

**La aplicación de adaptaciones a la dislexia para compensar el reconocimiento de palabras en la clase de lectura de ESL**

**The application of dyslexia-friendly adaptations to compensate for word recognition in the ESL reading class**

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## RESUMEN

Los estudiantes con dislexia se enfrentan a muchas dificultades en su entorno de aprendizaje y en su vida diaria, necesitan compensar sus problemas de aprendizaje y ser capaces de lidiar con la baja autoestima que les queda al darse cuenta de que no pueden progresar a la misma velocidad que sus compañeros. Este estudio sugiere el uso de adaptaciones amigables con la dislexia en textos de ESL para compensar un proceso de pensamiento fundamental, el reconocimiento de palabras, que forma parte de todas las funciones desarrolladas durante la lectura. Al apoyar la decodificación de palabras sueltas y la conciencia fonológica, los estudiantes con dislexia dan el primer paso para trabajar con el significado de las palabras. El estudio encuentra su relevancia para la enseñanza y el aprendizaje de EFL ya que las dificultades de aprendizaje afectan la adquisición del idioma inglés y, además, debido a las dificultades que el idioma inglés ya incluye.

**Palabras clave:** dislexia; adaptaciones; decodificación de palabras; reconocimiento de palabras; competencia lectora; fluidez

## ABSTRACT

Dyslexia students face many difficulties in their learning environment and daily life. They need to compensate for their learning disabilities and be able to deal with the low esteem that is left from becoming aware that they cannot progress at the same speed as their partners. This study suggests using dyslexia-friendly adaptations in ESL texts to compensate for one fundamental thinking process, word recognition, which conforms to all functions developed while reading. By supporting single-word decoding and phonological awareness, dyslexia students take the first step to working with words' meanings. The study finds its relevance for EFL teaching, and learning since learning difficulties affect English Language acquisition, and additionally because of the difficulties that the English language already includes.

**Key words:** Dyslexia; Adaptations; Word-decoding; Word Recognition; Reading proficiency; Fluency

## Introduction

Along with various learning disabilities (LDs), dyslexia and attention disorders are the most common among scholars. It is clear that LDs are not diseases that children can heal or cure over time; they instead act like symptoms that appear when students perform in school environments and out of them. Therefore, the school community needs to become aware and act as a team to help students with learning disabilities. For example, a teacher can help identify and contribute information to the families and specialists about circumstances and changes related to the student's performance in class, but mostly adapt the activities and strategies used to help dyslexic students overcome their main difficulty, word recognition when reading.

Dyslexic students who are learning English need reading adaptations related to the activities. These adaptations ensure that students with dyslexia, who struggle to develop enough fluency, can work to achieve the same goals at their own pace. In addition, teachers can help achieve the class goals.

This study intends to show a proposed intervention model, explain the procedures for applying dyslexia-friendly adaptations in ESL reading texts, and thus, make it evident that the goal of improving word decoding and fluency can be achieved. In addition, this study cites investigations related to ineffective practices or misconceptions to avoid unfair practices.

## Justification

The present study intends to show the advantages of the use of dyslexia-friendly adaptations as a strategy to ameliorate reading difficulties in students with dyslexia. Furthermore, these adaptations can also help ESL students comprehend texts faster and easier. Consequently, teachers can apply dyslexia-friendly adaptations to all students thanks to their positive effects when working on reading activities to improve fluency.

Irregularities when processing written

English can affect native learners and learners of English as a second language, but people with dyslexia take much more time to get it. These irregularities are generally connected with deep alphabetic orthography, a single letter representing multiple sounds, and weird morphological pronunciation. According to a study, one area in which second language learners in English medium classrooms are known to experience extreme difficulties is with English spelling, mainly related to vowels (Seeff-Gabriel, 2003).

These adaptations assist the primary functions of the learners' brains when reading. We can say that once word recognition is achieved, it might fasten the reading process and increase the attention span and the student's motivation and confidence to keep learning. Single-word decoding is a brain process that allows learners to acquire new vocabulary.

## Dyslexia in Education

Word identification and reading comprehension have great importance. Comprehension cannot happen without word identification. According to Friesen and Haigh, these apply equally to monolingual and L2 readers. The Simple View of Reading (SVR) suggests that reading comprehension success depends on both word reading ability and language comprehension ability (Friesen & Haigh, 2018) children enter the school system with a home language that differs from the language of the majority. Consequently, classrooms have students with diverse language backgrounds and teachers must develop reading comprehension instruction that meets the needs of all their students. To successfully plan instruction, it is critical for teachers to understand the strengths that second language learners (SLLs). Therefore, the complications in either domain might result in poorer reading comprehension skills.

