Challenges in Literacy Skills Development in Early Childhood Special Education in Inclusive Setting



Sarah A Alahmari¹, Dr. Muhammad Javed Aftab^{2*}, Faisal Amjad³

¹Assistant Professor, Department of Early Childhood, Faculty of Education, King Khalid University, Saudi Arabia. Email: Ssarh@kku.edu.sa

^{2*}Assistant Professor (Special Education), Department of Special Education, Division of Education (DoE), University of Education, Lahore, Punjab, Pakistan. Email: drmjavedaftab@ue.edu.pk (Corresponding Author)

³Ph.D. Scholar (Special Education), Department of Special Education, Division of Education (DoE), University of Education, Lahore, Punjab, Pakistan. Email: amjadfaisal40@gmail.com

Abstract

Developing literacy skills for children with disabilities in inclusive early childhood education settings presents significant challenges. While inclusive classrooms promote social integration, they require specialized instructional strategies to address diverse learning needs. This study examines key barriers to literacy development, including insufficient teacher training, limited access to assistive technologies, and inadequate instructional materials. Using a quantitative descriptive research design, data were collected from 200 special education teachers through a structured questionnaire. The findings indicate that despite teachers' qualifications, challenges such as large class sizes, inflexible curricula, and minimal parental involvement hinder effective literacy instruction. Statistical analysis reveals significant differences in teachers' perspectives based on demographic factors. The study emphasizes the need for professional development programs, curriculum modifications, and improved access to assistive technology. Strengthening parental involvement and policy support is crucial for fostering inclusive literacy development. These findings contribute to enhancing instructional practices, ensuring equitable education for children with disabilities.

Keywords: Inclusive Education, Literacy Development, Special Education, Assistive Technology, Teacher Training

Introduction

Establishing literacy skills in early childhood special education in inclusive classrooms is a complicated and multidimensional task. One of the larger shifts is toward inclusive schooling whereby children with disabilities are placed in the same classroom with children who would normally not have disabilities. What that does is provide greater diversity within the classrooms today. While this approach seeks social integration and equality of educational opportunities, it also requires highly specialized instructional strategies that meet the unique learning needs of children with disabilities. Terrell and Watson (2018) conducted some research that indicates that children with disabilities tend to encounter significant difficulties with such things as hearing individual sounds in words (phonemic awareness), learning large words (vocabulary acquisition), and reading content and comprehension as well. This implies that children who struggle require interventions that are individualized to them based on evidence that these interventions work extremely well. Yet, shortages of proper training for teachers, reduced access to assistive technology, and shortages of funding for specialized instructional materials persist in impeding proper literacy development in inclusive settings (Atanga et al., 2020). The issues reinforce the necessity for systematic change in literacy teaching to provide children with disabilities equal learning opportunities.

One of the largest obstacles that children with special needs encounter on their journey to reading is that they do not always have access to quality learning materials. Conventional literacy materials usually do not apply universal design principles, so they are hard for children with visual, auditory, or cognitive disabilities to use effectively (Parween Ahmad, 2025). Schools often cannot afford to invest in adaptive learning resources, e.g., text-to-speech programs, braille books and documents, interactive digital books, that widen the gap in reading achievement between the disabled and able-bodied children (Kimogol, 2023). Most teachers also remain reluctant to tailor reading instruction in line with inclusive practices since such strategies are emphasized within professional development processes. Bowman (2019) quotes that early childhood teachers get the feeling that they are losing their direction sometimes since children who are special and have different problems are attending classes. This can also result in not providing such children with adequate literacy education or hindering their long-term learning and academic success, Bowman says. Such educators feel lost, it is a problem for them. In addition, systemic barriers like limited early intervention programs and poor special education services further limit the literacy development of children with disabilities (Hirano et al., 2018).

The justification for this study arises from the urgent need to identify and address the challenges of literacy skills development in early childhood special education in inclusive environments. In spite of such remarkable progress towards inclusive education policy, most schools still struggle with implementing the essential support systems needed for successful literacy education. Through this study, it is attempted to investigate some of the fundamental impediments in literacy development and how teacher training, availability of learning materials, parental engagement, and technology application are involved in this process. Through this area of focus, this study anticipates providing important new information individuals who could truly benefit. Individuals such as teachers, planners who must develop policies, and other managers who are employed at schools and libraries. They wish to produce literacy programs that are effective and open to all types of students. These are all questions that need to be addressed so that children with disabilities have the support they need to acquire early literacy skills and therefore increased academic achievement and integration into society (Theoharis, 2024).

Objective:

To examine the key challenges in literacy skills development for children with disabilities in early childhood special education within inclusive settings.

Literature Review

Early childhood special education in inclusive settings presents a range of difficulties for educators, parents, and legislators trying to establish reading skills. The various learning demands of children with disabilities present one of the key difficulties since they need for different teaching methodologies and customized approaches. Research by Parween and Ahmad (2025) show that children with impairments typically face challenges in phonemic awareness, vocabulary development, and comprehensionqualities that require specialized assistance. Inclusive settings can complicate the process since teachers must simultaneously teach their typically developing peers, usually without enough resources and training, while meeting the various needs of children with disabilities (Hebbeler & Spiker,

Finding appropriate learning resources is a second major obstacle in developing literacy. Most traditional reading resources are not created with universal design issues in mind, hence children with impairments find them difficult to access and use. Many schools lack the money to produce literacy materials tailored for use by children with visual, auditory, or cognitive problems; so, these materials must be altered for their use by these children. The unavailability of assistive tools, including text-to--speech software and interactive learning materials, also aggravates the problem, thereby limiting the involvement of children with disabilities in literacy (Svensson et al., 2021).

