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SPEED READING AND INNER SPEECH: WHAT VERBAL REPORTS SUGGEST

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Abstract. As we might experience it while reading this abstract, silent reading often implies hearing our “inner voice” and pronouncing words inwardly. Vygotsky determined that this inner voice is the product of a process called internalization in which people transform external speech into internal expression. It remains to be determined, however, how English learners begin to use their inner voice to internalize the foreign language by using a series of speed reading activities. We implemented a constructivist-interpretative study to find the primary uses of the inner voice in the internalization of English through foreign language texts. We carried out the study in a public university of Popayán (Colombia) in a beginners’ class comprising 17 students of English as a foreign language. We gathered data through verbal reports and a stimulated recall technique. This study suggests that beginner students use their internal speech mainly to subvocalize, vocalize, repeat, and translate what they read. The study also suggests that students use their internal voice to make associations with visual images as students’ reading skills develop. Further research might explain how speed reading contributes to the use of inner speech to make associations with images.

Keywords: Fluency, Foreign Language, Inner Speech, Speed Reading

LECTURA RÁPIDA Y HABLA INTERNA: LO QUE LOS REPORTES VERBALES SUGIEREN

Resumen. Como podemos experimentar mientras leemos este resumen, la lectura silenciosa a menudo implica escuchar nuestra “voz interior” y pronunciar palabras mentalmente. Vygotsky determinó que esta voz interior es el producto de un proceso llamado internalización en el que el habla externa se transforma en habla interna. Sin embargo, queda por determinar cómo los estudiantes de inglés comienzan a usar su voz interior para internalizar este idioma mediante una serie de lecturas rápidas. Implementamos un estudio

de tipo constructivista-interpretativo para determinar los usos iniciales de la voz interior en la internalización del inglés a través de la lectura de textos escritos en lengua extranjera. El estudio se llevó a cabo en una universidad pública de Popayán (Colombia) en una clase de 17 estudiantes de inglés como lengua extranjera. Se recopilaron datos a través de informes verbales y una técnica de recuerdo estimulado. Este estudio sugiere que los estudiantes principiantes usan su habla interna principalmente para subvocalizar, vocalizar, repetir y traducir mentalmente lo que leen. El estudio también sugiere que los estudiantes usan el habla interna para hacer asociaciones con imágenes visuales a medida que su habilidad lectora se desarrolla. Investigaciones adicionales podrían explicar cómo la lectura rápida contribuye al uso del habla interna para hacer asociaciones con imágenes visuales.

Palabras clave: Fluidez, Habla interna, Lectura rápida, Lengua extranjera.

Introduction

We all hear “some form of internal, self-directed inaudible speech” in our head, commonly called inner speech (Guerrero, 2017, p. 2). Inner speech, or speech for oneself (Vygotsky, 1987), occupies at least one quarter of people’s conscious waking life (Uttl, Morin, Faulds, Hall, & Wilson, 2012), is central to processes such as self regulation, memory and problem solving (Morin, Uttl & Hamper, 2011), and is involved in reading (Perrone-Bertolotti et al., 2012). According to Perrone-Bertolotti et al. (2012), when we learn to read in our first language (L1), we learn to associate written symbols with spoken sounds; after much training, that association occurs effortlessly and we can read silently. Introspection studies suggest that after learning to read fluently, we continue to pronounce written texts inwardly when reading (Jäncke & Shah, 2004).

From the sociocultural theory perspective, children develop their native language inner speech as they apply social forms of communication to their thinking processes. Transforming external discourse into an inward expression is known as internalization. According to Fernyhough (2004), people carry out the internalization process of a language in a four-level process. At level 1, people use *social speech* in dialogues. At level 2, children and sometimes adults conduct these dialogues in their overt, *private speech*; they speak aloud to themselves. At level 3, people fully internalize private speech and experience it as talking silently to themselves (*expanded inner speech*). At level 4, the syntactic and semantic transformations of internalization ensure that the internal expression keeps few if any of the characteristics of the external language (*condensed inner speech*) (Fernyhough, 2004, p. 55).

