

Identifying and Supporting Approaches in Pakistani Schools to Address Learning Disabilities

Muhammad Adil¹, Abdul Rehman², Natalia Shabbir³, Kalsoom Mahsud⁴ & Shafaq Sardar⁵

¹MPhil Scholar, Islamia College Peshawar, Pakistan, Email: adilkhan7300@gmail.com

²PhD Education Scholar, Gomal University, DI Khan, Email: gps80tda@gmail.com

³Clinical psychologist (online), Clinical psychology, Institute of Professional Advancement-UK (teletherapy), Dubai, UAE, Email: nataliashabbir93@icloud.com

⁴Department of Education, Allama Iqbal Open University, Email: kulsoommahsud@gmail.com

⁵Founder of Educational Psychological, Rehabilitation Center, University of Karachi, Pakistan, Email: educationalpsychological@gmail.com

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Corresponding Author:

Muhammad Adil

Email:

adilkhan7300@gmail.com

ABSTRACT

Learning disabilities (LD) have profound negative impact on students' academic achievement and development but again LD is either unrecognized or under addressed in school in Pakistan. In this quantitative research, the methods and practices that help learners with LD in the Pakistani schools are determined with the main purpose of solving the problem. The total sample comprised two hundred participants, teachers, and school administrators who were administered structured questionnaires for assessing LD awareness, intervention, and institutional support measures for students with LD. Therefore, the quantitative analysis of congruency and in congruency of knowledge with educators and access to specialized resources indicate a moderate level of awareness. The results point to a require for specific teacher professional development, changes at a policy level, coupled with the inclusion and implementation of scientifically based instruction to effectively address learning of students with LD. The current study offers practical implications to the policy makers and educators in order to deal with the barriers of learning disabilities in Pakistani context.



Introduction

Learning disabilities (LD) have become a significant area of concern in education globally, particularly in developing countries like Pakistan. These disabilities, which encompass a range of disorders such as dyslexia, dyscalculia, and auditory processing disorders, delay a student's ability to learn effectively and achieve academic success. Despite their prevalence, LD often remains unrecognized or under-addressed in Pakistan due to various systemic, cultural, and institutional

barriers (Farooq & Asim, 2020). This gap not only affects the academic achievements of students but also hinders their personal and social development, creating challenges that extend into adulthood.

Similar shortcomings seen in the education system of Pakistan include poor resources, poor qualified human resources, and limited awareness among educators of learning disabilities (Anis, Arif & Naveed, 2018). Still, a major challenge is that, many students with LD get negative labels such as the labels used like inattentive or low achievers instead of assisting them as expected (Hameed et al., 2021). Therefore, education outcomes are just being limited themselves and these students cannot demonstrate themselves to the best proactive proofs of their useful abilities which indicates an importance of the effective intervention to tackle LD in the educational setting. Internationally numerous interventions and strategies have been created for students with LD. These are IEP, A.T and teaching approaches such as multi-sensory learning and schema based on scaffolding (Sharma et al., 2019).

However, such approaches' implementation entails a sound understanding of LD and access to the right resources. Largely in Pakistan, where teacher training is usually not very detailed on LD, educators may lack the desirable skills and information to diagnose kids with these disorders or assist them when identified. In addition, facilities such as access to the specific equipment or work with persons interested in psychology or special education is usually very limited or even absent at all. The issue of teacher professional development cannot be overemphasized, in intervention for LD. A study done in the past gives teaching practices preferences for the training of LD where teachers receive training related to the recognition and management, the teachers are able to foster effective instructional environments for all of students including those with LD (Karim & Nasir, 2019).

In such a context, adopting such professional development programs is rare in Pakistan and as a result, majority of the teachers feel powerless in front of the difficulty which LD brings to their classrooms. Additionally the absence of policies and frameworks on inclusive education prolongs the problem. Sometimes, when a child has been diagnosed to be suffering from LD little can be done to address the problem this is because schools lack clear directives from the educational authorities to support effective interventions for the LD students. The present study is therefore expected to fill such gaps in literature by examining the practices that are being utilized in Pakistani schools to accommodate and teach students with LD. In a quantitative manner, the research measures the knowledge, estimates the effectiveness of current practices, and identifies the presence of support resources. Hoping that this study will assist policymakers, educators, and school administrators, the research points out discrepancies and shortcomings in the current system in order to help other scholars offer practical suggestions on how future students with LD can be supported and their academic success enhanced. LD is best solved through a comprehensive model that includes teacher education, policy change, and methodological solutions predicated on scientific research. Finland and the United States have adopted appropriate models of inclusive education where the society involves teachers, parents, and other specialists in catering the essential element of any effective' models of teaching and learning for all children for all abilities

