

Morphological awareness in L1 and L2 reading skills

Vassiliki Tsela¹, Georgia Andreou¹, Maria Liakou², Julie Baseki²

¹Department of Special Education, University of Thessaly, Greece

²Hellenic Open University, Greece

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Abstract

The present study investigated the effect of morphological awareness on three measures of reading, namely decoding, fluency and comprehension, in Greek as a first language (L1) and in French as a foreign language (L2). Morphological awareness was assessed via two tasks, a verb inflection task and a word production task. The results of this study indicated that the student's performance in the two morphological tasks was significantly associated with their performance in the reading tasks. Our results support our hypothesis that morphological awareness can be a significant predictor of the high or low performances in decoding, reading fluency and reading comprehension in both L1 and L2 and it plays a critical role in reading efficiency.

Keywords: morphological awareness, reading skills, Specific Reading Disorder, Greek (L1), French (L2)

Introduction

The relationship between morphological awareness and reading skills has been repeatedly documented. The contribution of morphological awareness to both decoding and comprehension reading skills increases with age and consequently, it gets more important in later reading development stages (Carlisle, 2000; Tong, Deacon, Kirby, Cain, & Parrila, 2011). Furthermore, research has shown that students with Specific Reading Disorder (SRD) have limited morphosyntactic skills when compared to students with Good Reading Skills (GRS) in both their first (L1) and second/foreign (L2) language (Casalis, Colé, & Sopo, 2004).

Purpose of the study

The aim of the present study was to investigate the effect of morphological awareness on three measures of reading, namely decoding, fluency and comprehension, in Greek as a first language (L1) and in French as a foreign language (L2). For both students with GRS and students with SRD, morphology skills are expected to predict students' reading skills in each language.

Method

The sample consisted of two groups of students in the last two grades of primary school (Grades 5 and 6), students with GRS (N=49) and students with SRD (N=49). Morphological awareness was assessed via two types of tasks, a verb inflection task and a word production task, from “Learning Disabilities Reading Inventory” (Padeliadu & Antoniou, 2008), a standardized reading assessment tool for the Greek language, and a reading assessment tool for the French language developed for the purposes of the present study. Pearson's r correlation coefficient was used for the statistical analysis of the data.

Results

The results of the study revealed significant correlations between morphological awareness and reading skills in both languages in both groups.

Table 1. Correlation between morphological awareness and reading skills in Greek and in French in GRS and SRD students.

Task	Group/Language	Decoding	Fluency	Comprehension
Verb inflection/Greek	GRS/Greek	$r=0,684$ $P<0,001^*$	$r=0,498$ $P<0,001^*$	$r=0,318$ $P<0,001^*$
	SRD/Greek	$r=0,306$ $P<0,001^*$	$r=0,335$ $P<0,001^*$	$r=0,475$ $P<0,001^*$
Verb inflection/French	GRS/French	$r=0,467$ $P<0,001^*$	$r=0,457$ $P<0,001^*$	$r=0,537$ $P<0,001^*$
	SRD/French	$r=0,719$ $P<0,001^*$	$r=0,517$ $P<0,001^*$	$r=0,693$ $P<0,001^*$
Production of compound words/Greek	GRS/Greek	$r=0,746$ $P<0,001^*$	$r=0,563$ $P<0,001^*$	$r=0,416$ $P<0,001^*$
	SRD/Greek	$r=0,258$ $P=0,007^*$	$r=0,353$ $P<0,001^*$	$r=0,449$ $P<0,001^*$
Word production/French	GRS/French	$r=0,550$ $P<0,001^*$	$r=0,513$ $P<0,001^*$	$r=0,625$ $P<0,001^*$
	SRD/French	$r=0,482$ $P<0,001^*$	$r=0,611$ $P<0,001^*$	$r=0,665$ $P<0,001^*$

GRS: Good Reading Skills, SRD: Specific Reading Disorder,

*Statistically Significant difference

Discussion

An important finding of the present study is the high correlation between morphological inflection and decoding as well as fluency. It seems that the functional character of inflection suffixes in the verb inflection task influences the precision and the fluency in reading both in Greek and in French for both

groups of students, who have completed the first stage of learning to read and write in their mother tongue. More specifically, inflection suffixes bear phonological information (Mahony, Singson, & Mann, 2000; Ralli, 2005) which can have an impact on word decoding, as the phonological information found in some verb suffixes influences the word pronunciation and causes changes in the intonation and the pronunciation of the radical part of the word both in Greek and in French. Moreover, the high correlation between morphological awareness and word decoding and fluency may be linked to the complex morphological structure of some of the words which were used in the tasks. The high correlations between performance in the tasks of morphological inflection and reading comprehension show that text comprehension is influenced by morphological inflection awareness, since inflectional suffixes bear morphosyntactic and semantic information.

As for the students' morphological awareness performance on the word production tasks, the present study showed that there is strong correlation between performance on these tasks and decoding and fluency in both languages. These findings indicate that the phonological, syntactic and semantic information included within production suffixes influence word decoding (Mahony, Singson, & Mann, 2000; Ralli, 2005). The morphological production tasks included items in which the derived word was phonologically different from the radical. This condition of phonological change, which caused difficulties to the students with SRD, shows the significant dependence of phonological skills on morphological processing and, consequently, the impact of morphological awareness on reading decoding. Additionally, the derivatives and the compound suffixes in the Greek language are semantically opaque forms (Ralli, 2005) and can cause difficulties to students with SRD. The same happens with derived words in the French language. In conclusion, low performance in reading, decoding and fluency, as a consequence of phonological deficit, as well as the phonological and orthographic changes between radical and derived words seem to influence and thus explain the low performances of students with SRD in morphological awareness tasks.

The results of the present study also showed that there is strong correlation between the students' performance on the morphological production task and the reading comprehension task in both languages for both groups. It is quite interesting that morphological production is a significant predictive indicator of reading skills for upper grades of primary school, when reading has started to be an automatized skill. According to our hypothesis, the more the decoding ability improves, with the number of morphologically complex words increasing in upper grades, the more morphological awareness through the recognition of words bearing familiar morphemes and, consequently, fluent reading is facilitated. Furthermore, phonological and semantic transparency between derivatives and radicals, as well as between compound words and their components, seem to facilitate the interpretation of unknown words and,

therefore, influence reading comprehension (Kuo & Anderson, 2006). Regarding Greek students in the early stages of learning French as a foreign language, the present study showed that morphological awareness skills can predict reading comprehension skills.

For the students with SRD, poor performance in morphological awareness should be expected, since morphemes also bear phonological characteristics and, consequently, the difficulty in phonological processing which leads to the difficulty in decoding and fluency seems to be positively related with morphological skills, as well. It seems that deficient skills in phonological processing are responsible for the limited skills in morphological processing for students with SRD, since the morphological awareness tasks contained phonologically opaque words.

It is concluded that morphological skills can predict reading performance for both students with SRD and students with GRS in both their L1 and L2. Moreover, the correlations between morphological skills and reading skills found in this study indicate that morphological skills can play a role in the reading performance in an alphabetic language with a rich morphology like the Greek language, but also in the reading performance in a language with a simpler morphology, like French.

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