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Making written texts for learning more accessible with easy-to-read and universal design

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Reading is regarded as one of the basic learning processes that provides multiple skills and abilities for daily life. The study reported on here arose from evidence of reading comprehension difficulties of middle school students in Colombia, and from reflection on the didactic strategies used for the promotion and teaching of reading. The purpose of this research was to strengthen students' reading comprehension by taking advantage of the benefits of Easy-to-Read in the context of a methodology applied in Universal Design for Learning. The methodology was centred on the critical social paradigm, and the type of research was mixed with a design based on action research. The instruments used included non-participant observation, online questionnaire, standardised testing and a survey. The pedagogical proposal "Easy Reading" was designed and implemented to show progress in the students' reading comprehension skills, meeting the objectives set.

Keywords: easy-to-read; inclusion; reading communicative skills; universal learning design

Introduction

One of the greatest challenges faced by teachers in their pedagogical activities is the lack of knowledge of teaching reading that allows them to develop their students' habit of learning and reading (Baba & Affendi, 2020). Reading habits influence students' academic performance and should be encouraged by teachers and parents from an early age to develop reading as a routine and pleasurable activity that helps develop critical thinking and analytical skills (Bano, Jabeen & Qutoshi, 2018). Reading skills are fundamental pillars in sustaining knowledge and can, in the educational context, influence academic success or failure.

Reading is fundamental for individuals and for the growth of society and culture as the ability allows people to analyse and reflect on the environment and is important to master (Ningsih, Winarni & Roemintoyo, 2019). Reading and writing, as fundamental axes of the curriculum, are important contextualised social practices and teachers play a fundamental role in literacy within literate cultural spaces. Books and reading are and will continue to be indispensable tools for preserving and transmitting the cultural legacy of humanity. Ho and Lau (2018) recognises that cultivating a positive reading climate, nurturing a good reading habit, exposing students to diverse text types, and incorporating instructional strategies that match their interests are promising ways to improve students' reading engagement and academic achievement. These insights, accompanied by support in the school and in the family may be important in shaping future reading policy and practice.

Since students are constant generators of development and progress for societies, it is essential to expose them to a wide range of texts. In schools, strategies such as monitoring and rereading should be employed to improve comprehension, and special attention should be paid to children's consumption of digital content (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). The Organisation for Economic Co-operation and Development (OECD) states that reading should be considered a priority by all its member countries as an important indicator of the human development of their inhabitants (OECD, 2011). According to the OECD (2018), it warns about the critical state in which millions of Latin American and Caribbean students find themselves in terms of reading. Of 13 countries that participated in a study, it was found that 12, with the exception of Cuba, showed unfavourable results with very low levels in all generalised aspects of reading. In the case of Colombia, low levels of performance were observed, as well as little interest in reading.

The Program for International Student Assessment (PISA) is a 3-year study that assesses the extent to which students have acquired the knowledge and skills that are fundamental to their full participation in society. The assessment focuses on proficiency in reading, mathematics and science proficiency and in an innovative domain (Hopfenbeck, Lenkeit, El Masri, Cantrell, Ryan & Baird, 2018). According to the results of the Pisa Tests (2018) administered to 7,522 Colombian students, 51% reached or exceeded the minimum level (Level 2) in reading, surpassing by seven percentage points the percentage obtained in PISA 2006 (Instituto Colombiano para la Evaluación de la Educación [ICFES], 2018). The report indicates that associated factors such as reading motivation can have positive effects on the results. Most Colombians do not read for pleasure and the lack of reading among the general population, regardless of social class or economic or academic levels is a drawback on the development of the country (Baquero Silva & Doria Correa, 2017; Villarreal-Borrero, Jiménez-Cárdenas & González-Roys, 2021). Students have difficulty with reading strategies which are defined as cognitive and metacognitive procedures that are useful for regulating reading activity, allowing them to reconstruct the overall meaning of a text or to deal with interpretation problems that may arise during reading (Cardona Puello, Osorio Beleño, Herrera Valdez & González Maza, 2018).

The teaching of reading is not easy; reading is a complex process that requires a permanent and consecutive intervention in each life stages in order to be meaningful and effective, especially considering the relationship between reading, understanding and learning. The activities presented by teachers in the classroom should include informal and formal opportunities that expose the child to literacy growth and the development of a variety of reading skills, therefore, parents and teachers should consciously introduce children to early reading (Samuila & Abari, 2018).

