Instructional Materials Usage as Correlates of Reading Comprehension Achievement of Pupils with Dyslexia in Buea Sub Division, Cameroon.

[1]Njock, Sam Tamoh., [1]Ngozi, Obiyo Ph.D., & [2]Charly Ringnyu Nyugap Ph.D

[1]Department of Special Needs Education University of Nigeria, Nsukka

[2]Department of Educational Psychology Faculty of Education University of Buea, Cameroon

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ABSTRACT

The purpose of this study was to investigate the relationships between instructional materials usage, and reading comprehension achievement of pupils with dyslexia in Buea sub-division, Cameroon. The study adopted a correlational survey design. One research question and one null hypothesis guided the study. Twenty-one (21) primary five pupils with dyslexia were taken as the sample size. Two instruments were used for data collection; Instructional Materials Usage Scale (IMUS), and Reading Comprehension Achievement Test (RECAT). To ensure the face validity of the instruments, they were given to three experts from the Faculty of Education, University of Nigeria, Nsukka for validation. Cronbach Alpha was used to determine the internal consistency for instructional materials usage scale while Kuda's Richardsons 20 was used to determine the internal consistency for reading comprehension achievement test. The instructional materials usage scale, and reading comprehension achievement test yielded an alpha of 0.85, and 0.78 respectively indicating that the instruments were reliable. The data collected were analyzed using simple linear analysis to answer the research question while regression ANOVA was used in testing the null hypothesis at 0.05 level of significance. The results of the study showed that there is a positive high relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia. Based on these findings, it was recommended among others that schools should be equipped with instructional materials to meet the reading needs of pupils with special needs in general and pupils with dyslexia in particular. The government should mandate professional bodies such as the Ministry of Basic Education, Regional Delegations of Basic Education, Divisional Delegations, and Inspectorates of Basic Education among others to organize seminars and conferences to train teachers on the effective usage of instructional materials to meet the needs of pupils with reading comprehension challenges. The limitation of the study is that the administration and collection of instruments might affect the results of the study since research assistants participated.

Keywords: Instructional Materials Usage, Reading Comprehension Achievement, Pupils with Dyslexia.

BACKGROUND OF THE STUDY

Reading is a skill that involves collecting materials from written symbols and translating them into words, sentences, and paragraphs that convey sense to the reader. Given the essence of this skill, pupils can construct reading through an organized literacy instruction that are typically language-based exercises supervised by teachers. Some pupils acquire the skill a very easy task while other finds it very difficult to read as their peers. Fletcher, Jack Reid Lyon, Lynn S. Fuchs, and Marcia Barnes. (2018). attributed such difficulties to identify words properly to a learning disorder known as learning disability.

Learning disability is a generic term linked to a neurological disease that limits pupils' capacity to receive and understand information. According to Little, Akin-Little, Gopaul, and Nicholson (2019), it's an inadequate mental development that impairs abilities throughout the age of growth and enhances general intelligence.

Similarly, the National Joint Committee on Learning Disabilities (NJCLD, 2016) views learning impairments as a diverse collection of conditions marked by challenges with speaking, listening, writing, reasoning, and using arithmetic skills. Learning disabilities are in many different forms, including dyslexia (a disability that affect reading and writing skills), dysgraphia (a disorder that affects written legibility, coherent, and organization), and dyscalculia (a disability that affect mathematical calculations). This paper defines learning disabilities as challenges related to reading, writing, numeracy, oral language, organization, and social interaction. This study, however is focused on dyslexia.

Dyslexia is a learning condition that impairs reading and language skills. The International Dyslexia Association (IDA, 2014) describes dyslexia as a particular type of learning disorder that impairs decoding skills, spelling accuracy, and fluency with words. Similarly, dyslexia is defined by Snowling and Hulme (2020) as language-based learning challenges that impair word identification, spelling, decoding skills, and reading fluency. Similarly, Ward, Bush, and Braaten (2019) stated that individuals with dyslexia struggle to read at an appropriate pace like peers. Pupils with dyslexia are just as intelligent as their peers without disabilities when it comes to other skills that require creativity like; problem-solving, critical thinking and visual-spatial skills (Kannangara, Carson, Puttaraju, & Allen, 2018).