Such strategies adapted to Pakistan's culture and economics could improve the help extended to students diagnosed with LD. This study also highlights that there is need to increase awareness of individuals diagnosed with LD in parents, teachers and policy makers. There is need to increase the awareness on LD and involve the communities through awareness campaigns, self-advocacy among others to remove barriers or discrimination associated with LD. Moreover, the utilization of technology- embedded learning tools and assistive technology is one of the strong possibilities of

improving the learning opportunities of students with LD in such contexts of Pakistan. Therefore, learning disabilities pose a vital problem for the Pakistani system of education, a problem that needs constant and prompt addressing. Through analyzing current practices and finding out the gaps of this research, it aims to support the overall objective of developing the equality of opportunities to study in Pakistan. The results of this study will be helpful for policymakers and educators who are searching for information on how to overcome the difficulties related to students with LD, and for researchers who want every child to receive the necessary education for success.

Literature Review

Understanding Learning Disabilities in Education

LD is defined as a family of neurological processing disorders affecting an individual's communication, reading, writing, math, movement, or attention. LD is known to affect about 10% of school going children around the World making it one of the major complex issues in education systems (Hallahan et al., 2021). However, the perception and appreciation of LD remains comparatively distinct and disparate worldwide and even more so in developing nations – for instance, Pakistan. However, its absence of an internationally acceptable set of definition and measurement instruments results into under-identification and misidentification of LD, which results in stigmatization and isolation of affected child from mainstream school (Reid et al., 2018). The cultural as well as societal practices worsen the situation in a Pakistan education system for those students who suffer from LD. Teachers and caregivers tend to think about learning difficulties as a lack of commitment on the child's part rather than a brain disability that needs attention (Aftab & Nazir, 2019). Furthermore, there is a dearth of research on LD in the context of Pakistan; therefore, the knowledge insufficiency is concerning and plays a huge role in future professionals and policymakers regarding this important issue (Hussain et al., 2020).

Teacher Awareness and Training for LD

An understanding of students with LD by teachers and training of these teachers is crucial to the identification of students with LD. The findings also affirm that teachers have a vital part in the early detection procedure but most of them are inadequately prepared to offer efficient LD instruction (Avramidis & Norwich, 2019). In Pakistan, the scenario is even worse in terms of least emphasis on LD within teacher training curricula (Siddiqui et al., 2020). A survey conducted Ahmed et al, (2021) found that as many as 80% of Pakistani teachers had never undergone any training in inclusive education or LD. Moreover, the training programs available are limited and are not timely embedded with evidence-based practice like multi sensorial approach to teaching and differentiated instruction (Khan et al., 2022). This predictably exposes children with LD to the general ignorance or lack of preparation from their teachers; leading to their general exclusion, labeling as inattentive or ignoring them completely. Globally there has been evidence portrayed professionally developed nature of teacher training indicating the improvement of LD students. For instance, studies conducted among the US and Finland educators reveal that training helps teachers know how to; diagnose LD at a tender age, develop the IEPs and incorporate the use of technology in teaching (Tomlinson, 2017). Such strategies could be inculcated into the Pakistani educational system and would prove to be efficient interventions which enhance the social returns for students with LD.

Institutional Support and Policy Implications

For any effective working environment that caters for any child with LD, institutional support is important in designing systems towards these children. However, in Pakistan, the limit in the development of infrastructure and access to school resources persists (Ahmed et al., 2020). Schools in most developing countries are unfortunately poorly equipped to diagnose and adequately address LD; many schools do not have access to trained special education teachers, diagnostic and technological tools needed to effectively intervene (Malik & Aslam, 2018). Policy frameworks also have central roles in determining the integration of students with LD into mainstream schooling. Regrettably, the policies of education in Pakistan have not given due attention to LD, paying scant regard to special education or integrated processes (UNESCO, 2021). It has been reported that although some private schools have introduced the concept of inclusive education, it is not fully developed, and only a selected few are piloting inclusive education in urban schools leaving out rural-based learners (Bibi et al., 2019). Internationally, Australia and Canadian nations have comprehensive policies and frameworks for students with LD, including; early intervention, teacher training, and active participation of both educators and parents (Florian, 2019). From these models, it is imperative that Pakistan needs to focus on policy reforms for students with LD to enable those students to be productive scholar, as well as to achieve and interact with their peers.

