



## Effectiveness of ongoing in-service training on sustained knowledge retention about learning disabilities among government school teachers

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### Abstract

The increasing prevalence of learning disabilities among school-aged children necessitates a well-informed teaching workforce capable of early identification and appropriate classroom-based interventions. Government school teachers, who often serve as the first point of contact for children with learning challenges, require sustained and updated knowledge to address the complex needs of students with learning disabilities effectively. This conceptual paper explores the potential effectiveness of ongoing in-service training as a strategic approach to ensure long-term knowledge retention among government school teachers. Drawing from existing literature, educational psychology theories, and nursing perspectives on health education, the paper examines how structured, continuous professional development can enhance teachers' understanding of learning disabilities and foster inclusive educational practices. It argues that one-time workshops or pre-service training sessions are insufficient to equip teachers with the nuanced and evolving knowledge needed in real classroom scenarios. Instead, ongoing in-service training—integrated into the regular professional development calendar—can reinforce learning, facilitate practical application, and promote a reflective teaching culture. The role of nursing professionals in this context is emphasized, particularly in delivering health-based educational content, advocating for mental health awareness in schools, and promoting interdisciplinary collaboration between health and education sectors. The paper advocates for policy reforms that institutionalize ongoing in-service training on learning disabilities as a mandatory component of teacher development programs. By highlighting the interconnection between sustained teacher knowledge, inclusive education, and child mental health, this study provides a theoretical foundation for future policy design and educational interventions. It underscores the importance of collaborative efforts in building a responsive education system that supports all learners, especially those with hidden or undiagnosed learning needs.

**Keywords:** Learning disabilities, in-service training, knowledge retention, government school teachers, inclusive education, nursing education, interdisciplinary collaboration, teacher development, educational policy, mental health in schools

### Introduction

The increasing prevalence of learning disabilities among school-aged children poses a significant challenge to the global educational community, especially in resource-constrained settings such as government-run schools in developing countries. Learning disabilities (LD) such as dyslexia, dyscalculia, and dysgraphia, while not indicative of cognitive deficits, interfere with academic performance and often go undetected in mainstream classrooms, particularly when teachers are inadequately trained to recognize and respond to them. Teachers play a critical role as frontline identifiers and facilitators of support for such children, yet traditional pre-service education often fails to equip them with sufficient, nuanced understanding of these conditions. Research underscores that a lack of awareness and continuing education on learning disabilities impedes early identification and effective intervention, especially in large and under-resourced classrooms (Latouche and Gascoigne, 2019) <sup>[1]</sup>.

Inclusive education has emerged globally as a transformative educational policy, with countries aligning themselves with frameworks such as the Salamanca Statement (1994) and the UNCRPD (2006). In India, legislative instruments like the Right to Education Act (2009) and the Rights of Persons with Disabilities Act (2016) mandate inclusive learning environments, obliging schools to provide equitable educational access to students with disabilities. Despite such progressive mandates,

implementation continues to face significant hurdles, especially in government schools, where teachers often lack structured support or ongoing training mechanisms to accommodate students with LD. This results in a dissonance between policy and practice, with teachers expressing limited self-efficacy in managing diverse classrooms (Zulu *et al.*, 2024) <sup>[2]</sup>.

In this context, the significance of in-service training—particularly programs that are sustained and embedded within the teaching calendar—gains salience. In-service training refers to professional development initiatives targeted at teachers who are already part of the education system. The shift from sporadic workshops to longitudinal training interventions has been associated with improved knowledge retention, attitudinal shifts, and enhanced pedagogical responsiveness toward students with special needs. A study by Uzorka *et al.* (2024) <sup>[3]</sup> illustrates that when training is continuous and tailored to specific teacher needs, it positively influences both teaching quality and student outcomes in inclusive classrooms (Uzorka *et al.*, 2024) <sup>[3]</sup>.

Moreover, the role of interdisciplinary collaboration in strengthening in-service training has gained traction, particularly involving nursing professionals and mental health experts. As learning disabilities often co-occur with psychological and emotional challenges, the integration of nursing perspectives brings a health-centric lens into educational discourse. Nursing professionals trained in

health education and behavioral science can contribute significantly to teacher development, especially by fostering awareness about mental health comorbidities and promoting early screening and referrals. Uçak and Demirok (2022) <sup>[4]</sup> demonstrated that interdisciplinary interventions improve teachers' competencies and lead to more inclusive classroom practices when they incorporate both educational and health-based strategies (Uçak and Demirok, 2022) <sup>[4]</sup>.