The exact cause of dyslexia is unknown, but it appears to be linked to specific genes that affect the brain. According to Eklund, Torppa, Sulkunen, Niemi and Ahonen, (2018) dyslexia tend to run in families, and having a family history increases the risk of developing dyslexia. Similarly, Protopapas and Parrila (2018) argue that the scientific understanding of differences in brain structure and function with regards to dyslexia is still unclear, whether these differences are the causes or consequences of dyslexia. Furthermore, environmental factors such as poor nutrition, exposure to stress during pregnancy, and smoking during pregnancy also cause dyslexia (Suades González, 2018; Hoeft & Bouhali, 2022). According to Livingston, Siegel, and Ribary (2018), dyslexia can lead to other related problems, such as social difficulties and complications in adulthood.

Pupils with dyslexia have common characteristics that affect their learning. According to Adubasim (2018), pupils with dyslexia have difficulty with phonological awareness, verbal recall, and verbal processing speed. Another crucial aspect of dyslexia, as stated by Adlof and Hogan (2018), is that it is a language-processing difficulty that affects understanding and processing of language. The impact of dyslexia varies from one person to another and depends on the severity which requires remediation. Pupils with this kind of problem, according to Glazzard and Dale (2015), are able to learn early reading and spelling tasks where early identification is crucial on a global scale.

When dyslexia is early identified in pupils, it becomes very important to provide necessary assistants to manage their reading difficulties. According to Dawson, Antonenko, Lane, and Zhu (2019), when pupils with dyslexia are diagnosed, access to special education services is eminent. Such assistance can be in the form of instructional materials usage in assisting pupils with reading comprehension challenges. In similar way, Catts, Nielsen, Bridges, Liu, and Bontempo (2015), are of the view that reading comprehension is decisive in ameliorating a child's access to reading materials that can improve their reading outcomes significantly especially in the first, second, and third grades.

The ability to process written text, understand its meaning, and integrate it with what the reader already knows is known as reading comprehension. According to Israel (2012), reading comprehension depends on word reading and are prerequisites for language comprehension, involving skills like knowing word meanings, drawing inferences, identifying main ideas, and visualizing text. Reading comprehension achievement is a term widely used in education to describe pupils' reading performance. Makebo, Bachore, and Ayele (2022), defined reading comprehension achievement as the ability to read grade-level material fluently and understand it's complex process of understanding written language. Reading achievement also encompasses measures of text-based reading comprehension and the fluent use of reading skills (Rochman, 2017). Also, it’s very important to note that reading volume, can impact their overall reading comprehension achievement (Stutz, Schaffner & Schiefele, 2016).

Several factors can contribute to the reading comprehension achievement among pupils with dyslexia. Kent and Wanzek (2016) noted that reading comprehension achievement is influenced by factors like metacognitive

knowledge, reading attitude, self-concept, and interest in reading. Metacognitive knowledge refers to understanding one's cognitive processes and employing strategies to enhance learning. In the context of dyslexia, individuals with reading difficulties might enhances his/her reading skills by processing a comprehension text. Moreover, reading attitude, self-concept, and interest are intertwined factors that influence reading comprehension in pupils with dyslexia. Positive reading attitudes and self-concepts can boost motivation and engagement, leading to improved reading comprehension outcomes. Conversely, negative attitudes and low self-concepts may hinder pupils reading progress. Interest in reading can significantly affect comprehension. When pupils with dyslexia become interested in a reading comprehension passage, they are likely to invest more effort and apply self-knowledge in enhancing their understanding and retention of the content. The reverse is the case leading to poor read comprehension retention memory.

The poor reading comprehension skills in primary schools in Buea sub-division in general and primary five pupils, in particular, is attributed to using predominantly prescribed English language textbooks and workbooks in the teaching the pupils. This method has proven not adequate as Nkwenti and Abeywardena (2019) pointed out in enhancing the reading comprehension skills of pupils with dyslexia. This has placed these pupils on a disadvantage lane. Moreover, the inadequate in-service training of teachers on the best practices and principle of teaching pupils with dyslexia made this researcher to embark on this study on the proper usage of instructional materials, to ameliorate the reading comprehension achievement of pupils with impairment.