Foreign language speakers, as well as native speakers, develop their L2 inner speech through the internalization of L2 social language. Research has shown that low-proficient L2 learners internalize an L2 language by using an inner speech which is much more focused on specific functions such as mental repetition, imitation, recalling of words, rehearsal of unfamiliar vocabulary, and preparation for future oral events (Guerrero, 2004). Advanced L2 learners develop an inner speech as complex as that of native speakers; they use their L2 inner voice in mental operations such as planning, guiding action, decision making, and problem-solving (Guerrero 1994, 1999; Larsen et al., 2002; Pavlenko & Lantolf 2000; see Guerrero, 2004).

Despite these findings about inner speech and foreign language learners, there is little research related to inner speech and the silent reading of L2 texts. However, some studies, most of them using verbal reports, have suggested that inner speech plays an instrumental role in reading L2 texts (Sokolov, 1972; Upton & Lee-Thompson, 2001), has some common uses when L2 language learners read (Guerrero, 2004), could be expanded or condensed according to text difficulty (Ehrich, 2006), and beginners and advanced L2 learners activate it when reading (Kato, 2009). In spite of this research, no

study has looked at inner speech and the reading process to support or question the frequent uses of inner speech or the internal voice –condensed or expanded– that students experience when they read foreign language texts. Besides, the use of inner speech during the silent reading of L2 texts in a series of speed reading –also referred to as timed reading– activities has not been explored yet.

Timed reading is a widely used fluency development activity for reading (Macalister, 2008). In speed reading, teachers use the timed reading of several passages of the same level and different topics that have controlled length and vocabulary. The passages also have a familiar content, topic-based organization, very few unknown words, and the same vocabulary and grammatical constructions frequently occurring to enhance automatization of word recognition and allow students to direct their attention to meaning rather than to decoding. Speed reading has been a technique that has proved effective in helping L2 students to increase their speed rate, one of the most critical dimensions of reading fluency (e.g., Chang, 2010; Chung & Nation, 2006; Macalister, 2008; Nation & Tran, 2014; Tran, 2012). Regardless of these positive results, it is not clear how students use their inner speech to internalize a written foreign language and eventually become fluent readers through a series of speed reading activities.

This study aims to present a snapshot of the initial stages of L2 internalization process by answering the following question: what are the most common uses of inner speech reported by beginner students while and after doing the speed reading activity? We believe that the most common applications of the internal voice while and after the speed reading activity will provide some information about the initial stages of an L2 internalization process. Understanding the internalization process of a language is vital since learning an L2 is essentially internalizing an L2 external speech as L2 inner speech (Lantolf, 2003).

In the following sections, we present the research method of this study, together with the findings obtained from the verbal reports. Then, a discussion section, and the conclusion of the research will be displayed.

Method

This study aimed to determine to most common uses of L2 inner speech while and after doing a series of speed reading activities.

Design

We framed the study into the qualitative paradigm which allows researchers to highlight the process of internalization of English from the perspective of students while focusing on the natural environment of the classroom. In addition, the study embraces Vygotskian sociocultural theory, which is a system of ideas that assumes the mind as being socially mediated (Guerrero, 2004). We conceived the design from a mixed viewpoint, implementing a constructivist and interpretative approach, and including triangulation.

Participants

The group chosen for the study was the first English level comprising 23 learners between 18 and 23 years old studying at a public university. Teachers designed the first English course to provide students with practice in the four strands proposed by Nation's and Macalister's (2010) curriculum design model. The first strand is meaning-focused input; in this strand, students learn through listening and reading activities. The second strand is language-focused learning, which implies the deliberate study of pronunciation,

spelling, vocabulary, and grammar. The third strand is meaning-focused output, which includes learning through speaking and writing activities, paying particular attention to the message. The last strand is fluency development which is a meaning-focused strand aimed to help students receive and convey messages at a faster than usual speed through activities like speed reading, ten-minutes writing, listening to stories, and easy extensive reading.