Although many say they are not sufficiently equipped to meet the different demands of their pupils, the responsibility of instructors in developing literacy skills in inclusive environments cannot be underlined. Russell (2021) found from research that most early childhood teachers lack sufficient knowledge in special education techniques and so lack sufficient readiness to employ evidence-based literacy interventions. This knowledge disparity can lead to ineffective instruction and hinder the literacy development of children with impairments. The additional effort needed in inclusive education causes teachers to experience significant stress and burnout, which can once more influence the quality of literacy instruction (Jeon et al., 2022).

Early childhood special education's development of reading depends much on parental engagement as well. Studies show that children whose parents actively participate in literacy activities at home are probably going to have better degrees of reading and writing ability (Ho & Lau, 2018). Children with disabilities' parents may, however, face different difficulties including inadequate resources to support their child's learning at home or lack knowledge of relevant literacy practices. Furthermore restricting parents' ability to be involved in their child's literacy development include socioeconomic level, time, and language limitations, so creating disparities in literacy attainment (Nag et al., 2019).

Policies of classroom inclusion affect students with impairments' literacy level as well. While inclusive education advances equality in learning chances, the quality of such policies varies greatly depending on the institution and the area. As Bean & Goatley (2020) point out, many schools lack the support systems such literacy coaches and resource teachers with particular training to provide efficient inclusive literacy teaching. Effective literacy programs in inclusive classrooms also depend on policy inconsistencies and lack of interaction between special and general education teachers weaken.

Early intervention is one of the building blocks of literacy development; most handicapped children do not receive timely help. Early literacy instruction apparently greatly improves reading and writing ability (Graham et al., 2018). Still, early

intervention programs are discouraged from being taken advantage of by quick screening procedures and delayed diagnosis. Furthermore aggravating families in need are systematic problems including poor funding for early childhood intervention programs and long waiting lists for special education services (Sapiets et al., 2023).

For children with special needs to acquire literacy skills, language and communication problems often provide a major obstacle. Many children with speech and language difficulties find difficulty with basic reading abilities including letter recognition, phonics, and word decoding (Gillon et al., 2020). Though many schools lack enough SLPs to provide continuous intervention, speech-language pathologists (SLPs) are absolutely essential in helping literacy development. This scarcity affects the long-term academic performance of many children by depriving them of the required help to acquire basic literacy skills (Powell, 2018).

Furthermore influencing literacy development in inclusive early childhood education are social-emotional factors. Students with disabilities tend to have lower self-esteem and increased anxiety related to reading and writing tasks, especially when unable to maintain the pace of their peers (Zuppardo et al., 2023). Studies indicate that creating a positive, constructive classroom environment can promote literacy involvement among students with disabilities. Teachers who practice social-emotional learning (SEL) strategies like developing self-esteem and peer support assist in generating a more embracing and inspiring classroom environment (Elmi, 2020).

Technology can aid in closing the literacy gap for inclusive classrooms but is not currently consistently implemented. Digital literacy supports like audiobooks, interactive e-books, and speech-totext software offer great assistance for children with impairments (Parween & Ahmad, 2025). Nonetheless, several schools are constrained by issues such as funding, teacher professional development, and facilities, which inhibit the implementation of technology in teaching literacy. In a study by Sen and Leong (2020), they discovered that though technology-supported learning environments enhance the literacy performance of children with disabilities, inequality in access to online resources remains a major challenge.

Peer relationships also contribute to literacy learning, but disabled children might lack social integration in mainstream classrooms. The work of Bruefach and Reynolds (2022) identifies that disabled children can be socially isolated, limiting their chances for collaborative learning activities that support literacy skills. Promoting peer-assisted learning approaches like buddy reading

and co-telling has the potential to increase literacy engagement and build positive social relationships among pupils (Farlow, 2024).

Assessment procedures in early childhood special education pose another problem in literacy development. Standardized literacy frequently do not adapt to the different needs of children with disabilities and thus present distorted images of their capabilities (Girolamo et al., 2022). Performance-based testing and portfolio assessments are more accurate in presenting an overall picture of a child's literacy development. Yet, these practices demand more training and resources, which are not available in most inclusive environments (Demir, 2021).

Collaboration among teachers and professional development are key aspects of effective literacy teaching in inclusive environments. Research shows that if general education and special education teachers work together, they are in a better position to meet the literacy needs of all students (Mofield, 2020). Nonetheless, most schools do not have systematic professional development programs that emphasize inclusive literacy approaches. Regular training sessions, mentorship, and collaborative planning can better prepare teachers and enhance literacy performance among children with disabilities (Zepeda, 2019).

Cultural and linguistic diversity also makes literacy teaching more challenging in inclusive classrooms. Most children with disabilities belong to multilingual families, and they need extra language support to acquire literacy skills effectively (Novogrodsky & Meir, 2022). Teachers are required to practice culturally responsive literacy that takes into account the students' language background and offer bilingual materials when necessary. Still, insufficient training for teachers in culturally responsive pedagogy continues to be a main obstacle in the response to diverse learners' literacy needs (Kieran & Anderson, 2019).