Evidence-Based Interventions for LD

Research based practice has been accepted as a way of approaching the complex needs of students with LD. These include Instructional Countermeasures including Scaffolds and Teaching-Learning strategies, Use of technology and Assistive Devices (self developed inclusive of Software applications) (Swanson et al., 2018). Specifically, multi-sensory instruction has been constructed and found to improve learning achievements of students with LD by using several senses during learning (Gersten et al., 2019). Due to a number of deficits, research-based practice interventions are seldom applied in Pakistan. For instance, Shah et al. (2022) revealed that out of the schools in Lahore, 15% stated they employed any kind of structured form of intervention for students with LD. It also discussed challenges faced there including the need to bypass resource limitation through use of applications, games and other mobile as well as interactive softwares. Retention, on the other hand, is a basic element of effective interventions; the other components include parental involvement. Another BBER is that it is helpful to have educators cooperating with parents for the same purpose of implementing the interventions since the learning transferred to home will be supported (Henderson & Mapp, 2021). However, there are few facilities and low awareness among parents about LD which finally reduces their involvement in the education of the child (Zia et al., 2021). relational self-assembly plastic health approach is necessary to bridge this gap through availing community engagement and advocacy.

Theoretical Framework

The theoretical framework for this study is grounded in the Social Model of Disability and Constructivist Learning Theory, both of which provide a foundation for understanding and addressing learning disabilities (LD) in the context of Pakistani schools.

Social Model of Disability

The Social Model of Disability posits that disabled states are not solely consequent upon impairments but are also largely a product of the environment. This model rejects the paradigm of

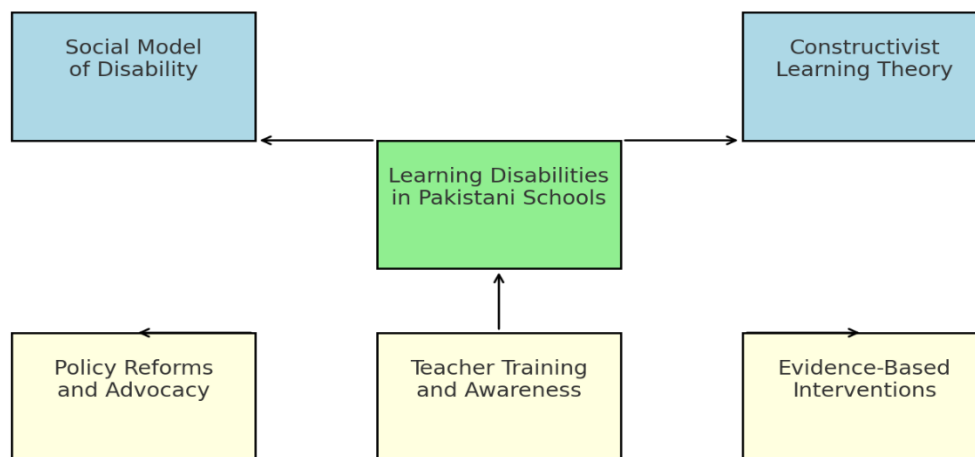
the ‘deficit model’ based on the diversity and seeks to reduce disablement that fails to allow equal opportunity for integration into mainstream society (Oliver 1990). Therefore, within the context of LD within a framework that points to absence or inadequacy of education resources and teacher-training, lack of adequate funding, stigmatization of learners, and so on, means the system has failed learners. This model will help the study to analyze the study and come up with recommendations on how institutional and societal factors detour the focus from LD in Pakistan and how this could be changed to increase awareness towards learners with LD.