Instructional materials, also known as instructional media are resources to support the teaching-learning process in educational settings. According to Gilboy, Heinerichs, and Pazzaglia (2015), instructional materials are designed to enhance content delivery, knowledge and skill acquisition, and learner engagement. In the same vein, Mathaba (2023) defined instructional materials as encompass a collection of hard wares to digital materials that can effectively communicate knowledge and assist in teaching reading skills. Similarly, Erfanian Mohammadi, Elahi Shirvan, and Akbari (2019) perceived instructional materials as resources, that teachers can utilize to teach pupils reading skills.
These resources support and enhance their educational experiences by ensuring participation. Monroe and Oxarart (2019) viewed instructional materials as tools used to convey or to teach a lesson. While these materials can be used face-to-face and online, some may require modification or redesign to be effective in meeting the needs of pupils with dyslexia. Instructional materials are categorized into different types, such as audio or aural, visual or audio-visual, and interactive media. Audio instructional media, as defined by Ukpabio, Ukpong, Ojong, Amalu, and Ernest (2023), are gadgets that are dependent on hearing, include podcasts, radios, audio tape recorders, cassettes, and microphones. They are objects or images that stimulate and support learning. Real items, graphs, images, maps, bulletin boards, chalkboards, and overhead projectors are a few examples of instructional media (Ponticorvo, Di Fuccio, Ferrara, Rega, & Miglino, 2019). Additionally, audio-visual technology includes computers, televisions, and movies that appeal to both the senses of hearing and seeing. According to Fitri and Erita (2023), they encompass physical objects, photographs, illustrations, charts, graphs, and games that enhance visual representation and effective information transmission. Since a majority of our learners especially pupils with dyslexia are still at the concrete operational level, they heavily rely on instructional materials for retention.

The importance of instructional materials in teaching pupils with dyslexia is very essential. Instructional materials according to Clark and Mayer (2023) if properly used, assist learners with reading comprehension challenges especially when it is well organized and presented in a manner that is easily comprehensible and memorable. Similarly, Udeagbala, Onwuka, and Ugwude (2020) investigated the role of instructional materials in improving the reading skills of pupils with dyslexia in public primary schools in Ekwusigo LGA of Anambra State and revealed that instructional materials help pupils with dyslexia to read well. By providing well-structured lessons, and an engaging classroom that motivates learning, instructional materials enable them to improve their reading skills most especially with adequate knowledge in pedagogy.

The theory that underpinned this study is Richard Mayer's Cognitive Theory of Multimedia Learning (CTML) (2005). Mayer provides a theoretical foundation that is essential in understanding how instructional media emphasizes the use of images, textbooks, and other multimedia content in almost all learning activities. The

Mayer cognitive theory of multimedia learning was based on the fact that learners attempt to build meaningful connections between words and images, including learning from textbooks that contain text and illustrations, computer-based lessons that contain animations and narration, and Face-to-Face teaching: Slide presentations with graphics and spoken words. Pupils learn more deeply when words, pictures, and computer-based lessons are used in class than when words alone are used. The main goal of multimedia teaching is to build a coherent mental representation from the material presented. The learner's task is to actively participate in understanding the material presented and ultimately construct new knowledge. This theory is relevant to the present study because it posits that meaningful learning from words and pictures occurs when learners engage in five cognitive processes: verbal and pictorial representations are integrated with prior knowledge; words are selected for processing in visual working memory; images are organized into a pictorial model; and words are organized into a verbal model.

The main purpose of the study is to investigate the relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia in Buea sub division, Cameroon. The research questions for the paper is; what is the relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia in Buea sub division, Cameroon? and finally the research hypotheses is; there is no significant relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia in Buea sub-division, Cameroon.