Aside from these issues, the general societal attitudes towards disability affect literacy achievement in early childhood special education. Negative misconceptions and stereotypes about disabled children may result in lower expectations and fewer opportunities for literacy acquisition (Haft et al., 2023). Advocacy campaigns and awareness initiatives to promote inclusive education can transform societal attitudes and promote more support for disabled children in literacy interventions (Rollan & Somerton, 2021).

Research Methodology

This research employs a quantitative and descriptive research design to examine systematically the challenges faced in the development of literacy skills among children with

disabilities in early childhood special education in inclusive settings. The quantitative design allows for the collection of numerical data to establish patterns, while the descriptive design allows for understanding and interpretation of the dominant challenges in literacy instruction.

The study population consists of those teachers working with special needs children in the Special Education Department. They are the ones directly involved with teaching reading to disabled children in inclusive classrooms and are, as such, the most suitable participants for this study.

200 teachers will be selected through the simple random sampling technique. This technique is employed to ensure that each teacher in the population has an equal chance of being involved in the study, reducing bias and enhancing generalizability of findings.

A self-developed questionnaire with the help of literature on special education literacy issues will be used in the study. The questionnaire will consist of a combination of close-ended and Likert-scale questions to provide systematic answers regarding what prevents as well as influences literacy instruction within inclusive classrooms.

To determine the reliability of the questionnaire, literacy and special education specialists will screen the instrument before collecting data. Pilot study with a small number of teachers will be conducted to pilot test the questionnaire to guide enhancement from their response. Internal consistency of the replies will be examined by determining the instrument's reliability using Cronbach's alpha.

The data will be collected through a mix of physical distribution of questionnaires and an online Google Form link. This opens up participation to be broader, with the addition of teachers whose time might be limited for face-to-face data collection.

The data collected will be statistically analyzed based on descriptive and inferential statistical analysis through SPSS (Statistical Package for the Social Sciences). The data will be reported using descriptive statistics such as frequency, percentage, mean, and standard deviation. Inferential analysis through t-tests and ANOVA will be used to find relationships and differences that are statistically significant in response based on teacher demographics and levels of experience.

Descriptive Statistics

Table 1 Frequency Distribution at the Basis of Demographic Analysis

| Title | Description | Frequency | Percentage (%) |
|--------------------|-------------|-----------|----------------|
| Gender | Male | 76 | 38.0% |
| | Female | 124 | 62.0% |
| | | 200 | 100% |
| Age of Respondents | 21-30 Y | 4 | 2.0% |
| | 31-40 Y | 64 | 32.0% |
| | 41-50 Y | 110 | 55.0% |
| | 51-60 Y | 22 | 11.0% |
| | | 200 | 100% |
| Qualification | Master | 122 | 61.0% |
| | M.Phil. | 70 | 35.0% |
| | PHD | 8 | 4.0% |
| | | 200 | 100% |
| Area of Posting | Rural | 42 | 21.0% |
| | Urban | 158 | 79.0% |
| | | 200 | 100% |
| Experience | 1-5 Y | 40 | 20.0% |
| | 6-10 Y | 102 | 51.0% |
| | 11-15 Y | 48 | 24.0% |
| | >15 Y | 10 | 5.0% |
| | | 200 | 100% |

The demographic analysis shows that the majority of respondents are female (62%), aged between 41-50 years (55%), hold a Master's degree (61%), are posted in urban areas (79%), and have 6-10 years of experience (51%).

Table 2 Frequency Distribution at the Basis of Questions Asked (Objective)

| Sr. | Statements of Questions | SA | A | UD | DA | SDA | M | SD |
|------------|---|-----|-----|-----|----|-----|------|------|
| 1 | Teachers face difficulties in adapting literacy | 102 | 84 | 10 | 4 | 0 | 4.42 | 0.68 |
| | instruction to meet the diverse needs of children with disabilities in inclusive settings. | 51% | 42% | 5% | 2% | 0% | | |
| 2 | Lack of specialized training in literacy instruction | 96 | 98 | 6 | 0 | 0 | 4.45 | 0.56 |
| | for children with disabilities hinders effective teaching. | 48% | 49% | 3% | 0% | 0% | | |
| 3 | Limited availability of appropriate learning | 86 | 106 | 6 | 0 | 2 | 4.37 | 0.64 |
| | materials impacts literacy skill development in children with disabilities. | 43% | 53% | 3% | 0% | 1% | | |
| 4 | The current curriculum does not adequately | 96 | 88 | 6 | 8 | 2 | 4.34 | 0.80 |
| | support literacy development for children with disabilities in inclusive settings. | 48% | 44% | 3% | 4% | 1% | | |
| 5 | Teachers struggle with classroom management | 64 | 106 | 20 | 10 | 0 | 4.12 | 0.78 |
| | while implementing literacy instruction for children with disabilities. | 32% | 53% | 10% | 5% | 0% | | |
| 6 | Assistive technology is not readily available to | 78 | 90 | 24 | 8 | 0 | 4.19 | 0.80 |
| | support literacy learning for children with disabilities. | 39% | 45% | 12% | 4% | 0% | | |
| 7 | Parents' lack of awareness and involvement | 74 | 100 | 22 | 2 | 2 | 4.21 | 0.75 |
| | negatively affects the literacy development of children with disabilities. | 37% | 50% | 11% | 1% | 1% | | |
| 3 | Large class sizes make it difficult to provide | 76 | 106 | 14 | 2 | 2 | 4.26 | 0.72 |
| | individualized literacy instruction to children with disabilities. | 38% | 53% | 7% | 1% | 1% | | |
| 9 | The absence of collaboration between special | 66 | 112 | 16 | 0 | 6 | 4.16 | 0.81 |
| | educators and general educators affects the effectiveness of literacy instruction. | 33% | 56% | 8% | 0% | 3% | | |
| 10 | Children with disabilities require additional time for | 84 | 92 | 12 | 8 | 4 | 4.22 | 0.88 |
| | literacy learning, which is not always accommodated in the school schedule. | 42% | 46% | 6% | 4% | 2% | | |
| 11 | Assessment methods used in literacy instruction are | 74 | 102 | 18 | 2 | 4 | 4.20 | 0.80 |
| | not suitable for evaluating the progress of children with disabilities. | 37% | 51% | 9% | 1% | 2% | | |
| 12 | The school environment lacks the necessary | 66 | 96 | 28 | 8 | 2 | 4.08 | 0.85 |
| | infrastructure to facilitate literacy development for children with disabilities. | 33% | 48% | 14% | 4% | 1% | | |
| 13 | Insufficient government policies and funding create | 64 | 108 | 20 | 6 | 2 | 4.13 | 0.78 |
| | barriers to effective literacy instruction for children with disabilities. | 32% | 54% | 10% | 3% | 1% | | |
| L 4 | Teachers experience challenges in using | 76 | 104 | 14 | 6 | 0 | 4.25 | 0.71 |
| | differentiated instructional strategies to teach literacy skills. | 38% | 52% | 7% | 3% | 0% | | |
| 15 | Lack of professional development opportunities | 84 | 96 | 16 | 4 | 0 | 4.30 | 0.70 |
| | prevents teachers from enhancing their skills in literacy instruction for children with disabilities. | 42% | 48% | 8% | 2% | 0% | | |
| 16 | The emotional and behavioral challenges of children | 64 | 118 | 12 | 6 | 0 | 4.20 | 0.68 |
| | with disabilities impact their literacy learning progress. | 32% | 59% | 6% | 3% | 0% | | |