This paper builds a conceptual foundation for the argument that ongoing in-service training is indispensable for sustaining teacher knowledge, improving pedagogical practices, and ultimately fostering inclusive education systems. By synthesizing research from educational psychology, public health, and policy, it aims to highlight the theoretical and empirical rationale for integrating structured in-service training into regular teacher development frameworks. The paper also advocates for the institutionalization of such programs, emphasizing their potential to transform government schools into truly inclusive spaces where every learner, regardless of ability, has the opportunity to succeed.

### **Understanding Learning Disabilities: A Conceptual Overview**

Learning disabilities (LD) are neurodevelopmental disorders that affect the brain's ability to receive, process, store, and respond to information. These difficulties are not a result of intellectual disabilities, lack of education, or environmental deprivation, but are rooted in atypical neurological development. LD commonly manifests as impairments in reading (dyslexia), writing (dysgraphia), and mathematics (dyscalculia), with children often displaying otherwise average or above-average intelligence. However, without proper support, these students are frequently labeled as inattentive, unmotivated, or disruptive. As noted by (Latouche and Gascoigne, 2019) <sup>[2]</sup>, a critical issue in schools is the failure of teachers to differentiate between learning disabilities and general academic underperformance, primarily due to insufficient pre-service and in-service training.

The biological and psychological basis of LD has been supported by neuroimaging and cognitive processing studies, showing dysfunctions in specific brain areas such as the parietal and temporal lobes. Nevertheless, understanding LD as merely a biological condition undermines the contextual and educational dimensions that influence how these disorders are identified and addressed in school settings. Teachers often struggle to distinguish LD from behavioral issues, especially in resource-constrained classrooms. (Zulu *et al.*, 2024) <sup>[2]</sup> emphasize that in many government schools, foundational teacher training does not sufficiently address the nuanced characteristics of LD, leaving educators ill-equipped to intervene early or effectively.

In addition to cognitive symptoms, students with LD often face emotional and behavioral challenges such as low self-esteem, anxiety, and frustration, which may escalate into behavioral problems when their learning needs are unmet. This complexity necessitates a cross-disciplinary understanding that integrates educational, psychological, and health perspectives. (Uzoraka *et al.*, 2024) <sup>[3]</sup> argue that professional development that includes mental health awareness components significantly improves teachers' capacities to respond appropriately to the holistic needs of

students with LD, thereby improving academic and behavioral outcomes.

Cultural and linguistic factors further complicate the accurate identification and management of LD. In multilingual classrooms, second-language learning difficulties are often misinterpreted as cognitive deficits, especially by untrained teachers. Mislabeling can lead to inappropriate educational responses and emotional distress for students. (Uçak and Demirok, 2022) <sup>[4]</sup> found that English language teachers, once exposed to structured training on LD, significantly improved their accuracy in identifying real learning disabilities versus language-based misunderstandings. This highlights the necessity for culturally relevant and linguistically sensitive diagnostic approaches in teacher education.

Finally, even with the existence of inclusive education policies, conceptual clarity among educators remains limited. India's Rights of Persons with Disabilities Act (2016) classifies LD as a legally recognized disability, mandating accommodations and individualized education plans. However, the translation of these mandates into daily teaching practice is obstructed by the absence of structured training programs and diagnostic support systems. As a result, many students with LD remain unsupported and misunderstood, while teachers, lacking clarity and confidence, continue to apply one-size-fits-all methods in increasingly diverse classrooms.

In essence, conceptualizing LD demands a shift from a purely clinical definition toward a more integrated framework that considers pedagogical realities, cultural diversity, and systemic barriers. For government school teachers, particularly those in inclusive settings, a clear and comprehensive understanding of LD is not optional but essential for achieving equitable educational outcomes.

### **The Role of Government School Teachers in Inclusive Education**

Government school teachers serve as the cornerstone of public education systems, especially in countries like India where the majority of children from marginalized and socioeconomically disadvantaged communities are enrolled in government-run institutions. These teachers are not merely facilitators of curriculum delivery but act as the first institutional touchpoint for identifying children with learning difficulties and other developmental challenges. Inclusive education mandates, such as those enshrined in India's Right to Education Act (2009) and the Rights of Persons with Disabilities Act (2016), emphasize the critical role of teachers in creating equitable classroom environments. However, the translation of these legal frameworks into everyday practice remains inconsistent, largely due to a lack of structured support, sustained training, and diagnostic tools for schoolteachers. As observed by (Latouche and Gascoigne, 2019) <sup>[1]</sup>, most government teachers have limited exposure to strategies for managing specific learning disorders, which impedes their confidence and effectiveness in inclusive classrooms.