METHODS

This paper adopted a correlational survey design. According to Nworgu (2015), a correlational survey design is suitable because it seeks to investigate the relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia in Buea sub division of the South West Region of Cameroon. The population of this study consisted of class five pupils with dyslexia in government primary schools. The sample size of 21 pupils was used for the study using purposive sampling technique. Two instruments were used for data collection. Instructional materials usage scale, and reading comprehension achievement test was developed by the researcher to suit the context of the study. The instruments were face validated by experts from the Department of Special Needs Education, and the Department of Science of Education, Faculty of Education, University of Nigeria, Nsukka. The reliability of the instruments was determined using Cronbach's Alpha, and Kuda's Richardsons 20. An Alpha coefficient of 0.85, and 0.78 respectively was obtained indicating that the instruments were reliable. Simple linear regression was used in answering the research question while regression ANOVA was used in testing the null hypotheses at 0.05 level of significance.

RESULTS

Research Question One: What is the relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia in Buea sub division, Cameroon?

Table 1: Linear regression analysis of the correlation between instructional materials usage and reading comprehension achievement of pupils with dyslexia

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
IMU & RCA	.473[a]	.224	.183	3.881

1. **(R^2) = Coefficient of Determination**

The findings in Table 1 shows the correlation coefficient between instructional materials used and reading comprehension achievement of pupils with dyslexia as 0.473. The results reveal that there exists a positive moderate association between the instructional materials used and the reading comprehension achievement of pupils with dyslexia. The results also revealed that the coefficient of determination (R2) for the correlation

coefficient of.473 was.224. The coefficient of determination (R2) of.224 indicates instructional materials employed accounts for 22.4% of reading comprehension achievement of pupils with dyslexia. This indicates that 77.6% of the diversity in reading comprehension achievement among pupils with dyslexia is due to other factors than the instructional materials used.

Hypothesis One: There is no significant relationship between instructional materials and reading comprehension achievement of pupils with dyslexia.

Table 2: Regression analysis significant relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.599	1	82.599	5.485	.030[b]
	Residual	286.142	19	15.060		
	Total	368.741	20			

The result in Table 2 shows that an F-ratio of 5.485 with associated exact probability value of 0.030 was obtained. This probability value of 0.030 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.030 is less than 0.05. Hence, the null hypothesis that stated that there is no significant relationship between instructional materials usage and reading comprehension achievement was rejected. The researchers therefore, conclude that there exists a significant relationship between instructional materials used and reading comprehension achievement of pupils with dyslexia.

DISCUSSION

Relationship between instructional materials used and reading comprehension achievement of pupils with dyslexia.

The findings of the study revealed that there exists a moderate positive relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia. On further testing, it was discovered that there is a significant relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia. This could be that instructional materials usage had a productive commitment on the reading comprehension achievement of pupils with dyslexia. Another reason for this finding could equally be that, read re-read, minimizing distractions and breaking down tasks into smaller chunks contributed to the reading comprehension achievement of pupils with dyslexia. This could not be possible with the absence of instructional materials to the reading comprehension achievement of pupils with dyslexia. The findings of this study are consistent with that of Akinmusire and Ilesanmi (2019) who conducted a survey study to properly describe how the use of instructional materials and teachers' effectiveness predict students' academic achievement in reading comprehension. The result shows a significant relationship between instructional materials usage and reading comprehension achievement students. In the same vein, Besingi, Ngong, Nsagha, and Jitzi (2023), conducted a quasi-experimental study to look at the impact of interactive instructional strategy on the reading skills of pupils with dyslexia. This method tries to evaluate the effect of instructional strategy on students' performance and the result revealed that, instructional strategy enhances reading skills of pupils with dyslexia. Finally, Moses (2020) examines an ex-post facto research design on the influence of instructional materials on students' academic performance. This was to look at the relationship between instructional materials and the findings of the study revealed a significant relationship between availability of instructional materials, accessibility of instructional materials, utilization of instructional materials and academic performance of students. The results of these studies show that instructional materials have a significant influence on reading comprehension achievement of pupils with dyslexia.

IMPLICATION OF THE FINDINGS

The result of the study shows that there is a moderate positive high relationship between instructional materials usage and reading comprehension achievement of pupils with dyslexia. The educational implication is that instructional materials tend to yield a significant positive influence on reading comprehension achievement among pupils with dyslexia. That is instructional materials play a significant role in determining the reading comprehension achievement of pupils with dyslexia.

