

# The Effect of Context on Ascertaining Word Meaning

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## ABSTRACT

The purpose of this study was to quantify the effects of context vs. no context on the ability to ascertain word meaning on multiple-choice vocabulary tests. Forty-three eighth grade students classified as good or poor readers were administered the vocabulary section from a standardized reading test wherein the stimulus words were presented in isolation. Two weeks later the students were administered a revised version of the same test wherein the stimulus words were embedded in context-rich sentences. The context means were dramatically higher than the isolation means. The results indicated very clearly that not only does context facilitate the ascertainment of word meaning, but that it does so for poor readers and good readers alike.

Some years ago Goodman (1976) called reading a "psycholinguistic guessing game." What he meant by this was that reading is a process wherein the reader is guided by expectations that are either confirmed or denied in search of meaning, rather than a precise process of letter and word identification. Goodman went on to say that in teaching reading we should therefore avoid instructional practices that discourage the reader from making such a search.

One instructional practice that discourages a search for meaning is that of teaching words in isolation. When words are divorced from what Goodman elsewhere calls "the flow of language" (1965, p.640), the reader is deprived of semantic and syntactic cues which are a potent aid to word identification -- so potent, in fact, that Gray (1960) was led to conclude: "Context clues are perhaps the most important single aid to word perception." (p.25)

The potency of context clues that Gray spoke of was demonstrated by Goodman (1965) in a study involving 100 students in grades 1, 2, and 3. Each student read a list of words followed by a story that contained those same words. Goodman expected that the students would be able to read many words in stories which they could not recognize in lists. This proved to be the case. For example, 89% of the first grade students correctly identified in the stories at least half of the words they were unable to identify in list form. Goodman's explanation for the results was that in list form the students had only within-word cues, while in story form they had

additional cues in the form of the semantic and syntactic environment in which the words were embedded.

Although Goodman's study clearly showed that context helped students to arrive at the pronunciation of many previously misidentified words, it did not explore the influence of context on an equally important aspect of word perception -- meaning. It is generally agreed that context clues help students to arrive at the meaning of unfamiliar words. Furthermore, there have been studies that have explored which type of context clue best facilitates the identification of word meaning (e.g., Dulin, 1969). However, this writer was unable to locate a study that compared the effect of context versus the effect of no context. It would seem that the potency of context with respect to ascertaining word meaning would be most convincingly demonstrated under that condition. One purpose of this research, then, was to compare the word meaning performance of students under two testing conditions: (1) words presented in isolation, and (2) the same words presented in context. A second purpose was to examine the differential effect that contextual information might have on good and poor readers.

### *Subjects*

The original sample of subjects included all of the 8th grade students (N = 176) from a school district in the Midwestern U.S. A subsequent selection by reading ability scores on a standardized reading test resulted in using data from 43 students.

### *Procedure*

During the Fall term of the 1982-1983 school year each student in the original sample was administered Level E (designated for grades 7-9) of the *Gates-MacGinitie Reading Tests*. Level E consists of a 45-item vocabulary test and a 43-item comprehension test. The vocabulary test calls for the students to match a stimulus word with a synonym from among five alternatives. The comprehension test entails reading a series of short passages and answering from two to four multiple-choice questions over each one. Normative scores are provided for both tests individually and for the two combined.

The "combined" percentile score was used to identify good and poor readers. Good readers were defined as students whose percentile score was in the 75-99 range. Poor readers were defined as students whose percentile score was in the 1-25 range. This created well defined boundaries between the two target reading levels.

Two weeks after the administration of the Gates-MacGinitie the students in the original sample were also given a modified version of the vocabulary test. In place of each stimulus word there was a context-rich sentence containing it. The alternatives were not changed. A context-rich sentence was defined as a sentence that met the following criteria elaborated by Duffelmeyer (1982):

1. *Experience*. Each sentence should incorporate an experience that the students can relate to.
2. *Familiar Words*. The student should be familiar with all of the words other than the target word.
3. *Placement*. The target word should be placed near the end of the sentence so that most of the context clues are encountered before the target word is met.

The context-rich sentences had been written by the investigator and piloted on education graduate students during the previous summer. Examples of an original and modified item are shown below:

Original: exceed

- A. go beyond
- B. do well
- C. proceed
- D. stumble
- E. approve

Modified: When you are driving, be careful not to *exceed* the speed limit.

- A. go beyond
- B. do well
- C. proceed
- D. stumble
- E. approve

For the good and poor readers the investigator calculated the raw score on the original vocabulary test and the raw score on the modified vocabulary test. The raw scores were then analyzed according to the procedures described below.

### Results

The raw score means and standard deviations obtained by the good and poor readers on the original and modified vocabulary tests are shown in the Table.

The Table shows that the context means are considerably higher than the isolation means for good readers and poor readers alike. This pattern is vividly illustrated in the Figure.

Since this was a case where all of the subjects were measured across all levels (isolation and context) of one factor (testing condition), a repeated measures design was used to analyze the data. The within-subjects factor was testing condition, while the between-subjects factor was reading ability. There was a statistically significant main effect for testing condition  $F(1,41) = 219.88, p < .001$ , and a statistically significant main effect for reading ability  $F(1,41) = 150.59, p < .001$ .

