

## Original Article

# Training Requirements of Educators in Relation to Introducing Inclusive Education Practices in Existing System of Sindh, Pakistan

 Nasir Sulman<sup>a</sup>, Shaista Naz<sup>a</sup>,  Aqeel ur Rehman Hameed<sup>b</sup> &  Shahid Ali<sup>c</sup>

<sup>a</sup> University of Karachi

<sup>b</sup> Abbasi Shaheed Hospital

<sup>c</sup> College of Speech, Language and Hearing Sciences, Ziauddin University

## Abstract

The study evaluates teachers' and principals' training requirements in Sindh province, Pakistan, for effective inclusive education management. It focuses on teachers' knowledge, talent capabilities, information and ability skills, necessary training areas for teachers to enforce inclusive practices, and specific training requirements for principals to manage inclusive education practices. The study uses a survey design and a hypothesis to improve the findings. The population includes educators and administrators from the University of Karachi's Bachelor of Education program. The survey covers 10 key issues related to inclusive education training and 20 competencies for teachers and principals. Respondents rate their knowledge on a 5-point scale. The study contradicts previous research suggesting teachers are crucial in inclusive education. It found instructors have knowledge and skill competencies but no difference in management or expert support. Teachers are more supportive, but further training is needed for communicative talents and disability assessment.

**Keywords:** Inclusive education, Training needs, Teacher & principal, Knowledge, Skills, Competencies, Survey, and Disability

## 1. INTRODUCTION

### Inclusive Education

Inclusive schooling entails educating students with special needs in mainstream classrooms and revamping educational institutions to suit all students. The regulation mandates all educators to engage in and practice the concept in an effort to build an inclusive subculture that celebrates range or diversity (Ainscow & Miles, 2012). The Convention on the Rights of Persons with Disabilities, signed and ratified by the majority of the nations in 2006, acknowledges persons with disabilities' duties.

### Global Achievements

The movement towards inclusive education for children with special needs began in the 1960s (Foreman, 2005) and has been influenced by UN declarations like the Convention against Discrimination in Education (1960), the Declaration on the Rights of Disabled Persons (1975), and the Convention on the Rights of the Child (1989). The World Conference on Education for All in 1990 and the Dakar framework for Education for All in 2000 aimed to ensure education as a right for all people, regardless of individual differences. All of which the world community vowed to provide education as a right for all people, regardless of individual characteristics.

The Salamanca Conference on Special Needs Education (World Conference on Special Needs Education



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**Corresponding Author:** Aqeel ur Rehman Hameed, Abbasi Shaheed Hospital

 [aud.aqeel@gmail.com](mailto:aud.aqeel@gmail.com)

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in Spain, 1994) advocated for inclusive education, focusing on diversity and respect for learners' needs (Ainscow & Cesar, 2006). Despite efforts to implement inclusive education, segregated systems have been criticized for human rights (Ainscow, Booth, Dyson, Farrell, Frankham, Gallannaugh, Howes & Smith, 2006). Modifying schools and implementing integrated programs, such as special classes within regular schools, are becoming more popular (Sebba & Sachdev, 1997). However, some countries report a rise in disabled students being classified as disabled for increased school resources (Ainscow, 2005).

### **Inclusive Education Practices**

Most inclusive education experts state, either expressly or implicitly, that inclusion refers to the location of all children, irrespective of ability stage, in ordinary schools and classrooms (Luciak & Biewer, 2011). A meta-analysis of 11 studies conducted among 1975 and 1984 found that mainstreamed impaired children outperformed non-mainstreamed children with comparable unique education categories. Part-time mainstreaming with occasional pull-out resource magnificence attendance and complete-time inclusion in ordinary classrooms had been each protected. Two-thirds of the a hundred and fifteen impact sizes evaluated showed that mainstreaming had a fine effect, resulting in a 13 percentile boom for children in mainstreamed environments (Wang & Baker, 1985). An extra latest meta-evaluation (Hattie, 2009) discovered an extremely larger impact size in desire of mainstreaming.

The take a look at via Saint-Laurent et al. (1998) in Canada tested the effect of a multidimensional inclusive schooling application on at-risk third-grade students. The intervention group acquired all coaching and support in general education lessons, while the assessment organization received assist in a separate resource room. The inclusive education group considerably advanced writing rankings. Waldron and McLeskey's 1998 have observed that students with minor learning impairments made more enhancements in analyzing and arithmetic than those with excessive disabilities in both inclusive classrooms and trendy useful resource elegance placements. The experimental group constituted 71 youngsters from three inclusive classrooms, at the same time as the control group included 73 children in general resource class placements.

Fryxell's 1995 study in Hawaii determined that general education placements improved social interactions of youngsters with intense impairments through increasing contact with non-disabled peers, providing elevated social help, and forming wider buddy networks. Fisher and Meyer's (2002) observe determined that children in inclusive placements showed great, if minimum, upgrades in social competence measures over two years in comparison to those in self-contained training. A Dutch study through Karsten et al. (2001) located that at-risks students in special and mainstream schools carry out worse academically and revel in developing disparities as they mature, however regular psychosocial improvement packages can gain them.

### **Teachers' Perceptions of Inclusive education Implementation**

Florien (2005 & 2008) argued that inclusive education is a human rights agenda; however educators have reservations approximately setting students with special educational needs. A UNSESCO survey revealed a wide variety of views on integration, with teachers favoring different student categories for inclusion in regular courses (Bowman & Skinner, 1994). A have a look at by using Leyser, Zeiger & Romi (2011) discovered large disparities in teacher attitudes toward inclusion throughout the USA, Germany, Israel, Ghana, Taiwan, and the Philippines. The USA and Germany had the most favorable attitudes due to full- inclusion adoption with the aid of Public regulation. Germany, however, had no special education legislation or training, and integration was seen as an experiment. Singal (2008) argues that mainstream schools won't effectively accommodate youngsters requiring instructional moderation, leading to the idea of separate schooling. She also states that inclusion projects do not benefit teachers or students. Notwithstanding a poor correlation between academic aptitude and disability ranges, the Canadian Council on Learning Research (2009) found that inclusive settings progressed educational effects for children with special training needs (Slavin, 1997).