CONCLUSION

Instructional materials should be designed to ensure that they served the purpose it was meant to achieve. Based on the findings of this study, it was concluded that instructional materials suage is very effective in improving the reading comprehension achievement of pupils with dyslexia in English Language in Buea sub division of the South West Region of Cameroon.

RECOMMENDATIONS

1. The government should make it mandatory for professional bodies like the Ministry of Basic Education, Regional Delegations of Basic Education, Divisional Delegations, and Inspectorates of Basic Education in Buea sub division of the South West Region of Cameroon among others to organize seminars and conferences for teachers on the use of instructional materials, pedagogical and content knowledge strategies with the view of ensuring the reading comprehension achievement of pupils with dyslexia.
2. The school head teachers should organize seminars and workshops for parents of pupils with dyslexia to be major state holders in facilitating the reading comprehension achievement of their children with dyslexia. Such information will help parents ensure their children get constant attention to be able to read.
3. The future of education is leaning heavily towards online teaching and learning. Several packages exist for helping children with dyslexia. Schools and colleges should expose teachers to these packages and deploy them for better reading comprehension gadgets for pupils with dyslexia.

REFERENCES

1. Adlof, S. M., & Hogan, T. P. (2018). Understanding dyslexia in the context of developmental language disorders. Language, Speech, and Hearing Services in Schools, 49(4), 762-773.
2. Adubasim, I. (2018). Improving Working Memory and Processing Speed of Students with Dyslexia in Nigeria. Online Submission, 5(2), 103-123.
3. Akinmusire, P. A., & Ilesanmi, Y. O. (2019). The Use of Instructional Materials and Teachers' Effectiveness as Correlates of Students' Academic Achievement in English Reading Comprehension in Public Junior Secondary Schools. IJIRAS, 6(3), 25-30
4. Besingi, C. N. Ngong, E. D., Nsagha, S. M., itzi S. N. (2023). interactive instructional strategy and its impact on pupils with dyslexia in Kumba Iii Sub Division, Meme Division of the South West Region of Cameroon. IJARIIE-ISSN9(5), 2395-4396.
5. Catts, H. W., Nielsen, D. C., Bridges, M. S., Liu, Y. S., & Bontempo, D. E. (2015). Early identification of reading disabilities within an RTI framework. Journal of learning disabilities, 48(3), 281-297.
6. Clark, R. C., & Mayer, R. E. (2023). E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning. john Wiley & sons.
7. Dawson, K., Antonenko, P., Lane, H., & Zhu, J. (2019). Assistive technologies to support students with dyslexia. Teaching exceptional children, 51(3), 226-239.
8. Eklund, K., Torppa, M., Sulkunen, S., Niemi, P., & Ahonen, T. (2018). Early cognitive predictors of PISA reading in children with and without family risk for dyslexia. Learning and Individual Differences, 64(7), 94-103.