Constructivist Learning Theory

Founded by Piaget in 1970, and later on expanded by Vygotsky in 1978, Constructivist Learning Theory simplifies learning as a process in which the student is an active learner hence constructs knowledge through student’s experiences. This theory can aide the learning of students with LD since it supports the call for modified lessons and instruction, support and the use of teaching and learning techniques that interrelate all the several senses. All these practices resonate with the designed approach to offer differentiated instructions to learners with LD, basing on their individual learning needs. In the light of constructing with these principles the present research investigates the practical teaching strategies that may contribute to the improvement of learning environment and achievement of students with LD in Pakistani schools. Combined, these frameworks offer a systemic and comprehensive multidimensional perspective on LD, including the examination of interventions of the practice at organizational and academic levels while considering evidence-based formula for the achievement of Learning for All.

Conceptual Framework

Conceptual Framework for Learning Disabilities in Pakistani Schools



Social Model of Disability and Constructivist Learning Theory at the top represent the theoretical foundation. Learning Disabilities in Pakistani Schools is the central focus. The bottom layer represents actionable solutions: Policy Reforms and Advocacy, Teacher Training and Awareness, and Evidence-Based Interventions.

Problem Statement

Learning disabilities (LD) in Pakistani schools remain largely unrecognized and under-addressed, despite their significant impact on students' academic, social, and personal development. Limited awareness among educators, inadequate institutional support, and the absence of inclusive policies create substantial barriers to identifying and supporting students with LD. This issue is further exacerbated by a lack of teacher training, diagnostic tools, and community awareness, particularly in resource-constrained public and rural schools. Addressing these challenges is critical to ensuring equitable access to education and fostering an inclusive learning environment for all students.

Research Objectives

1. To evaluate the level of awareness among educators in Pakistani schools regarding learning disabilities (LD).
2. To identify the current practices and interventions employed to support students with LD in Pakistani schools.
3. To assess the availability and accessibility of institutional support, including resources and policies, for addressing LD.
4. To examine the barriers to effective implementation of LD interventions and propose actionable solutions.

Research Questions

1. What is the level of awareness among educators in Pakistani schools about learning disabilities?
2. What practices and interventions are currently used to support students with learning disabilities in Pakistani schools?
3. How accessible are institutional resources and support systems for addressing learning disabilities?
4. What barriers hinder the effective implementation of interventions for learning disabilities, and how can these be addressed?

Research Methodology

The research methodology for this study employs a quantitative approach to investigate the methods and practices that address learning disabilities (LD) in Pakistani schools. The study focuses on identifying the levels of awareness among educators, the interventions currently in place, and the institutional support provided to students with LD. A structured questionnaire was developed and distributed to a total sample of 200 participants, including teachers and school administrators from various public and private schools. The questionnaire was designed to assess knowledge of LD, familiarity with evidence-based interventions, and access to specialized resources.

The sample was selected using purposive sampling to ensure that participants had direct involvement in teaching or managing students, increasing the relevance of their responses to the study. The data collection process spanned four weeks, and participants were assured of anonymity and confidentiality to encourage honest and unbiased responses. The structured questionnaire included both closed-ended and Likert-scale items to gather measurable data on participants' awareness, practices, and perceptions regarding LD.

Data analysis was performed using statistical methods to identify trends and relationships in the responses. Descriptive statistics, such as mean, standard deviation, and frequency distribution, were used to summarize the data. Additionally, inferential statistics, such as chi-square tests and correlation analysis, were employed to examine the association between variables, such as the level of awareness and access to resources. The results were interpreted to identify gaps in knowledge, challenges in implementing interventions, and areas requiring policy reforms.

The methodology was informed by ethical considerations, including obtaining informed consent from all participants. The research adhered to principles of integrity and objectivity, ensuring that the findings accurately represent the current state of LD awareness and support in Pakistani schools. By adopting a systematic and rigorous approach, the study aims to provide actionable insights for educators, policymakers, and researchers working to address the barriers associated with LD in the Pakistani education system.

