

Endonezya'da Kapsayıcı Eğitim Disleksi ve Disgrafi Öğrencileri İçin Eşitliği Ne Ölçüde Sağlıyor?

To What Extent Does Inclusive Education in Indonesia Achieve Equality for Dyslexic and Dysgraphia Students?

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U'um Qomariyah¹


Qurrota Ayu Neina²


Imam Baehaqie³


Sumartini⁴


¹ **Corresponding Author:** PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: uum@mail.unnes.ac.id

² Lecturer, University of Negeri Semarang, Central Java, Indonesia, E-Mail: neina@mail.unnes.ac.id

³ PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: imambaeahqie@mail.unnes.ac.id

⁴ PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: sumartini@mail.unnes.ac.id

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U'um Qomariyah; kavramsallaştırma, metodoloji, biçimsel analiz, araştırma, veri düzenleme, yazma (orijinal taslak), görselleştirme, Qurrota Ayu Neina; denetim, proje yönetimi, doğrulama, kaynaklar, yazma (orijinal taslak) ve düzenleme, Imam Baehaqie; veri düzenleme, biçimsel analiz, yazma (inceleme) ve düzenleme ve Sumartini literatür incelemesi, veri toplama, istatistiksel analiz, yazma (inceleme) ve düzenleme bölümlerinde görev aldı. Her yazar nihai el yazmasını okuyup onayladı. Katkıları, araştırmanın akademik standartları ve hedefleriyle uyumlu kapsamlı ve titiz bir çalışma sağlamak için koordine edildi.

U'um Qomariyah; conceptualization, methodology, formal analysis, investigation, data curation, writing (original draft), visualization, Qurrota Ayu Neina; supervision, project administration, validation, resources, writing (original draft) and editing, Imam Baehaqie; data curation, formal analysis, writing (review), and editing, and Sumartini contributed to literature review, data collection, statistical analysis, writing (review), and editing. Each author has read and approved the final manuscript. The contributions were coordinated to ensure a comprehensive and rigorous study that aligns with the academic standards and goals of the research.

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To What Extent Does Inclusive Education in Indonesia Achieve Equality for Dyslexic and Dysgraphia Students?

U'um Qomariyah¹


Qurrota Ayu Neina²


Imam Baehaqie³


Sumartini⁴


¹ **Corresponding Author:** PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: uum@mail.unnes.ac.id

² Lecturer, University of Negeri Semarang, Central Java, Indonesia, E-Mail: neina@mail.unnes.ac.id

³ PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: imambaehaqie@mail.unnes.ac.id

⁴ PhD, University of Negeri Semarang, Central Java, Indonesia, E-Mail: sumartini@mail.unnes.ac.id

Abstract

Introduction: The implementation of inclusive education poses several challenges. Some of them involve a need for teacher resources and training, community, cultural, social, and cultural readiness, as well as other policies. Therefore, the active participation and empowerment of students with dyslexia and dysgraphia in inclusive schools in Indonesia is essential to build a fair educational environment. Substantially, this article will discuss the concept of educational inclusivity as a form of equal access for students with dyslexia and dysgraphia in Indonesia.

Method: This study used a Systematic Literature Review (SLR). We used the Scopus and ScienceDirect databases. The study was carried out in compliance with PRISMA criteria. As for formulating clear and focused research results, we use the PICO criteria. The online systematic review program Rayyan AI was updated to include the final search results from every database.

Findings: The literature review of the 81 final articles provides topics and opinions to determine barriers. It necessitates (or areas) for teaching differentiation but also the types of debris for dyslexic students with dysgraphia needs, as well as illustrating differentiated behavior such as receptiveness, demonstrated to illustrate taking part, valuations among these pieces, and guidance annelids gas measures involving dyslexic & lexist symbatography, including Dyscalculia levels.

Discussion: Among the key enunciative outcomes is the imperative to implement pedagogical support mechanisms that effectively identify and address the specific difficulties and needs of students undergoing diagnostic crises associated with dyslexia and dysgraphia. Moreover, reducing student dependency through an inclusive and supportive school climate and technology can help mitigate diverse disabilities and help them reach their highest possible ability level.

Keywords: Systematic literature review, inclusive education, dyslexia, dysgraphia, equal access to education.

