

## Assessing Classroom Accessibility Barriers for Students with Physical Disabilities

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### Abstract

*This quantitative study assessed the educational environment for students with physical disabilities in secondary schools in Lahore, Pakistan. Specifically, it examined if teacher qualifications, gender, and experience influence accommodation attitudes and potential. Data were collected through observation checklists and surveys from public schools. Results showed no significant differences in disability accommodation based on teacher credentials, gender, or years of teaching. Mean scores indicated moderately high accommodation levels regardless of factors. Thus, barriers may stem more from systemic issues like resources rather than individual biases. Recommendations include standardized teacher training in inclusive practices, Universal Design of curriculums, assistive technologies, co-teaching models, and teacher support communities. Enhancing teacher capacity and removing structural obstacles better serves disability inclusion versus scrutinizing group traits.*

**Keywords:** *Physical Disability, Inclusive Education, Teacher Attitudes, Accessibility, Special Education*

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### 1. Introduction

Education is critical for individuals and society. Research indicates education systems can play a vital role in fulfilling diverse learning needs and enabling the holistic development of children (Al Khateeb et al., 2023). However, conventional frameworks often struggle to support students with physical disabilities, negatively impacting their outcomes. An individual's physical, cognitive, social, and emotional growth is tied to educational experiences. Education cultivates development across multiple domains by imparting essential skills, knowledge, and perspectives. Authors argue quality education should facilitate an individual's ability to navigate and contribute to an increasingly complex, interconnected global context (Al Khateeb et al., 2023). When systems fail to provide supportive, personalized, and empowering learning environments for all students, they restrict human potential. Hence, ensuring appropriate accommodations and accessibility in schools is instrumental for both individuals and broader communities to thrive. With the proper

scaffolding, education enables students with diverse needs to harness their capabilities as conscientious, engaged members shaping an evolving society.

Educational quality may be evaluated through metrics examining student health and motivation, resources, aligned curriculums, enabling environments, transparent assessments, participatory governance, and community engagement. Research indicates accessible systems that serve all societal groups, regardless of race, class, gender, or ability level, are a government duty (Barton & Smith, 2015). Learning is a natural, lifelong developmental process tied to lived experience. It encompasses cognition, socialization, and development across domains.

Neuroscience reveals biological bases and social dimensions of learning. As humans evolved to navigate social groups, modern pedagogies should motivate through relevance versus rote drilling. Yet increasing knowledge demands pose challenges as youth feel disconnected from curriculums and struggle to construct positive identities (Satterfield, 2023). The research argues meeting learners' needs to explore societal roles may outperform the transmission of isolated skills. This framework recognizes schools as sites nurturing multidimensional growth, including evolving capacities to understand complex systems and solve collective problems. Quality learning environments facilitate youth in harnessing their potential to contribute to society.

## **2. Research Objective**

1. To assess teacher qualifications, gender, and years of experience impact accommodation of students with disabilities

## **3. Research Questions**

1. Does any difference exist in teachers' accommodation of students with disabilities based on qualifications, gender, and years of teaching experience?
2. Do teachers' qualifications and years of experience predict a higher potential to accommodate students with physical disabilities?
3. Are teachers' characteristics (qualifications, gender, years of experience) associated with greater willingness and ability to accommodate disabilities in the classroom?

## **4. Literature Review**

The learning environment refers to various circumstances, physical places, and different backgrounds of students in which they acquire skills, knowledge, and changes in behavior. Because the learners can gain knowledge of a broad range of locations, places outside the schools, and different situations outside of homes, these are the alternate used more precise and favorite substitutes to classroom practices that have inadequate and conventional implications, for example, a room where rows of chairs or desks and writing board need special attention (Skinner, Katz, & Knight, 2022).

The terms also include traditions and customs of the class or school, its culture, control, and traits, how the people in the school work together, how they take care of each other, including the ways of setting and other classroom arrangements to make possible teaching-learning process, e.g., setting arrangement of chairs and desks in groups, creating real situations, use of digital equipment's, audio and visual aids. These traits and techniques of a conducive environment for learning are based on different aspects, policies of the school, authority, and control of administration, and other aspects that might be considered fundamental to a "learning environment" (Aldosari, 2022).

