

2022

Approach to Improve Reading Skill of Students with Dyslexia

A. S. AL Hadhrami

Department of Administration Education, College of Arts and Humanities Educational, A 'Sharqiyah University, UAE., Ahmed.alhadrami@asu.edu.om

M. G. Raja Al-Amrat

Department of Special Education, Faculty of Education, Jadara University, Jordan, Ahmed.alhadrami@asu.edu.om

M. A. S. Khasawneh

Department of Special Education Department, College of Education, King Khalid University, Abha, Saudi Arabia, Ahmed.alhadrami@asu.edu.om

S. R. Darawsheh

Department of Administrative Sciences, the Applied College, Imam Abdulrahman Bin Faisal University, P.O. Box: 1982, Dammam, Saudi Arabia, Ahmed.alhadrami@asu.edu.om

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/isl>

Recommended Citation

S. AL Hadhrami, A.; G. Raja Al-Amrat, M.; A. S. Khasawneh, M.; and R. Darawsheh, S. (2022) "Approach to Improve Reading Skill of Students with Dyslexia," *Information Sciences Letters*: Vol. 11 : Iss. 6 , PP -. Available at: <https://digitalcommons.aaru.edu.jo/isl/vol11/iss6/39>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Information Sciences Letters by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo.

Approach to Improve Reading Skill of Students with Dyslexia

A. S. AL Hadhrami^{1,*}, M. G. Raja Al-Amrat², M. A. S. Khasawneh³ and S. R. Darawsheh⁴

¹Department of Administration Education, College of Arts and Humanities Educational, A 'Sharqiyah University, UAE

²Department of Special Education, Faculty of Education, Jadara University, Jordan

³Department of Special Education Department, College of Education, King Khalid University, Abha, Saudi Arabia

⁴Department of Administrative Sciences, the Applied College, Imam Abdulrahman Bin Faisal University, P.O. Box: 1982, Dammam, Saudi Arabia

Received: 2 May 2022, Revised: 18 May 2022, Accepted: 21 May 2022.

Published online: 1 Nov. 2022.

Abstract: The purpose of this research is to define and explain the way of learning to read that is effective in increasing the reading abilities of students with dyslexia. The qualitative research technique that was employed in this study consisted of case study analysis. Those who participated in this research had dyslexia as their primary diagnosis. Interviews, observation, and documentation were employed as data gathering methods, with triangulation techniques being used to assess the validity of the information. Data analysis is carried out by the Miles and Huberman model, which includes data gathering, data reduction, data presentation, and final findings. Several methods were combined to create the method used for dyslexic students, including the phonic method, the syllable peeling method, and the language experience method, as well as simplification of reading practice materials and assistance with a verbal explanation of the material from a special assistant teacher for students, according to the findings. As shown by indications of early reading ability, the technique has the potential to increase early reading abilities in dyslexic pupils. Among these skills are the ability to recognize and read letters and letter sounds, as well as the ability to pronounce words correctly and to read sentences aloud and with the correct pronunciation for an extended period.

Keywords: Approach, Dyslexia, Reading Skill.

1 Introduction

It is common for children with learning Disabilities to have abnormalities in the process of mental and physical functioning [1], [2], [3], which may interfere with the normal flow of learning and cause delays in some perceptual-motor skills and language skills [4]. Irregularities in the process of mental and physical function in children may be caused by developmental differences between them and other normal youngsters. Because of the presence of various innovations, the usual flow of learning has been slowed or stopped entirely [5].

Even though there are several types of learning issues that exist in our society, they may be broadly classified into three categories: learning Disabilities in reading (dyslexia learning), writing (dysgraphia learning), and difficulty in counting (learning dyscalculia) [6]. The three types of learning challenges are caused by a variety of conditions, both internal and external to students, that might make it difficult for them to attain

academic success in line with their abilities and expectations [7]. Reading issues might be one of the reasons for writing and counting challenges since writing skills need the development of reading abilities to be successful.

Hulme & Snowling [8] explain that dyslexia is a syndrome characterized by Disabilities in learning the components of words and sentences, integrating the components of words and sentences, and learning everything that has to do with time, direction, and time management.