The capacity of teachers to recognize and respond to learning disabilities depends not just on their formal education but also on the availability of ongoing professional development opportunities. In many government schools, especially in rural or underfunded regions, teachers face systemic constraints such as overcrowded classrooms, inadequate infrastructure, and

insufficient teaching aides. These challenges severely restrict the implementation of individualized instruction or differentiated pedagogy required for children with learning disabilities. According to (Zulu *et al.*, 2024) <sup>[2]</sup>, the role of school leadership and systemic support is pivotal in enabling teachers to function as effective agents of inclusion. When teachers are adequately trained and institutionally supported, their ability to cater to diverse learners—including those with LD—increases significantly. Beyond content delivery, government teachers are increasingly expected to assume the roles of child advocates, mental health monitors, and inclusive practitioners. This evolving role necessitates a broader skill set, including social-emotional competencies, cultural responsiveness, and awareness of comorbid conditions such as ADHD and anxiety, which often accompany learning disabilities. In this context, school-based training that incorporates health and psychology modules has shown promise. As reported by (Uzorka *et al.*, 2024) <sup>[3]</sup>, teachers who received ongoing in-service training that emphasized practical strategies for student engagement and classroom inclusivity reported increased teaching efficacy and better student learning outcomes.

Language and socio-cultural barriers present unique challenges in inclusive education, particularly for teachers in multilingual or tribal regions. Miscommunication and assumptions about linguistic delays can lead to misdiagnoses or ignorance of underlying learning disabilities. Training teachers to distinguish between linguistic challenges and cognitive impairments is vital. A study by (Uçak and Demirok, 2022) <sup>[4]</sup>

<sup>1</sup> on English language teachers revealed that structured educational programs significantly improved their ability to correctly identify and support students with LD, especially in culturally diverse classrooms. This suggests that government school teachers can act as effective gatekeepers for inclusive education if provided with the right tools and training.

Despite policy mandates, the role of government school teachers in inclusive education continues to be constrained by a lack of autonomy and professional recognition. Teachers often operate under rigid bureaucratic structures that limit innovation and adaptability, which are essential in supporting students with special learning needs. Nevertheless, with strategic reforms in teacher education and stronger interdepartmental collaboration between the education and health sectors, government school teachers can be empowered to become proactive agents of inclusion. Their potential to transform classroom dynamics and educational trajectories for students with LD makes them indispensable in any inclusive education initiative.

### **Importance of Knowledge Retention in Teacher Effectiveness**

In the evolving landscape of inclusive education, knowledge acquisition alone is insufficient; the sustainability of that knowledge through retention significantly determines the long-term effectiveness of teachers. Retention refers not only to remembering facts but to the consistent internalization and application of concepts in classroom practices over time. In the case of learning disabilities (LD), where nuanced understanding and adaptive strategies are essential, the retention of specialized pedagogical knowledge becomes critical. Teachers who fail to retain foundational and applied concepts on LD may revert to

ineffective practices or misinterpret student behaviors, which can directly hinder academic progress and emotional well-being of affected students. As shown by (Latouche and Gascoigne, 2019) <sup>[1]</sup>, while brief workshops can temporarily boost teachers' knowledge and self-efficacy, much of this knowledge tends to decline within weeks without reinforcement mechanisms, underscoring the fragility of one-time training approaches.

In government school systems, where teachers operate under high workloads, retention is further challenged by cognitive overload and institutional constraints. Daily teaching duties, administrative burdens, and large class sizes often displace less frequently used knowledge, particularly content related to inclusive education or psychological understanding. Without repeated engagement and scaffolded learning, initial gains from professional development fade rapidly. (Zulu *et al.*, 2024) <sup>[2]</sup> observed that teachers retained training knowledge more effectively when in-service modules were distributed over time, linked to actual classroom application, and followed by reflective practices. This indicates that training models emphasizing continuity and contextual relevance are superior in promoting long-term retention.