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Introduction

Equal entry to schooling is an elementary building block in gentle inclusion (Broderick, 2018; Ehsaan & Shahid, 2016). Educators aim to ensure that students of all backgrounds and abilities have equal opportunities to achieve excellence in academic instruction. This principle is a framework for an education policy and a relevant element of social justice and equality (Adams, 2015; Colodro-Conde et al., 2015; Horsford et al., 2018). It is crucial to correct this context, ensuring that those in positions of decision-making around educational equity and social justice have access to educational equity. Scholars have argued that 'equitable access requires schools to provide equal opportunities for all students to achieve academically, socially, and with fairness of outcomes' (Fletcher et al., 2015).

The journey of the development of inclusive education in Indonesia was transformative (Astuti & Sudrajat, 2020; Mansur et al., 2021; Setia et al., 2021). Substantial policy initiatives and the evolution of the education paradigm also reinforce this. The Indonesian version moves around an inclusivity circle where everybody gets the same direction channel, ensuring no one is left behind, especially not even students with special needs. It is grounded in the multiculturalism of our characters as Indonesians, which prioritizes tolerance and respect for differences, which is the foundation for creating an inclusive, welcoming learning environment and supporting the development of the potential of all students holistically. The form of inclusive education in Indonesia is designed structurally to be a strategic approach to providing every student with special needs the right to access classes, programs, or learning places at all levels of education (Karya et al., 2021; Mulyadi et al., 2018). While the approach has attracted stakeholder support, numerous barriers to its implementation persist.

All in all, the practicability of inclusive education is laden with challenges. Some of these regards a lack of teacher resources and training (Bibiana et al., 2020; Ozel et al., 2018; Sharma & Mullick, 2020), lack of community readiness (Makoelle, 2014; Mitiku et al., 2014), social and cultural (Andrews et al., 2021; Sabbarwal, 2016) as well as other policies. In the same vein, it is essential to recognize that the enactment of inclusive education in Indonesia remains incomplete and requires comprehensive implementation; consequently, this deficiency may contribute to the diminished efficacy of inclusivity. The obstacles are related to the need for more human resources, infrastructure, cultural perceptions, and policies created (Anshory, 2018; Astuti & Sudrajat, 2020; Bakhri et al., 2017; Mudjito et al., 2017). To map out and develop ways to create an inclusive education strategy in Indonesia, we must recognize these diverse problems to provide adequate solutions. A particularly acute challenge here is that there needs to be more teachers dealing with students with special needs in an educated manner. Some teachers are overwhelmed and not equipped with the specific skills required for students with learning disorders, ranging from dyslexia to APD (Malisiova & Folia, 2023; Sansano & Jiménez-Fernández, 2024).

Inclusive education in Indonesia is comprehensively regulated in several laws that are the legal basis for its implementation. Law no. 20 of 2003 on the National Education System affirms that every citizen has the right to receive education without discrimination, including children with special needs (Report on the Implementation of Inclusive Education in Indonesia in 2021, 2022). In addition, Law No. 8 of 2016 concerning Persons with Disabilities strengthens this right by affirming the state's obligation to provide inclusive and friendly educational services for persons with disabilities (Law of the Republic of Indonesia Number 8 of 2016 concerning Disabilities of the Government of the Republic of Indonesia, 2016). Regulation of the Minister of Education and Culture Number 70 of 2009 also provides technical guidelines for the implementation of inclusive education in regular schools, which aims to accommodate the learning needs of students with various types of disabilities, including learning disorders such as dyslexia and dysgraphia.

Although the legal framework is strong enough, the implementation of inclusive education in Indonesia still faces significant obstacles. One of the main challenges is the limitation of human resources, especially teachers who have special competencies and training in dealing with students with special learning needs. In addition, the facilities and supporting facilities in many schools are still inadequate to meet the needs of students with dyslexia and dysgraphia. Other factors that contribute to the impediment are budget limitations and the lack of socialization and a deep understanding of inclusive education at the school level and the wider community. This condition causes a gap between the policies regulated in the legislation and real practices in the field, so that the main goal of inclusive education to achieve educational equality has not been fully realized (Report on the Implementation of Inclusive Education in Indonesia in 2021, 2022; Sari et al., 2022).

In Indonesia's highly diverse social and geographical context, inclusive education requires a more adaptive and contextual approach in order to run effectively. Differences in socio-economic, cultural, and accessibility conditions in various regions significantly affect the implementation of inclusive education policies. Therefore, in addition to strengthening regulations, efforts are needed to increase teacher capacity, involve local communities, and develop facilities and infrastructure that suit the needs of students with special needs. This holistic approach is important to ensure that students with dyslexia and dysgraphia can have equal and optimal

learning opportunities, so that inclusive education can truly realize the principles of justice and equality in the national education system (Yasin et al., 2023).