The main difficulties encountered by students are inferential and critical comprehension, which shows that a lack of language proficiency results in discrimination and sociocultural marginalisation (Flotts, Manzi, Del Pillar Polloni, Carrasco, Zambra & Abarzúa, 2016). Therefore, confronting students with different strategies where the focus is directed to the essential ideas, and providing them with the possibility of selecting the strategies best suited to their needs, can improve reading comprehension. Reading cannot only be sensitised as an act in which some entertainment is found, because it must go further to deepen the types of reading comprehension, the analysis of the text, its internal coherence, its usefulness for the reading context and the understanding of the writer's interests (Ortiz-Salazar & Peña-Castaño, 2019).

In this case, we evidenced low levels of communicative reading competencies in Spanish as mother tongue of students in the sixth and seventh grade at a public educational institution in northern Colombia. It is important to mention that for students between 11 and 13 years of age, reading comprehension is crucial for academic success, intellectual development, critical thinking skills, communication and active participation in society. Therefore, if difficulties in reading comprehension persist, it may negatively result in low self-esteem, frustration, limitation of autonomous learning, disinterest in reading and limitation in making informed decisions, among others. We also found evidence of traditional teaching methodologies, limited, inaccessible and rigid didactic strategies in which the learning rhythms and diversity of the adolescent population and focus on the content of the Spanish language area were not considered. This may negatively influence the students' ability to develop reading comprehension processes.

The key premise is that schools should provide quality education for all – irrespective of differences in race, class, culture, language, gender, ethnicity, or ability/disability. This is linked to the construction of a democracy based on social justice and quality education (Ainscow, 2005; Casanova, 2016; Mfuthwana & Dreyer, 2018; Ngcobo & Muthukrishna, 2011). It is imperative that schools respond to local socio-cultural needs, and their students' learning characteristics by taking

advantage of the favourable conditions brought about by the incorporation of educational technology as an element that allows diversity of formats, access to educational resources, flexibility, collective knowledge construction and student autonomy (Alba Pastor, Zubillaga del Río & Sánchez Serrano, 2015).

Based on the above, the research question in this study was: What pedagogical strategies can be applied to promote reading comprehension in students?

The purpose of this research was to strengthen reading comprehension in students by taking advantage of the benefits of Easy-to-Read in the context of a methodology applied in Universal Design for Learning that favours such an important process in education. From a theoretical point of view, we recommend an analysis of the presentation of the texts that students read. The pedagogical proposal achieves a transformation in the presentation of the content, based on the guidelines of Universal Design for Learning (UDL) and the Easy-to-Read methodology. It highlights the importance of contributing to the accessibility of written text and in turn to the improvement of reading comprehension skills, diversifying the way in which they perceive and understand information, taking advantage of the use of educational technology (Center for Applied Special Technology [CAST], 2011).

Within the framework of inclusive education, all students have the right to access to information, knowledge and culture. Reading is one of the universal tools that allows autonomy in the information society, but the written text does not always fit the capabilities of the diversity of students. Therefore, easy reading aims to eliminate comprehension barriers, so that written information can be used by all, thus promoting equal learning opportunities.

Literature Review

Reading comprehension is a multidimensional process which requires identifying the sources of difficulties and designing educational approaches that prevent or improve these shortcomings (Kendeou, McMaster & Christ, 2016; Klapwijk, 2015). A reader must visually process words; identify their representations, and use syntax rules to connect them in order to understand the meaning of the sentence, which involves a complex cognitive process (Perfetti & Stafura, 2014). It is very important to instil reading as a pleasurable activity, not only useful in students' academic lives but as an important element in the culture and development of society. For this reason, it is essential that teachers are committed to literacy so that all children are encouraged and supported to read for pleasure (Merga, 2019). The teacher's role is fundamental as he/she must consider the diversity of learning styles

and characteristics of his/her students when designing reading comprehension strategies in inclusive educational environments.