The ability disorder and difficulties have an impact on the learning process include disruptions in the processes of reading, expressing, and writing, as well as Disabilities in coding numbers and letters at times. Dyslexia is a learning disability, but the ability to read may aid someone in learning a more difficult subject [8].

It is possible to enhance dyslexic children's reading abilities with the use of proper strategies [9]. In contrast, if the instructor employs a reading learning approach that is not appropriate for the requirements of the students, it will harm the students' enthusiasm for learning to read [10], [11]. When utilizing techniques for learning to read for dyslexic kids, instructors must, of course, pay close attention to the requirements of dyslexic children throughout the process of learning to read.

The learning technique is one of the most significant aspects of the learning process since it is through the application of the proper method that the learning goals will be reached in

*Corresponding author e-mail: Ahmed.alhadrami@asu.edu.om

the learning process. Learning techniques for normal children will vary from those used by students with learning disabilities, for no other reason than that their children need different services than their peers. Based on these issues, it is necessary to do research into techniques for children who have learning challenges, such as those who have dyslexia.

2 Methods

The objective of this study is to determine the best effective method for teaching dyslexic children to read, which includes reading learning methodologies that may be used to improve dyslexic students' early reading ability. The case study method was used to get a better understanding of the various instructional tactics used to aid dyslexic persons in improving their reading ability.

This study used structured interviews; in structured interviews, the interviewer controls the questions and the informants control the responses (or participants). The director of the school's inclusion division, special assistance teachers, and children with dyslexia all supplied information about themselves for this study. It will be presented as a qualitative descriptive analysis of the data collection procedures and methodology used in this study. This will include data reduction, presentation of data, conclusion generation, and data verification.

Triangulation techniques are used to determine the reliability of data by comparing data from the same source to data from other sources utilizing varied tactics such as observation, interviewing, and documenting. The researcher's evaluation of the data to achieve a conclusion is followed by a check for agreement (member check) with the three data sources from which the information was gathered. Time triangulation is a technique that involves comparing several data sources to the same data source at distinct periods.

3 Results and Discussion

The approach used by the investigated school

Case 1

A single class is used to accommodate students with special needs who are taught alongside typical pupils. Nonetheless, there is a distinction in that children are closely supervised by special assistant instructors throughout the day in class. One of the resources provided by the school for inclusive kids is the provision of special assistance instructors. According to the instructor in charge of the inclusion division, who stated:

"For dyslexic pupils, the school offers accompanying instructors. Dyslexia instruction is available at our facilities, as are accompanying instructors. Things to provide dyslexia are going to be discussed later. There is no school-based treatment for this student. "

The majority of learning activities for dyslexic pupils are carried out with the assistance of special assistant instructors. The instructor's job is to break down all of the information supplied by the lesson teacher and class teacher into smaller, more digestible chunks. It was mentioned by the teacher:

"In the past, we've always begun with basic words. First, let's take a look at a single phrase to see whether that's the case. Write aboard, and then go to bed. One phrase at a time is all we can do. For example, it may take a few minutes to write "Mom is going to the market. "

Learning for individuals with exceptional challenges, including dyslexia, must be done in little increments over time. Apart from the fact that it differs from typical pupils with dyslexia in terms of capacity to acquire content, it is also distinct. In contrast to dyslexia, if a usual student is told about a topic, he or she will be able to pick up on it quickly. Dyslexic pupils need twice as much time to complete a task as their non-dyslexic peers.

"And now for the material A, am I correct? I'll sum it up and keep asking questions. He isn't very good at writing. For instance, he doesn't desire at least one word in a phrase that many others do. My questions and the answers to the questions in the summary were given to them, and they were tasked with finding them. "

Special assistant instructors are responsible for understandably communicating subject content. But, apart from that, it is important to remember that the learning approach employed must be tailored to the requirements of the pupils. When it is seen that dyslexic pupils are making progress, the technique of learning to read in particular is utilized constantly to help them. According to the instructor, the following is true:

"Yes, if it is consistent with the preceding procedure. To employ theme material, I reduce the content, then I read the points, and finally, I compose the questions myself. "

The strategies utilized to educate inclusive students will differ depending on the student. The same may be stated about the methods used with learners. They both have dyslexia associated with reduced focus as well as dyslexia associated with a moody or irregular learning disposition.