Although teachers planned the course for students who have a very elementary English proficiency level, we administered the Quick Placement Test designed by Oxford in the first class to determine the level of English proficiency that students had at the initial stages of the course. The test has 60 questions divided into two parts. The participants took the first part of the paper-and-pen test containing 40 questions that test mainly reading skill, vocabulary and grammar. The results showed that 69,56% of the students had an elementary English proficiency (equivalent to A2 level of the European Framework), 17,40% of the students had a lower intermediate level of language competence (B1), and 13,04% had a beginner proficiency level (A1). Since most of the students (A1+A2=82,6%) had little command of the English language, we chose this course for the study because of the possibility of getting information from students that were at the initial stages of their L2 internalization process and needed to develop their reading skill. From the 23 students that started the course, we took into account only 17 students as participants of the study because most of the students that had a lower intermediate level (B1) took another test to fulfill their L2 proficiency requirement and dropped the course. Consequently, 17 students who sent their weekly diary entries and gave their voluntary consent were considered participants in the study.

Data Collection

1. *Dairies*. Diaries and stimulated recall technique were used to find out what students could say about their inner speech in a series of speed reading activities. The teacher-researcher in the study asked students to keep a journal in which they described any mental language that occurred while reading. The diary had a format that followed a “line of investigation specified by the researcher” (McDonough & McDonough, 2014, p. 124). Thus, the teacher-researcher gave directions on how to keep a diary taking into account the guidance offered by Curtis and Bailey (2009) who suggest that diary data must contain factual records and interpretations, evidence for statements, detail chronological order of entries, a summary of the class information, first language use, and reasonable time limits for making diary entries.

In line with Guerrero’s (2004) research, the directions on how to keep a diary presented the following definition of inner speech: “Inner speech is any language in English that occurs in your mind and that is not spoken. Inner speech may include sounds, words, phrases, sentences, dialogues, and even conversations in English” (p. 93). The directions requested students to write in the diary at the end of each timed reading activity. The teacher-researcher also asked students to write about any internal language in English that occurred while they were doing whichever task outside the classroom as frequently as they wanted. The aim of writing the entries in class after finishing the timed reading activity was to obtain immediate retrospective accounts of the students’ inner speech and minimize the lapse of time between the speed reading activity and its reporting. The purpose of writing the entries outside the classroom was to examine to what extent the speed reading activity influenced students’ inner speech in their L2 internalization process.

Besides asking students to write in their diaries in and outside the class, we requested students to send their diary entries once a week via email. In total, we used 102 entries, since students sent their diary entries six times during two months and a half. Students wrote their entries in Spanish –participants’ native language– and we checked them immediately the first time students sent their entries to confirm the participants were following the instructions the teacher-researcher gave at the beginning of the course.

2. The stimulated recall technique. Apart from the diary, we used the stimulated recalled method to clarify information or to request explanations about confusing sentences. Some authors such as Ryan and Gass (2012) have pointed out that receptive processes, like reading, do not provide sufficiently rich data to allow researchers to understand learners’ concurrent thought process; hence, the stimulated recall technique is appropriate to fill this gap. We read all the entries each week, and when we required more information, the teacher-researcher emailed participants to ask for a more expanded report. Below there is an example, translated from Spanish into English, where we used the stimulated recalled technique.

Diary entry:

During the speed reading technique, I used between the lines when a word was not clear to me. I translated the text in my mind, and what I did not understand, I got an idea of what I thought it meant. [The teacher- researcher emailed the student to clarify what “between the lines” meant and for more information about “the translation in mind.”]

Researcher’s email:

Hello,

Thank you for the information about your inner speech and for sending your diary entries every week. I am writing this email because first, I would like to know what you mean when you say “between the lines,” and second because I would like to have more details about your inner speech when you translate the text in your mind. Thanks a lot for your information.

Participant’s replay:

During the Speed Reading technique I use “between the lines,” that is, I re-read what is before and after an unknown word to get what it could be its meaning. I translate parts of the text in my mind. Each time, I understand better, and I need not translate everything; I imagine what the passage says. I achieved a time of 2:30 and I got all the answers right in the reading comprehension exercise.

The teacher-researcher informed students about our need to collect data about the internal speech process while and after the speed reading activity, and they were willing to submit their information for research purposes.

Procedure

The timed reading activity lasted about 12 minutes, and it was the first activity students performed at the beginning of every class. In each speed reading activity, the teacher-researcher asked students to look at a copy that had a list of possible unknown words that they would find in the text. The list contained some words in English, their phonetic transcription (based on the International Phonetic Alphabet), and their Spanish translation. Then, the teacher asked all students to read at the same time. Once students

finished reading, they raised their hands and looked up at the board to see the time the teacher-researcher had written and was pointing. Students wrote the time, turned over the text, and started answering the comprehension questions on the back of the copy. After finishing their reading activity, the students checked the answers, looked at the reading chart, and entered their time and their comprehension score onto the graph. Next, the teacher-researcher and the students scanned the text to understand it. As soon as the entire speed reading activity finished, students wrote their retrospective accounts about the inner speech they experienced during the speed reading activity. Finally, students transcribed their entries onto a word document and sent it via email to the teacher-researcher every weekend.