Educationists might argue that the environment can affect students' learning directly or indirectly, with their commitment to what they are being taught, their inspiration to learning, their level of

comfort, and their personal satisfaction and belonging. For example, a conducive environment for learning with proper ventilation and light plays a vital role in learning rather than a narrow space without ventilation and inadequate sitting arrangements, misbehavior with students, mess, harassment, and unlawful activities. How the students behave by school staff and work together is also believed to be part of the learning environment (Walker, Carpenter, Kittelman, & Rowe, 2023).

A positive or negative learning environment is normally used in a classroom or school's emotional and social scope. Teachers need to make the environment of the class comfortable both mentally and physically for students to ease the teaching-learning process. Teachers should care for everyone's self-respect; students should feel relaxed and safe (Parey, 2022).

Suppose teachers use participatory approaches like peer learning, learning in small groups, and supportive learning. In that case, the students will feel confident about asking any query and participate actively in the discussion. It is the dire need of a student for effective learning to ask questions freely and without any hesitation. The physical environment of the classroom affects the learning and confidence of students. The classroom environment must follow the learning objectives, and the approaches of instructions and communication should be kept in mind while creating the environment of the class (McBeth, 2021).

Seating arrangement in the classroom is a main variable in the participation of students, making the physical atmosphere play an imperative role, boosting the emotions of students, which gives them ownership. Planning is essential to enhancing the educational environment, where extra time for students is to move about in the classroom or school. Planning in instructional prerequisites like training in AAC "Alternative and Augmentative Communication" means generating the speech devices that need programming for the involvement of all team members in planning related to the life of students (Kart & Kart, 2021).

The physical needs of the students should be considered. Planning for a substitute means completing written practical work other physical tasks, and planning for supportive and particular technology tools. Considering access issues on tours and additional learning situations, e.g., wheelchair, reachable transportation, harmless locations for individual care and plan for necessary care of personal needs of the students (Yan, Deng, & Ma, 2021).

The teacher plans for the cooperation of team members to complete given assignments. Teach them to use planners, illustrative labels, color coding, sequences, and pictorial timetables. Use accessible individual resources, such as peer teaching, teacher helpers, special education teachers, and other related services (Blecker & Boakes, 2010). Teach about the communication devices to other class members. Make the classroom environment equipped with various specific tools (Navarro, Zervas, Gesa, & Sampson, 2016). Teachers can use the tools for the assessment of students with physical disabilities. Record the work of students; for example, digital photography, collect interpreted samples of work from time to time, organize one-to-one discussions, organize extra time, organize use of materials, make available substitute means of demonstrating skill, for example, written work instead of oral responses, objective type questions instead of subjective type tests (Leatherman1 & Niemeyer, 2005).

The students with physical deficiencies might have sources precisely suggested by therapists, AVTs, qualified doctors, or experts. It should be confirmed that helpers and students have the proper orientation to approach the paramedical staff. The staff should be trained to effectively use tools to meet students' needs (Gal, Schreur, & Engel-Yeger, 2010).

## 5. Research Methodology

The research employed a quantitative methodology. A census sampling technique was utilized to obtain the sample, which comprised 10 teachers approached within public sector secondary institutions in Lahore. Data were gathered from said institutions. Only teachers of the students with physical disabilities enrolled in these public sector secondary schools were included. Two research instruments for data collection were self-developed: An observational checklist to assess school and classroom environments and two 5-point Likert scale questionnaires. Questionnaire items were constructed to gather teacher perspectives on inclusivity. Teachers were asked to complete the questionnaires based on their experiences. Additional observations were conducted to directly evaluate accessibility within educational settings. Responses were organized, and data was displayed using descriptive tabulation. Relevant statistical analyses were performed to analyze the data and interpret the results.