According to the findings of interviews with special help teachers, children often daydream and play with objects around them while they are learning. Due to the lower ability to concentrate, it is critical to maintain a good balance between learning and relaxing time. For instance, if someone has studied for 15 minutes and then desires 10 minutes of relaxation, he must study for an additional 15 minutes. The researcher saw the same impact when observing the student's class, confirming the results. When learners are placed in positions of authority, they are required to communicate directly with the accompanying teacher. Pupils were studying English during this period, and the teacher gave a

presentation in front of the class. When the teacher indicated that the students were daydreaming, their expressions remained blank and their attention was fixed outside the classroom doorway. Similarly, when the lecturer explains the material, he seems to be daydreaming and oblivious to what he is presenting. This learner will recover his focus if the accompanying teacher reprimands him.

According to the researcher's second observation, when the accompanying teacher told students to get their textbooks, he seemed to be paying great attention to the sequence of the students' movements. However, the student never returned to his book and was instead seen snoozing in his chair. He will be convinced to remove the book from his bag after getting a second warning from his special assistant instructor.

Case 2

In contrast to the other pupils, Case 2's student was seated in the far back with his special assistant instructor. When the researcher watched his class, he seemed to have a cheerful expression on his face. When he was studying with the instructor, on the other hand, he did not seem to pay any attention to the teacher's explanations. His gaze was riveted on the buddy who stood in front of him. However, as the lecture drew to a close, he transformed into a lively youngster who convinced his classmates to play in the classroom.

As a result of the interviews and observations conducted above, it is clear that the therapy provided to students is tailored to their unique circumstances and requirements, as he is a dyslexic student with poor focus. This is how the following instructor said it:

"To begin with, I instructed him to mimic. A term that's more than three letters lengthy is counted as a three-letter word. When it comes to, say, "environment," he takes a cue from it. So, one must first read it, then copy it. Reading in one paragraph is also my goal. There should be a reading drill every day of the week. His daily readings consisted of a paragraph that Ali had read aloud. As an example, reading a piece of writing a few times I lent a hand by reading, and he patiently listened while I did so. To ensure that he does not fall behind with the others."

Reading by spelling is another approach that special assistance teachers employ to help their students learn to read. Researchers' observations of pupils learning English have led to this conclusion, which is consistent with the findings of their study. In the word "hundred," the instructor practices reading by breaking it down into syllables to form the word "hundred," and then the pupils go on to the next reading assignment.

Meanwhile, the narrative from the pupils' special accompanying instructor discussed the strategies employed in learning to read in the following ways:

"Isn't it time to move on to material A? I summarize and prompt him with questions to entice him to read. He was averse to writing. For instance, one sentence, at the very least one word. I assigned them the task of finding solutions to the synopsis's queries. I will read it if you do not. It was impossible since he was tasked with the responsibility of "explaining" obstacles."

According to the previous description, the two special assistant instructors seem to apply the strategy by lowering the content and reading the subject being studied; nonetheless, there are some inconsistencies between the two professors. Case 1 is an obedient child, which suggests that the students will follow the instructor's teaching strategy. Similarly, when the researcher observed classes, the special companion teacher for these kids employed the reading approach, spelling out words that had been broken down into syllables using the spelling method. In contrast to Case 2, he is a melancholic youth. When a teacher employs an approach that he thinks to be distinct from that of his typical learners, he will withdraw from the session. This student is uneasy since he does not like to be distinguished from his colleagues.

As with the special assistant teacher in Case 2, the special assistant teacher in Case 2 said that kids would not want to show their incompetence to others. When he reads an article, he will mentally spell it out before pronouncing it. He also takes issue with the teacher demonstrating a method by plagiarizing an essay, believing he is being treated like a child in this circumstance. Nonetheless, when he was asked to write a story about his experience, he declined, claiming inability.

When it comes to reading, Case 1's student mimics, reads the reading material daily, reads by breaking words down into syllables, and completes reading activities. Reading through imitation is also employed in a huge number of reading materials. Students will get support from the teacher, for example, when reading several paragraphs. Along with reading and imitating procedures, the teacher provides pupils with visual media assets. Ali may also benefit from instruction on how to keep a journal of his or her experiences. As a result, the teacher said that when students were asked to write narratives about their personal experiences, they were able to finish the assignment as well. In comparison, the total number of sentences generated by students does not surpass one paragraph, because each paragraph incorporates many student writings.