The link between knowledge retention and teacher confidence is also significant. Teachers with sustained knowledge are more likely to feel competent, take initiative, and experiment with individualized instructional methods. These qualities are essential in addressing LD, where rigid, standardized approaches often fail. Confidence rooted in deeply retained knowledge fosters more consistent identification, accommodation, and communication with caregivers and specialists. According to (Uzorka *et al.*, 2024) <sup>[3]</sup>, teachers reported increased confidence and a stronger commitment to inclusive practices when they had access to follow-up training and collaborative discussions that reinforced earlier learning.

Moreover, retention has a direct influence on policy implementation fidelity. Teachers serve as the link between inclusive education policies and classroom realities. However, if their understanding of policy requirements related to LD is superficial or short-lived, compliance may become mechanical rather than transformative. The failure to consistently apply accommodations, modify curriculum, or utilize assistive technologies results not from defiance but from knowledge attrition. A study by (Uçak and Demirok, 2022) <sup>[4]</sup> showed that when knowledge was reinforced through interactive modules and field-based sessions, teachers not only retained information better but demonstrated greater alignment with inclusive teaching standards over time.

Teacher effectiveness in inclusive education is inextricably tied to the retention of knowledge, particularly when addressing complex challenges such as LD. Training programs must therefore evolve from episodic learning events into sustained developmental trajectories, incorporating opportunities for practice, reflection, feedback, and interdisciplinary collaboration. Only when knowledge is retained and embedded into the daily pedagogical fabric can teachers move beyond compliance to cultivate truly inclusive classrooms.

### **In-Service Training: Definition, Objectives, and Models**

In-service training refers to organized learning opportunities provided to currently employed teachers to enhance their professional skills, update their knowledge base, and adapt

to evolving educational demands. Unlike pre-service training, which occurs before a teacher enters the workforce, in-service training is conducted during their active professional life, making it highly relevant and immediately applicable. For government school teachers, in-service training plays a particularly critical role in bridging the gap between policy mandates and classroom realities, especially in the context of inclusive education and the management of learning disabilities (LD). The core objective of in-service training is not merely skill transmission, but sustained professional growth that enables educators to internalize inclusive practices. As noted by (Latouche and Gascoigne, 2019) <sup>[1]</sup>, even brief training interventions can result in measurable increases in knowledge and teacher self-efficacy when well-designed, but long-term effectiveness depends on the training's structure and follow-up.

Effective in-service training is characterized by continuity, contextual relevance, active engagement, and feedback mechanisms. Traditional one-day workshops or lecture-based seminars are insufficient for fostering deep pedagogical change, especially in complex domains like LD. Teachers need opportunities for iterative learning, including practice-based modules, peer mentoring, and classroom experimentation. (Zulu *et al.*, 2024) <sup>[2]</sup> emphasized that ongoing in-service training, when delivered in phases and integrated into teachers' working routines, not only improves knowledge retention but also reduces attrition and promotes morale. This is particularly vital in government systems where teacher motivation is often undermined by systemic challenges.

Several models of in-service training exist, ranging from centralized institutional models to decentralized, school-based or cluster-based models. Centralized models involve teachers attending training at district or state education centers, often conducted by experts or government-appointed trainers. While structured, these models risk being disconnected from classroom contexts. In contrast, school-based models involve localized training through mentoring, coaching, or collaborative lesson planning. Cluster-based models, used effectively in many developing countries, pool teachers from nearby schools into training cohorts, offering both resource optimization and peer learning benefits. (Uzorka *et al.*, 2024) <sup>[3]</sup> showed that in the Ugandan context, in-service programs that combined face-to-face modules with peer collaboration and school-level support led to significant improvements in student outcomes and teacher performance.

In the domain of inclusive education, especially related to LD, the content of in-service training must be multidisciplinary. Modules should cover cognitive characteristics of LD, inclusive instructional strategies, classroom accommodations, behavior management, and psychosocial support frameworks. Importantly, training should also foster attitudinal change, helping teachers move from a deficit-oriented view of disability toward a strengths-based approach. (Uçak and Demirok, 2022) <sup>[4]</sup> found that English teachers trained through comprehensive in-service programs significantly improved their classroom practices, including differentiated instruction and use of visual aids, demonstrating the practical benefits of content-specific, reflective training models.