Some of the research that has been conducted related to inclusive school policies in Indonesia includes: *First*, research conducted by Abiyyah (2024). This study highlights that the implementation of inclusive education in Indonesia requires supportive government policies as well as a conducive environment created by parents and educators. Despite stakeholder support, challenges remain in achieving equitable educational opportunities for all students, especially those with special needs. *Second*, Rahmi et al. (2024) research shows that inclusive education in Indonesia aims to provide equitable learning opportunities for all students, including those with special educational needs. However, limited teacher training, insufficient funding, and diverse student needs hinder effective implementation despite supportive policies and stakeholder engagement. *Third*, the research conducted by Fadilah (2024) identifies challenges in implementing inclusive education in Indonesia, such as unequal access and cultural stereotypes. It emphasizes the need for inclusive curricula, cultural diversity training for educators, and stakeholder collaboration to overcome these barriers and promote multiculturalism. Moreover, *fourth*, a study conducted by Somad et al. (2024), the results of this study highlight that inclusive education in Indonesia faces significant challenges, including inadequate teacher training, limited resources, and a lack of standard identification methods for students with special needs, despite the recognition of its importance for equitable educational opportunities. Based on the study's results, inclusive education development in Indonesia has significantly shifted towards equitable educational opportunities for all students, especially those with special needs. However, this movement faces several challenges that need to be solved, including a lack of teacher training, limited school resources, and a lack of stakeholder collaboration.

Researchers have found that these challenges do not yet have fully effective solutions. The policy based on inclusive education in Indonesia aims to provide equal learning opportunities for all students, including those with special needs, according to their diverse learning needs (Nur-Baiti et al., 2021; Sunardi et al., 2011). In this context, dyslexia and dysgraphia are learning disorders that significantly affect students' academic performance, especially in reading and writing. Specifically, dyslexia is a language-based learning disability characterized by difficulties in word recognition, phonological processing, and reading fluency (Alevizos et al., 2024; Yunus & Ahmad, 2022). Dyslexia is often characterized by poor handwriting and written expression, and difficulty associating sounds with letters (Yunus & Ahmad, 2022). Dysgraphia is a neurological disorder that interferes with the ability to write, affecting letter formation, spacing, and harmony (Annette et al., 2023; Moonsamy, 2023). Dysgraphia is characterized by impaired handwriting, spelling, and challenges in producing readable text (Annette et al., 2023). Students with dyslexia often struggle with reading comprehension and fluency, leading to academic delays. Those with dysgraphia may face increased cognitive demands as writing tasks become more complex, affecting their overall learning experience (Vasileios et al., 2024).

Related to this, the inclusive education policy in Indonesia is a form of national action that emphasizes that schools must accommodate the learning process of children with disabilities in general schools. However, policies are often hampered by a lack of instructional differentiation to identify the challenges and needs of students with dyslexia and dysgraphia for educators. This is why executing the policies governing inclusive education in developing countries like Indonesia, which suffer from systemic issues like a lack of accessibility, scarcity of teachers, and minimal funding, are often faced with challenges that hinder their implementation (Astuti & Sudrajat, 2020; Sunardi et al., 2011). In other cases, they take the easy step of adopting policies that are too advanced for their development stage, making them even more difficult to implement. A lack of a responsive social framework and uncertainty in policy delivery further hinder this.

Therefore, the involvement and empowerment of students with dyslexia and dysgraphia are essential to guarantee their equitable access to educational opportunities. This is necessary to facilitate the optimal development of their inherent potential. Actively engaging students with special education needs in the learning process helps them feel respected and included, which in turn enhances their motivation, confidence, and sense of autonomy. In addition, empowerment allows these students to develop customized learning strategies that align with their distinctive requirements, such as integrating assistive technology or adopting a more visually oriented pedagogical approach. Thus, this active participation and empowerment model fosters an inclusive educational environment and supports realizing equitable and high-quality education for all learners. So, this article will substantially discuss educational inclusivity as a form of equal access for students with dyslexia and dysgraphia in Indonesia. There are two research questions in the current study.

1. What role does instructional differentiation play in identifying the specific challenges and educational needs of students with dyslexia and dysgraphia?
2. What is the form of active participation and empowerment of students with dyslexia and dysgraphia?