Dyslexia is one of the learning disabilities that become evident in the early years of child development. Dyslexia is a learning disability of the cognitive processes used when reading. It affects word-level reading (Reiter et al., 2005).

Dyslexia can only be identified when testing the learner while reading. Brain processes activate a compound of functions that help the learner achieve comprehension of a text. Among these brain functions, phonological processing is mainly affected when decoding information in dyslexic students. Thus, affecting lexical accuracy significantly.

Dyslexia is the most common neuropsychological disability in the infant population. Its prevalence varies between 5% and 15% (Tacuri et al., 2018). Early identification and treatment are advantages to overcoming its difficulties. Moreover, the earlier the learner starts to interact with a second language, the easier it becomes to acquire basic vocabulary (Marín-Ospina et al., 2019). Access to information about its possible identification and deriving of possible cases of students with learning difficulties needs to be done on time. Even though it is not the teacher's duty to identify it, he or she may appeal to its experience and perception to suggest testing on possible cases.

The benefit rests on helping students overcome their difficulties, thus decreasing or eliminating the barriers to learning. Unfortunately, untreated cases become worse. Students fall behind, becoming demotivated. They may even drop out of school and lag in grades. Preliminary reports before the pandemic in Ecuador show statistics for high school levels with 3,3% of dropouts and 4% lagging in grades; for elementary levels with an additional 1,5% for each case (Educación, 2019). The lack of intervention for learning difficulties is one of the causes for these statistics to keep increasing.

This study develops a proposal to help English teachers develop reading strategies to support students overcome their disabilities in reading. This input skill backs up students' acquisition of basic vocabulary required to understand instructions, make sense, and learn new words. In addition, reading helps students acquire background knowledge for scaffolding the rest of their learning processes. Learners can become successful in learning English and acquiring the skills to keep progress if teachers

get well informed on how to help them.

There are not enough studies that can provide sufficient evidence on how Spanish speakers with dyslexia can ameliorate their difficulties presented in reading while learning English as a second language—in this case, referring to difficulties presented in word decoding. Additionally, the spelling difficulties experienced by second language learners are less well documented (Seeff-Gabriel, 2003).

## **Objectives of the study**

### **Main Objective**

To suggest dyslexia-friendly adaptations in reading texts for EFL learners with dyslexia in order to assist word decoding and fluency while reading English texts.

### **Specific Objectives**

- To suggest EFL teachers use strategies for designing and applying dyslexia-friendly adaptations in reading texts for EFL students with dyslexia.
- To explain the advantages of dyslexia-friendly adaptations in reading to support EFL learners with dyslexia decode words.
- To explain the advantages of dyslexia-friendly adaptations in reading to support EFL learners with dyslexia in gaining fluency.

## **Literature Review**

### **Dyslexia Identification and Characteristics**

Dyslexia is a learning disability that affects word recognition and therefore reading fluency. This disability is present in early child development stages and extends throughout a person's lifetime. It means that it can be identified when children acquire their language and the skills to process written and oral information. Therefore, providing additional instruction for learners with dyslexia can help them ameliorate

its effects on their learning process. To do so, the effective identification of learning difficulties should be made as soon as possible. (Tunmer & Greaney, 2010).

Identification of dyslexia can be confused with other similar learning difficulties. In general, deriving a child for screening tends to fail due to the coexistence of other difficulties in the process or functions that also take part when processing reading. For example, a student who has difficulties in reading may also find it difficult to keep information that he just used to understand the topic. Students with an attention deficit disorder may also find it challenging to read. Comorbidity found in specific learning disabilities leads to confusion; consequently, reading adaptations in this study help all students struggling with reading, especially those who have been formally tested and diagnosed with dyslexia (G. Lyon et al., 2001).

Teachers and parents confuse children's difficulties when exchanging information in a second language. Therefore, they derive children from ESL classrooms for screening of dyslexia when they present difficulties due to standard decoding while processing a second language (G. R. Lyon et al., 2003).

### **Dyslexia and Word Decoding**

According to Pennington, 2006, single-word decoding problems in reading are strongly associated with problems segmenting words and syllables into phonemes, but phonological awareness has multiple causes. Pennington's multiple deficit model (MDM) explains that "the liability distribution for a given disease is often continuous and quantitative, rather than being discrete and categorical" (Pennington, 2006). Pennington supports his theory with studies that show that dyslexia occurs more often than expected by chance with other disorders, like dyscalculia, specific language impairment (SLI), speech-sound disorder, and attention-deficit hyperactivity disorder (ADHD).