Furthermore, technological models of in-service training—such as online learning platforms, hybrid formats, and microlearning—are gaining traction, especially post-

pandemic. These models increase accessibility, particularly for teachers in remote or under-resourced regions. However, the effectiveness of digital training depends heavily on instructional design, learner engagement, and local adaptability. In underfunded government schools, blended models that combine physical training with mobile-based refresher content may provide a feasible and scalable solution.

In short, in-service training is not a one-size-fits-all intervention but a dynamic, evolving process that must align with teachers' needs, school environments, and educational goals. For inclusive education to thrive—particularly in the realm of learning disabilities—training must move beyond content delivery to embrace long-term support, collaborative learning, and reflective practice. When properly designed and implemented, in-service training can transform government teachers from passive recipients of policy to active agents of change in inclusive education.

### Theoretical Frameworks Supporting Ongoing Training

Understanding the success of ongoing in-service teacher training, especially for managing learning disabilities (LD), requires an exploration of the theoretical models underpinning such interventions. The effectiveness of sustained professional development hinges on frameworks that account for the complexities of adult learning, belief systems, and behavioral change. One of the most influential is Bandura's Social Cognitive Theory, which emphasizes the importance of self-efficacy and observational learning. Teachers are more likely to implement and retain inclusive practices when they believe in their capability to affect student outcomes. (Sze, 2009) <sup>[5]</sup> highlighted that teacher confidence is a critical mediating factor in applying knowledge gained through training, particularly in challenging scenarios such as teaching students with LD.

Another guiding model is Situated Learning Theory, which proposes that learning is most effective when it is contextualized and occurs in real-life practice environments. This perspective supports school-based or experiential in-service training models. (Jones and Lawson, 2015) <sup>[6]</sup> applied this framework in classrooms serving students with severe intellectual disabilities and found that teacher learning was significantly enhanced when tied to actual teaching events and adapted based on student feedback.

Universal Design for Learning (UDL) is also gaining prominence as a theoretical foundation for inclusive teacher training. It promotes proactive planning of curricula that accommodate diverse learners, including those with LD. (Lanternman and Applequist, 2018) <sup>[7]</sup> demonstrated that training structured around UDL frameworks not only improved teachers' instructional strategies but also shifted their beliefs toward more interventionist and inclusive attitudes—factors essential for consistent classroom application.

In-service training programs often leverage Variation Theory, particularly in early childhood and elementary education. This theory posits that learners understand critical aspects of content when exposed to systematically varied examples and non-examples. (Olander and Ljung-Djärf, 2013) <sup>[8]</sup> studied preschool educators after an in-service training using learning study methods based on Variation Theory and found that educators not only adopted theoretical language but also applied it in practical lesson planning.

Additionally, Disability Studies in Education (DSE) offers a socio-cultural lens, advocating for inclusive practices rooted in rights-based and identity-affirming principles. DSE encourages educators to interrogate traditional deficit-based approaches to LD and to recognize the role of institutional and attitudinal barriers. (Morton *et al.*, 2021) <sup>[9]</sup> emphasized the power of DSE in reshaping teacher education through narrative assessments and reflective practices, leading to greater alignment with inclusive values and responsive pedagogy.

Finally, the Praxeological Approach, which blends theory with practice in iterative cycles, is particularly effective for adult learners like teachers. It emphasizes reflective learning grounded in real-world experiences, allowing for continuous adaptation and feedback. (Winterbottom and Mazzocco, 2016) <sup>[10]</sup> implemented this model in teacher education and found that it improved self-actualization, skill retention, and ethical engagement—key outcomes for sustainable change in classrooms handling LD.

Theoretical frameworks such as Social Cognitive Theory, Situated Learning, UDL, DSE, Variation Theory, and Praxeological learning each provide critical insights into how teachers learn, retain, and apply inclusive education strategies. In-service programs grounded in these models are far more likely to result in meaningful, lasting changes in teacher behavior, thereby enhancing outcomes for students with learning disabilities.

### **Nursing Perspectives in Educational Interventions**

Nursing professionals play an increasingly significant role in the multidisciplinary framework of inclusive education, particularly in the identification and support of students with learning disabilities (LD). Traditionally positioned within healthcare, nurses—especially school nurses and community-based practitioners—serve as critical bridges between the health and education sectors. Their understanding of developmental milestones, behavioral health, and psychosocial factors uniquely equips them to support early identification, advocacy, and teacher education. As highlighted by (Shannon and Yonkaitis, 2017) <sup>[11]</sup>, school nurses are mandated under the Individuals with Disabilities in Education Improvement Act (2004) to contribute directly to individualized education plans (IEPs), participating in eligibility determination and service planning for students with LD.