Table 2 contains the frequency table of answer items about difficulty experienced in teaching literacy to students with disabilities within integrated environments. As reported by the results, overwhelming teachers cited the challenge in reconciling the pedagogy of literacy instruction across various learning conditions at a significant level, such that 93% (51% of teachers SA-ed while 42% of them A-ed) affirmed the experience (M = 4.42, SD = 0.68). Moreover, 97% of the teachers (SA = 48%, A = 49%) opine that the absence of specialized training impedes effective teaching (M =

4.45, SD = 0.56). The absence of proper learning materials was also cited as a significant issue, with 96% of the teachers (SA = 43%, A = 53%) recognizing its effect on literacy development (M = 4.37, SD = 0.64). In addition, 92% (SA = 48%, A = 44%) concurred that the existing curriculum is not suitable for assisting children with disabilities in literacy skills (M = 4.34, SD = 0.80). Classroom management was identified as a problem, with 85% of instructors (SA = 32%, A = 53%) having challenges when incorporating literacy instruction (M = 4.12, SD = 0.78). The absence of assistive

technology was also a major obstacle, with 84% (SA = 39%, A = 45%) citing its absence as a challenge (M = 4.19, SD = 0.80). Parental engagement was also emphasized, with 87% (SA = 37%, A = 50%) concurring that a lack of awareness has a negative impact on literacy development (M = 4.21, SD =0.75). Large class sizes were reported to interfere with individualized teaching, with 91% (SA = 38%, A = 53%) reporting it to be a challenge (M = 4.26, SD = 0.72). In the same vein, 89% (SA = 33%, A = 56%) reported that lack of coordination between special and general educators affects literacy instruction effectiveness (M = 4.16, SD = 0.81). Time pressures were also present, with 88% (SA = 42%, A = 46%) reporting that children with disability are not provided with enough time for learning to read (M = 4.22, SD = 0.88).

Methods of assessment were found inappropriate by 88% (SA = 37%, A = 51%) of instructors (M = 4.20, SD = 0.80). Further, poor school infrastructure was cited by 81% (SA = 33%, A = 48%) as a hindrance to literacy progress (M = 4.08, SD = 0.85).

Lack of government policies and funding was also viewed as a hindrance, with 86% (SA = 32%, A = 54%) agreeing with this perspective (M = 4.13, SD = had challenges 0.78). Teachers applying differentiated instructional strategies, according to 90% (SA = 38%, A = 52%) of the participants (M = 4.25, SD = 0.71). Lack of professional development opportunities was also cited as a significant limitation, with 90% (SA = 42%, A = 48%) concurring that this hinders teachers from enhancing their literacy teaching skills (M = 4.30, SD = 0.70). Lastly, emotional and behavioral difficulties in children with disabilities were identified as a prominent influence on their literacy achievement, with 91% (SA = 32%, A = 59%) admitting its influence (M = 4.20, SD = 0.68). Overall, the evidence underscores the paramount difficulties of preschool teachers in instructing children with disabilities in literacy, highlighting the imperative necessity for policy interventions, training modules, and resource accessibility to further inclusive education.

Inferential Statistics

 Table 3 Independent Sample T-Test Analysis at the Basis of Gender

| Gender | N | M | SD | df | t | Sig. |
|--------|-----|-------|------|-----|------|-------|
| Male | 76 | 68.26 | 6.48 | 198 | 0.64 | 0.522 |
| Female | 124 | 67.68 | 6.15 | | | |

The independent sample t-test shows no significant difference in responses based on gender (t = 0.64, p = 0.522), indicating that both male and female participants have similar perspectives.