Method

Research Method

The method for this study was a systematic literature review (SLR). It is generally a review of all relevant literature to deal with specific problems, and then assess the validity of each study when concluding (Lame, 2019). We systematically searched English articles from Scopus and ScienceDirect literature databases. Compliance with PRISMA Criteria: The study was conducted according to PRISMA criteria (Gundogan et al., 2020). The decision to review only English language articles was based on the prevalence of English as the primary language for academic publications, particularly in high-impact, peer-reviewed journals indexed in databases like Scopus and ScienceDirect. By focusing on English-language articles, the study ensures access to a broader range of globally recognized research and methodologies, facilitating consistency in evaluating findings. Additionally, this approach aligns with the PRISMA criteria, which emphasize systematic and transparent methods, including clear justification of inclusion and exclusion criteria, thereby enhancing the reliability and replicability of the review process.

The process of identifying scientific articles through the Scopus and ScienceDirect search engines is carried out because both databases are respectable resources that provide access to high-quality and internationally indexed scientific journals. Scopus is recognized as one of the most extensive bibliographic databases covering various disciplines. At the same time, ScienceDirect facilitates direct access to contemporary research articles from journals published by Elsevier. Using these two search engines allows researchers to obtain relevant articles and validate and follow global academic standards, thereby increasing the credibility and validity of research findings. Furthermore, the broad scope of both databases ensures that the identified literature encapsulates a broad spectrum of perspectives within a particular field of inquiry.

We used the PICO (problem/population, intervention, comparison, and outcome) criterion to generate well-focused research results (Eriksen & Frandsen, 2018). Inclusion criteria will include students diagnosed with dyslexia and dysgraphia, and schools that utilize differentiation-based learning approaches and/or technology. Excluding Article School without Instructional differentiation instruction not for Students with a learning disability that was not dyslexia and Dysgraphia Study, which Teachers and school staff are out of teacher or specific Case training in their Special instructional Differentiation strategies.

We use data related to instructional differentiation strategies, including adaptation of teaching materials and alternative assessments, to address students' specific needs. Additionally, we collect data from programs that promote active student participation, such as project-based learning and group collaboration. The integration of technology is also utilized to further empower students in the learning process.

Outcome parameters include improved identification of the specific challenges and needs of students with dyslexia and dysgraphia. They also encompass enhanced academic performance and greater engagement in the learning process. Additionally, outcomes involve increased student participation, self-confidence, and independence in learning.

Search Strategy

On Scopus, search terms for inclusive education and each criterion were optimized in the title, abstract, and keywords. The final search that was conducted ("educational inclusivity" OR "inclusive education" OR "diverse learning") AND (dyslexia OR "reading disorder" OR "specific learning disability"). The database search in Scopus is based on the filters in Table 1.

The researchers optimized the search on ScienceDirect by using keyword terms in the title and abstract related to inclusive education and each criterion. The final search used ("educational inclusivity" OR "inclusive education" OR "diverse learning") AND (dyslexia OR "reading disorder" OR "specific learning disability"). The database search in ScienceDirect is based on the filters in Table 2.

Study Selection

The online systematic review program, Rayyan AI, was updated to include the final search results from every database (Zhao, 2014). With Rayyan AI, duplicates were eliminated. Based on the inclusion criteria, the titles and abstracts of the remaining papers were screened. A full-text screening process was used to select the final qualifying articles. Two reviewers independently completed the full-text and title/abstract screenings on Rayyan AI. A third reviewer settled any disagreements. During the title and abstract screening, no explanation was given for the exclusion; however, at the full-text screening, the exclusions were noted. Any other articles found through the contained articles' references were added. The final analysis was conducted on the resulting papers. The extracted information on the result criteria was either quantitatively or qualitatively synthesized based on the quantity and type of data.

Table 1

Keyword search filters in Scopus

No	Criterion filter	Limit
1	Years	2014-2024
2	Subject area	Social sciences, psychology, health professions, arts and humanities, and multidisciplinary
3	Document type	All
4	Language	English
5	Keyword	All
6	Country	All
7	Source type	All Journal of Research in Special Educational Needs African Journal of Disability European Journal of Special Needs Education International Journal of Disability Development and Education Support For Learning Asia Pacific Science Education Disability And Society Teacher Development Sustainable Development Goals Series Supporting Diverse Students in Asian Inclusive Classrooms: From Policies and Theories to Practice South African Journal of Childhood Education
8	Source title	Software Engineering Education Conference Proceedings Optimizing Education Through Micro Lessons Engaging and Adaptive Learning Strategies Journal of Language Teaching and Research Journal of Intellectual and Developmental Disability Journal of Education South Africa International Journal of School and Educational Psychology International Journal of Inclusive Education International Journal of Higher Education International Journal of Evaluation and Research in Education IEEE Transactions on Learning Technologies Ethics in Higher Education Dyslexia