9. Erfanian Mohammadi, J., Elahi Shirvan, M., & Akbari, O. (2019). Systemic functional multimodal discourse analysis of teaching students developing classroom materials. Teaching in higher Education, 24(8), 964-986.
10. Fletcher, Jack M., G. Reid Lyon, Lynn S. Fuchs, and Marcia A. Barnes. (2018). Learning disabilities: From identification to intervention. Guilford Publications.
11. Fitri, Y., & Erita, Y. (2023). Analysis of the application of audio-visual media-based concept map strategy to improve the quality of elementary school IPS learning. Journal of Digital Learning and Distance Education, 1(12), 370-377.
12. Glazzard, J., & Dale, K. (2015). 'It takes me half a bottle of whisky to get through one of your assignments': exploring one teacher educator's personal experiences of dyslexia. Dyslexia, 21(2), 177-192.
13. Gilboy, M. B., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing student engagement using the flipped classroom. Journal of nutrition education and behavior, 47(1), 109-114.
14. Hoeft, F., & Bouhali, F. (2022). Pre-and postnatal environmental effects on learning to read and mathematical learning. In The Cambridge handbook of dyslexia and dyscalculia (pp. 115-150). Cambridge University Press.
15. International Dyslexia Association. (2014). Definition of dyslexia. Retrieved from https://dyslexiaida.org/definition-of-dyslexia/.
16. Israel, G. D. (2012). Sampling: Determining sample size. Retrieved, 5(13), 2013.
17. Kannangara, C. S., Carson, J., Puttaraju, S., & Allen, R. E. (2018). Not all those who wander are lost: examining the character strengths of dyslexia. Global Journal of Intellectual and Developmental Disabilities, 4(5), 555648.
18. Kent, S. C., & Wanzek, J. (2016). The relationship between component skills and writing quality and production across developmental levels: A meta-analysis of the last 25 years. Review of Educational research, 86(2), 570-601.
19. Little, S. G., Akin-Little, A., Gopaul, M., & Nicholson, T. (2019). Social skills. Handbook of intellectual disabilities: Integrating theory, research, and practice, 685-697.
20. Livingston, E. M., Siegel, L. S., & Ribary, U. (2018). Developmental dyslexia: Emotional impact and consequences. Australian Journal of Learning Difficulties, 23(2), 107-135.
21. Makebo, T. H., Bachore, M. M., & Ayele, Z. A. (2022). Investigating the Correlation Between Students' Reading Fluency and Comprehension. Journal of Language Teaching and Research, 13(2), 229-242.
22. Mathaba, S. R. (2023). The availability, use, and impact of instructional materials in the teaching and learning of life sciences in secondary schools in the Ehlanzeni District, Mpumalanga [Doctoral dissertation].
23. Monroe, M. C., & Oxarart, A. (2019). Integrating Research and Education: Developing Instructional Materials to Convey Research Concepts. Bio-Science, 69(4), 282-291.
24. Moses, V. (2020). Influence of instructional materials on students' academic performance in biology in Calabar South local government area, Cross River State. Social Science Research Network.
25. National Joint Committee on Learning Disabilities (NJCLD) (2016). Definition of Learning Disabilities. Retrieved on the 16/04/2023 from http://www.ldonline.org/about/ partners/njcld/archives
26. Nkwenti, M. N., & Abeywardena, I. S. (2019). OER mainstreaming in Cameroon: Perceptions and barriers. Open Praxis, 11(3), 289-302.
27. Ponticorvo, M., Di Fuccio, R., Ferrara, F., Rega, A., & Miglino, O. (2019). Multisensory educational materials: five senses to learn. In Methodologies and Intelligent Systems for Technology Enhanced Learning, 8th International Conference 8(3), 45-52.
28. Protopapas, A., & Parrila, R. (2018). Is dyslexia a brain disorder? Brain sciences, 8(4), 61.
29. Rochman, M. (2017). The importance of teaching reading: Emphasize for reading fluency or accuracy in improving students' reading comprehension in EFL context. Ethical Lingua: Journal of Language Teaching and Literature, 4(1), 11-29.
30. Snowling, M. J., Hulme, C., & Nation, K. (2020). Defining and understanding dyslexia: past, present and future. Oxford Review of Education, 46(4), 501-513.
31. Stutz, F., Schaffner, E., & Schiefele, U. (2016). Relations among reading motivation, reading amount, and reading comprehension in the early elementary grades. Learning and Individual differences, 4(5), 101-113.

32. Suades González, E. (2018). Socio-environmental exposures and neurodevelopmental disorders [Doctoral dissertation, Universität Pompeu Fabra].
33. Udeagbala, I. R., Onwuka, L. N., & Ugwude, D. I. (2020). Role of Instructional Materials in Improving Pupils with Dyslexia in Public Primary Schools in Ekwusigo LGA of Anambra State. Journal of Early Childhood and Primary Education, 2(2), 1-12.
34. Ukpabio, G. E., Ukpong, N. N., Ojong, F. E., Amalu, M. N., & Ernest, E. M. (2023). Instructional materials availability and lecturers' task performance in Nigerian universities. Nurture, 17(4), 684-693.
35. Ward, A., Bush, H., & Braaten, E. B. (2019). Reading disorders/dyslexia. The Massachusetts General Hospital Guide to Learning Disabilities: Assessing Learning Needs of Children and Adolescents, 21-37.