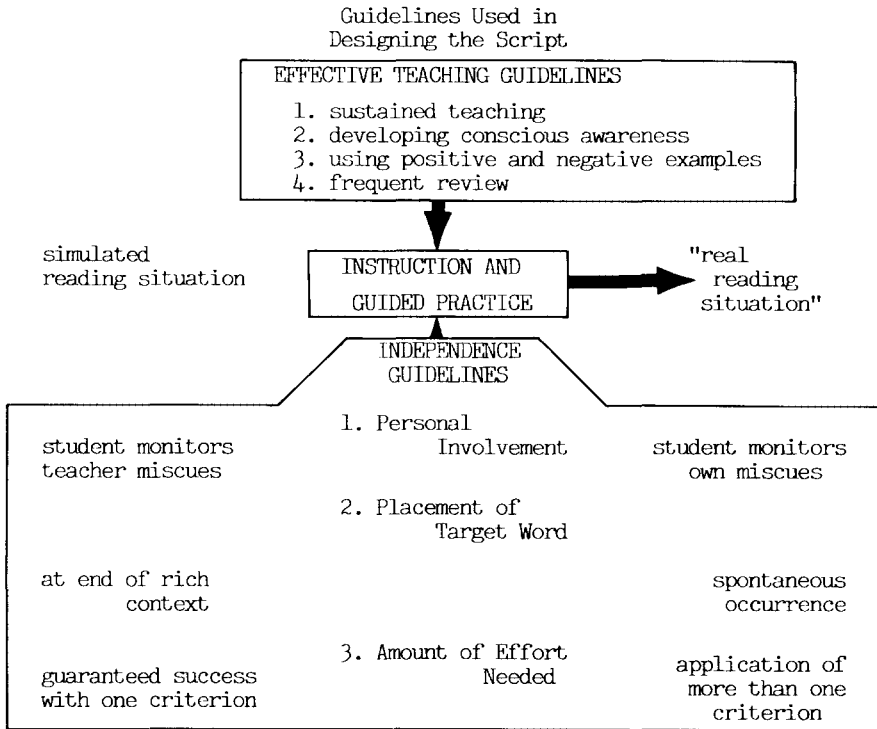
Development of the Instructional Script

A script was written to provide three 20-30 minute sessions of instruction and two 20-30 minute practice sessions in using a context-plus-phonics strategy. The overall instructional script was designed with two sets of guidelines in mind. One set of guidelines involved effective teaching. The second set of guidelines was concerned with developing successful and independent use of the strategy during "real reading." (See Figure 1, next page)

Four guidelines were utilized in order to provide effective teaching of the process of using the context-plus-phonics strategy. The first guideline was to provide sustained teaching. In contrast to instruction as mere "mentioning" of strategies (Durkin, 1978-1979), the instruction in this study was designed to provide 20-30 minutes a day of sustained exposure to the strategy over several days.

The second guideline for effective teaching was to develop in the children an awareness of how the strategy was supposed to work. Work by Duffy and Roehler (Duffy, Book, & Roehler, 1983; Duffy & Roehler, 1984; Roehler & Duffy, in press) has shown the importance of this conscious awareness of the "how." In the present

Figure 1

Guidelines Used in
Designing the Script

EFFECTIVE TEACHING GUIDELINES

1. sustained teaching
2. developing conscious awareness
3. using positive and negative examples
4. frequent review

simulated
reading situation

INSTRUCTION AND
GUIDED PRACTICE

"real
reading
situation"

INDEPENDENCE
GUIDELINES

1. Personal
Involvement

student monitors
teacher miscues

student monitors
own miscues

2. Placement of
Target Word

at end of rich
context

spontaneous
occurrence

3. Amount of Effort
Needed

guaranteed success
with one criterion

application of
more than one
criterion

study, children were taught a set of specific steps to follow
in using a context-plus-phonics strategy, and charts delineating
these steps were on display during all instructional and practice
sessions.

The third guideline for effective teaching is to explore
systematically why a right answer is right and why a wrong answer
is wrong. In the instructional sessions the children were routinely
asked to justify their selection of a particular word and their
rejection of another.

The fourth guideline employed to maximize the effectiveness
of the instruction was to provide systematic and frequent review.
Each lesson began with a review of earlier lessons and ended with
a review of the strategies taught in the current lesson.