### **Academic Success of Language Learners with Dyslexia**

As teachers, we expect to see progress in all our students. However, each learner has his own pace, so following standards is essential. Our scope and sequence are based on the Common European Framework of Reference. They give us an idea of the goals we can trace for our students in the lessons we teach. Nevertheless, there is a significant disadvantage, legislation in Ecuador does not include programs for our special-needs students to receive differentiated attention. As a result, we lack special education programs. So, most of the time, adaptations to be done for learners with special needs are left to the teacher.

Considering previous ideas, the best way to work and help our learners in the reading classroom is to develop adaptations for dyslexia learners focusing on one priority, identification of words. Working on word decoding can provide a great advantage to the learner. This is an opportunity for English language learners with dyslexia to overcome their learning disabilities.

### **Dyslexia-friendly Adaptations**

Many techniques can help ameliorate reading difficulties in children with dyslexia, and accommodations such as allowing extra time to finish an activity, setting a quiet place for the learner to work, or allowing a pupil to provide help are among the most important.

Dyslexia-friendly adaptations consist of making changes to the following aspects:

#### **Content**

Students must get the most out of a good reading without feeling anxious. Foreign Language Anxiety, which is a specific form of anxiety, is related to using or learning a foreign language, according to Horwitz & Cope. Using foreign language is closely connected to self-expression, and the ensuing frustration can be highly face-threatening and undermine our sense of self and confidence (Dewaele et al., 2017).

## Length

Start with a short paragraph, find simplified texts, or try to adapt them by summarizing their ideas before presenting them to students. Texts will not always be short. When students have progressed, readings can be extended, but they must be broken down into stages.

## Vocabulary and Grammar

Avoid using too many complex words since it is hard for students with dyslexia to predict the meaning of too many words from the context. Dyslexia students focus more and spend more time identifying word spelling patterns and pronunciation before they can identify their meanings. Catherine Snow et al. concluded on the importance of spelling: Spelling and reading build and rely on the exact mental representation of a word. Knowing a word's spelling makes its representation sturdy and accessible for fluent reading." (How Spelling Supports Reading | LD Topics | LD OnLine, n.d.).

## Layout and Appearance

Make it easy for students to identify the stages the text is divided into; each stage may contain a central idea. The text font needs to be displayed between 13 and 15 font sizes. The reading can also be included in a computer-based application to help students navigate the text.

## Comprehension Activities

Questions and reading exercises that move gradually from basic background knowledge and then connect with new words help students grasp the meaning of new words and the main idea. Including activities that can help students work with sensory details also helps and allows extra time.

Avoid the use of open-ended questions. Instead, work with vocabulary first, then help students identify the main idea of the overall text using strategies such as true or false. Furthermore, work with the main ideas of each paragraph using additional guiding exercises.

## Other Important Adaptations

Once students work with vocabulary identification and explore the reading for a while, the use of graphic organizers helps them associate new information and establish relationships of chronological order, cause and effect, and more. The teacher should model the application of graphic organizers until they can do it independently. Students benefit because graphic organizers make it easier for them to grasp the meaning of words and ideas.

It is essential to provide a model of the activity or adapt the language in it for better understanding. Another adaptation that can significantly help students with dyslexia is including cognates or words with similar spelling and pronunciation in Spanish and English (e.g., *escultura*, *sculpture*).

Some tools can be provided, such as text-to-speech applications, which rely on access to technology and knowing how to use it. Therefore, the present study includes suggestions for adaptations teachers can apply in their reading classes. These computer-based tools can become part of teachers' adaptations to facilitate reading comprehension.

## Reading in EFL

### Genre Based Approach

The work of the genre is to mediate between the social situation and the text, which realizes certain features of this situation or responds strategically to its demands. The importance of the genre-based approach to students is that it teaches the four macro skills, focusing on a specific text genre. Furthermore, it helps learners understand how the text is linked between its different elements (Montero-Arévalo, 2019).

As teachers, it is better to focus on engaging students and the purpose of reading rather than on learners' errors, except when intending to correct them by providing positive feedback. In addition, students face difficulties in foreign language reading compared to their

mother tongue, especially because when they read, they tend to focus more on form than meaning.