Taking into account students' Quick Placement Test scores and our teaching experience, the material used for the reading activity was *Reading for Speed and Fluency* by Nation and Malarcher (2007), Book 1. Book 1 has 300 words long passages and is the first of a four-book series created for individual or classroom use to practice speed reading. Book 1 contains eight themes: animals, books, computers, music, places, medicine, plants, and learning. Each topic has five passages followed by five comprehension questions that readers must answer.

Analysis of the Data

We carried out a content analysis observing Guerrero's (2004) analysis of data implemented in her research. Guerrero (2004) considered the following elements:

First, the *universe of content*, which refers to all the information the participants of the study sent via email. In this study, the universe of the content included the comments of students about inner speech in the speed reading activity. We carried out several readings to determine which entries applied to the universe of content and to develop the criteria for identifying topics.

Second, Guerrero considered the *unit of analysis*, which in this study comprised any proposition or statement about inner speech in the speed reading activity. In this stage, we carried out new readings to generate internal speech categories. We used the categories established by Guerrero (2004) –*concurrent processing of language being read* and *recall of language read previously*– together with Ehrich's (2006) Vygotskian reading model as resources to consolidate the resulting categories. We employed the *QDA Miner* software program and an external rater to complete the codification process and to establish reliability.

Finally, Guerrero took into account *criteria to identify themes*, which referred to a series of rules to define the suitable topics in the study. We took into account the following rules: a theme concerns inner speech which according to Sokolov (1972, p. 1) is "concealed verbalization" including subvocal expression; a topic refers to specific occurrences of the internal voice during and after the speed reading activity; and a theme could appear in statements that used words like: *I imagined, I thought, in my mind, mentally, internally*.

The first category, called the *concurrent processing of language being read*, referred to the processes of inner speech experienced in the speed reading activity. This category included repeating words silently or subvocally, trying to understand language, and making associations. Students used their inner speech to repeat language silently or subvocally and to try to understand the language when they came to parts of texts they found difficult.

Below (Table 1) there are some examples of students' entries regarding their inner speech during *the processing of language being read*. (We translated the examples from Spanish into English. The words that students wrote in English are in bold letters and enclosed in quotation marks).

Table 1
Entries examples of concurrent processing of language being read

	to vocalize words	In the speed reading related to the birds, I could distinguish a few words, and mentally I repeated and translated them. In the sections where I found unknown words, I stopped to re-read and try to pronounce the words mentally.
Repeating language silently or subvocally	to hold language in memory	In the speed reading activity, I imagined the scenes step by step. When I didn't know the words, I tried to repeat them silently to remember them and later look for them to try not to forget their meanings.
	to imitate the accent and the pronunciation of some words	There were no unknown words inside the text. However, at the end of the speed reading, my classmates asked for the translation of some words they did not know. The teacher wrote them down on the board and told us their correct pronunciation. I mentally repeated the pronunciation of the words to learn them.
Trying to understand the language	by translating	In the course of the reading, in my mind, I translated, and mentally I tried to pronounce the words in the passage. I knew most of them; however, there were some that I did not know such as " whole ," " lucky ," " worth ," " sell ," although this did not prevent me from having a general idea of the reading.
	by isolating and analyzing words	During the speed reading, I tried to remember, memorize, and retain the unknown words, but this caused pauses in reading and delay in the translation and interpretation of the text. When this happened, I lost interest in reading because I did not understand the complete sentences, so I had to deduce or believe what they meant.
	by attempting to recall or remember the meaning of a word	In the beginning, I was reading and translating but when I found a new word or a word that I did not remember, I stopped for a long time to try to remember this word, and when I did not know it, I struggled to introduce it in the passage's context to continue reading. I analyzed that while I tried to remember I forgot some ideas I had already read.
Making associations	with visual images	During the speed reading activity, I did not need to translate the text inwardly since it seemed very simple. I read fast imagining what the author was trying to say without translating the text. I achieved a time of 2 minutes reading the passage and I got all the answers right in the comprehension exercise.
	with a concrete referent	During the speed reading activity, I remembered some songs or known phrases which helped me with words I did not recognize.