Approach to Increase Performance of Students with Dyslexia

Identifying the Dyslexia

The use of learning strategies that are precisely tailored to the needs of students. Students' reading abilities have increased as a consequence of the strategy employed to teach them how to read a book. Dyslexia is a learning disability that manifests itself via difficulty with reading and spelling

and is often accompanied by issues with writing [12]. Additionally, individuals with dyslexia will suffer from poor self-esteem and confidence [13], [14],[15] [16].

After then, dyslexic children's skills will be unique from those of typical children. Similarly, the delivery of learning will need a different length of time and will be more intensive. Numerous factors contribute to this outcome disparity. Additionally, in addition to the internal variables that contribute to children acquiring dyslexia, there are external factors that contribute to students' reading abilities being different from those of normally developing children. Additionally, external influences include the impact of electronics on children, which leads to children being more engaged in gaming and parents spending less time with their children.

Farokhi & Hashemi [17] suggest that psychological, intellectual, environmental, and psychological elements all impact children's ability to read. Pupils' background and experiences at home are two critical environmental factors affecting their reading success in school. According to Rubin, parents who are warm and democratic in their parenting styles, who can direct their children to educational activities, who enjoy challenging their children to think, and who enjoy encouraging their children to be independent have the attitude their children require as good preparation for school learning.

In contrast to their present situation, their parents' lack of motivation is likely the fundamental reason for their reading difficulties. Parents only encourage the form of resources that are known to be beneficial in motivating children to pursue secondary school. Pupils, on the other hand, think they are more powerful when their parents pay attention to them and supply them with resources, rather than when they are motivated to study.

Psychological factors such as motivation, interest, and social maturity, as well as emotion and adjustment, all affect students' reading ability [18], [19]. The capacity of a pupil to manage their emotions and self-adjustment must be shown at a certain level of social maturity. Children who get irritable, shout and overreact when they do not receive what they want, withdraw or become gloomy, will have difficulty reading and learning to read.

This is what happens to a student who has mild dyslexia. They also tend to throw tantrums or express themselves emotionally excessively in response to anything that makes them feel uneasy [20], [21]. Students will immediately get furious and inflict damage on their classmates. Indeed, if they so desire, they will not hesitate to throw heavy objects at their peers during class time.

Teaching Strategies with Different Dyslexia

To assist dyslexic students in learning, one strategy is to simplify the subject being studied by offering less reading material and writing in larger letters/fonts than the text size.

Between dyslexic individuals and regular students, there will be a disparity in their ability to remember knowledge during lectures. In contrast to dyslexia, when a typical student is informed about a subject, he or she will rapidly grasp it. Dyslexic students need double the amount of time as their non-dyslexic counterparts to accomplish a task. Additionally, the reading learning strategy used with the youngsters must be continual.

Among the most frequently used techniques by special assistant teachers with students who have moderate dyslexia are reading imitating the teacher, reading texts regularly, performing reading drills, reading methods for spelling words that have been broken down into syllables, and methods for writing stories based on their own experiences. Children with dyslexia are presently employing the phonic approach, peeling syllable methods, and language experience methods, in addition to drilling activities as part of their reading practice.

It is vital to use the phonics strategy when dealing with reading topics that children perceive to be difficult. For instance, reading many sentences in a paragraph or utilizing three-syllable terms such as "Environment." It is performed by the instructor reading aloud words or phrases, the students listening to what the teacher reads, and then the students expressing their understanding of what they have heard using the written materials they have read.

According to Tunmer & Nicholson [22] the phonic approach emphasizes word recognition via the act of listening to letter sounds. The procedure outlined above is consistent with his idea, which is discussed in further detail below. Children are first taught to listen to the sounds of letters, and then to synthesize these sounds into syllables and words. On the other hand, dyslexic pupils employ the phonic strategy to teach their students syllables and words rather than letter sounds. Because youngsters are capable of reading and naming the alphabet from A to Z, letter recognition is unnecessary.

The second strategy is the syllable peel. This is performed by training students on how to spell a syllable-split word. The researcher saw an instructor use this method during an English session, notably with the term "hundred." The lecturer showed reading by describing it as "hundred," and then the learners practiced reading by peeling the syllables off the next word. Reni's stated theory describes it as follows: the syllable peeling technique explains how to parse and combine words.