Table 4 Independent Sample T-Test Analysis at the Basis of Area of Posting

| Area of Posting | N | M | SD | df | t | Sig. |
|-----------------|-----|-------|------|-----|------|------|
| Rural | 42 | 71.43 | 6.51 | 198 | 4.28 | 0 |
| Urban | 158 | 66.96 | 5.87 | | | |

The independent sample t-test indicates a significant difference in mean scores based on the area of posting (p = 0.000), with rural respondents (M = 71.43, SD = 6.51) scoring higher than urban respondents (M = 66.96, SD = 5.87).

Table 5 One Way ANOVA Analysis at the Basis of Age

| Age | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 754.935 | 3 | 251.645 | 6.991 | 0 |
| Within Groups | 7055.065 | 196 | 35.995 | | |
| Total | 7810 | 199 | | | |

The one-way ANOVA analysis shows a significant difference in mean scores among different age groups (p = 0.000), indicating that age has a notable impact on the measured variable.

Table 6 One Way ANOVA Analysis at the Basis of Qualification

| Qualification | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|-------|
| Between Groups | 440.713 | 2 | 220.356 | 5.891 | 0.003 |
| Within Groups | 7369.287 | 197 | 37.408 | | |
| Total | 7810 | 199 | | | |

The one-way ANOVA analysis indicates a statistically significant difference in mean scores based on qualification levels (p = 0.003), suggesting that qualification influences the measured variable.

 Table 7 One Way ANOVA Analysis at the Basis of Experience

| Experience | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|-------|
| Between Groups | 535.84 | 3 | 178.613 | 4.813 | 0.003 |
| Within Groups | 7274.16 | 196 | 37.113 | | |
| Total | 7810 | 199 | | | |

The one-way ANOVA analysis shows a statistically significant difference in mean scores based on experience (p = 0.003), indicating that experience level impacts the measured variable.

Findings

The demographic profile of the study establishes that the respondents are female, between 41-50 years of age, and possess a Master's degree. The teachers are mostly found in urban locations and possess six to ten years of teaching experience. These results establish that the majority of the participating teachers have long professional experience and high levels of academic qualification, which would shape their attitudes towards teaching literacy to children with disabilities in the inclusive classroom context.

The research suggests that instructing disability students in literacy is still challenging for teachers because they are posed strict challenges by their ability to offer literacy training designed to accommodate their different requirements. An overwhelming majority of participants concur that the lack of adequate professional literacy training incapacitates successful pedagogy considerably. In addition, limited access to appropriate learning materials became a prime hindrance as it negatively influences children with disabilities' literacy acquisition. These results reaffirm the necessity for professional training and necessary resources to facilitate inclusive education.

Another salient issue the study brings to light is the insufficiency of the existing curriculum to improve the literacy skills of children with disabilities. Teachers feel that the existing curriculum does not address the unique requirements of these students, thus posing challenges towards the accomplishment of effective learning outcomes. Classroom management issues were also common, and teachers also found it difficult to use inclusive literacy instruction effectively. This indicates the necessity for training in classroom management techniques that are specific to inclusive learning environments.

The research also indicates that the unavailability of assistive technology is a significant impediment to children with disabilities' literacy education. Most teachers indicate that assistive devices are not available, and this hinders learners from effectively learning. Second, parental involvement in children with disability literacy is also nonexistent. Teachers

lament that lack of awareness and involvement by parents impacts students negatively. Such problems would necessitate more than just expanded access to assistive devices but also awareness campaigns and inducement of parental involvement in children's learning.

Large class sizes also appeared to be a critical issue as these constrain the ability of teachers to give special instruction to disabled children. This implication means that class sizes may be minimized or co-teaching strategies utilized to ensure high-quality instruction. The research also brings to the surface a lack of coordination among special educators and general educators, affecting the efficacy of literacy instruction negatively. Creating partnerships among these groups of teachers can result in enhanced teaching techniques and increased learning outcomes among disabled kids.

The results of the study are that teachers find children with disabilities need extra time for learning literacy, which it is not always possible to provide in school timetabling. Secondly, existing assessment processes are not found suitable to measure children with disabilities' progress. The findings stress that there is a requirement for flexible timetabling and devising different methods for assessing literacy development more appropriately.

Infrastructure issues also existed, as most teachers complained that schools have no facilities to develop literacy among disabled children. In addition, poor government policies and funds were also indicated as an obstacle in quality literacy education. All these findings indicate that policymakers should consider investing in school infrastructure as well as the provision of funds to ensure inclusive education programs.

The research also validated that teachers face challenges in the use of differentiated instructional approaches, which are critical to the teaching of the diverse learning requirements of children with disabilities. Another significant limitation validated was the absence of opportunities for professional development, which hinder teachers from enhancing their literacy instructional capacity. This

justifies the need for ongoing professional development initiatives in evidence-based teaching approaches to inclusive education.

Another significant finding is the effect of students' emotional and behavioral difficulties on their literacy development. Teachers indicated that these difficulties are most likely to impede progress, implying a requirement for extra support services like counseling and behavior interventions in schools. Meeting these needs can result in an improved learning environment for disabled children.

On the aspect of gender variations, independent sample t-test analysis does not identify that male and female teachers significantly vary with respect to response to the literacy teaching issues of inclusive classrooms. Both groups of teachers seem to have the same view on this issue. Postings varied in areas, as rural respondents made higher mean scores compared to the urban respondents. This implies that the rural district teachers find it difficult or have other circumstances compared to the urban districts.