Nursing perspectives enrich educational interventions through a holistic, student-centered lens that recognizes the interconnection of physical, emotional, and cognitive health. Their ability to detect early signs of neurodevelopmental delays and refer students for specialized assessments is crucial in contexts where teachers lack diagnostic training. A significant example is the contribution of community health nurses to early screening efforts and in disseminating information to teachers on differentiating LD from temporary learning lags. (Jukes, 1994) <sup>[12]</sup> emphasizes that the development of learning disability nursing requires more structured training and integration into educational systems to achieve its full potential.

Recent interventions have also illustrated the impact of nursing-led training on teacher awareness and knowledge retention regarding LD. A quasi-experimental study conducted by (Elizabeth, 2011) <sup>[13]</sup> demonstrated that selected nursing interventions—including lectures, booklets, and checklists—significantly improved both knowledge and

attitudes of teachers toward learning disability identification. Teachers exposed to these interventions showed measurable gains in their ability to detect and respond to early signs of LD, highlighting the value of nurse-educator partnerships in school settings.

Furthermore, nursing education frameworks rooted in theories like Wiedenbach's Helping Art of Clinical Nursing provide a solid foundation for educational outreach. This approach emphasizes the need to understand individual experiences and tailor interventions accordingly, making it particularly relevant in culturally and linguistically diverse classrooms. (Culley and Genders, 1999) <sup>[14]</sup> suggest that when nursing curricula integrate issues related to learning disability, including parenting and cognitive support, it prepares nurses to provide better holistic care and contribute more effectively in interprofessional teams that include educators.

Importantly, the nursing role extends beyond direct service delivery to capacity building. Through continuous engagement with teachers, school nurses can reinforce knowledge over time—acting as resource persons and providing real-time consultation. This aligns with the principle of knowledge reinforcement emphasized in educational theory, which is essential for long-term retention and application in the classroom. A recent systematic review by (Evans *et al.*, 2023) <sup>[15]</sup> concluded that affective, nursing-led educational interventions significantly improved empathy and attitudes of student educators and clinicians toward disability, although more robust evidence is needed.

Nursing perspectives bring invaluable depth to educational interventions targeting learning disabilities. By integrating developmental insight, health-based frameworks, and continuous support models, nurses empower teachers to act early, respond appropriately, and contribute meaningfully to inclusive education. Their collaborative role not only strengthens professional training systems but ensures that health and education domains work together to support every child's learning journey.

### **Policy Implications and Institutional Support**

The successful integration of in-service training for government school teachers on learning disabilities hinges not only on pedagogical innovation but also on strong institutional frameworks and supportive policy environments. Despite the growing recognition of inclusive education globally, national policies often lag in operationalizing structured, ongoing teacher development programs specific to learning disabilities. For instance, Ukraine's policy reform in 2018 initiated inclusive education as a national mandate, yet in-service teacher training lacked depth and practical application, undermining classroom readiness (Scherba, 2019) <sup>[16]</sup>.

In many developing nations, including India, policy rhetoric is not matched by effective resource allocation. The Rights of Persons with Disabilities Act, 2016 in India mandates inclusive education under Section 17, yet implementation is fragmented due to limited teacher preparedness and the absence of continuous professional development models. The U.S. Individuals with Disabilities Education Act (IDEA) of 2004 highlights the necessity of "qualified personnel," pushing for the recruitment of highly trained special educators. However, similar binding provisions are

often missing in developing nations, leaving a policy vacuum (Jameson and Huefner, 2006)<sup>[17]</sup>.

Institutional support plays a pivotal role in embedding inclusive practices through collaborative teacher support teams, school leadership engagement, and access to inter-professional expertise. Research from South Korea highlighted the importance of cross-functional collaboration—engaging administrative staff, special educators, and academic counselors to ensure early diagnosis and appropriate learning pathways for at-risk students (Cho *et al.*, 2024)<sup>[18]</sup>. However, most institutions still fall short in creating systemic support structures that promote ongoing professional growth and interdisciplinary integration.