Table 2

Filter keyword searches in ScienceDirect

No	Criterion filter	Limit
1	Years	2014-2024
2	Article type	Review article and research article Teaching and Teacher Education International Journal of Educational Research Educational Research Review Children and Youth Services Review International Journal of Educational Research Open
3	Publication title	Computers and Education: Artificial Intelligence International Journal of Educational Development Studies in Educational Evaluation Learning and Instruction Computers & Education Journal of School Psychology Research in Developmental Disabilities
4	Subject area	Social sciences and psychology
5	Access type	Open access and open archive

Should any supplementary articles be discerned from the references of the included articles, these were incorporated into the analysis. The resultant articles underwent a comprehensive final examination. The data extracted concerning the outcome criteria were subjected to either quantitative or qualitative synthesis, contingent upon the volume and nature of the data.

Risk of Bias Assessment

Risk of bias refers to the potential for systematic errors in a study that can affect the validity of the results. This article's systematic article screening process uses Rayyan AI, especially in literature review or meta-analysis. In this article, four collaborators can indicate articles that meet or do not meet the inclusion criteria, thereby minimizing the potential for decision bias. In this context, collaborators consistently play a role in the articles' inclusion and exclusion process so that the risk of bias can be reduced to a minimum.

Findings

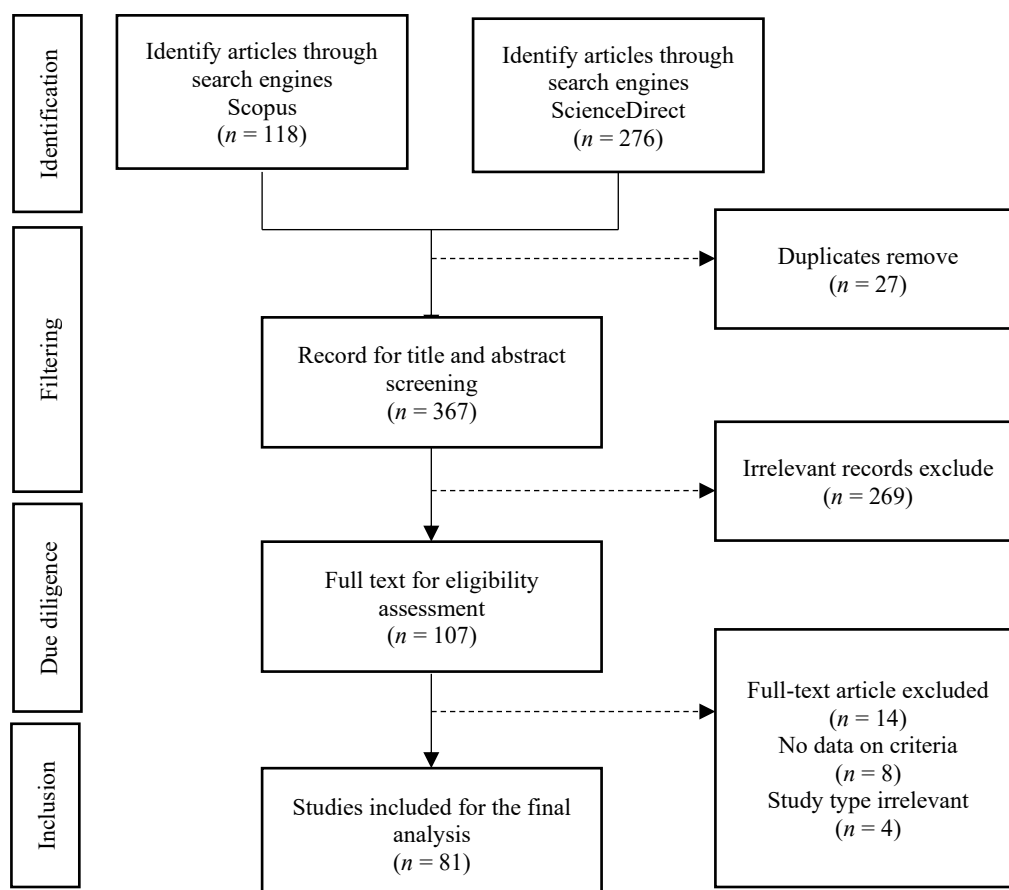
Study Selection

Searches on the Scopus and ScienceDirect databases were carried out in the range from October 1, 2014, to October 1, 2024. The selection to scrutinize the last decade, specifically from October 1, 2014, to October 1, 2024, underscores the imperative to concentrate on recent and pertinent advancements within the discipline. Throughout the preceding ten years, substantial progress in research methodologies, technological innovations, and theoretical frameworks has presumably transpired, rendering this temporal segment particularly illuminating for comprehending contemporary trends and practices. Moreover, reviewing the most recent decade guarantees that the outcomes are relevant to current contexts, addressing modern challenges and opportunities. This temporal scope is congruent with the prevailing academic convention of emphasizing recent literature to uphold the relevance and precision of the review.