Research on inclusive education has increased, seeking the transformation of educational institutions and entire communities (Del Pozo-Armentia, Reyero & Gil Cantero, 2020). This widely studied topic highlights the importance of teacher training, and the implementation of educational resources according to the needs of the students (Van Mieghem, Verschueren, Petry & Struyf, 2020). A school that adopts inclusive education accepts the principle that it is no longer necessary for a student to adapt, but the educational institution must adapt to cater in the needs of all, breaking down barriers and promoting accessibility (Mfuthwana & Dreyer, 2018). Inclusive education is an educational approach that values diversity and contributes to the development of being human, extending the ecology of equity and social justice (Del Pozo-Armentia et al., 2020; Parra Dussan, 2010). Promoting accessibility to spaces, resources, materials and curriculum enables equal opportunities, identifying the strengths of each student, and valuing diversity.

Duk and Murillo (2013) and Griful-Freixenet, Struyven and Vantiegheem (2021) state that UDL makes tailored education possible, promoting inclusive practices that respond to the real diversity of classrooms, through programmes and methods that accommodate different ways of learning. UDL can help teachers improve the effectiveness of their teaching and learning process by catering to the diversity of students. It is a framework that takes into account the wide range of variations in skills and abilities that exist in classrooms, and provides a set of research-based principles for inclusive curriculum development (McKenzie & Dalton, 2020). Implementing UDL contributes to the integral development of students, since its principles work to form a motivated and determined student body, oriented to accomplish goals and capable of identifying the appropriate resources according to their preferences (Alba Pastor, 2016; CAST, 2011).

Considering the principles of UDL, teachers can offer varied materials to address the full spectrum of students' different learning styles and in turn, design curricula and learning environments that address needs across a varied and comprehensive continuum of learning and support options (McKenzie & Dalton, 2020), among which are multiple content representation options. Accessibility to textual content has been of great research interest, considering how it positively impacts access to information, culture, and education. UDL is a useful framework for increasing reading outcomes and student engagement (Lowrey, Hollingshead, Howery & Bishop, 2017). Access to written information is key in the social inclusion of different groups, such as people with cognitive

disabilities, the elderly, linguistic minorities, or students with reading comprehension difficulties. Therefore, research such as that of Schmutz, Sonderegger and Sauer (2019) who conducted a usability test of a website containing content in conventional language and in the Easy-to-Read format to make a comparison between people with and without disabilities, found that Easy-to-Read offers advantages for both types of users in terms of improved search times, reading, comprehension and speed. For their part, Moreno, Alarcon, Segura-Bedmar and Martínez (2019) designed the web-based EASIER Tool, a system that simplifies texts, systematising compliance with accessibility guidelines referring to the design of textual content.

It is important that the student practices with reading that can be understood and, in this way, guarantee their access to information (Anderson, 2022). The Easy-to-Read methodology improves accessibility and, combined with the principles proposed by the UDL, provides redundancy in the presentation of essential information by presenting it in various ways and through multiple formats including the use of digital materials. According to Bosch and Fernández-Llebrez (2014), Easy-to-Read is the most innovative application, capable of providing its recipients with a more effective level of comprehension, thanks to adaptations of reading material that provides improvement in text comprehension, response time, and decreased fatigue, both in students with intellectual disabilities, as well as in those who do not have any diagnosis. Bernabé (2017), specifies that Easy-to-Read is a methodology which focuses on the principle of accessibility in understanding and together with user-centred design, become transversal strategies to support students.

Theoretical Framework

Reading comprehension

Reading comprehension is the mental construction that allows a reader to decode printed symbols, and that this representation must be the one that the author of the text created to convey. Reading comprehension occurs in the dialogue between the text and the reader. The readers, on the other hand, bring to the text their mental representations and their knowledge about the world (Català, Català, Molina & Monclús, 2007). Readers can give meaning to texts in a variety of ways. In the particular case of students, they read to access information, to learn, to participate in communities of readers at school, and for enjoyment (Mullis, Martin & Sainsbury, 2016). Reading comprehension levels in students can be influenced by different aspects, such as difficulties in decoding, poor vocabulary, lack of motivation and low self-esteem (Català et al., 2007; Kendeou et al., 2016; Klapwijk, 2015).

On the other hand, the Ministry of National Education (MNE) in Colombia has detailed in their orientation guide for the state “Saber” testing, basic standards specifications for language competencies. The guide emphasises the recognition of multiple manifestations of language, which provide people with the possibility of appropriating their environment and intervening in social reality in very rich, diverse and complex ways. Taking the above into account, the MNE (2017) defines reading comprehension performance levels from insufficient to advanced, according to the ability to develop competencies related to the comprehension of different types of texts, making inferences, recognising rhetorical and stylistic sources, and explaining the appropriate use of connectors and cohesion mechanisms that ensure coherence of texts.