The design of teacher education policies must also consider regional disparities. In Sri Lanka, despite national efforts to promote inclusive education, policies remain inconsistent across provinces, especially in the provision of ongoing in-service training to physical education teachers responsible for integrating students with disabilities in mainstream activities (Nanayakkara, 2021)<sup>[19]</sup>. This inconsistency limits the impact of central policies and underscores the need for institutional monitoring mechanisms.

Furthermore, training must be backed by data systems to monitor impact and identify gaps in teacher competence. The adoption of universal screening protocols, data-sharing frameworks, and digital reporting tools can bridge the disconnect between policy intention and field implementation. However, in many regions, teacher training remains decoupled from performance assessments, and policy outcomes are rarely measured against classroom indicators. A study from Saudi Arabia recommended building collaborative feedback systems, where teachers are empowered to share insights and challenges directly with policymakers through structured professional development reviews (Alsamiri, 2024)<sup>[20]</sup>.

Lastly, sustainability of policy frameworks depends on institutional leadership. School principals and district-level administrators must be mandated and trained to oversee in-service training effectiveness. This requires redefining their roles from administrative gatekeepers to instructional leaders. Without institutional mandates linking in-service training completion to teacher evaluation and school accreditation, policy reforms may remain symbolic. Bridging this policy-practice divide is essential to equip teachers with the confidence, skills, and systemic backing needed to teach students with learning disabilities effectively.

### Challenges and Barriers to Implementation

While the benefits of ongoing in-service training for government school teachers in identifying and supporting students with learning disabilities are well-documented, implementing such training at scale is fraught with multiple systemic and contextual barriers. One of the primary obstacles is the mismatch between teacher perceptions and institutional goals regarding inclusive education. Teachers frequently express feelings of unpreparedness, especially in the face of limited classroom resources, excessive student-teacher ratios, and rigid curriculum demands. As highlighted by (Tlale, 2013)<sup>[21]</sup>, poorly trained and under-qualified teachers often compromise not only the academic needs of learners with disabilities but also the ethos of inclusive schooling.

Financial and infrastructural constraints are also major hindrances, particularly in developing countries where in-service training is often implemented as a one-off event rather than a sustained process. In the context of Nepal, teachers cited insufficient expert availability, time management issues, political interference, and lack of incentives as major barriers to effective training deployment (Mahara, 2024)<sup>[22]</sup>. This mirrors challenges reported in other contexts where even when training is conducted, teachers are unable to apply their learning effectively due to overloaded schedules and non-conducive school environments.

Another layer of complexity arises from administrative and leadership gaps. When institutional leadership is not invested in inclusive education, teacher development initiatives tend to lack strategic direction, accountability, and continuity. Teachers often report that principals and management do not prioritize or support inclusive training, leaving them to individually navigate classroom challenges with limited backup. This lack of coordinated planning and follow-through dilutes the impact of any initial training efforts (Scott, 2018)<sup>[23]</sup>.

Resistance to change within educational institutions also poses significant barriers. Many teachers still operate under a "medical model" of disability, viewing students with LD as problems to be referred rather than learners to be engaged through adaptive pedagogy. This outdated orientation persists due to limited exposure to contemporary frameworks like Universal Design for Learning (UDL), despite their proven relevance (Forkosh-Baruch and Lipka, 2016)<sup>[24]</sup>. Without comprehensive mindset shifts supported by institutional policy and mentoring, teacher development efforts remain superficial and unsustainable.

Lastly, there are psychological and motivational barriers. Teachers in under-resourced schools often experience burnout, role overload, and lack of professional recognition—factors that reduce receptivity to additional training. The absence of incentives such as career progression, salary increments, or academic credits further disincentivizes participation in in-service programs. As (Sydoriv, 2022)<sup>[25]</sup> argues, the effectiveness of inclusive education is strongly linked to the professional motivation and capacity of the teaching workforce.

The implementation of in-service training on learning disabilities faces challenges spanning institutional inertia, resource inadequacies, pedagogical resistance, and psychological fatigue. These multifaceted barriers highlight the urgent need for integrated policy reforms and systemic support mechanisms that prioritize teacher readiness as a cornerstone of inclusive education.