Based on the search results, we found 118 articles in Scopus and 276 articles in ScienceDirect. The final articles included in the inclusion category were 29 and 52 articles. Based on the results of screening and feasibility tests through the Rayyan AI application, as many as 27 articles have been removed from the findings because they have duplicates. Then, 269 articles that were not relevant to the topic were also deleted. In addition, 14 articles are included in the exclusion list, eight that do not meet the criteria and four that are outside the topic. The process of filtering the article's data can be seen in Flow Chart 1.

Figure 1

Flow Diagram for Selection of Studies Included in the Systematic Review Based on the PRISMA Statement



Discussion

Finding Review

The literature review of the 81 final articles was focused on themes and viewpoints regarding instructional differentiation to identify the challenges and needs of dyslexic and dysgraphia students, as well as forms of active participation and empowerment of dyslexic and dysgraphia students.

Instructive Differentiation to Identify the Challenges and Needs of Dyslexic and Dysgraphia Students

Instructional differentiation is a critical pedagogical approach necessary to address the typical challenges and requirements of students diagnosed with dyslexia and dysgraphia (Strogilos, 2018; Strogilos et al., 2017). Such learning disabilities require differentiated educational strategies to facilitate optimal learning outcomes. Differentiation includes modifications of methodologies and instructional resources to accommodate a variety of learning profiles, which is especially important for students with specific learning disabilities, including dyslexia and dysgraphia (Gibbs & Beamish, 2020; Kocdar & Bozkurt, 2022; Strogilos, 2018).

In the United Arab Emirates (UAE), different curricular practices are particularly important for students with dyslexia and dysgraphia, focusing on inclusive learning experiences in higher education. Strategies in the UAE include modifying content delivery, using assistive technology, and providing a variety of assessment methods to meet individual learning styles and needs (Al-Bukhari, 2024). As for Nepal, implementing different instructions reveals significant challenges, such as limited resources and inadequate teacher training. Teachers in Nepal often struggle to balance diverse learning needs in a single classroom, leading to the inconsistent implementation of different strategies (Jung & Niure, 2018). The details below are the core aspects of this learner-related instructional differentiation.

Understanding Dyslexia and Dysgraphia

Dyslexia represents a distinct learning disability characterized by decoding, word reading, text comprehension, and spelling challenges, which occur without an identifiable biological etiology (Jaffe-Dax et al., 2018; Shaywitz et al., 2015; Werth, 2021). This condition is associated with disturbances in the brain's language processing system, significantly inhibiting the capacity to interpret phonological information, resulting in difficulties with reading and spelling tasks.

Children diagnosed with dyslexia often face obstacles in phonological processing, an essential component for successful word recognition and spelling ability (Anderson & Kachorsky, 2019). They did not use fundamentally different cognitive processes compared to their non-dyslexic counterparts; However, they struggled to utilize phonological and visual data efficiently (Layes et al., 2021).

Manifestations of dyslexia vary across languages, influenced by the orthographic complexity inherent in each linguistic system. Dyslexia correlates with deficits in procedural learning mechanisms involving specific regions in the brain (Christodoulides et al., 2022; Daikoku et al., 2023). Dyslexia researchers have empirically linked dyslexia to language processing deficits that are not associated with general cognitive impairment but rather specific neural processing abnormalities (Brimo et al., 2021). A spectrum of clinical presentations occurs in this parSIAL condition, with impairments also in reading (Mingozzi et al., 2024), working memory, and sensorimotor coordination. Placed on the spectrum of specific learning disorders, dyslexia is characterized primarily by reading and spelling difficulties that are thought to reflect precise deficits in language processing and procedural learning capacity rather than diffuse cognitive or sensory impairments (Cidrim & Madeiro, 2017; Hulme & Snowling, 2016; Snowling et al., 2020).