Three guidelines were utilized to move the children from
the simulated reading situation of instruction to a situation
more clearly resembling real reading. These will be labeled "inde-
pendence guidelines." Each of the three independence guidelines was
on a continuum and the guidelines were utilized across their own
continuum at different rates across the five lessons. The first

of these independence guidelines was to increase gradually personal
involvement in the use of the strategy. The initial emphasis on
monitoring miscues involved the children in monitoring miscues
of the teacher, not their own. In this way, instruction began
in a non-threatening atmosphere because the children themselves
were not the ones making the mistakes. However, in "real reading"
children need to learn to monitor their own miscues. Thus, after
the children monitored the teacher's miscues in the three instruc-
tional sessions, they transferred their attention to their own
miscues during the two practice sessions.

The second independence guideline was to vary the placement
of the target word. This placement changed from the simulated
to the "real" reading situation. At the very beginning of instruc-
tion, the target word (i.e., the word assumed to be the unknown
word) was placed at the very end of the sentence, so that the
readers had a full context from which to draw clues by the time
they reached the target word. However, in "real" reading, unknown
words don't occur only at the end of context-rich sentences. There-
fore, the placement of the target word was gradually and systemat-
ically varied among all positions in the sentence. Finally, in
the two practice sessions which were designed to be most similar
to real reading, no target words were identified. Thus, unknown
words appeared spontaneously in all positions in the sentences
and without being identified as potentially troublesome.

The third independence guideline was to change systematically
across instruction the amount of effort needed to identify the
correct word. At the beginning of instruction, success was guaran-
teed because of the rich context used and the placement of the
target word. (See Day 1 of the script for an example.) Gradually
the children were shown how to choose from several meaningful
guesses by employing the additional criterion of beginning sound.
Finally, the children were given passages to read in which no
control had been exerted over the difficulty of the task (other
than to give the children a passage at their instructional word
recognition level). This was done to approximate "real" reading.

The script which follows is described in detail in order
that the reader can identify the use of the seven guidelines
described above.

The Script

Day 1

The children are told that sometimes reading can be "magic"
and that sometimes they will even be able to "read" invisible
words. They are then shown sentences, each of which has a word
near the end covered by a card. The sentences have been constructed
so that only one particular word is likely to be the "invisible"
word (e.g., "At Bob's birthday party, we had cake and ice [cream]").
Then a child and the teacher read the sentence together, with
the teacher allowing the child to provide the missing word. The
covering card is then removed and the group confirms that the
child's guess has been correct.

After the children practice identifying several "invisible" words at the ends of sentences, they are told that sometimes they will come to a word they don't know at the beginning of a sentence. They are assured that the "magic" will work then, too. They will need to skip the word they don't know, finish the sentence, and then return to the unknown word to see if the magic has worked by trying to put in a word that now makes sense. A sentence is shown in which a blank might be filled by more than one meaningful guess ("The bad dog ____ at me"). The teacher reads the sentence to the children, saying "blanked at..." The children's suggestions for words that make sense in the sentence are recorded on the chalkboard and discussed.

Next, the teacher shows the children how they can use the first letter or letters of an unknown word to guess at the exact word. The teacher writes the initial letter of one of the guesses on a card (e.g., b) and clips it at the beginning of the blank in the sentence. The children are asked to tell which of their guesses make sense and start with that sound. The correct word is written on a card clipped over the blank in the sentence and the sentence is then read in its entirety. The process is repeated for several more of the children's guesses.

The Magic chart (see Figure 2) is then introduced and the children are reminded to use the "magic" steps on the next set of sentences. These sentences are similar to the dog sentence, in that a word has been replaced by a blank near the beginning of a sentence and several different words might be appropriately supplied for that blank. After several meaningful guesses have been written on the board for a sentence, the beginning letter(s) of one of them is put in the blank and the children are asked "How do you know the word wasn't ____?" suggesting a word that begins with that letter but is semantically inappropriate. For example, for "My ____ has a pretty new dress," m may be chosen and the suggested word may be marshmallow. Then the children are asked the same question, but this time the word begins with the right letter but is syntactically (as well as semantically) inappropriate, such as marching. The question is asked a third time, with the suggested word being a meaningful guess but one that begins with the wrong letter (e.g., sister).

After several sentences have been explored in this manner, the magic chart is reviewed.

Figure 2 – The Magic Chart

1. Skip the word.

2. Read the rest of the sentence.

3. Go back to the word.

4. Look at the first letter.

5. Think of a word that makes sense. Try to think
   of a word that starts with that letter too.

6. Try that word in the sentence. Does it make sense?

Day 2

The chart is reviewed and the three "How do you know it wasn't _____?" steps from Day 1 are applied to several new sentences. Then a second chart is introduced to remind the children of the three things they should always think about:

A. Does that make sense?

B. Could you say it that way?

C. Does that word begin with the right first letter?

D. Did you say "yes" to all 3 questions?

Next, the children are told that they will be working on sentences that have real words in them instead of blanks, just like they will find when they are reading by themselves and come to a word they don't know. They are warned that they will only get one "out-loud" guess at a word, so they should be sure to use "magic" and think hard before they guess.