### **Purpose for Reading**

There are many types of readings the teacher can use. Teachers can adapt learning objectives and activities depending on the purpose of each text. Some of the purposes for reading can be: to search for simple information, skim for information, integrate information, search for specific information (also called scanning), critique texts, and for general information (Grabe, 2004). Reading requires identifying vocabulary and then finding the meaning of sentences, which provide ideas in a sentence.

### **Reading Adaptations for EFL Learners with Dyslexia**

#### **Developing Reading Fluency**

Fluency in reading is marked by the automation of brain processes when decoding words. When average readers master comprehension and have enough practice, they demonstrate fluency by associating the visual stimuli to their long-term memory, thus taking advantage of learning new words when presented with new challenging texts. Teachers can read aloud texts to model pronunciation for regular readers and help dyslexia learners achieve the first step into fluency, word decoding. Other strategies can include providing access to audiobooks and computer-based applications to supplement reading aloud and grapheme relation to sound.

When the teacher reads lines of the text aloud and pauses for students to repeat each line, it guides students into pronunciation practice. In this step, students must also follow the reading with their eyes. Paired reading accompanies the learner depending on his specific needs and confidence. The idea is to back up the students' reading aloud until they earn enough confidence to complete the reading independently.

### **Intervention proposal**

#### **Aims of the proposal**

#### **Primary Objective of the Proposal**

- To facilitate ESL students with dyslexia, decode words when reading.

#### **Specific Objectives of the Proposal**

- To show samples of adapted readings that can assist students with dyslexia decode words and practicing their meaning in context.
- To supplement ESL sample readings using different strategies that back up word decoding adaptations.

#### **Educational context**

#### **The Learning Center**

The learning center is an English academy that provides courses for all ages. The institution has more than thirty-five years of providing this service of education. Internal procedures demand teachers to communicate the difficulties found in students with special needs. We found one or two cases in every group of around thirty-five students.

#### **Methodology of the proposal**

#### **Communicative Approach**

Reading does not represent whole learning, but it is how students can grasp new ideas and acquire new skills. Reading is essential since it becomes how we can communicate ideas and share or generate more information. We learn new information or study new topics by decoding words and associating them with concrete or abstract ideas. It generates crucial input that learners recycle throughout their academic life. By using adapted activities, dyslexic learners can use other skills to compensate for their disabilities in reading.

These activities' adaptations complement communicative approaches that help students learn while reading. By interacting with

peers, learners can use the language they have acquired. They listen and exchange new information. Activities for dyslexic learners need to be supported by practices or routines that advocate sensory stimuli. One way to do it is by considering multiple intelligence. The more learners get involved in activities that trigger their senses through vivid descriptions, touchable elements, audio, and interaction among the rest of the class, the more options they have to make connections and learn.

### **Thinking Routines**

Students may have different purposes for reading. Teachers can motivate learners to engage in different texts and utilize available resources. One way to do it is by generating new ideas while working using thinking routines. Thinking routines are one of the methodologies that can help learners get used to manipulating information, organizing ideas, and adapting tools to analyze texts. Using these strategies can provide learners with dyslexia with an additional opportunity to facilitate understanding. The correspondence between ideas in a text is easier to organize and grasp when learners follow easy, organized steps when thinking about a topic. For example, using a three-step analysis of a text by observing a picture, reading for the main idea, and sharing what learners understood, can help incorporate routine students will later use on their own.

### **Adaptations in Content and Length**

The reading should contain essential vocabulary and details about a central point. The objective is for students to identify the main ideas and critical vocabulary and comprehend details related to the text. In order to adapt the reading for dyslexia learners, the content should be modified.

### **Adaptations in Vocabulary and Grammar**

Commonly abstract vocabulary is difficult to explain in general, especially if students have not had the opportunity to use the concept in their language. Besides, it can become

challenging to remember. Therefore, adaptations in vocabulary should be made by reducing the number of exercises focused on terms.

In this case, words can be explained by the teacher after thoroughly reading the text for the first time. In addition, it can help dyslexic learners connect the meaning of words to their sound and written form and, more importantly, get used to the pronunciation of some grammar tenses they may review in the future.

ESL Reading with Adaptations is mainly in the past tense. The teacher may play the audio, put more stress on those past tense words, and even mimic some ideas related to the past and present. It will help students understand the context.

