

Assessing the reading skill increase in children with learning disability through scanning and skimming focused approach

Firas Ahmad Saleem Al Taqatqa *, Education Faculty, University of Jeddah, Special Education Department, Jeddah, Saudi Arabia.

Suggested Citation:

Al Taqatqa, F. A. S. (2022). Assessing the reading skill increase in children with learning disability through scanning and skimming focused approach. *Cypriot Journal of Educational Science*. 17(11), 4126-4132. <https://doi.org/10.18844/cjes.v17i11.7943>

Received from August 18, 2022; revised from October 26, 2022; accepted from November 14, 2022.

©2022 by the authors. Licensee Birlesik Dunya Yenilik Arastırma ve Yayıncılık Merkezi, North Nicosia, Cyprus. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract

The objective of this study is to explore the reading skill development of students with learning difficulties after they were taught in the same conventional way as regular students. Specifically, the study will look at how well the sample of the study (n=24) read after receiving this instruction. For this analysis, a technique known as descriptive quantitative research was used. The authors evaluated the learners' levels of competence both before and after students got the treatment to determine how much progress they had made as a result of the intervention. The results of the study showed that students had various degrees of reading ability before they were taught using the methodology that was put to the test. On the other hand, the vast majority of students are proficient to the point where they are delighted with their results on the post-test.

Keywords: Reading Skill, Learning Disability, Scanning. Skimming

* ADDRESS OF CORRESPONDENCE: Firas Al Taqatqa, Education Faculty, University of Jeddah, Special Education Department, Jeddah, Saudi Arabia
E-mail address: fasaleem@uj.edu.sa.

1. Introduction

The unfortunate truth that exists in the field of education in this day and age is that some students suffer academically for a variety of different reasons. Learning disability may manifest itself in a student as difficulty in writing, reading, counting, speaking, and thinking, among other areas of academic performance (Chordia et al., 2021; Kavale & Forness, 2000). Students who have unique learning impairments struggle with academic activities related to one or more fundamental psychological processes. These students also demonstrate a gap between their potential and their actual level of academic accomplishment.

Because of these challenges, students are unable to meet their academic objectives, and as a result, their accomplishments do not reflect their true potential. There is a group of children in practically every grade level who have special learning issues. Most often, primary school is the stage of education at which children struggle the most with their learning. Students who struggle with certain forms of learning do not easily absorb information when it is presented to them in general education settings.

Because children who have learning difficulties require a special approach that is related to their learning styles, they face additional challenges when trying to obtain services that meet their needs (Mahyoob, 2020; Fallah et al., 2020). These challenges stem from the fact that children with learning difficulties require special handling. To boil it all down, students of all ability levels, not only the ones with the lowest but also the ones with the moderate and the highest, have to deal with the challenges of learning. The phenomenon of a student having difficulty learning is often made apparent by a drop in the student's overall academic success (Newman et al., 2019; Lightfoot et al., 2018). Learning challenges may also be demonstrated by the formation of student behaviour disorders such as frequent yelling in the classroom, upsetting peers, arguing, and often not attending school (Singer et al., 2020; Gómez-Puerta & Chiner, 2020; Adams et al., 2019; Schwab et al., 2019). These are all examples of behaviours that might be indicative of learning issues.

Reading difficulties are a common kind of learning disability that is seen in elementary school children. These children have a hard time picking up new reading skills. The majority of them have a reputation for being slow learners, both among their professors and among their classmates. At least eighty percent of kids who struggle with particular learning issues also struggle in the area of reading. Many of them are forced to either continue attending classes or get kicked out of school because of their poor levels of academic success.

This occurs rather often as a result of the fact that youngsters who have trouble reading will frequently interrupt the process of comprehending advanced information on a variety of topics (Peng et al., 2019). Therefore, every educator needs to have an understanding of children who exhibit indications of reading problems at an early age. When it comes to assisting students in overcoming these learning obstacles appropriately via the implementation of learning accommodations in schools, the role of the teacher is quite important and crucial (Soares et al., 2018).