The second category named *recall of language read previously* referred to the words or phrases that students processed during the speed reading activity, but that they recalled or remembered later in or outside the classroom. Although participants did not report this category very much, probably because students wrote their reports outside the class, it is essential to mention it to emphasize that students continued internalizing

English even after the speed reading had already finished. Students reported experiencing subvocal repetition, spontaneous recall, and playback –“the insistent hearing of words in the mind” (Guerrero, 2004, p. 97). Participants also recalled words read previously to try out knowledge and reflect on the language. Below (Table 2) there are some examples of students’ entries regarding *the recall of language already read*. (We translated the examples from Spanish into English. The words that students wrote in English are in bold letters and enclosed in quotation marks).

Table 2
Entries examples of recall of language read previously

Subvocal repetition	On my way home, I reviewed and mentally pronounced the word “ belong ,” it was the word that I remembered from the speed reading; I repeated it silently several times.
Reflecting	During yesterday’s reading “types of animals”, I noticed several words I did not know, so I wrote them down in my notebook, for example: “ both ,” “ enough ,” “ ground ,” “ far away ,” “ belong ,” among others. So then I looked for them in “Google translator,” I found their meaning, and I heard the pronunciation. I immediately tried to repeat the words being aware of their meaning in context.
Experiencing playback	Today, in the exercise of “speed reading,” while I was reading the words in English, I was trying to visualize images with familiar words. After finishing reading, I continued hearing a very peculiar word “ trunks ” whose meaning I didn't know, but after a while, the teacher told us how it was pronounced and also what it meant, then I began to pronounce that word inwardly the way the teacher told us.
Spontaneous recall	I was helping my sister with some English homework, and then I remembered a word from the speed reading “ although .” I remembered its translation “ aunque ,” I pronounced it mentally; it was hard for me “/aldoug/?”
Try out knowledge	On my way home, I reviewed and mentally pronounced the word “ belong ,” it was the word that I remembered from the speed reading; I repeated it silently several times. I thought about how to use it in a sentence then the phrase “ I belong to God ” came to mind, I remembered it because I had seen it in a Facebook status; I repeated it inwardly many times.

Results

We based the following quantitative analysis on the most common and less prevalent uses of inner speech in the speed reading activity at the early stages of L2 internalization. However, it is crucial to consider that self-reports are subjective, and therefore students may have reported some and not all the inner speech experienced since they may have decided not to express it or may not have been aware of it. Table 3 below shows the frequencies the participants reported in this study and Table 4 presents the ranking of categories by frequency of occurrence.

As we can be seen in Table 3, 93% of the categories referred to the use of inner speech for *concurrent processing of language being read* and only 7% were about *the recall of language read previously*. In the concurrent processing of language being read, the first sub-category that showed most significant prevalence was trying to understand language (44%), followed by subvocal or silent repetition (35%) and associating language being read (14%).

Table 3
Categories of inner speech: frequency of themes by participants

Internal speech categories	Participants																	N.	%	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
1. Concurrent processing of language being read																				
a Subvocal or silent repetition	5	1	3	1	2	5		1				1		4	8	2	2	35		
b Trying to understand	5	2		1		3	4		6	3	2	2	3	5	4	1	3	44		
c Associating language			2	2	1				1	3				1			2	2	14	
Subtotal	10	5	5	3	2	8	4	2	9	3	2	3	4	9	12	5	7	93	93	
2. Recall of language read previously																				
a Playback			1																1	
b Spontaneous recall of words					1														1	
c Subvocal or silent repetition				1	1														2	
d Reflecting; recapitulating									1			1							2	
e Trying out FL knowledge					1														1	
Subtotal	0	1	1	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	7	7

Table 4 shows that in the frequency’s ranking of inner speech occurrence in the timed reading activity, the *concurrent processing of language being read* was the highest frequent category. Inside this category, *trying to understand language - translation* had a high number of occurrences (36) reported by a significant quantity of participants (13). Otherwise, the least recurrent category was *the recalling of language being read*. The subcategories less frequently mentioned by participants were *experiencing playback*, *spontaneous recall*, and *trying out knowledge*.