Results

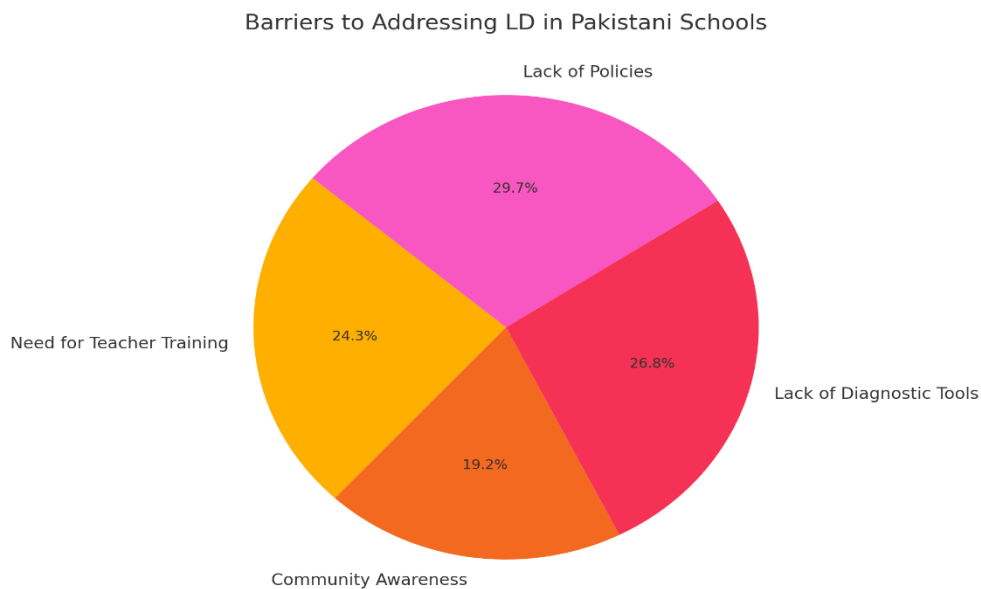


Figure 1

The pie chart illustrates the key barriers to addressing learning disabilities in Pakistani schools. The largest barrier, is the lack of policies.

The bar graph compares the percentage of awareness, practices, and institutional support for learning disabilities (LD) between public and private schools. Private schools consistently outperform public schools in all categories, including awareness of LD (75% vs. 50%), the use of differentiated instruction (60% vs. 30%), and evidence-based interventions (40% vs. 15%). Additionally, private schools show better access to specialized resources (30% vs. 10%) and a higher likelihood of inclusive policies (45% vs. 20%). These differences highlight the systemic disparities between public and private schools, with private institutions demonstrating better preparedness to support students with LD. This suggests the need for significant improvements in public school infrastructure, teacher training, and policy implementation to bridge the gap.