Universal design for learning

For the Center for Applied Special Technology ([CAST], 2011), UDL breaks with rigid and inflexible curricula, personalising the process to meet the diversity of all students. UDL is structured around three principles, each of which is embodied in guidelines and lines of action to achieve the activation of the aforementioned neural networks and ensure the comprehensive and effective development of all students to live in society (CAST, 2011).

The first principle of UDL refers to providing multiple forms of information and content representation. It is related to recognition networks. The second principle refers to providing multiple forms of action and expression, which is related to strategic networks, and finally, the third principle refers to providing multiple forms of involvement, which is related to affective networks. UDL facilitates continuous student support, and considering that its principles imply variations in instructional design, delivery and support should be incorporated in and from the objectives, study resources or materials, methodology and assessment, as variation in student needs, abilities, skills and interests is the norm, not the exception (Meyer, Rose & Gordon, 2014). UDL is recognised as a way to ensure accessibility to learning, based on cognitive neuroscience, successful educational theories and practices, the reduction of barriers to learning, and the development of new technologies and digital media for educational purposes, allowing an individualisation of teaching (Rose & Meyer, 2002).

Easy-to-read

Easy-to-Read is a general methodological approach to make information accessible and facilitate the understanding of written messages to all people in their intellectual and learning diversity (Vived & Molina, 2012). It is a linguistic adaptation of a text that makes it easier to read and, therefore, facilitates

reading comprehension. The increase in its use is supported by a legal framework, the documented experiences of academics, and the social needs it has met (Bernabé Caro & Orero, 2019).

Easy-to-Read is easily included in the discourse of equity, since it favours access to information for everyone. Modifying or adjusting the characteristics of written texts in order to make them more universal is a concern that is gaining strength in the educational field, since it meets the demands of students with reading comprehension difficulties. Easy-to-Read can be combined with technologies to increase accessibility to information. An example of these are audio captions (Bernabé Caro & Orero, 2019). When defining the target or beneficiary population for the Easy-to-Read methodology, readers with cognitive disabilities could be considered. However, it has been shown that it is widely used to eliminate different barriers in written communication, such as sensory and language barriers, so it is beneficial for migrants, the elderly, and people with reading and learning difficulties (Maaß, 2019).

Following the principle of design for everyone, Easy-to-Read is a model accessible to any user with minimum reading ability. It is a way of respecting human diversity and promoting equality and social inclusion, especially for people with reading comprehension difficulties, taking into account that about 30% of the population has difficulties understanding and interpreting texts (Vived & Molina, 2012).

Methodology

The research was developed in the socio-critical paradigm, which, according to Arnal (1992, quoted by Alvarado & García, 2008), seeks to build knowledge from a global and dialectical perspective of the educational reality; that is, this paradigm allows a transformation of the structure of social relations and a response to certain problems generated by them, based on the reflective action of the members of the community. This research focuses on recognising teachers’ perceptions of their students’ reading comprehension and the characterisation of the reading comprehension levels of sixth and seventh grade students of secondary education, in which discursive analysis was used as a methodology. A mixed approach was used, representing a set of systematic, empirical and critical research processes involving the collection and analysis of quantitative and qualitative data.

It was based on an approach taking the fundamental characteristics of the research that uses them into account according to Johnson, Onwuegbuzie and Turner (2007). The research design used was action research, which, according to Hernández Sampieri, Fernández Collado and Baptista Lucio (2014), allows understanding and solving problems such as, in this case, reading

comprehension levels from the point of view of the teachers and students at the educational institution. The data collection was carried out in a longitudinal descriptive manner that sought to identify, describe and establish the relationship between teaching methods to determine the performance levels of students' skills and knowledge.

Participants and Instruments

As for the participants, we worked with a population of seven sixth grade students and six seventh grade students, for a total of 13, all enrolled in the 2020/2021 period, covering the entire population of these courses. This group was chosen for the study because of the importance of reading comprehension in their mother tongue at adolescent age. Also participating in the study were the six teachers assigned by the institution in sixth and seventh grade for the areas of Spanish, social sciences, natural sciences and English, corresponding to the total population. To collect data from students, participant observation, a questionnaire and a standardised language test established by the Colombian Ministry of Education were carried out. A survey designed by Herrera Sánchez and Luna Alonso (2018) was administered to the teachers with Likert-type, open and selection questions with justification. The data were analysed to identify, describe and establish the relationship between teaching methods to determine the levels of performance of the students' skills and knowledge.