The process of adapting and altering educational practices to better suit the requirements of individual students is known as learning accommodation (Afeli, 2019). The learning accommodations that will be provided by the instructor are flexible enough to adapt to the dynamics of any individual classroom. The use of direct learning accommodation in the teaching and learning process by the instructor will offer information on the challenges and supportive elements in the process of putting the learning accommodation into practice. It is anticipated that this would result in an improvement in the overall quality of schooling for children who have learning difficulties. If there are kids in the class who have issues learning, learning accommodations will likely be very necessary. This is done so that all children

are provided with an equal education without taking into account the varying conditions that each student may be in.

It should come as no surprise that teachers have challenges when it comes to communicating content to students while taking into account the problems faced by students. One of the things that schools do to help children who have trouble learning is to provide them with special assistant instructors who can work with them one on one. Students who have difficulties learning are evaluated by the classroom teacher in conjunction with the assistant teacher, and the assistant teacher then prepares specialized materials for those students. This preparation takes the form of implementing learning accommodations, which include teaching materials and methods, learning environments, time demands and schedules, assignments, and assessments that take place in class. One of the adjustments that have often been made up to this point is assisting students in the form of problem-solving while they are working, such as by reading questions. Students are guided through the process of better understanding the questions that have been posed to them so that they can turn in their projects on time. Furthermore, students who have learning disabilities may not have been provided with the appropriate instructional strategy (Kohli et al., 2018).

The problem of the study

The aforementioned cases and conditions imply that these students should constantly be handled as if they had some kind of psychiatric problem. Therefore, the purpose of this research is to assess the improvement of students' reading skills using the approach of skimming and scanning. With this strategy, they will be able to comprehend both the surface-level features of the text and its underlying concepts.

Questions of the study

The study attempted to answer the following questions:

- 1- What is the level of students in reading in the pre-test before applying the proposed approach?
- 2- What is the level of students in reading in the post-test after applying the proposed approach?

2. Methods

Research design

This study is an example of an experimental form of research that takes a quantitative approach to its data collection and analysis. In this study, a design known as the One Group pre-test and Post-test design was used. Before receiving therapy, there is a preliminary examination included in this plan.

Participant

Purposive sampling is going to be the method that we adopt for this investigation. The participants in this study were 24 students with learning disabilities in reading.

Instrument

A test with multiple choice questions will serve as the study instrument that is used in this investigation. The purpose of the examination is to determine the nature of the student learning results both before and after the implementation of the problem-based learning model.

Data collection and analysis

The data for the research was collected via several methods including observation and testing. Researchers will conduct observations and take approaches to behaviour both within the learning process and outside of regular class hours as part of the observation procedure. Educators use various learning models as subjects for observation and analysis in the course of imparting learning materials. In addition, the researchers looked at the educational resources that were utilized as research samples in the study, which were owned by classroom instructors who participated in the study. The kind of examination that is utilized is called a multiple-choice exam. This exam consists of a series of multiple-choice questions, and its purpose is to enhance the learning outcomes for the students. A descriptive statistical analysis will be utilized to evaluate the information that was gleaned from the findings of the investigation.

3. Results and Discussion

Results of the first question

Frequencies and percentages of the students' levels in reading were extracted from the results of the pre-test. The following table shows the results.

Table 1. Distribution of Frequency and Percentage of pre-test Result Score

Interval	Category	Frequency	Percentage
0-62	Very Low	13	55%
63-71	Low	6	25%
72-80	Moderate	5	20%
81-89	High	0	0
90-100	Very High	0	0
Total		24	100%

According to the data that can be observed, it is possible to deduce that thirteen students fall into the very low category, which has a percentage of fifty-five percent, six students fall into the low category, which has a percentage of twenty-five percent, and five students fall into the medium category, which has a percentage of twenty percent. When the results of the existing percentages are taken into consideration, it is possible to conclude that the level of reading ability possessed by students who have learning disabilities before the implementation of the Learning Model that emphasizes scanning and skimming was quite poor.

Table 2. Description of pre-test Results Completeness

Score	Category	Frequency	Percentage
0-71	Below Criteria	19	79,17%
72-100	Achieve Criteria	5	20,83%
Total		24	100

It is clear to see that 19 pupils fall into the category of being below the standard, while the group fulfilling the norm only has 5 kids. If it is related to the Indicators of Completeness Criteria for Student Learning Outcomes, that is, if the number of students who meet or surpass the Standard score (72) is 100%, then it is considered to be associated with the criteria. Because 19 students fall into the group of learning results that are below the standard, it is possible to conclude that the learning outcomes for students before the use of the skimming and scanning procedures are rather poor.