Table 4

Ranking of categories of inner speech by the frequency of usage as reported by participants

Category	Subcategory	Theme	Description	No. of students	Total occurrences
Concurrent processing of language	Trying to understand	Translation	Use L1 to understand the language	13	36
	Repeating	Vocalization	Subvocalize or vocalize mentally language	7	14
	Making associations	Visual image	Make associations with a visual image	7	12
	Repeating	Language holding	Repeat to fix or hold language in memory	6	10
	Trying to understand	Deliberate effort	Make a deliberate effort to recall or remember the meaning of a word	5	6
	Repeating	Pronunciation imitation	Repeat to imitate accent or pronunciation	3	4
	Making associations	Concrete referent	Make associations with a concrete referent	2	2
Recall of language read previously	Subvocal repetition		Repeat silently language that students read before	2	2
	Reflecting		Recapitulate language knowledge in terms of vocabulary or meaning	2	2
Concurrent processing of language	Trying to understand	Word analysis	Analyze a word to understand the language	1	1
	Trying to understand	Word isolation	Isolate words to understand them	1	1
Recall of language read previously	Experiencing playback		Hear or replay words insistently in silence	1	1
	Spontaneous recall		Words that suddenly pop into the student's mind	1	1
	Try out knowledge		Try out knowledge of L2 by applying L2 knowledge in novel constructions	1	1

Discussion

The data collected from students starting their L2 reading process suggest some inner speech forms in which learners begin to internalize L2 printed words. Analysis of the data reveals that beginner students use L2 internal speech to process language during the reading process as well as to recall language read previously. Processing of printed texts is a complex task in which students repeat words subvocally or silently, try to understand meanings, and make associations with visual images for the words previously read. Likewise, recalling of language already read includes repeating subvocally or silently, hearing words inwardly, trying out knowledge and reflecting on language. The researcher did not find any association between frequencies of reported inner speech and the English proficiency level of participants because of the homogeneity of the group regarding their proficiency level.

The data obtained from the verbal reports are compatible with theory and research about the reading process and the role of inner speech in this process. Data suggest that students use their internal voice to process a printed text they find difficult by subvocalizing or vocalizing, repeating, and translating language silently. Data also indicate that students use their inner speech to process words they find simple, familiar or frequent by associating them with visual images. Researchers like Ehrich (2006) have talked about a combined function of inner speech as expanded or condensed triggered by the difficulty or the familiarity of the language that the reader processes.

The expanded inner speech characterized by keeping many qualities of the external language is experienced mainly as subvocalization or mental vocalization of language, silent repetition, and translation. Sokolov (1972) emphasized the instrumental role of inner speech, arguing that repetition played an essential role in understanding and memorizing the general meaning of a text. From a cognitive point of view, the emphasis on mental vocalization and silent repetition are necessary to recognize and monitor words (Ridgway, 2009), prevent decay or memory loss (Baddeley, Thomson, & Buchanan, 1975), and help learn new words (Baddeley, Gathercole, & Papagano, 1998).

Translation has to do with making meaning. The practice of mental translation, pointed out by Guerrero (2004) as one important use of inner speech, shows that students focus on comprehending rather than merely repeating words subvocally or mentally. According to Upton and Thompson (2001), students that are still working on their L2 reading skills, spend much of the time translating inwardly L2 texts into their L1 to facilitate comprehension when they find difficult parts in a passage. The verbal reports in this study showed that students, in effect, use their L1 most of the time to make meaning and aid comprehension, but also, the entries showed that some students start to stop translating and get access to the definition of words directly without using their L1. One participant wrote, for example:

During the speed reading activity, I translated parts of the passage silently, although this time I did not need to translate everything but to imagine what the text said, so I achieved a time of 2:30 and I got all the answers right.

Data suggest that thanks to the timed reading activity, students start to get access to the meanings of the text through the use of a condensed internal speech which people may experience as “fragmentary, condensed series of verbal images” (Ferryhough, 2004, p. 54). One student wrote, for instance:

In the speed reading exercise “The library of the future”, I did not have much difficulty. I was reading directly in English, and I understood; I imagined little by little the situation. I knew the words in the text.