Another technique is the language experience method, which entails the teacher offering instruction by interrogating students about their language-learning experiences. Students may obtain experience via their usual activities or by visiting

a new area on a holiday or school trip. This strategy is executed in the assertion that this methodology is entwined with the development of children's listening, speaking, and writing skills. Reading materials are based on children's experiences. This method is predicated on the idea of perspective.

The stage of the language experience approach that is being used is simply the third, during which students may relate their experiences, write them down, and read them. The special assistant teacher's role is confined under this system to aiding children's learning processes when they seem to be having trouble.

It has been shown that the strategies used by special assistance teachers improve children's initial reading ability. Reading activities are designed to ensure that reading teaching is as successful as possible. Students do regular reading tasks to maintain their reading ability. This is performed by the recitation of sentences from different paragraphs selected from the day's teachings.

In contrast to children with mild dyslexia, teachers who provide special help use the method of providing a synopsis of the material to spark students' interest in reading it. Meanwhile, understanding of the topic is achieved by reading the information and then discussing it vocally. The second student was subjected to a process that was not developed for those with learning difficulties. This is because kids have mild dyslexia, which means they can read and mention the alphabet from A to Z, comprehend words with numerous syllables, and comprehend paragraphs with several lines of sentences. Reading problems are characterized as the inability to read and spell for a lengthy period.

The method's suitability for students' needs is shown by its ability to increase pupils' reading skills. The special student aid instructor determines whether or not a pupil's ability increases by minimizing the indication from ordinary pupils. The decrease in indicators is obvious in the individual student program, notably the program developed by the special assistant teacher for students and children with learning disabilities.

Beginning reading is a necessary skill for the reader to learn or improve. Individuals gain the capacity to read in stages. The first step is to begin reading. Children are introduced to the alphabet's forms and pronunciations from A to Z, as well as how to read syllables, phrases, and sentences. Children should be introduced to stringing together spoken letters to form syllables, words, and phrases in this circumstance. After then, children are introduced to short sentences. After the child has mastered short phrases, he or she must be taught to read whole sentences that adhere to the subject-predicate-object-description pattern. Following that, even children must be taught how to read complex or complicated sentences.

4 Conclusions

Students use a variety of reading instruction strategies, including the phonic approach, the syllable peeling method, and the language experience method. Students use the strategy by delivering easy content in the form of material summaries to facilitate the daily reading acquisition. The instructor explains the topic verbally for students to comprehend it. This method can help dyslexic students improve their reading ability, as measured by the initial reading indicators, namely the ability to read the names of letters and letter sounds, the ability to pronounce words correctly, and the ability to read sentences aloud and correctly in a little longer time.

Conflict of interest:

The authors declare that there is no conflict regarding the publication of this paper.

Acknowledgments

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through Small Research Groups under grant number (RGP.2 /136/43)

References

- [1] Khasawneh, M. A. S. (2021). Developing Reading Skills Among Students with Learning Disabilities in English. *Journal La Edusci*, 2(5), 1-8. <https://doi.org/10.37899/journallaedusci.v2i5.439>
- [2] Law, M., Finkelman, S., Hurley, P., Rosenbaum, P., King, S., King, G., & Hanna, S. (2004). Participation of children with physical disabilities: relationships with diagnosis, physical function, and demographic variables. *Scandinavian Journal of Occupational Therapy*, 11(4), 156-162. <https://doi.org/10.1080/11038120410020755>
- [3] Young, P. C. (1925). An experimental study of mental and physical functions in the normal and hypnotic states. *The American Journal of Psychology*, 36(2), 214-232. <https://doi.org/10.2307/1413621>
- [4] Gupta, P., & Sharma, V. (2017). Working memory and learning disabilities: A review. *International Journal of Indian Psychology*, 4(4), 111-121. <https://doi.org/10.25215/0404.013>
- [5] Foster, A., Titheradge, H., & Morton, J. (2015). Genetics of learning disability. *Pediatrics and Child Health*, 25(10), 450-457. <https://doi.org/10.1016/j.paed.2015.06.005>
- [6] Vidyadharan, V., & Tharayil, H. M. (2019). Learning disorder or learning disability: Time to rethink. *Indian Journal of Psychological Medicine*, 41(3), 276-278. https://doi.org/10.4103%2FIJPSYM.IJPSYM_371_18
- [7] Torgesen, J. K. (2018). Phonologically based reading disabilities: Toward a coherent theory of one kind of learning disability. *In Perspectives on learning disabilities* (pp. 106-135).. <https://doi.org/10.4324/9780429498381-5>