Pedagogical Proposal: "Easy Reading"

The "Easy Reading" proposal is designed and focused on students in the sixth and seventh grades of middle school, in order to provide them with guidance in the process of communicative reading skills, specifically in the comprehension of the same. This proposal was developed taking into account the principles of UDL; the principle of representation, multiple forms of action and expression, and multiple forms of involvement. Consequently, it met

the needs of a wide range of students. The proposal was developed on the Chamilo Learning Management System (LMS) platform, which uses digital information and communication technologies for the development of systematic training processes, with curricular, didactic, and evaluative environments to motivate and encourage students. The lessons were adapted by implementing the Easy-to-Read methodology, using support such as underlining and defining new words, visual aids, complementary videos, and interactive exercises.

The reading texts increased in complexity and size and were complemented with activities to assess knowledge either through images, multiple-choice questions with a single answer, multiple-choice questions with several answers, audio, relationships, and oral expression, among others, to incorporate the second principle of UDL which is related to offering the student multiple forms of expression. It is important to mention that the third principle was incorporated by offering multiple forms of motivation and involvement by giving constant feedback, strategies to face challenges, and self-assessment activities.

Results

Initial Diagnostic

Through continuous observation, we attempted to get closer to the main actors of the research, namely the teachers and students through observation before and during the implementation of the instruments. In this sense, the strategies used by the teachers and their influence on the students' learning could be evidenced, from which it was possible to confirm the lack of motivation and interest in the activities related to reading and its comprehension.

A survey was administered to the six teachers in which they were asked about their perceptions about their students' reading comprehension. The teachers scored 66% of the learners reading comprehension as "fair", 17% as "good", one as "poor" (cf. Figure 1).

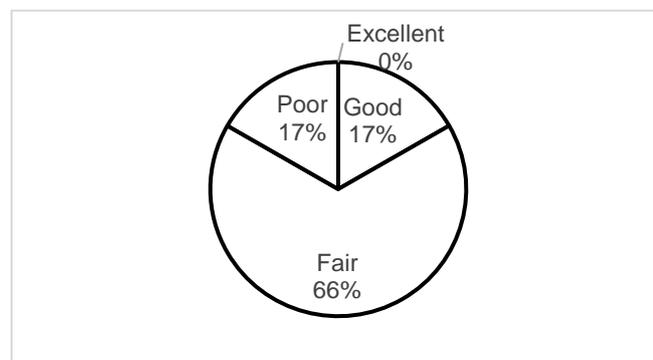


Figure 1 Survey – Teachers' perceptions of student reading comprehension

Teachers were aware of the difficulties that their students had. They agreed on the need to improve pedagogical practices to obtain better

results. Despite the above, there was a lack of motivation on the part of the teachers themselves to implement new strategies. The teachers stated that

they recognised the importance of students' reading comprehension, considering that it affected the learning process and communication:

Reading comprehension within my area of performance is essential to grasp the meaning of the social and geographical phenomena we analyse, specifically to identify the consequences of these in the context in which students evolve (Teacher 1 [T1]).

It makes learning easier with more clarity in the topics to be covered, analyses are created and students are encouraged to put into practice what they have read (T2).

Because they begin to think, understand and analyse. If they understand a reading, they can make a critical analysis of any fact (T3).

It facilitates their relationships with others, enables them to communicate clearly, improves their

vocabulary and gives them tools to defend themselves in any area of life, in addition to improving their lexicon – the higher the reading level, the better the lexicon and in turn, both written and oral expression. (T4)

For this research, the MNE 5th Saber competency test was administered, specifically focusing on language competency, with the purpose of characterising the reading comprehension levels of the students. The results obtained show that the students presented low levels of reading comprehension, thus, according to the MNE standards and the Saber test scores, most (54%) of the students were at an “insufficient” level and 46% were at a “minimal” level. As Figure 2 shows, no student achieved either a satisfactory or advanced level.