Results of the second question

Frequencies and percentages of the students’ levels in reading were extracted from the results of the post-test after receiving the treatment. The following table shows the results.

Table 3. Level of Post-test Learning Outcomes

Interval	Category	Frequency	Percentage
0-62	Very Low	0	0
63-70	Low	3	12,5%
71-80	Moderate	11	45,83%
81-89	High	4	16,67%
90-100	Very High	6	25,00%
Total		24	100%

According to the data that can be seen, it is possible to deduce that six pupils have achieved a score that places them in the Very high group, which corresponds to a percentage of 25.00%. With a percentage of 16.67%, four pupils have earned a spot in the High category. 11 students have a percentage of 45.77% and fall into the Medium group. 3 pupils have a percentage that places them in the Low group. After implementing the Skimming and Scanning Approach, the level of pupils' reading ability has increased to a point where it is considered to be pretty high. This conclusion can be drawn from the findings of the current percentages.

Table 4. Description of Completeness of Social Science Learning Outcomes

Score	Category	Frequency	Percentage
0-71	Below Criteria	3	12,5%
72-100	Achieve Criteria	21	87,5%
Total		24	100%

The facts in the table make it abundantly clear that every student is a member of the group labelled Completed. This criterion is related to it if it is connected with the Indicators of the Completeness Criteria for Student Learning Outcomes, which means that 75% of students must reach or surpass the standard value for it to be considered complete. It is possible to conclude that students who successfully finish the course have a high level of reading ability since they were required to study with an emphasis on scanning and skimming the material rather than reading it word for word.

Table 5. Descriptive statistics test

	N	Mean	Std. Deviation	Minimum	Maximum
Pre_Test	24	47.5833	22.26894	15.00	80.00
Post_Test	24	81.9167	10.82235	66.00	100.00

An alarming pattern of test results was observed among the learner during the pre-test. This is due to the standard deviation score being rather high, reaching almost exactly half of the mean score. This demonstrates that there is a tendency for there to be a variety of test results, each of which describes a particular variation in the student's capability in reading. This outcome is a direct consequence of the varying degrees of learning difficulty present among the students. However, after the administration of

the interventions, the standard deviation is found to be within the range of results that may be considered tolerable, and as a consequence, the students' levels of competence are found to be, for the most part, undistorted.

4. Discussion

The findings of this study showed an improvement in the students in reading skills. Whether or not a learning process has been effective may be determined, at least in part, by examining whether or not there has been a change in behaviour or renewal of conduct. The degree to which students are successful in their academic outcomes is influenced by a variety of different elements, some of which are specific to each student while others are based on the social milieu in which the student is educated. Although 19 students did not turn in their assignments, the results of the pre-test indicated that the mean value of student learning outcomes was 47. However, some students did not complete the assignment. On the other hand, the number that was considered to be normal for the post-test was 81. Even though there were still three students who had not completed the course, the instructor provided the remaining three students with more work to do.

Students diagnosed with autism spectrum disorder may have reading and comprehension skills similar to those of their typically developing peers. In contrast, children who have dyslexia often struggle to comprehend what is written in front of them. Despite this, there is no guarantee that these children will have the same access to semantic meaning in every situation.

They may have problems envisioning action and comprehending social relationships, both of which are crucial components of the majority of narratives. This may make it difficult for them to follow most stories. It is conceivable that the youngster will be oblivious to the subtle hints that the author has offered, or that the child's full attention will be caught up by a certain characteristic, which will result in incomplete processing of the other content. Both of these scenarios are feasible.

Some youngsters who have autism spectrum condition have the extraordinary capacity to read and comprehend material at a rate that is very more accelerated than the average person. Brain scans have shown that this happens as a result of synchronized activity in both the left and right hemispheres of the brain. This activity is what makes it feasible for phonological and visual processing to proceed at the same time.