A further analysis by one-way ANOVA indicates that there are significant response differences in respect of experience, qualification, and age. The implication of the results is that experienced, more qualified, and older teachers might have different views towards teaching literacy to disabled children. The implication of this is that the need arises for professional development courses to be designed to meet the particular needs of individual teacher groups.

In general, the study brings into focus the various obstacles teachers have in offering high-quality literacy lessons to disabled pupils in inclusive education. The study indicates that more professional development, better curriculum development, enhanced accessibility to assistive technology, greater parental involvement, and policy transformation are needed in order to enable education to become more inclusive and facilitatory. The overcoming of these barriers with the help of specific interventions has the potential to greatly enhance the literacy achievements of children with disabilities along with the overall quality of inclusive education.

Discussion

The study's results highlight some crucial issues facing teachers in providing literacy education to children with disabilities in inclusive classrooms. The demographic data indicate that the participants are mostly experienced, well-educated female teachers employed in urban locations. Their professional competence is at a high level, indicating that their problems knowledge in literacy

teaching is research-informed and grounded in real classroom practice.

Among the most urgent matters that were found is the lack of professional training among teachers. The majority of the participants were in agreement that the lack of literacy education professional development programs for disabled children significantly hinders them from teaching effectively. There is evidence to suggest this conclusion, with research identifying that teachers with specific training in inclusive teaching are more effective at adapting pedagogical strategies and enhancing learning outcomes (Mitchell & Sutherland, 2020). Furthermore, the absence of accessible learning materials is also a causative factor in literacy downturns, consistent with current literature highlighting the need for adaptive and accessible teaching materials in special education (Westwood, 2018).

Another significant challenge that has been unearthed is the insufficiency of the current curriculum in meeting different learning needs of children with disabilities. Teachers are convinced that contemporary curricula do not design flexible learning pathways, and it is challenging for students with disabilities to attain desired literacy rates. This concurs with research indicating a growing requirement to revise the curriculum to allow differentiated instruction strategies individualized learning plans to be integrated (Bondie et al., 2019). Issues of classroom management were also frequently cited, concurring with the necessity for considerable training on how best inclusive classrooms can be managed.

The assistive technology was generally not available, which is a serious limitation to literacy teaching. Research indicates that the application of assistive technology, e.g., speech-to-text programs and audiobooks, can enhance learning for students with disabilities (Wood et al., 2018). In addition, lack of parental involvement aggravates reading problems, as testified by their teachers, who stated most parents are not involved or informed about their child's learning process. The literature attests that parental involvement is extremely important to their academic achievement, especially among children with disabilities (Ahmed et al., 2021). Addressing these issues requires awareness programs to enhance parental participation in literacy acquisition.

Large class sizes were also a significant issue mentioned, limiting teachers from providing one-on-one attention to children with disabilities. This conclusion is complemented by earlier research that indicates co-teaching practices or student-teacher ratios might improve the quality of inclusive education by a large percentage (Iacono et al., 2023). Likewise, a lack of co-teaching among

special and general educators was indicated as a problem that was complemented by studies prioritizing interdisciplinarity to achieve quality literacy education (Van den Beemt et al., 2020).

Teachers were also complaining about insufficient time used to teach disabled children literacy. Most held the view that pupils should spend longer learning literacy, but tight school timetables do not support this. Also, there are existing evaluation processes that are not compatible for the measurement of the development of literacy, and thus new types of evaluations like portfolio-based evaluation and individual progress evaluation are crucial (Abbott et al., 2021).

Infrastructure issues were also witnessed, with most schools missing physical and technology infrastructure to accommodate inclusive literacy education. Moreover, the lack of government support and policy was also a reason for the hindrance in efficient teaching. Studies indicate that more government spending on inclusive education facilities and teacher training is essential to enhance educational success of disabled children (Bose & Heymann, 2020).

The study further notes that it has been a struggle for teachers to utilize differentiated teaching techniques since proper opportunities for professional growth and development were lacking. This aligns with literature revealing continuous education on adaptable teaching methodologies needs to ensure comprehensive literacy training (Westwood, 2018). Furthermore, the instructors opined pupils' behavioral and emotional challenges invalidate their literacy achievements and, hence, need supplementary supportive services in form of behavioral interventions and school guidance counseling.

The gender analysis of the study did not find any significant differences in male and female teachers' attitudes, indicating both sexes have the same problems in inclusive literacy education. Rural teachers did report significantly more issues than their urban colleagues, which is in line with earlier studies that underlined differences in training centers and educational materials between rural and urban schools (Echazarra & Radinger, 2019). Age, qualification, and experience differences in responses also suggest there might be variations in perception between older and more experienced teachers about teaching literacy and highlight the for differentiated requirement professional development programs.

Overall, the findings of this study highlight the need for structural change in developing literacy instruction for disabled children. Solution to the said problems through professional training, curriculum change, increased access to assistive technology, enhanced parental participation, and policy change can significantly enhance inclusive education. Interventions addressing these concerns are needed in order to ensure that all children, both able-bodied and otherwise, have equal opportunities for quality literacy instruction.