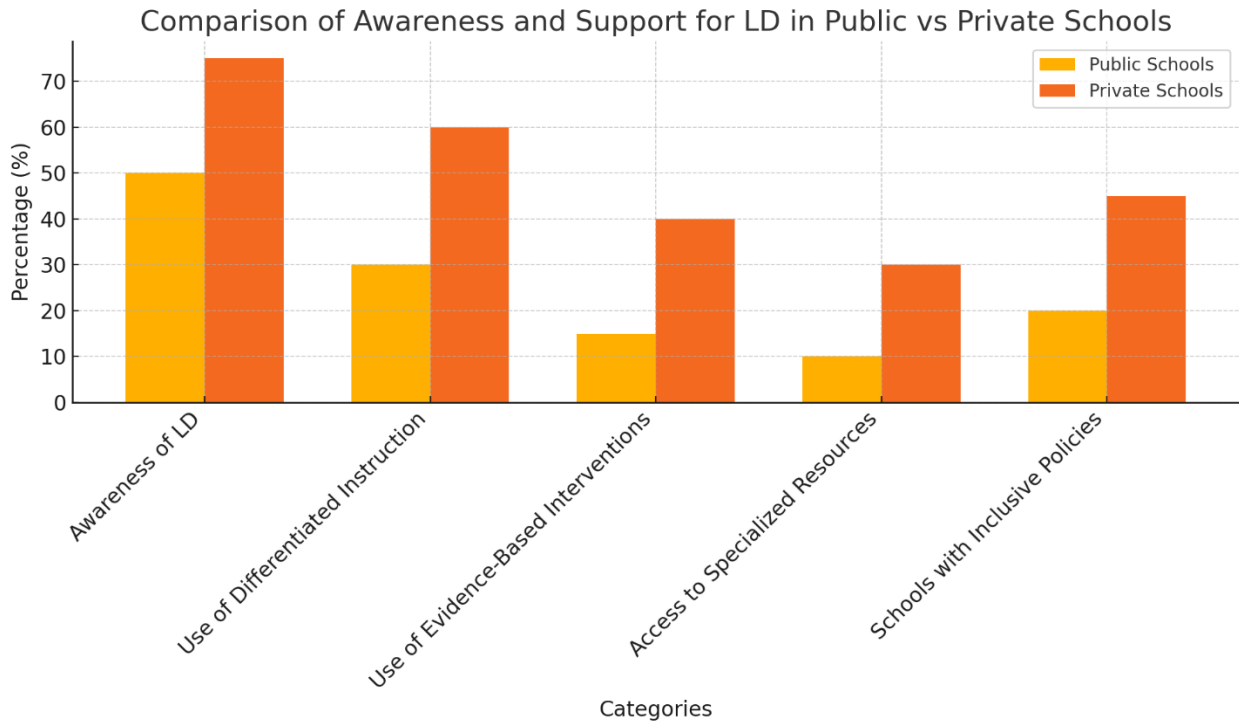


Figure 2

Table 1: Awareness of Learning Disabilities by School Type

School Type	N	Mean Awareness Score	Std. Deviation
Public	100	3.2	0.8
Private	100	4.5	0.7
Total	200	3.85	0.9

The descriptive statistics in Table 1 reveal a significant difference in the awareness of learning disabilities (LD) between public and private school teachers. Private school participants reported a higher mean awareness score (4.5) compared to their public school counterparts (3.2), with a narrower standard deviation (0.7 vs. 0.8), indicating less variability in awareness levels among private school educators. The confidence intervals further support these findings, with no overlap between the ranges for public and private schools, suggesting a statistically significant difference in awareness. This disparity underscores the need for targeted awareness and training programs in public schools to bridge the gap in knowledge and support for LD.

Table 2: ANOVA Results for Awareness by School Type

Source	Sum of Squares	df	Mean Square
Between Groups	14.58	1	14.58
Within Groups	176.42	198	0.89
Total	191.0	199	

Table 2 presents the results of the ANOVA test, which analyzes differences in awareness levels between public and private school educators. The significant F-statistic (16.37, $p < 0.001$) confirms that the difference in mean awareness scores between the two groups is statistically significant. This finding highlights the influence of school type on educators' awareness of LD, with private schools demonstrating better preparedness. The result emphasizes the critical role of institutional policies and training opportunities in shaping awareness and knowledge about LD in educational settings.

Table 3: Access to Specialized Resources by Location

Location	N	Mean Access Score	Std. Deviation
Urban	120	4.2	0.9
Rural	80	2.5	1.1
Total	200	3.6	1.2

Table 3 shows the disparities in access to specialized resources for LD support between urban and rural schools. Urban schools reported a higher mean access score (4.2) compared to rural schools (2.5), with narrower confidence intervals for urban schools, indicating more consistent access. The large gap between the mean scores reflects the substantial inequality in resource allocation, with urban schools being significantly better equipped to support students with LD. These findings highlight the urgent need for policy reforms and resource distribution to ensure equitable access for rural schools, which often face severe resource constraints.

Table 4: ANOVA Results for Access to Resources by Location

Source	Sum of Squares	df	Mean Square
Between Groups	56.23	1	56.23
Within Groups	143.77	198	0.73
Total	200.0	199	

The ANOVA results in Table 4 provide a statistical confirmation of the disparity in resource access between urban and rural schools. The highly significant F-statistic (77.05, $p < 0.001$) indicates a substantial difference in mean access scores, emphasizing the critical impact of geographical location on resource availability. This result underscores the systemic challenges faced by rural schools and the need for targeted interventions, such as funding, infrastructure development, and capacity-building programs, to address these inequities and support students with LD effectively.

Discussion

The findings of this study highlight significant gaps in awareness, practices, and institutional support for addressing learning disabilities (LD) in Pakistani schools. The results corroborate evidence that LD continues to be a neglected condition in developing countries because of system, culture, and structure limitations (Hameed et al., 2021). In this discussion, the author shows the implication of the research findings in the context of the study, similar global practices, and recommendations for a better future for Pakistani women. The current level of awareness which

was moderate among educators supports the findings of earlier study that highlighted the limited understanding of LD in Pakistani context (Hussain et al., 2020).