### Conclusion and Recommendations

In conclusion, the effectiveness of government school teachers in identifying and managing learning disabilities is strongly linked to their ability to retain and apply specialized pedagogical knowledge over time. Traditional one-time workshops have proven inadequate in supporting long-term competence, with evidence suggesting that sustained, contextually relevant in-service training significantly enhances both knowledge retention and practical classroom application (Vincent and Shobha, 2019)<sup>[26]</sup>. Teachers are most successful when professional development is scaffolded through cognitive strategy instruction and reflective practice, as seen in mathematics

education research (Krawec and Montague, 2014) <sup>[27]</sup>. Implementation of collaborative models involving co-teaching and peer mentoring has further shown to promote sustained change in inclusive practices (Gerber and Popp, 2000) <sup>[28]</sup>. Recommendations include reforming pre-service education to ensure foundational understanding of learning disabilities among all trainee teachers, a need strongly highlighted by gaps in Indian pre-service cohorts (Saravanabhavan and Saravanabhavan, 2010) <sup>[30]</sup>. Institutional frameworks should mandate periodic, incentivized in-service training programs tied to practical outcomes and performance metrics. Administrative support, structured guidance services, and alignment with broader inclusive education policies are essential for program success, as evident in recommendations from primary school teacher evaluations in Jordan (Alsagarat, 2024) <sup>[29]</sup>. Cross-sectoral collaboration with health professionals, including nurse educators, can further enrich teacher capacity by integrating mental health literacy and early intervention protocols into educational frameworks. Thus, the transformation of teacher training into a continuous, reflective, and interdisciplinary practice is not only feasible but essential to building an inclusive education system that recognizes and supports the diverse learning needs of all students.

## References

1. Latouche K, Gascoigne M. In-service training for increasing teachers' ADHD knowledge and self-efficacy, 2019.
2. Zulu NG, Munsaka E, Sichali N, Miti A. Training: A determinant of teacher retention in Zambia, 2024.
3. Uzorka MC, Kalabuki R. The effectiveness of in-service teacher training programs in Uganda, 2024.
4. Uçak E, Demirok M. Examining the effectiveness of the educational program for English teachers, 2022.
5. Sze SF. A literature review: Pre-service teachers' attitudes toward students with disabilities, 2009.
6. Jones P, Lawson H. Insights into teacher learning about pedagogy from an intellectual disability context, 2015.
7. Lanterman JL, Applequist KL. Pre-service teachers' beliefs and the impact of UDL training, 2018.
8. Olander L, Ljung-Djårf A. Theoretical appropriation in preschool teachers' reflection, 2013.
9. Morton M, McIlroy A, Duke J. Disability studies in and for inclusive teacher education, 2021.
10. Winterbottom M, Mazzocco PJ. Reconstructing teacher education: A praxeological approach, 2016.
11. Shannon RA, Yonkaitis CF. The role of the school nurse in the special education process, 2017.
12. Jukes M. Development of the community nurse in learning disability care, 1994.
13. Elizabeth M. Effectiveness of selected nursing intervention on teacher knowledge of LD, 2011.
14. Culley L, Genders N. Parenting by people with learning disabilities: The role of nurses, 1999.
15. Evans I, Lisiecka D. Exploring the impact of educational interventions on disability perspectives, 2023.
16. Scherba S. WebQuests for preparing in-service teachers in Ukraine, 2019.
17. Jameson JM, Huefner DS. Highly qualified special educators and IDEA, 2006.
18. Cho MK, Kwon MH. School-based collaborative educational support systems in South Korea, 2024.
19. Nanayakkara V. Inclusive physical education in Sri Lanka: Policy vs. practice, 2021.
20. Alsamiri Y. Enhancing teacher competence for inclusive education in Saudi Arabia, 2024.
21. Tlale LD. Teachers' competency in responding to learning-disabled learners, 2013.
22. Mahara A. Receiving and implementing in-service training in Nepal, 2024.
23. Scott LA. Barriers to implementing Universal Design for Learning, 2018.
24. Forkosh-Baruch A, Lipka O. Preservice teachers with learning disabilities, 2016.
25. Sydoriv T. Pre-service training for inclusive elementary education, 2022.
26. Vincent V, Shobha S. Classroom practices of teachers on learning disabilities, 2019.
27. Krawec J, Montague M. Role of teacher training in cognitive strategy instruction, 2014.
28. Gerber PJ, Popp PA. Collaborative teaching for inclusive classrooms, 2000.
29. Alsagarat AR. Examining school services for learning-disabled students in Jordan, 2024.
30. Saravanabhavan RC, Saravanabhavan S. Knowledge of learning disability among pre- and in-service teachers in India, 2010.