The practice sentences have been written to include an underlined word near the beginning or middle of the sentence that should be easy for the children to identify correctly if they use context and beginning sounds (e.g., "Dr. Weiss, the principal, visited our class"). After each word is successfully identified, the three "How do you know it wasn't _____?" questions are asked, to encourage the children to test their guesses semantically and graphophonically. As a final step for Day 2, the Magic chart is reviewed again.

Day 3

On this day the children are asked to determine if the teacher is using "magic." They are instructed to watch and listen to the teacher read a sentence, to wait until the teacher has finished the sentence, and then judge if she has read it correctly. If the teacher has hade a mistake, the children are to say "Does that make sense?", "Which word didn't make sense?" and then, "Think of a word that makes sense and starts with the same first letter." The teacher then elicits the correct word from the children.

For the first set of sentences, the teacher will make mistakes by supplying guesses that are semantically and/or syntactically inappropriate, such as "My broom [for brother] has a new bike" or "The bet [for big] cat said 'meow'."

For the second set of sentences, the children are reminded that sometimes they put in words that make sense, but they forget to look at the letters of the word. Errors such as these are made by the teacher in this set of sentences: "First [for then] I went to the store" and "Jack ran [for went] to school."

For the last set of sentences, the teacher will make errors by failing to skip a word and to read the rest of the sentence before guessing or by skipping the word but never returning to it. For example, for "The bird was flying in the sky," the teacher will pause 3 seconds before bird, with puzzled expression, then

provide <u>brown</u> for <u>bird</u> and finish the sentence. The teacher will <u>not</u> go <u>back</u> to correct the mistake. The children are asked if <u>the</u> teacher has used "magic" correctly and to tell why or why not.

The chart is reviewed and the children are urged to use the procedure when reading by themselves.

Days 4 & 5

The two days of practice are essentially identical. In an effort to personalize instruction, groups are smaller, with each group subdivided into two groups, and the children, rather than the teacher, do the reading.

While half of each group works with the teacher, the other three or four children play a context-based game with an assistant. Then the two sub-groups are switched. Before beginning the practice sessions, both sub-groups review the Magic chart.

The children who are working with the teacher read orally 100-word passages at their own instructional level. (In the study, this was determined by oral reading performance after the third day of instruction.) As one child reads aloud, the others in the group follow along silently on their own copy of that child's passage. If the child appears to use the "magic" context-plus-phonics strategy, praise is given. If the child fails to make use of the strategy, the teacher will wait until the child finishes a sentence and then directs the child's attention to the relevant portions of the Magic chart.

Children working with the assistant play a board game in which success is determined by the child's ability to identify an underlined word in a sentence context. The assistant follows the same reinforcement procedures as the teacher, praising the use of the target strategy and calling the child's attention to failure to make use of the strategy.

The Study

A study was carried out to determine the effects of the instruction described above on instructional word recognition level, context usage, persistence in using context, use of phonics, and substitution of real words as miscues.

Methods

Subjects. Forty-seven second grade children were screened in order to identify children's use of context. Fourteen children (nine males and five females) were identified as using context the least effectively.

Procedures. Pre-treatment scores on the five dependent variables (two scores for each variable, totaling 10 scores) were obtained from the oral readings of the two instructional word recognition level passages used during screening. The children were randomly assigned to experimental or control group. After three instructional sessions, interim testing took place. The

children read orally a new set of 300-word passages to determine their instructional word recognition level, use of context, persistence in context usage, use of phonics, and substitution of real words. After this interim testing, the experimental subjects took part in the two practice sessions described above. Final testing then took place after the practice sessions with a third set of leveled passages.

Measures. In order to identify the instructional word recognition level, the subjects read aloud on two successive days 300-word stories at varying readability levels (as determined by the Fry [1977] readability graph.) The stories had been adapted from basal selections. Rewriting was done so that each 100-word segment of a story was at the desired readability level. The children's oral reading was tape recorded and transcribed, and two instructional word recognition level passages (using Betts' [1946] criterion of 91-98% word recognition accuracy) were identified for each child, one each day. Two passages were used in order to provide a sufficient number of oral reading miscues for a reliable analysis of the use of context and so that the results would not be specific to a single passage.