This study of inner speech in the speed reading activity suggests that students may use their expanded and condensed inner voice interactively to internalize English. Nevertheless, it is essential to state that further research is necessary to understand how the internal voice works over time since many issues remain unknown. For example, although students use mainly subvocalization, vocalization, repetition and translation – expanded inner speech– in the initial stages of L2 internalization, it is not clear how much reading is necessary for expanded inner speech continues its process of internalization to get to the state of condensed inner speech and be experienced as associations with visual images.

Following Fernyhough’s (2004) four-level scheme for the development of inner speech and Ehrich’s (2006) internal speech reading model, Figure 1 shows an outline of the use of the internal voice in speed reading. Using inner speech during the speed reading activity can be explained as a dynamic movement from one kind of internal speech to another depending on the complexity of a text. When students find a problematic part of a passage, they use their expanded inner speech; therefore, they vocalize, repeat, and translate that part of the language to retain information and make meaning. On the other hand, when students find familiar and frequent language, they probably use their condensed inner speech to predicate and agglutinate the text immediately into meaning units what might indicate that the internalization process is progressing to its full completion.

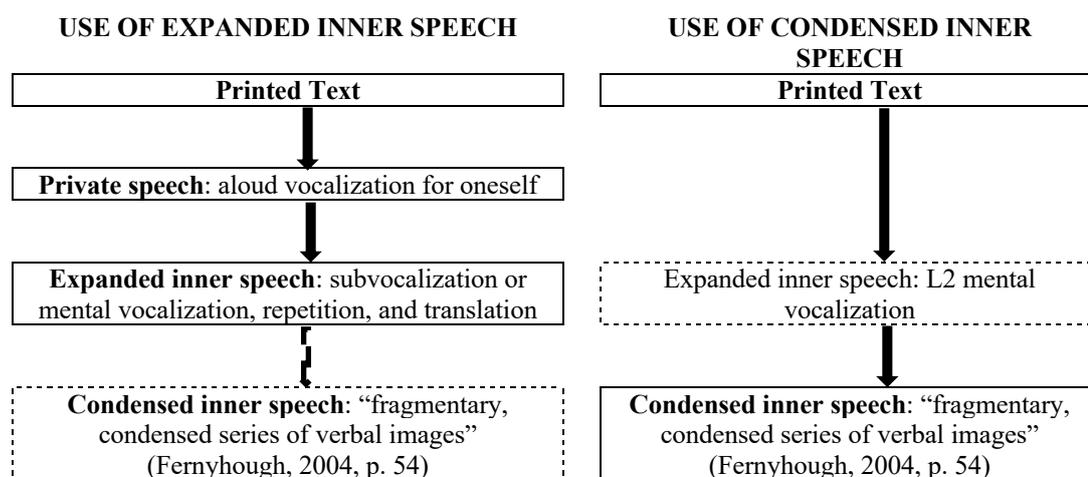


Figure 1. Use of expanded and condensed inner speech in the internalization of printed language. (Based on Fernyhough, 2004)

Concerning the recall of language read previously, the students’ attempts to repeat, retrieve, try out, and reflect about language shows students’ efforts at processing English worked in the timed reading activity although in a very narrow and occasional way. The little reported use of L2 inner speech after the speed reading activity implies that the participants in this study were just starting their initial stages of L2 internalization and that they were occupied in transforming external printed language into inner speech but when the processing of English was being performed and not so much afterward. Nonetheless, it is essential to notice that somehow students were internally working with their English after the speed reading activity, thus developing their L2 internalization.

Conclusion

Using inner speech in the L2 timed reading activity is a developmental process that is characterized mainly by silent vocalization, repetition, translation, and associations with visual images. Data in this study suggest that students use an inner speech from the very early stages of L2 internalization and that its condensed and expanded uses depend on the complexity of the text the reader is processing. Much practice, repeated occurrence of vocabulary, and familiar content in the timed reading activity may promote the use of condensed inner speech. Translation seems to be one of the first uses of internal speech that students start to avoid when the internalization of L2 becomes more developed. We hope that further research will continue revealing the applications of inner speech in the speed reading activity, so as to permit better understanding of the fascinating process of L2 internalization.

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