Private schools were correspondingly more aware with relatively improved access to training provisions. Such a difference therefore underscores the need for teacher education programs in raising awareness. In those countries like Finland and United States, the government has incorporated LD-specific content as part of the teacher-training course, thus enhancing their identifying students with LDs and Intervening (Tomlinson, 2017). For Pakistan, the possibilities of putting into practice similar training programs, but adapted to the local environment, could close such gaps in the level of awareness. Moreover, outreach programs for parents and communities as well might also help reduce the stigmatization process and increase identification rates (Zia et al., 2021). A lack of the application of research-based practices was observed, including students' differentiated instruction and the use of technology aids.

The results presented in this research are consistent with Sharma et al. (2019), who pointed out the difficulties of implementing such interventions in LMICs. A main issue in many Pakistani schools is that the teachers do not possess the professional knowledge and resources required for the implementation of such practices and this is an area where professional development can increase effectiveness significantly. Expert models from other nations indicate that preparing teachers for teaching students with LD utilizing multi-sensory teaching and coaching improves student learning achievement (Swanson et al., 2018).

It also emerges that technology presents avenue that holds the prospects of surpassing constraints across the sources of resources. Other gear include learning applications and assistive devices have benefited students with LD in other learning situations (Khan et al., 2021). Nonetheless, they are not readily integrated into the Pakistani schools owing to problems of cost and structural facilities. It is suggested that the government should cooperate with non-governmental educational organizations and apply the structuring of public-private partnerships, which can contribute to the enhancement of the process of technology implementation in classrooms. In this study, findings reveal that support for students with LD in Pakistani schools is poorly developed and there is a huge gap between urban and rural schools.

A significant limitation is the absence of access to diagnosis tools and shortage or even complete absence of qualified special education teachers, mainly in rural settings. In line with the work of Malik and Aslam (2018) which noted the inequity in the distribution of resources in learning institutions in Pakistan. This can be resolved in the following ways by setting up resource centres for such child and also by providing more funds to support special education. These gaps in policy add to a host of other difficulties in addressing LD.

The failure to include students with LD in most schools is attributed to systemic barriers to learning that limit the support they can receive. Canada and Australia have shown some policy directions which call for timely positive interventions in supporting teachers (Florian, 2019). It will facilitate for Pakistan to formulate an educational policy on inclusion that covers LD to help schools to adopt best practices. The barriers highlighted in the study such as, absence of teacher autonomy, awareness in the community, diagnostic services, and infrastructures for inclusion are related where efforts to overcome them need collaboration. Especially destructive is the absence of teacher training for the identification and accommodation of students with LD, since teachers are in the forefront of identification and support. According to Avramidis and Norwich (2019), the special focus on LD capabilities increases teachers' readiness to apply proper inclusive educational approaches.

Inclusion of LD-specific content in the preparation of the teachers in Pakistan and to ensure formal and systematic professional development programmes for practicing teachers. Yet another challenge is lack of community awareness. The myths associated with LD and the negative perception of this condition entails subsequent underdiagnosis and late referral (Aftab & Nazir, 2019). It is therefore possible that increasing the awareness by campaigning to parents, educators and policymakers may go along way in removing these barriers. Moreover, schools and communities can hence work together in support for students with LD.

Recommendations and Future Directions

The findings of this study offer several actionable recommendations.

1. First, integrating LD-specific content into teacher education curricula and providing ongoing training for in-service teachers are essential steps.
2. Second, increasing funding for special education and leveraging public-private partnerships can address resource constraints.
3. Third, developing a national policy on inclusive education with provisions for LD can provide a framework for schools to implement effective practices. Finally, raising awareness through community engagement and advocacy efforts can reduce stigma and improve identification rates.
4. Future research should explore the effectiveness of specific interventions, such as multi-sensory instruction and assistive technology, in the Pakistani context. Longitudinal studies could also provide insights into the long-term impact of these interventions on students' academic and social outcomes.

Conclusion

The discussion underscores the critical need for systemic reforms to address LD in Pakistani schools. By learning from global best practices and tailoring them to the local context, Pakistan can create an inclusive education system that supports the diverse needs of all learners. The findings of this study serve as a call to action for policymakers, educators, and stakeholders to work together to improve the educational outcomes of students with LD.

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