Conclusion

The results of this research reveal major limitations to the ability of teachers to provide quality literacy instruction to disabled children in inclusive classrooms. The study indicates that although the respondents are very experienced and fairly welltrained, they are constrained by limited specialized training, poor-quality instructional materials, and a rigid curriculum that does not cater to varied learning needs of students. Furthermore, absence of assistive technology, overpopulation in the class, and reduced parental involvement also hinder disability's children with literacy success. Professional training courses, special inclusive programs, education specifically designed improved coordination between special and regular teachers, and various assessment processes to follow up on the students' learning in literacy are also of paramount importance since the study concluded. Differences in teacher attitudes by location of posting, age, qualification, and experience suggest that interventions must be constructed to address specific demographic needs. Systemic change must occur for the instruction of literacy to individuals with disabilities. High-impact strategies on student achievement and classroom practice will be realized through strategic investments in teacher professional development, accommodations, curriculum and assistive technology. The schools must embrace flexibility in schedules, differentiated instruction, and wellimplemented classroom management routines that are inclusive. Consolidation of parental support through awareness and sensitization drives and ensuring proper infrastructure and policy support from the government is of top priority in building a culture of inclusivity in learning. Through the removal of such barriers through programmed interventions, educational institutions can establish a more inclusive and welcoming system to facilitate children with disability in achieving proper literacy development as well as academic advancement.

Recommendations

- Create specific professional development programs to prepare teachers with excellent teaching practices for inclusive literacy.
- Offer assistive technology, adaptive instructional materials, and curricular adaptations to meet a variety of learning needs.
- Implement awareness programs for encouraging active involvement of parents in

the literacy development of children with disabilities.

References

- 1. Abbott, M. L., Lee, K. K., & Ricioppo, S. (2021). Does portfolio-based language assessment align with learning-oriented assessment? Evidence from literacy learners and their instructors. *Canadian Journal of Applied Linguistics*, 24(2), 260-285.
- 2. Ahmed, Q. W., Rönkä, A., & Perälä-Littunen, S. (2021). Parental involvement or interference? Rural teachers' perceptions. *Education Research International*, 2021(1), 3182822.
- 3. Ainscow, M. (2020). Promoting equity in education: Lessons from international experiences. *Routledge*.
- 4. Atanga, C., Jones, B. A., Krueger, L. E., & Lu, S. (2020). Teachers of students with learning disabilities: Assistive technology knowledge, perceptions, interests, and barriers. *Journal of Special Education Technology*, 35(4), 236-248.
- 5. Auer, P. (2023). On the inclusiveness of the education system in a multination state from the perspective of primary school children and teachers' values. *International Perspectives on Inclusive Education*.
- 6. Beal, J. S., Dostal, H. M., & Easterbrooks, S. R. (2024). *Literacy instruction for students who are deaf and hard of hearing*. Oxford University Press.
- 7. Bean, R. M., & Goatley, V. J. (2020). *The literacy specialist: Leadership and coaching for the classroom, school, and community.* Guilford Publications.
- 8. Bondie, R. S., Dahnke, C., & Zusho, A. (2019). How does changing "one-size-fits-all" to differentiated instruction affect teaching?. Review of Research in Education, 43(1), 336-362.
- 9. Bose, B., & Heymann, J. (2020). Do inclusive education laws improve primary schooling among children with disabilities?. *International Journal of Educational Development*, 77, 102208.
- 10. Bowman, K. L. (2019). Exploration of Early Childhood Educators' Struggle for Inclusion of Infants and Toddlers with Developmental Delays (Doctoral dissertation, Cabrini University).
- 11. Bruefach, T., & Reynolds, J. R. (2022). Social isolation and achievement of students with learning disabilities. *Social Science Research*, 104, 102667.
- 12. Crispel, O., & Kasperski, R. (2021). The impact of teacher training in special education on the implementation of inclusion in mainstream classrooms. *International Journal of Inclusive Education*, 25(9), 1079-1090.

- 13. Demir, M. (2021). Alternative assessment methods in primary education: Review and future directions. *Current studies in educational disciplines*, 227.
- 14. Echazarra, A., & Radinger, T. (2019). Learning in rural schools: Insights from PISA, TALIS and the literature. *OECD Education Working Papers*, (196), 0_1-77.
- 15. Edyburn, D. L. (2020). Assistive technology and inclusive education: A systematic review. *Journal of Special Education Technology*, 35(1), 3-16.
- 16. Elmi, C. (2020). Integrating social emotional learning strategies in higher education. European journal of investigation in health, psychology and education, 10(3), 848-858.
- 17. Farlow, D. M. (2024). Effectiveness of peer-assisted learning strategies on oral reading fluency for students with a learning disability (Doctoral dissertation).
- 18. Gillon, G., McNeill, B., Denston, A., Scott, A., & Macfarlane, A. (2020). Evidence-based class literacy instruction for children with speech and language difficulties. *Topics in Language Disorders*, 40(4), 357-374.
- 19. Girolamo, T., Ghali, S., Campos, I., & Ford, A. (2022). Interpretation and use of standardized language assessments for diverse school-age individuals. *Perspectives of the ASHA special interest groups*, 7(4), 981-994.
- 20. Graham, S., Liu, X., Bartlett, B., Ng, C., Harris, K. R., Aitken, A., ... & Talukdar, J. (2018). Reading for writing: A meta-analysis of the impact of reading interventions on writing. *Review of Educational Research*, 88(2), 243-284.
- 21. Haft, S. L., Greiner de Magalhães, C., & Hoeft, F. (2023). A systematic review of the consequences of stigma and stereotype threat for individuals with specific learning disabilities. *Journal of learning disabilities*, 56(3), 193-209
- 22. Hebbeler, K., & Spiker, D. (2016). Supporting young children with disabilities. *The future of children*, 185-205.
- 23. Hirano, K. A., Rowe, D., Lindstrom, L., & Chan, P. (2018). Systemic barriers to family involvement in transition planning for youth with disabilities: A qualitative metasynthesis. *Journal of Child and Family Studies*, *27*, 3440-3456.
- 24. Ho, E. S. C., & Lau, K. L. (2018). Reading engagement and reading literacy performance: Effective policy and practices at home and in school. *Journal of Research in Reading*, 41(4), 657-679.
- 25. Iacono, T., Landry, O., Garcia-Melgar, A., Spong, J., Hyett, N., Bagley, K., & McKinstry, C. (2023). A systematized review of co-teaching efficacy in