In order to determine context usage, each child's miscues on the two instructional level passages were analyzed. A modification of Goodman and Burke's (1972) miscue analysis was used, in which a miscue was given a score of 2 if it were corrected or if it were semantically and syntactically appropriate. A score of 1 was given if the miscue were sytactically but not semantically appropriate, and 0 was given if the miscue were neither semantically nor syntactically appropriate. The mean score of a child's miscues was used to determine context usage. (Interrater reliability was .91.)

Persistence in using context throughout an entire selection was determined by the difference between a subject's context usage score on the first half of his or her miscues on a passage and the context usage score of the second half of miscues. A low score would be indicative of high persistence. (Interrater reliability was 1.00.)

Use of phonics was determined on the basis of phonemic agreement of initial sounds between the word pronounced by the child and the text word. (Interrater reliability for use of phonics judgments was .94.)

Substitution of real words, rather than nonsense words, as guesses for unknown words was measured, and the interrater reliability was .98.

Reading achievement level was measured by the total reading percentile score on the Prescriptive Reading Inventory (CTB/McGraw-Hill Staff, 1972).

Instruction. Both the experimental and control groups received instruction on three consecutive days in 20-30 minute sessions.

The experimental group received instruction according to the con-text-plus-phonics script described above. In order to control for the effect of oral reading practice, the control group read chorally the same sentences that the experimental group did and then listened to the teacher read them a story. During the two practice sessions, the control group children again read chorally with the teacher.

Results

Four repeated measures analyses of covariance were performed. Each analysis included a control for reading achievement level, treatment as an independent variable, and instructional word recog-nition level, context usage score, persistence in context usage score, use of phonics score, and substitution of real words score as the dependent variable.

The major finding was that by the end of the instruction, the context-plus-phonics instruction effected an increase in instructional word recognition level, when compared to the control group instruction. (See Table 1.) A significant treatment by time effect for instructional word recognition level was found
$$F \; [1,11] = 5.46, \; p=.04.$$
On the final set of passages, the mean instructional level of the ex-perimental group for the two stories was significantly higher than that of the control group (T = 3.27, Studentized Range Sta-tistic [2,12] = 3.08). However, at the interim testing, there was no significant difference (T = .46).

There was one other significant effect. For the substitution of real words, rather than nonsense words, the experimental group had a higher mean score on Interim Story 1 (.863) than did the control group (.781) (T = 3.61, Studentized Range Statistic [2,12] = 3.08).

Table 1

Means (Stan Dev) for Instructional Level of Passage

	Pre		Interim		Final	
	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2
Exper. Group	3.57 (1.40)[a]	3.86 (1.22)	4.14 (1.35)	4.57 (.98)	5.29 (.95)	5.57 (.79)
Con-trol Group	4.00 (1.41)	4.14 (1.46)	4.00 (1.83)	4.43 (2.15)	4.43 (2.15)	4.43 (2.15)

[a] 1 = Low first grade level   2 = High first grade level
5 = Low third grade level

Although the children in the experimental group had a post-treatment word recognition level one-half grade higher than that of the control group, the instruction did not affect their overt use of context (see Table 2) or their use of phonics. No significant

Table 2

Means (Standard Deviations) for Use of Context Scores

	Pre	
Experimental Group	Day 1	Day 2
	1.11 (.19)	1.24 (.27)
Control Group	1.25 (.19)	.91 (.23)

	Interim	
	Day 1	Day 2
Experimental Group	1.33 (.27)	1.25 (.38)
Control Group	1.06 (.35)	1.15 (.29)

	Final	
	Day 1	Day 2
Experimental Group	1.27 (.26)	1.45 (.18)
Control Group	1.41 (.30)	1.36 (.32)

effects on context usage or use of phonics were found

A likely explanation for the positive effect for instructional word recognition level without a concomitant effect for use of context or phonics is that the children were using the context-plus-phonics strategy silently and successfully. This silent use of context-plus-phonics to identify troublesome words would lead to higher accuracy at lower reading levels (thus the effect for instructional level). But because the strategy was often used successfully silently, the out-loud miscues (used to determine use of context) might have been for words for which the strategy did not work quickly. If the use of the context-plus-phonics strategy had not yet been developed to the automatic level, the children may have reverted to their initial ineffective strategies when the context-plus-phonics strategy did not work quickly. Extending the number of either the instructional or practice sessions might have developed the use of the context-plus-phonics strategy to the automatic level.

Summary

The script detailed above can be used by teachers in two ways. First, it can be used relatively easily to provide effective instruction in integrating two word identification strategies. It has been shown to have a positive effect on word recognition level. Second, the script can be used by teachers as a model for designing instruction intended to help children develop the ability to apply a strategy independently. Instruction needs to be thoughtfully and meticulously designed, and attending to the seven guidelines described in this paper may provide instruction which will prove to be more effective.

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