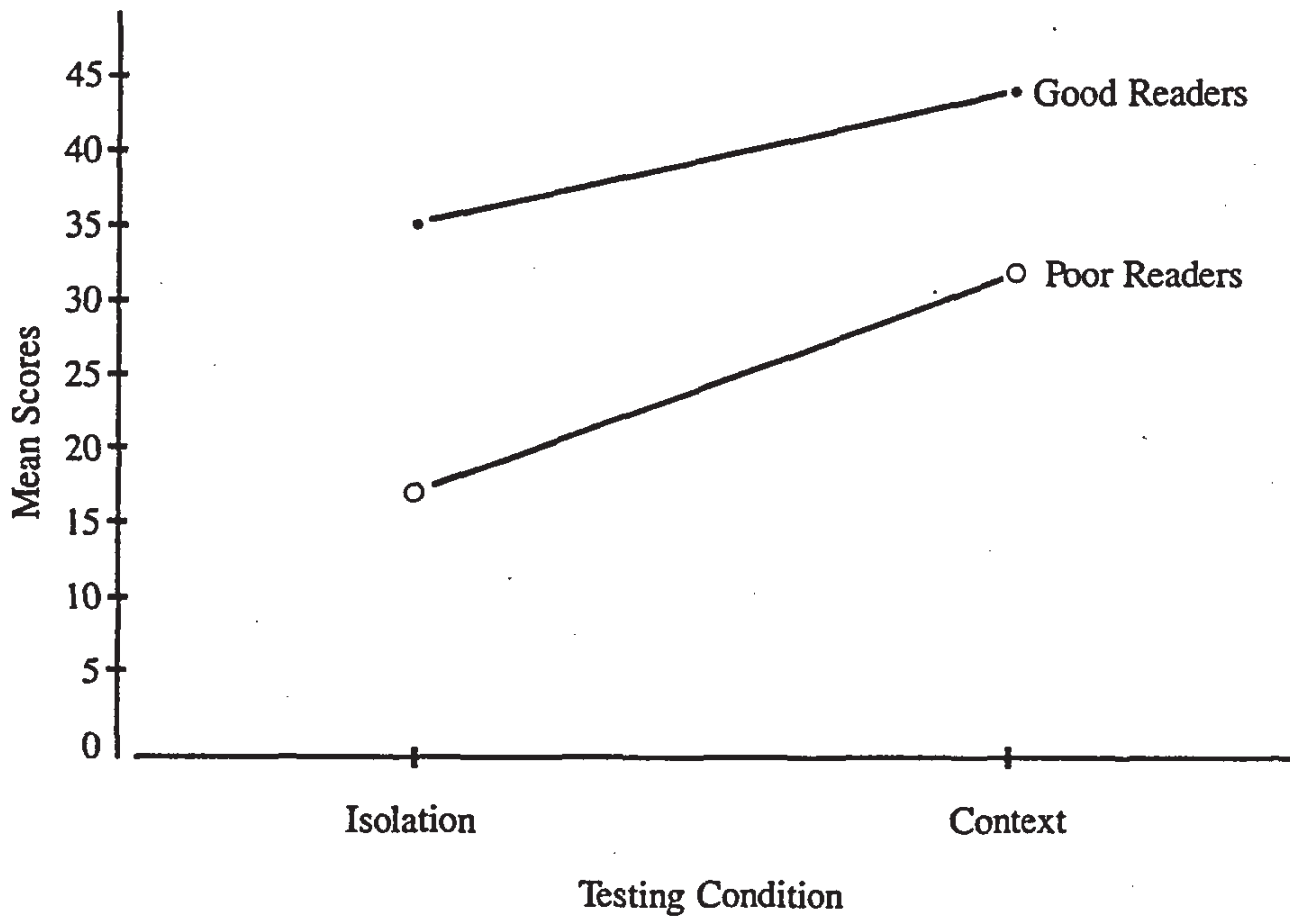
### Discussion

When a set of words was presented in context, the 8th grade students in this research were able to ascertain the meaning of a much higher proportion of those

Table  
Vocabulary Scores for Good and Poor Readers  
Under Two Testing Conditions

Reading Ability	Testing Condition					
	Isolation			Context		
	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.
Good	25	34.4	2.9	25	43.2	1.3
Poor	18	16.5	5.3	18	31.3	7.9

Figure

Mean Scores for Good and Poor Readers  
on Isolation and Context Tests

words, on the average, than they had previously been able to ascertain when the same words were presented in isolation. The isolation mean for the entire sample (good readers and poor readers combined) was 26.9 out of a possible 45, while the context mean was 38.2.

This difference was not due to the performance of good readers alone. For even though the good readers, on the average, unquestionably benefited from the availability of context clues (the isolation and context means being 34.4 and 43.2 respectively), so did the poor readers. The context mean for poor readers (31.3) was nearly

twice as large as their isolation mean (16.5). This indicates that poor readers are quite capable of using context to ascertain word meaning.

One might argue that the context means are inflated due to a kind of test-retest phenomenon. In other words, the students did better on the context test because they had been sensitized to the target words on the previously administered isolation test. Whatever sensitization occurred, however, would likely have been cancelled by the fact that there was a two-week interval between the two administrations.

One might also argue that the context means were inflated due to the fact that the students did not have to come up with the meanings of the words on their own. Instead, on each item they were presented with options from which to select the correct response. In other words, the task that the students faced was a *recognition* task as opposed to a *production* task. Admittedly, the context means would have been lower if the students had been presented with a production task. However, students did not have to *produce* meanings on the isolation test, either. We might reasonably suppose that the *relative* difference between the isolation and context production means would have been comparable.

### *Concluding Remarks*

At the outset of this research it was implied that in teaching reading we should take advantage of every opportunity to engage students in a search for meaning, since that is the ultimate purpose of reading. One opportunity that frequently arises is that of teaching new vocabulary. Farr and Roser (1979, p.188) have stated that “. . .using context analysis to unlock a word is the behavior most in tune with the purpose of reading. . .” This suggests that strategies for teaching word meaning should incorporate some sort of contextual component. This would seem especially critical with respect to poor readers. The results of this research indicated that even poor readers are capable of using context to ascertain word meaning. Therefore, they especially should be given an opportunity to enlarge their reading vocabulary via the deliberate provision of contextual information.

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