### **Layout and Appearance**

Large fonts are a dyslexic-friendly format that enables learners to eliminate the visual barriers when decoding text; spaces between words and punctuation signs are also more evident. In addition, paragraphs are separated into chunks that allow dyslexia learners separate groups of ideas and support their difficulties in locating text. Also, underlined critical words in instructions enable learners to identify what is expected from them as part of the practice. Teachers need to model these words in advance.

### **Comprehension Activities**

Comprehension activities also become part of the formative assessment and help maintain a record of students' progress in class. Although, while working on them, teachers must observe students' reactions or feelings toward challenging exercises. Adapted exercises guarantee that difficulties may be compensated.

Comprehension exercises should first address vocabulary by decoding the most important words. Those words should be backed up with pictures. Some exercises require students to identify the picture after reading each vocabulary word.

## Assessment

### Learning assessment

Teachers should guide, observe and accompany the learner to conclude every task. Teachers' work starts from initial planning. It continues when students complete the proposed activities. The student outcomes should be revised during and after class.

### Assessment of the proposal

The strategies presented can help learners decode words, but we must remember that learning disabilities, such as dyslexia, cannot be healed. Dyslexia may reduce its effects during the appearance of maturity processes that occur due to lateralization, where the brain changes and developmental stages provide new strategies to the learner.

In general, adaptations for ESL learners with dyslexia will strongly depend on the compound of all the adaptations that the teacher prepares to work with reading materials and the capacity and effort of the teacher to analyze students' progress and observe their reactions when working with the content.

## Discussion

### Addressing Dyslexic Learners in Class

The final purpose of the activities is to facilitate learning. When learning becomes clear, objectives are achievable. By working on the goals teachers have for the class, dyslexic students can be guided to meet them. It will not interrupt their progress but will give them additional tools to convert into reflexive learning. Learners can develop metacognitive strategies from a young age if routines are reinforced, and teachers can model them.

One strong suggestion that became necessary for productive activities is to show models to students of exemplary work. It is not always necessary to change the class' objectives but to support and accommodate our speech when engaging students in new tasks, giving

them opportunities to decide and choose what they want to read.

Using motivational phrases significantly impacts students' behavior and attitude towards our proposed activities. We also need to talk about learning disabilities in class so other students become aware and join efforts to help instead of criticizing.

### Engaging Students

Every student can feel anxiety when learning a second language. Our role as teachers is to support learners in understanding the new challenges and assimilate them as steps to achieve good results. Teachers need to focus on good practices, celebrate students fulfilling new objectives, and create a healthy environment where all collaborate.

## Conclusions

### Word Decoding in Intervention

Some adaptations include more complex words for dyslexic learners than expected. This is common in learners who have difficulty decoding words when confusing the letters. In these cases, listening to the list of vocabulary is essential. Also, teachers can use different colors for similar letters for important words since doing so with the whole text will require much time.

Dyslexic students who gradually work with color codes for similar letters (p, q, b, p, d) presented in essential vocabulary can gradually assimilate their differences once word automation has occurred. Furthermore, when key words in a text are backed up by hierarchical exercises that focus learners' attention on vocabulary meaning and main ideas, fluency is increased as a consequence of this process.

### Limitations and further research

#### Time Spent on Planning

Expectations for learners to respond to intervention will mainly depend on the group's characteristics and background knowledge.

Teachers need to adapt material based on learners' expectations and experiences. Dyslexic students, especially those with comorbidity, can present areas with lower proficiency rates. Using diagnostic tests at the beginning of a course is highly recommendable.

Teachers commonly face the difficulties of spending time planning, teaching, and assessing ESL students who present difficulties associated with L2 learning in reading comprehension and phonemic awareness. For example, students find it hard to remember syllable sounds, and sound errors are common, too, presented when students only use their L1 sounds because they find it hard to differentiate between short and long vowels. Sometimes nonimpaired readers also make many mistakes in pronouncing words that have already been decoded because their sound does not look familiar to those phonemes in L1. Consequently, teachers may wrongly perceive that some words were not understood and would waste time re-teaching to decode them.

All these aspects will demand teachers to develop well-structured diagnostic materials and adapted reading texts and exercises for dyslexic students. Teachers dealing with large groups and long periods of work will find it very difficult to deal with administrating all tasks assigned. Considering that it will demand a lot more time for the teacher to work on these adaptations, teachers can still count on using technology in case it is possible.

### Access to Technology

Teachers who benefit from using technology to manage and create adaptations find it very useful and time-saving to create activities and use resources online or with computer-based applications—starting from recorded audios and interactive presentations. However, teachers and students who do not have access to technology find it difficult to apply or access some of these adaptations.

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