Differentiated Instruction Strategy

Educators must practice instructional differentiation during the learning process due to the various needs of students with dyslexia and dysgraphia (Al-Bukhari, 2024). This method categorizes learners by their skills and adaptation to learning materials according to how they learn best. Hence, adaptive teaching methodologies can be employed for all learners, including those with disabilities (Ginting et al., 2024; Bañados et al., 2024). Instructional practice can include, but is not limited to, categorizing students based on their abilities, interests, or needs (Devi, 2023). However, whether or not grouping students by ability has been a successful method of categorization depends largely on educators' skill to adapt lessons to suit the needs of different groups. By doing this, educators can ensure every learner has a purposeful and meaningful educational experience. Differentiation ensures inclusive access to the curriculum through instructional adaptation, ensuring that all students (including those with a disability) are in the co-taught classrooms (Devi, 2023; Malisiova et al., 2023; Olanrewaju Adebisi, 2024). It creates an even educational environment where all students can interact and advance at their own pace.

Forms of Differentiated Instructions

Significantly, instructional differentiation for students with dyslexia and dysgraphia focuses on personalized approaches to adequately tackle their multiple deficits (Inglebret et al., 2016; Strogilos, 2018). Phenomena known to help support better reading and spelling proficiency in individuals with dyslexia are found within intervention strategies, such as phonological awareness training, orthographic coding activities (Layes et al., 2020), and the use of assistive technologies. On the other hand, Dysgraphia Students may need direct instruction in handwriting and graphic organizers and hands-on practice with alternative modalities (e.g., typing or speech-to-text assisted technology) to support writing output (John & Renumol, 2018). Similarly, for both types

of learners, a multisensory approach that integrates visual and auditory modalities in tandem with continuous measures of performance achievement (both the objective progress to date and continued support requirements) is crucial. Furthermore, students can be provided extra time on activities focusing on reading and writing is so which will lower the stress levels they experience (Li & Deng, 2023; Marucci et al., 2021), while pump system feedback along with tailorable grouping ways can pave the way for increased participation as well as better understanding. These methods, incorporated into personalized education plans, will likely be much more successful in meeting the learning profiles of your students with dyslexia and/or dysgraphia, enabling access to the curriculum for all.

Challenges in Implementation

Instructional differentiation for students with dyslexia and dysgraphia is challenging. These issues bear on the diversity of student needs and the complexity of a highly flexible pedagogical approach. The main challenges reported in the scientific literature are: 1) instruction differentiation demands a deep understanding of individual students' specific and unique mixes of learning disorders, even though they might share diagnostic labels that may also change over time; Dyslexia and dysgraphia are two other independent cognitive and linguistic dimensions, thereby making the educators to accurately evaluate in identifying of these disorders as well as designing remediation strategies (Bajrami, 2015; Gheyssens et al., 2023; Smith & Hill, 2019). Such efforts are typically resource-intensive and require specialized training. Classroom atmosphere makes the most significant difference in how well differing instructional methodologies work. Educators must work within the spectrum of learning abilities while maintaining an environment that accommodates all students. However, many general education teachers may not be well-trained in having tailored differentiation strategies for students with learning disabilities (Khazanchi & Khazanchi, 2021; Ryan, 2012). 3) Conventional instructional practices, such as memorizing spelling words, often prove ineffective for students with learning disabilities. As a result, educators must adopt alternative pedagogical techniques, including mnemonic instruction and graphic organizers, which require further planning and resources. Applying this strategy in a co-taught classroom can produce positive outcomes, but also mandates careful coordination and collaboration among educators (Boon et al., 2018; Westwood, 2017). 4) Educators face difficulties reconciling the standard curriculum mandate with the need for individualized instruction. This challenge is becoming increasingly felt in secondary school, where curricular demands are rigorous (Balanchivadze & Nikoladze, 2022; Townsend, 1968; Wong & Mohd-Rashid, 2022).

Forms of Active Participation and Empowerment of Dyslexia and Dysgraphia Students

The involvement and improvement of students diagnosed with dyslexia and dysgraphia are essential for their academic achievement and individual growth. This effort requires the creation of a nurturing atmosphere that promotes self-advocacy, collaborative learning, and equitable interaction between educators and learners. The following section investigates this dimension comprehensively.

Self-Advocacy and Individual Education Programs (IEPs)

When students with dyslexia and dysgraphia are taught self-advocacy, they can better communicate necessary educational needs and goals, resulting in more individualized IEPs (Prater et al., 2014; Seong et al., 2015). Above all, this approach puts learners, including those with learning disabilities, in the driver's seat of their educational progress and promotes a culture of inclusion and agency.

Those who were taught self-advocacy skills were found to participate in IEP meetings, detailing more goals and advocating more effectively than those who had not received the same support (Brendli et al., 2021; Royer, 2017). This way, students can communicate better what they want and need, making the IEP process more student-centered. Further, the self-advocacy model clarifies that students are to understand their entitlement. It explains what it means for them to be a learner, something crucial for the success of students with learning disabilities, as they come up in a system filled with standardized tests.