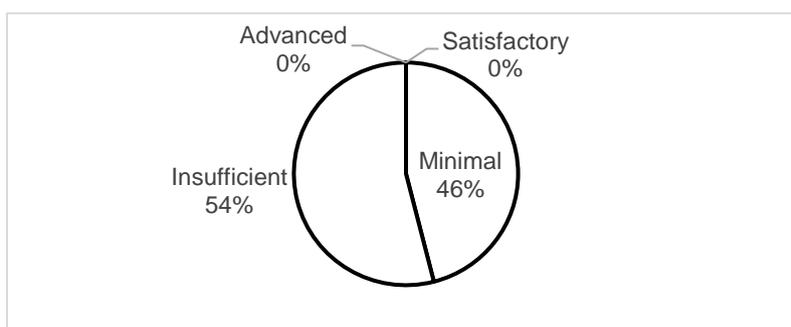


Figure 2 Levels of reading comprehension

It is important to mention that despite the fact that the test administered corresponded to the fifth grade and was administered to sixth and seventh grade students, or in other words, to grades one and two levels higher, the results did not coincide with the basic competencies that the students were supposed to demonstrate. Considering the above, it could be established that the participants had low performance in relation to text comprehension. The results of the test show that the students required methodological strategies to strengthen their reading comprehension processes since this affected their school performance and would continue to be a burden throughout their lives. This is why a pedagogical proposal was designed based on Easy-to-Read and the UDL in order to achieve the objectives set – the main one being to strengthen reading comprehension.

It is relevant to mention that factors external to the school environment influence learning processes, such as a rural context with scarce economic resources, social conflicts and a lack of familial support in the academic development of their children. From the observation we found dysfunctional families, denial of diagnoses,

unemployed parents, and an immigrant population from Venezuela.

Results of the Easy Reading Proposal

Through the application of the texts and the story adapted in Easy-to-Read, it was possible to corroborate the viability and the increase in the students' reading comprehension skills. A significant increase was observed in the students' performance levels before and after the application of the Easy-to-Read pedagogical proposal. Figure 3 shows the comparison of the results, observing that when facing texts without Easy-to-Read and after applying the pedagogical proposal, no student reached the advanced and satisfactory levels. On the other hand, 54% reached a minimal level, which corresponded to seven students, and 46% reached an insufficient level, corresponding to six students. Furthermore, it is evident that, upon implementing the pedagogical proposal based on Easy-to-Read and UDL, 15% of the participants achieved an advanced level, which corresponded to two students, 54% reached a satisfactory level, which corresponds to seven participants, and 31% reached a minimal level, which corresponds to four participants. None of the students (0%) scored at an insufficient level.

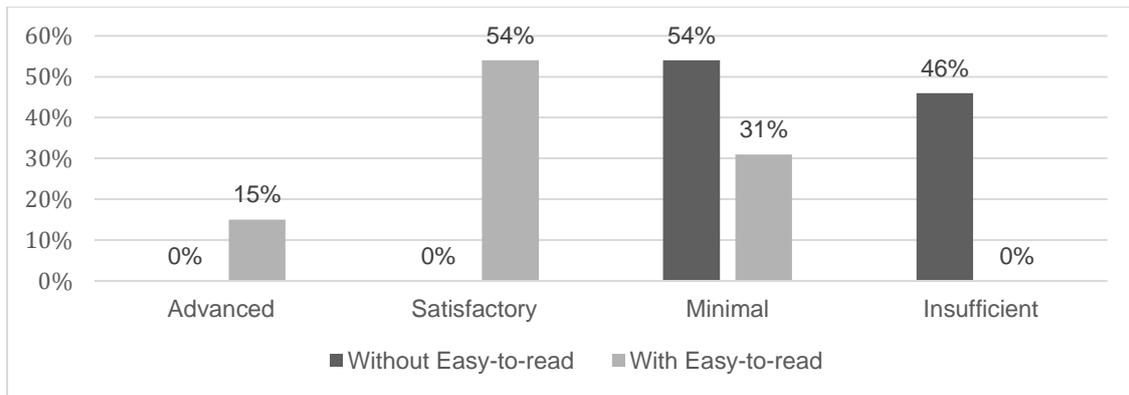


Figure 3 Comparison of test results with and without Easy-to-Read

The above ratifies that Easy-to-Read generates a positive impact not only on text comprehension, vocabulary increase, motivation and interest in reading, but also reflects a significant increase in performance levels. It is important to provide students with reading material adapted to Easy-to-Read and to generate adequate and continuous reading environments to generate a sequential and progressive improvement of reading comprehension skills, vocabulary management, motivation and autonomy, all supported, not only by Easy-to-Read, but also by the principles of UDL.