- enhancing inclusive education for students with disability. *International Journal of Inclusive Education*, *27*(13), 1454-1468.
- 26. Jeon, H. J., Diamond, L., McCartney, C., & Kwon, K. A. (2022). Early childhood special education teachers' job burnout and psychological stress. *Early education and development*, *33*(8), 1364-1382.
- 27. Kieran, L., & Anderson, C. (2019). Connecting universal design for learning with culturally responsive teaching. *Education and Urban Society*, *51*(9), 1202-1216.
- 28. Kimogol, S. S. (2023). *Accessibility of digital teaching materials. Identifying barriers faced by students with visual impairment in digital teaching materials* (Master's thesis, Oslometstorbyuniversitetet).
- 29. Mitchell, D., & Sutherland, D. (2020). What really works in special and inclusive education: Using evidence-based teaching strategies. Routledge.
- 30. Mofield, E. L. (2020). Benefits and barriers to collaboration and co-teaching: Examining perspectives of gifted education teachers and general education teachers. *Gifted Child Today*, *43*(1), 20-33.
- 31. Nag, S., Vagh, S. B., Dulay, K. M., & Snowling, M. J. (2019). Home language, school language and children's literacy attainments: A systematic review of evidence from low-and middle-income countries. *Review of Education*, 7(1), 91-150.
- 32. Novogrodsky, R., & Meir, N. (2022). Multilingual children with special needs in early education. In *Handbook of early language education* (pp. 669-696). Cham: Springer International Publishing.
- 33. Parween, S., & Ahmad, W. (2025). Inclusive Literacy Strategies for Learners With Special Needs: Application of Innovative Strategies. In *Literacy Policies for Equity and Inclusion* (pp. 263-290). IGI Global Scientific Publishing.
- 34. Powell, R. K. (2018). Unique contributors to the curriculum: From research to practice for speech-language pathologists in schools. *Language, Speech, and Hearing Services in Schools*, 49(2), 140-147.
- 35. Rollan, K., & Somerton, M. (2021). Inclusive education reform in Kazakhstan: Civil society activism from the bottom-up. *International Journal of Inclusive Education*, *25*(10), 1109-1124.
- 36. Russell, S. (2021). *Using evidence-based instruction to promote literacy proficiency for students with severe learning disabilities: A case study* (Doctoral dissertation, Northcentral University).
- 37. Sapiets, S. J., Hastings, R. P., Stanford, C., & Totsika, V. (2023). Families' access to early intervention and supports for children with

- developmental disabilities. *Journal of Early Intervention*, 45(2), 103-121.
- 38. Sen, A., & Leong, C. K. (2020). Technology-enhanced learning. In *Encyclopedia of education and information technologies* (pp. 1719-1726). Cham: Springer International Publishing.
- 39. Svensson, I., Nordström, T., Lindeblad, E., Gustafson, S., Björn, M., Sand, C., ... & Nilsson, S. (2021). Effects of assistive technology for students with reading and writing disabilities. *Disability and Rehabilitation:* Assistive Technology, 16(2), 196-208.
- 40. Terrell, P., & Watson, M. (2018). Laying a firm foundation: Embedding evidence-based emergent literacy practices into early intervention and preschool environments. *Language, speech, and hearing services in schools*, 49(2), 148-164.
- 41. Theoharis, G. (2024). The school leaders our children deserve: Seven keys to equity, social justice, and school reform. Teachers College Press.
- 42. Van den Beemt, A., MacLeod, M., Van der Veen, J., Van de Ven, A., Van Baalen, S., Klaassen, R., & Boon, M. (2020). Interdisciplinary engineering education: A review of vision, teaching, and support. *Journal of engineering education*, 109(3), 508-555.
- 43. Westwood, P. (2018). *Inclusive and adaptive teaching: Meeting the challenge of diversity in the classroom.* Routledge.
- 44. Westwood, P. (2018). *Inclusive and adaptive teaching: Meeting the challenge of diversity in the classroom.* Routledge.
- 45. Wood, S. G., Moxley, J. H., Tighe, E. L., & Wagner, R. K. (2018). Does use of text-to-speech and related read-aloud tools improve reading comprehension for students with reading disabilities? A meta-analysis. *Journal of learning disabilities*, 51(1), 73-84.
- 46. Zepeda, S. J. (2019). *Professional development: What works.* Routledge.
- 47. Zuppardo, L., Serrano, F., Pirrone, C., & Rodriguez-Fuentes, A. (2023). More than words: Anxiety, self-esteem, and behavioral problems in children and adolescents with dyslexia. *Learning Disability Quarterly*, 46(2), 77-91.