5. Conclusion

According to the findings of the pre-test, the average score that students achieved on their learning outcomes was 47. However, 19 students did not hand in their work at the appropriate time. Numerous factors, both internal and external, have a role in determining the extent to which students achieve the academic goals they set for themselves. Students who have dyslexia often have difficulty understanding what is being written in front of them. They may have trouble seeing actions and understanding how people are connected. Because of this, it could be difficult for children to follow the majority of tales. Some children who have autism spectrum disorder can read and absorb content at a pace that is far faster than the rate at which the typical individual can do either of these things.

References

- Adams, D., MacDonald, L., & Keen, D. (2019). Teacher responses to anxiety-related behaviours in students on the autism spectrum. *Research in developmental disabilities*, 86, 11-19. <https://doi.org/10.1016/j.ridd.2018.12.009>

- Afeli, S. A. (2019). Academic accommodation strategies for pharmacy students with learning disabilities: what else can be done?. *Currents in Pharmacy Teaching and Learning*, 11(8), 751-756. <https://doi.org/10.1016/j.cptl.2019.04.001>
- Chordia, S. L., Thandapani, K., & Arunagirinathan, A. (2020). Children 'at risk' of developing specific learning disability in primary schools. *The Indian Journal of Pediatrics*, 87(2), 94-98. <https://doi.org/10.1007/s12098-019-03130-z>
- Fallah, A., Mokhtari, A., & Ozdaglar, A. (2020). Personalized federated learning with theoretical guarantees: A model-agnostic meta-learning approach. *Advances in Neural Information Processing Systems*, 33, 3557-3568.
- Gómez-Puerta, M., & Chiner, E. (2020). Teachers' perceptions on online behaviour of students with intellectual disability, risk mediation and training. *European Journal of Special Needs Education*, 35(4), 437-450. <https://doi.org/10.1080/08856257.2019.1703602>
- Kavale, K. A., & Forness, S. R. (2000). What definitions of learning disability say and don't say: A critical analysis. *Journal of learning disabilities*, 33(3), 239-256. <https://doi.org/10.1177/002221940003300303>
- Kohli, A., Sharma, S., & Padhy, S. K. (2018). Specific learning disabilities: Issues that remain unanswered. *Indian journal of psychological medicine*, 40(5), 399-405. https://doi.org/10.4103/IJPSYM.IJPSYM_86_18
- Lightfoot, A., Janemi, R., & Rudman, D. L. (2018). Perspectives of North American Postsecondary Students with Learning Disabilities: A Scoping Review. *Journal of Postsecondary Education and Disability*, 31(1), 57-74.
- Mahyoob, M. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal (AWEJ)*, 11(4). <https://dx.doi.org/10.24093/awej/vol11no4.23>
- Newman, L. A., Madaus, J. W., Lalor, A. R., & Javitz, H. S. (2019). Support receipt: Effect on postsecondary success of students with learning disabilities. *Career Development and Transition for Exceptional Individuals*, 42(1), 6-16. <https://doi.org/10.1177/2165143418811288>
- Peng, P., Fuchs, D., Fuchs, L. S., Elleman, A. M., Kearns, D. M., Gilbert, J. K., ... & Patton III, S. (2019). A longitudinal analysis of the trajectories and predictors of word reading and reading comprehension development among at-risk readers. *Journal of Learning Disabilities*, 52(3), 195-208. <https://doi.org/10.1177/0022219418809080>
- Schwab, S., Eckstein, B., & Reusser, K. (2019). Predictors of non-compliant classroom behaviour of secondary school students. Identifying the influence of sex, learning problems, behaviour problems, social behaviour, peer relations and student-teacher relations. *Journal of Research in Special Educational Needs*, 19(3), 220-231. <https://doi.org/10.1111/1471-3802.12444>
- Singer, G., Golan, M., Rabin, N., & Kleper, D. (2020). Evaluation of the effect of learning disabilities and accommodations on the prediction of the stability of academic behaviour of undergraduate engineering students using decision trees. *European Journal of Engineering Education*, 45(4), 614-630. <https://doi.org/10.1080/03043797.2019.1677560>
- Soares, N., Evans, T., & Patel, D. R. (2018). Specific learning disability in mathematics: a comprehensive review. *Translational pediatrics*, 7(1), 48. <https://doi.org/10.21037%2Ftp.2017.08.03>