

# DEAF STUDENTS' USE OF STRATEGIES WHILE READING EXPOSITORY TEXT. A THINK-ALoud STUDY.<sup>1</sup>

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## ABSTRACT

Reading is a complex task for deaf students (Luckner & Handley, 2008), and only a few of them become proficient readers. Learning about what these students do differently might help us reduce the gap. This study aimed to (a) identify the strategies used by deaf students when reading informative expository texts and (b) compare better and poor readers regarding strategy use.

A think-aloud procedure was used with 26 deaf students (ages 14-22), to try to capture the strategies they use when asked to read one or two expository passages of different difficulty level. Students were asked to stop at three points during each reading, answer some questions regarding their cognitive processes (following Banner & Wang's procedure, 2010), and produce a retell at the end. Chilean Sign Language was used in the interviews, which were all videotaped and transcribed.

Results show that deaf students report few strategies when trying to make meaning from text. Although all students encounter unknown words, only a few describe what they do to try to find out their meaning. Better readers adopt a more active engagement while reading, while weaker readers tend to get easily discouraged when they found many unknown words in the text.

Comprehending informative expository text is a crucial task to succeed in high school and college. Deaf students depend heavily on others to construct meaning from text and only few of them are independent readers. They need more opportunities to learn cognitive and metacognitive strategies that could help them in this process.

## INTRODUCTION

During the early school years, children read mostly narrative text, but this situation changes around fourth grade, when they are expected to be able to read for information and to learn school content by reading informative expository texts (Akhondi, Malayeri & Samad, 2011). Comprehension of this type of texts plays an important role on learning in high school, and it is critical in higher education; college students must deal frequently with them in order to acquire, construct, and transmit knowledge (Hall, 2004; Tarchi, 2010).

Given the importance of expository texts, it is a problem that students find them harder to understand than narrative texts (Jitendra, Burgess & Gajria, 2011), particularly when they have low reading competence (Hall, 2004).

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Several studies provide evidence that many deaf students do not achieve high competence in reading and writing (Albertini & Mayer, 2010; Bowe, 2002; Wauters, van Bon, Tellings, & van Leeuwe, 2006). Just like any other students, deaf students need to become competent at reading for learning if they are going to succeed in college. It is important to learn more about the strategies used by deaf students when reading different types of text, in order to design interventions that help them become more strategic and competent readers. There are very few studies on the strategies used by deaf readers, particularly by those who are competent readers (Banner & Wang, 2010; Toscano, McKee & Lepoutre, 2002). Schirmer and her colleagues have conducted two studies with deaf children using verbal protocols to identify the reading comprehension strategies they use (Schirmer, 2003; Schirmer, Bailey & Schirmer Lockman, 2004). Both studies used the reading comprehension strategies classification developed by Pressley & Afflerbach (1995, in Schirmer et al., 2004), which presents three large groups of strategies: Meaning constructing, Monitoring and improving comprehension and Evaluative strategies. They found that deaf children use only some of the strategies in each group and they use strategies from the first group more frequently than from the other two. Banner and Wang (2010) used the same categories in a study with deaf adolescents and deaf adults. They found that deaf readers use a variety of strategies, especially the more competent ones. They also found that deaf adults used more and better strategies than the students, who showed a more passive attitude during reading tasks; and, in general, participants used a larger number of strategies when reading narrative texts than when reading expository texts.

In Chile there is also evidence of deaf students' low levels of reading comprehension (Lissi, Cabrera, Raglianti, Grau, & Salinas, 2003), but there are no studies describing the strategies they use. This study aimed to identify the strategies used by deaf students when reading informative expository texts, and to compare more and less competent readers regarding strategy use.

## **METHOD**

### **Sample**

Participants were 26 deaf students, 10 females and 16 males, ages 14-22 years old. The students were all between 8<sup>th</sup> and 12<sup>th</sup>, except for one in higher education.

### **Procedure**

The students were asked to read informative texts selected from a series of books entitled "World's Curiosities" and "Nature's Curiosities" that contain one- or two-pages long texts about some interesting and not well-known topic (Ayala & Larraguibel, 2011; Larraguibel & Ayala, 2009a, 2009b, 2010, 2011; Larraguibel & Traverso, 2009). Texts were assigned to one of two categories: short-easy and long-difficult. The short-easy texts are equivalent to the fourth and fifth reading level of a Chilean reading comprehension test (CLP, Alliende, Condemarín y Milicic, 2004) and the long-difficulty corresponded to the sixth and seventh level in the same test. Texts equivalence was confirmed using number of words, a readability index calculated through the Inflesz program (Legibilidad.com, 2007), the average word frequency in Spanish written texts according to Metametrics corpus (Metametrics, 2015), and Lexile index, which measures syntactic and semantic text features (Metametrics, 2015).

Each text was divided in three parts, marking the end of each part by inserting a red square. A guided think-aloud procedure, similar to the one designed by Banner and Wang (2010) was used to capture students' strategy use while reading. Assessments were carried out by hearing or deaf adults proficient in Chilean Sign Language (ChSL), all of them trained by members of the research team.

Based on their teachers' opinion about their reading skills, students were divided in two groups (low reading competence and high reading competence) and were presented with one of the two reading situations that are briefly described below. The higher education student was assigned to the second group. There were 13 students in each group.