Cooperative Learning Environment

Cooperative learning environments have been shown to provide significant academic and social benefits for students with identifiable disabilities, such as dyslexia and dysgraphia. These advantages are not solely the result of inclusive pedagogical practices, but are also shaped by individual differences. Factors such as reading ability, intuition, and social interaction skills play a crucial role in determining the effectiveness of cooperative learning.

A cooperative learning model, exemplified by the Cooperative Integrated Reading and Composition (CIRC) framework, has been shown to enhance students' academic abilities in reading, language arts, and writing, particularly among those with learning difficulties (Agustin & Wardhono, 2024; Silalahi et al., 2024). The model organizes students into teams with heterogeneous overall abilities while grouping them homogeneously for specific skills. These skills include oral reading, vocabulary development, and composition writing.

Finally, cooperative learning encourages interaction among students at different educational levels and helps strengthen ties and social participation. This supports student-student interaction, particularly important for students with special educational needs. Cooperative learning has a limited impact on increasing academic achievement, but it is essential for creating a safe and supportive classroom environment for all students (Gillies et al., 2023; Johannesson, 2024; Linenberger, 2023).

Therefore, educators can adopt instructional practices that teach students from diverse backgrounds to collaborate effectively and demonstrate mutual tolerance. Such approaches promote a more inclusive learning environment. This inclusivity benefits all students, including those with disabilities. Empowering School Characteristics

Creating an educational environment that emphasizes empowerment over a deficit-based mindset fosters a more supportive and encouraging space for students with dyslexia and/or dysgraphia. This approach shifts the focus from limitations to potential. A pedagogical strategy is thus designed to highlight students' strengths and possibilities within a flexible and inclusive learning context.

They can emphasize various teaching criticalities and Individualized Education Plans (IEPs) designed for the typical needs of dyslexic learners in children with Special Needs Education, educating teachers (SNED), and systematic instruction for those with dysgraphia in addition to using assistive technology as methods proven effective (Kalenjuk et al., 2024; Wong & Mohd Rashid, 2022; Yaacob et al., 2024). For instance, Machine learning and Optical Character Recognition (OCR) have boosted the software pipeline to liberate dyslexic learners who suffer from document conversion hindrance and hugely potentiate their language competencies (Agarwal et al., 2024; Narkhede et al., 2024; Sadhana et al., 2023; Singh, 2023).

Similarly, investing in professional development and collaboration with mental health practitioners is crucial for enhancing educators' confidence and expertise in supporting students with learning difficulties. This professional growth enables teachers to respond more effectively to diverse student needs. As a result, empowerment strategies targeting educators and school leaders play a vital role in fostering an equitable, inclusive environment where students can develop a strong sense of agency.

Conclusion, Limitation, and Future Research

Applying this lesson about instructional differentiation is essential in understanding the struggles and needs of students with dyslexia or dysgraphia. Revisiting standards-based grading through the lens of competency education ensures that teaching strategies are adjusted to reflect better what students are learning and strengthens student engagement in meaningful learning activities. Everything from the individual education plan meetings (IEP) to how students are engaged in various methods of the educational planning process can become more personalized, all within an inclusive scope. Additionally, students with disabilities can be maximally supported in reaching their potential in high-quality schools that maintain a strong culture of an inclusive environment where students are placed at the forefront of learning and directed towards appropriate technological resources that empower them as students.

Certainly, instructional differentiation and student empowerment approaches are well-supported, but with reservations. One significant concern we observe is the absence of pedagogy training for educators on how to apply these methodologies. In addition, not all educational institutions have adequate resources to provide the necessary assistive technology. The limitations identified in previous studies may also hinder the generalization of the findings, as many studies concentrate on specific contexts and fail to cover diverse populations of students affected by dyslexia and dysgraphia.

To improve understanding and applicability in the facilitation of students with dyslexia and dysgraphia, future research should investigate several domains. Additional investigations are needed to assess the efficacy of diverse instructional differentiation methodologies in various contexts. Additionally, examining how emerging technologies can be more effectively assimilated into the curriculum is essential to increase student support. In addition, questions concentrating on students' life experiences and perceptions of empowerment and active involvement in their educational journey will result in significant insights for advancing superior practices. By emphasizing this dimension, there is an aspiration to foster a more inclusive and effective learning environment for individuals with dyslexia and dysgraphia.

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