## 6. Findings of the Study

1. There was no significant difference in accommodating students with disabilities based on the professional qualifications of the teachers ( $t=7.455$ ,  $p<.001$ ). The mean score of 1.5455 indicates that most teachers, regardless of qualifications, were accommodating towards students with disabilities.
2. There was no major variation in accommodating students with disabilities based on the teachers' gender ( $t=5.237$ ,  $p=.001$ ). The mean score of 1.6 indicates that male and female teachers had similar, moderately high accommodation levels.
3. There was no significant difference in teachers' potential to accommodate students with physical disabilities based on the teachers' qualifications ( $F=.415$ ,  $p=.674$ ). Teacher qualifications do not appear to impact accommodation potential.
4. There was no significant difference in teachers' potential to accommodate students with physical disabilities based on years of teacher experience ( $F=1.633$ ,  $p=.267$ ). More experienced teachers do not appear to have greater potential to accommodate students with disabilities than less experienced teachers.
5. Overall, the ability and willingness of teachers to accommodate students with disabilities does not appear to depend on teacher gender, qualifications, or years of experience based on these findings. Most teachers display moderately high accommodation potential regardless of these factors.

## 7. Conclusions

This study aimed to assess whether key teacher characteristics impact the accommodation of students with disabilities in mainstream classrooms. Specifically, it examined if teacher qualifications, gender, and years of experience influence accommodation potential and attitudes. The results show that these factors do not significantly influence teachers' willingness or ability to accommodate diverse learning needs. Regardless of professional credentials, gender, or extent of classroom experience, most teachers display moderately high accommodation levels. Statistically, these teacher attributes did not predict accommodation attitudes or capacity variation. It aligns with past studies emphasizing teacher empathy, positivity, patience, and student-centered philosophies over demographics in determining inclusion success.

Interestingly, the lack of group differences suggests accommodation challenges may stem less from individual biases against disabilities. More systemic factors like inadequate training, large class sizes, standardized curriculums, and lack of resources likely impede responses instead. Thus, equipping all teachers with knowledge and tools to adapt instruction better serves students versus concentrating support on certain "types" of teachers.

Furthermore, the consistency in potential across groups implies existing standards in teacher education already promote inclusive values well. Additional training and professional development can still deepen knowledge on implementing evidenced-based strategies matched to specific learning needs. However, enhancing actual implementation capacity requires coordinated policy efforts to reduce legal barriers, transition curriculums and assessments towards Universal Design models, allocate classroom resources, strengthen parent-teacher collaboration channels, and foster peer support communities.

## **8. Discussion**

The research aims to study the educational environment of those with physical disabilities in general education classrooms. The findings are evident from data that children with physical disabilities can be accommodated in existing classrooms. The government is responsible for making schools accessible for all children regardless of disability. A research study by Barton and Smith (2015) depicted that it is the government's responsibility to make all services available to the needy individuals of society regardless of their socioeconomic and cultural background, religion, race, gender, ethnicity, and disability. The proper learning environment must be provided in various circumstances, physical places, and different backgrounds of students in which they acquire skills, knowledge, and change in behavior. Because the learners can gain knowledge of a broad range of locations, places outside the schools, and different situations outside of homes, these are the alternate used more precise and favorite substitutes to classroom practices that have inadequate and conventional implications, for example, a room where rows of chairs or desks and writing board need special attention (Charley, 2015). Teachers need to make the environment of class comfortable both mentally and physically for students to ease the teaching-learning process. Teachers should respect and care for the students' needs (Zilz & Pang, 2021). Teachers can enhance the positive educational environment through a participatory approach, like learning in groups or peer learning. Using these techniques, children will feel confident and participate in the classroom discussion as it is depicted that the classroom environment must follow the learning objectives, and the approaches of instructions and communication should be kept in mind while creating the environment of the class (Rozenfelde, 2016).

## **9. Recommendations**

Considering the findings of the study, the following were the recommendations.

1. Standardized training in special education and disability awareness across teacher certification and professional development programs is suggested, regardless of qualifications pursued or years of experience. It establishes an inclusive culture and skill base as a foundation.
2. There should be an audit of the current curriculum, assessments, and learning materials for accessibility barriers to Universal Design. Identify concrete steps to shift towards flexible models accommodating diverse needs.
3. It is suggested to increase staffing support and collaborative channels between general and special education teachers through scheduled co-teaching, joint curriculum planning, and shared daily prep times.
4. General classrooms should have libraries of assistive technologies, tools like text-to-speech software, audiobooks, fidget devices, and flexible seating accommodating mobility limitations and sensory needs.
5. There should be teacher communities to share successful disability accommodation strategies. Encourage open dialogues on inclusion challenges to inform administrative decisions on resource allocation, school policies, and teacher support.

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