- [8] Hulme, C., & Snowling, M. J. (2016). Reading disorders and dyslexia. *Current opinion in pediatrics*, 28(6), 731. <https://dx.doi.org/10.1097%2FMOP.0000000000000411>
- [9] León, A. M., Bravo, C. B., & Fernández, A. R. (2017). Review of Android and iOS tablet apps in Spanish to improve reading and writing skills of children with dyslexia. *Procedia-Social and Behavioral Sciences*, 237, 1383-1389. <https://doi.org/10.1016/j.sbspro.2017.02.200>
- [10] Deci, E. L., & Ryan, R. M. (2016). Optimizing students' motivation in the era of testing and pressure: A self-determination theory perspective. In *Building autonomous learners* (pp. 9-29). Springer, Singapore. https://doi.org/10.1007/978-981-287-630-0_2
- [11] Gooch, D., Vasalou, A., Benton, L., & Khaled, R. (2016, May). Using gamification to motivate students with dyslexia. In *Proceedings of the 2016 CHI Conference on human factors in computing systems* (pp. 969-980). <https://doi.org/10.1145/2858036.2858231>
- [12] Hoeft, F., Meyler, A., Hernandez, A., Juel, C., Taylor-Hill, H., Martindale, J. L., ... & Gabrieli, J. D. (2007). Functional and morphometric brain dissociation between dyslexia and reading ability. *Proceedings of the National Academy of Sciences*, 104(10), 4234-4239. <https://doi.org/10.1073/pnas.0609399104>
- [13] Glazzard, J. (2010). The impact of dyslexia on pupils' self-esteem. *Learning support*, 25(2), 63-69. <https://doi.org/10.1111/j.1467-9604.2010.01442.x>
- [14] Kinder, J., & Elander, J. (2012). Dyslexia, authorial identity, and approaches to learning and writing: A mixed-methods study. *British Journal of Educational Psychology*, 82(2), 289-307. <https://doi.org/10.1111/j.2044-8279.2011.02026.x>
- [15] Shehu, A., Zhilla, E., & Dervishi, E. (2015). The impact of the quality of social relationships on the self-esteem of children with dyslexia. *European Scientific Journal*, 11(17). <https://ejournal.org/index.php/esj/article/view/5808>
- [16] Sumner, E., Crane, L., & Hill, E. L. (2021). Examining academic confidence and study support needs for university students with dyslexia and/or developmental coordination disorder. *Dyslexia*, 27(1), 94-109. <https://doi.org/10.1002/dys.1670>
- [17] Farokhi, M., & Hashemi, M. (2011). The analysis of children's drawings: social, emotional, physical, and psychological aspects. *Procedia-Social and Behavioral Sciences*, 30, 2219-2224. <https://doi.org/10.1016/j.sbspro.2011.10.433>
- [18] Catalano, R. F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of school health*, 74, 252-261. <https://doi.org/10.1111/j.1746-1561.2004.tb08281.x>
- [19] Habibian, M., Roslan, S., Idris, K., & Othman, J. (2015). The Role of Psychological Factors in the Process of Reading. *Journal of Education and Practice*, 6(29), 114-123.
- [20] Eissa, M. (2010). Behavioral and emotional problems associated with dyslexia in adolescence. *Current Psychiatry*, 17(1), 17-25.
- [21] Livingston, E. M., Siegel, L. S., & Ribary, U. (2018). Developmental dyslexia: Emotional impact and consequences. *Australian Journal of Learning Difficulties*, 23(2), 107-135. <https://doi.org/10.1080/19404158.2018.1479975>
- [22] Tunmer, W. E., & Nicholson, T. (2011). The Development and Teaching of Word Recognition Skill. In *Handbook of Reading Research, Volume IV* (pp. 431-457). Routledge. <https://doi.org/10.4324/9780203840412-28>