Discussion

Reading is conceived as one of the most important skills that every human being should acquire in the initial stages of development. Authors such as Baba and Affendi (2020) and Ningsih et al. (2019) consider reading as the basis for the acquisition of knowledge and for the comprehensive development of children. Reading comprehension levels in students can be affected by different aspects, such as difficulties in decoding, poor vocabulary, lack of mastery of metacognitive strategies, disinterest or lack of motivation, and low self-esteem (Català et al., 2007; Kendeou et al., 2016; Klapwijk, 2015). Presenting students with texts that arouse their interest and fit their needs is very important (Merga, 2019). This is where teachers face a great challenge, by focusing on the content, the way in which it is presented and the constant motivation of the student.

Easy-to-Read is a methodology that permits the elimination of barriers to comprehension, participation and learning. Bernabé (2017) offers a methodological proposal for the development of Easy-to-Read according to the user-centred design, providing a solid basis for the successful development of text comprehension for people with intellectual disabilities through digital products. This corroborates the results obtained in this research, which show a significant improvement in the level of performance of adapted texts in relation

to the results previously carried out without Easy-to-Read. Incorporating adapted texts resulted in improved levels of readers' comprehension.

For this reason, it is of great importance that teachers are open to new methodologies to promote educational accessibility to students with cognitive disabilities, learning difficulties, people who are learning Spanish for the first time, or even unmotivated students with low self-esteem. In this way, diversity in the classroom is addressed and participatory and accessible educational spaces are promoted for all.

In accordance with the above, Alba Pastor (2016) and CAST (2011) affirm that applying the principles of UDL holds multiple benefits; representation, multiple forms of expression, motivation to generate meaningful, active and participatory learning of students, thus embracing diversity. This is ratified by the notable increase in text comprehension with the application of the "Easy Reading" pedagogical proposal.

Following the principle of design for all, Easy-to-Read is a model accessible to any user with a minimum reading ability. It is a way of respecting human diversity and promoting equality and social inclusion, especially for people with difficulties in reading comprehension. Based on the results and statistical analysis obtained through the application of Easy-to-Read in stories and texts, it was possible to demonstrate an increase in students' reading skills. This was specifically so with regard to comprehension of texts adapted to Easy-to-Read compared to those who took the tests without Easy-to-Read. In addition, the students' interaction was better since they had visual and auditory aids and a glossary with the purpose of expanding their knowledge and vocabulary, as well as highlighting words that might be unfamiliar to them. In this sense, Easy-to-Read can be considered a didactic methodological strategy that, when articulated in UDL, increases reading comprehension in students with or without disabilities.

Conclusion

The purpose with this research was to strengthen reading comprehension in students by taking advantage of the benefits of Easy-to-Read in the context of a methodology applied in UDL that favours such an important process in education. This experience recognises the importance of providing options for perception, for language and symbols, and for comprehension, in accordance with UDL and incorporating the Easy-to-Read methodology. This study became even more interesting through intervening in contexts where extremely low levels of motivation and interest in reading and reading comprehension activities were evident. This was confirmed by the systematic observation of classes and the strategies used by the teachers. This problem led to the design of a pedagogical proposal with activities that not only captured attention, but also fostered motivation, interest and pleasure in reading on the part of the students.

For the initial diagnosis, a standardised test was administered in order to characterise the students' reading comprehension levels. It was found that 100% of the students were at a lower reading comprehension level than they should have been, taking into consideration their age and school grade, i.e., students had low reading comprehension levels compared to the reading comprehension skills they should already have had. After the application of the pedagogical proposal, Easy Reading, a virtual course with different texts adapted to Easy-to-Read, and following UDL principles, was presented. Its effectiveness was evidenced, making the texts more understandable and allowing better responses from the students. The UDL principles based on the objectives, methodology, resources and evaluation made it possible to create a virtual course that encouraged the motivation of the students, who not only showed great interest in digital devices, but also directed that same interest in reading, following their own pace and using their learning strengths.

Authors' Contributions

ECR and AHG conceived the study as part of their graduate work; LHN and VDV were their theoretical and methodological tutors. The four authors designed the questionnaire and ECR and AHG conducted the data collection; LHN and VDV conducted the analysis. All authors contributed to the writing of the article and approved the final version.

Notes

- i. Published under a Creative Commons Attribution Licence.
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