1. Simple Reading Task: Students sit in front of the interviewer and on a table near them there is a dictionary, a highlighter and a pencil. Two short and simple texts are presented to the student, who chooses one for reading. The student is told to start reading as he usually does, and they could use any of the things on the table if they wanted to. They should read normally until they reach the red mark. At that point they should look at the interviewer who would ask them some questions. At each pause the interviewer asks the following questions: (a) What were you thinking when you were reading that part? (b) While you were reading, did you think of something you already knew or have experienced before? (c) Where there words or sentences that you did not understand or that confused you? (d) What did you do to try to figure out the meaning of that word or sentence? The same questions were asked at the end of each of the three parts of the text. Then, the student was asked to reread the whole text, and produce a retell of its content. After the student finished retelling the text, the interviewer asks him to give a summary of the text, and to report the main ideas. Then, five more questions are asked: (1) Who do you think wrote this text? (2) Why do you think he or she wrote it? (3) Did you like the text? Why? (4) Why did you pick that text? (5) Did you find it easy or difficult? Why? Finally, the interviewer asks what type of things does the student like to read, and what does he normally do when he is reading something and comes up to a word or sentence that he does not understand.

2. Challenging Reading Task: The setting is the same as in the other situation. The difference is that the student is asked to read two texts. First, the same two texts of the first condition are presented, following the same process. After asking the questions that follow the production of the retell, the student is presented with two more texts, which are longer and more complex than the first ones. They are asked to choose one of them to read, and the same process is followed again. After answering the last question related to this last reading, the interviewer asks the last two questions mentioned at the end of the condition 1.

Each session was videotaped and transcribed for further analysis. The transcripts were reviewed in order to identify the strategies used by students. An open-coding procedure of content analysis was used, and the categories that emerged were also contrasted with those found in earlier studies (Banner & Wang, 2010; Schirmer, 2004).

## **RESULTS**

None of the students in the low reading competence group managed to get a complete comprehension of the text they read. They tried to do a word-by-word reading and were only able to report isolated ideas. On the other hand, most of the students in the high reading competence group were able to get a good understanding of the first text and at least a partial comprehension of the main ideas of the longer and more complex text.

The emerging codes were grouped considering the three overarching activities in strategic reading described by Pressley and Afflerbach (1995, cited by Schirmer, 2004): Constructing Meaning, Monitoring and Improving Comprehension, Evaluative Comprehension.

### **Constructing Meaning**

One of the problems deaf students encounter when they read is that they come across many unknown words. Therefore it is important to know what they do when that happens. More than half of them report that they usually ask somebody else for the

meaning of the word, usually a teacher or one of their parents. If none of them is available, some of them indicate they register or memorize the word to ask them later. Most of them also report using the dictionary or searching the internet, although only two of them actually used the dictionary during the reading task, and one of them did it only one time. One of the students looked up every unknown word in the dictionary, but many times this was not useful for grasping the meaning of the word in the text.

A small group of highly competent students reported using specific strategies oriented to construct meaning in a more autonomous way, such as using context to figure out the meaning of a word. The strategy of using the pictures to support comprehension was reported by students in both groups. Only students in the high competence group reported using the strategy of rereading a paragraph when trying to understand.

It is important to point that, when asked about what they did to try to find the meaning of a word while they were reading, close to a third of the students –including students from both groups- could not report any specific strategy, and answered things like “I try hard”, “I make an effort”, “I read it again and again”.

Students in both groups activate prior knowledge when they read and use it to try to understand the texts, but while 76% of the more competent readers do this, only 30.7% of less competent readers report it.

### **Monitoring and Improving Comprehension**

Some of the students, especially among those in the high competence group, seem more aware of their comprehension processes, clearly distinguishing when they are understanding and when they get lost. Beyond this, they do not report actively monitoring their comprehension or taking measures to improve it during the reading process. Only the higher education student described how he was testing his reading hypothesis during the reading.

### **Evaluative Comprehension**

Although they do not report this spontaneously, when they are asked about it, most students show they can think of who could have written the text, and infer what purpose the author had in mind. All students were able to indicate if they have liked the text or not, and the main reasons they give to justify a positive evaluation were: the topic was interesting, they could understand it, and it provided important information. Students' answers to the question about the possible author and his or her intention, as well as the reasons they give when they say they liked the text, indicate that they are aware that the texts are informative-expository and not fiction-narrative ones. This is even true for those students that did not manage to get a grasp on the text's main ideas.

With regard to more sophisticated evaluative comprehension strategies, only two students, both in the more competent group, enunciated a critical comment about a passage on the text.

## **DISCUSSION**

These results show that students in this sample are less strategic readers than those in previous American studies (Banner & Wang, 2010; Schirmer, 2003; Schirmer et al., 2004). However, it is important to consider that expository texts like the ones used in this study are more complex for students (Jitendra et al., 2011) and therefore it is less likely that they use strategies when reading them (Banner & Wang, 2010). Conducting other studies with narrative texts would allow to explore possible differences.

Just as those in Schirmer's study (2003), these students used more constructing meaning strategies and almost none evaluative comprehension strategies. We could also say that, like the students in the study of Banner and Wang (2010), our students

tend to have a very passive approach to reading. They seem to attempt a word by word reading, which limits their possibilities of constructing meaning. It would be important for those working with deaf students to include the systematic teaching of reading strategies.

This study is the first carried out in Chile using think-aloud protocols to explore reading comprehension strategies use by deaf students. As such, it makes an important contribution to understand deaf students' difficulties to construct meaning from written text, and the importance of finding better ways to help them overcome them.

One limitation of the study is that it included very few highly competent readers. Although students in the high competence group clearly showed better comprehension than those in the low competence group, only three of them managed to show a high level of comprehension of the more difficult text. In order to learn more about what are the strategies used by skilled readers, further studies should include more students in their last years of high school as well as higher education students.

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