Deriving word meaning from written context: a process analysis

R.G. Fukkink[*]

*SCO-Kohnstamm Instituut, Universiteit van Amsterdam, Wibautstraat 4,
1091 GM Amsterdam, The Netherlands*

Abstract

The paper reports on a study among primary-school students of the process of deriving word meaning from written context in a first language. A sequential analysis of think-aloud protocols revealed that the students inferred one or more meanings, checked their inferences and then rejected or accepted them. These activities were performed in a highly flexible manner and their order varied. Four major sequences, which were not equally effective, showed up in a cluster analysis. The paper concludes by discussing implications for instruction and think-aloud research.
© 2005 Elsevier Ltd. All rights reserved.

Keywords: Deriving word meaning from context; Reading strategy; Think-aloud methodology; Sequential analysis

1. Introduction

Primary-school students encounter many unfamiliar words while reading. A conservative estimate is that students in middle grades encounter each year some 16,000–24,000 totally new vocabulary items (Nagy, Anderson, & Herman, 1987) in approximately a million running words of text (Nagy, Herman, & Anderson, 1985). Children develop impressive vocabularies at a phenomenal rate in the primary school

* Tel.: +31 20 5251351; fax: +31 20 5251200.
  E-mail address: r.g.fukkink@uva.nl

period, and the default explanation is that most vocabulary is acquired by deriving word meaning from context (Beck & McKeown, 1991). According to Nagy and Anderson (1984), word meanings derived from a written context account for at least a third of the total vocabulary growth during the primary school period, which has been estimated at 3000 words per year (Beck & McKeown, 1991; Nagy & Scott, 2000).

Deriving the meaning of an unknown word from the written context is a complex and demanding task. First, the complexity of the word is a crucial factor. The unknown word may be related to a known concept, in which case it is a 'simple synonym' (Durkin, 1990). An important proportion of the new words that primary-school students encounter during reading, however, are 'conceptually challenging words' (Durkin), that is, words with new labels that refer to unfamiliar concepts. Also the concreteness of the unfamiliar concept is related to the complexity of deriving word meaning from context. The abstract word 'dilemma', for example, is conceptually challenging for primary-school students, although they may be familiar with the related concepts of 'difficult', 'choice' and 'two options'. Second, the complexity of deriving word meaning from context is, of course, also influenced by the context. Contexts are helpful only to a certain extent, and they do not reveal the full meaning of a word, even when explicit clues are present (e.g. a synonym or antonym clue). Some contexts are even misleading (Beck, McKeown, & McCaslin, 1983; Schatz & Baldwin, 1986). Readers therefore often glean only partial word knowledge from context (Swanborn & de Glopper, 1999) and include both correct and false attributes in their definitions (Fukkink, Blok, & de Glopper, 2001). Students experience additional problems in formulating a decontextualized word meaning that is abstracted from the original context. However, previous studies have also shown that both young students and students with a low verbal ability understand the task and are capable of performing meaning-derivation activities that were previously ascribed only to mature students of high ability. Although older students generate more and better hypotheses, younger and older primary-school students seem to work in a qualitatively similar way in deriving word meaning from single contexts (van Daalen-Kapteijns, Elshout-Mohr, & de Glopper, 2001; Werner & Kaplan, 1952).

Many authors have advocated instruction in deriving word meaning from context, considering its intrinsic complexity and also its potential (Baumann et al., 2002). Jenkins, Matlock, and Slocum (1989: 218) note that this type of instruction has a 'sound and persuasive rationale', because students encounter a large number of unknown words, and even a small improvement in the ability to infer the meaning of these words results in a sizable number of words learnt. An evaluation of experimental studies has shown mixed results: some were successful, while others established only small and non-significant effects or even negative effects (Fukkink & de Glopper, 1998; Kuhn & Stahl, 1998).

A central problem that educational designers face in this area is a lack of knowledge of how to help students to acquire an effective strategy. We do not yet know what activities untrained primary-school students perform in deriving word meaning from written context, and there is only scarce knowledge of how strategy instruction can fit in with these natural routines (Fukkink & de Glopper, 1998).