Whyte (2005) shows that inclusive training teachers are characterized through respect and caring for all students, irrespective of their needs, and engage with them accordingly. In keeping with Ali, Mustapha, and Jelas (2006), Malaysian instructors have generally advantageous attitudes concerning inclusive schooling, feeling that it complements social interaction and minimizes poor opinions of students with special educational needs. They push for collaboration among regular and special education teachers. The 2007 study examined by Loreman, Forlin, and Sharma located high quality attitudes towards inclusive education for students with special needs, mainly children with social, emotional, and behavioral problems.

Ross-Hill (2009) observed that teacher's attitudes closer to inclusion and creating an inclusive surroundings were stimulated by means of their help for inclusion activities or loss of strong beliefs about inclusive schooling. Croll and Moses' (2000) observations reveal that 90% of teachers consider traditional classrooms are perfect for children with disabilities, emphasizing the importance of pre-existing attitudes in inclusive training. Inclusive education for children with special educational needs requires thinking about all views, such as expert and parental help. Teachers have to agree on class sizes and coaching strategies and small magnificence sizes can enhance learning efficiency. But, teachers should cope with getting to know problems and control the classroom environment correctly. Training is crucial to prevent teachers from losing control. Increased interplay between students and teachers is crucial for promoting successful education. Teachers ought to gain knowledge of to address difficult situations rather than focus on classroom processes.

Inclusive education in developing countries is going through demanding situations due to a scarcity of local sources in instructional establishments, making the implementation of inclusive training appreciably more difficult (Eleweke & Rodda, 2002). Educators ought to set up a dynamic and a success teaching environments for all students, with their revel in and education heavily impacting their views (Meng, 2008). Inclusive schooling packages are insufficient, regardless of the need for professional and certified teachers in inclusive school rooms, as highlighted by way of Hossain (2004), requiring pressing attention. In step with Eleweke & Rodda (2002), specialized specialists are needed for special needs children, but help personnel like audiologists, psychologists, speech and language pathologists, communication help people, and interpreters are often in short supply in developing nations.

Teachers' prior expertise might stymie inclusive teaching, since inclusion regulations may drive them into areas where they are doubtful or uninterested. But, as Meng (2008) factors out, having the right instructional heritage may also have a good have an impact on inclusive teaching. Research indicates that teaching is becoming greater numerous due to expanded workloads and a lack of excitement for entire-person training. Instructors are concerned approximately ability threats to their competence and misbehavior from children with special needs, main to a vast shift in teaching techniques. Teachers may perceive students with special needs as hindering ordinary students' progress by focusing on their own work. This can negatively impact their progress and future courses. The evaluation criteria for both types of students can be contentious, impacting students' knowledge and future courses. Additionally, disciplinary issues may arise. Despite years of experience, few instructors are prepared to teach inclusive education and handle real-world scenarios. Addressing teacher and school needs is crucial for preventing burnout and increasing engagement in inclusive education.

## 2. METHODOLOGY

### Objectives of the Study

This study assesses the deficiency requirements of educators (both teachers and school principals) in Sindh, Pakistan, for the effective management of inclusive education in secondary schools. It focuses on their skills and knowledge in implementing inclusive education, identifying areas requiring training and determining if there is a significant difference in knowledge and skill capabilities between teachers and principals. The study also explores the specific areas where teachers and principals should be taught.

### Research Question

The study questions are formulated to offer a complete knowledge of the initiation of inclusive practices in mainstream schools.

- What know-how and skills do educators have to effectively apply inclusive education in mainstream schools?
- What are the information and ability skills possessed by way of educators in the initiation of inclusive practices in mainstream schools?
- What are the needful training areas for teachers to correctly enforce inclusive training practices in the secondary school's classrooms of Sindh, Pakistan?
- What particular training is required via secondary school principals to successfully manage inclusive education practices?

### Research Hypothesis

A hypothesis was developed and examined at a stage of significance of 0.05 to improve the findings of

the study outcomes.

Ho: There's no significant difference in the common responses of educators in terms of their aptitude in the areas of information and competence required to correctly implement inclusive education practices in the mainstream school setting in Sindh, Pakistan.

### Research Design

This study make used of a survey design to assess the knowledge and ability abilities of teachers and principals in applying inclusive education in secondary schools. The study focuses on regions in which education needs might be progressed or deficient. The study population includes educators and administrators in public secondary schools registered for the Bachelor of Education (B.Ed.) program at the University of Karachi. The program, lasting 1.5 years, aims to provide instructional preparation opportunities for educators, administrators, and those with a Master's degree or a Bachelor's degree with honors or an equivalent qualification. The purposive sampling technique was used for sample selection, with 65 participants, including 51 teachers and 14 school principals. The study aims to address the current requisites and deficiencies in human development personnel and leadership excellence in the education sector.

### Research Apparatus

The study utilized the 'Training Needs Analysis for Inclusive Education (TNAIE)' technique, which was developed after a thorough review of literature on diversity, education, educational policies, inclusive school management, leadership roles, curriculum development, teamwork, community involvement, and inclusive education methodologies (Gonzalez, et al., (2013); Bai & Martin (2015); Navarro-Montano, et al., (2021); Sukinah, et al., (2018); Trivino-Amigo, et al., (2022); Ogba & Ugodulunwa (2020); Kuyini, et al., (2016); and Deng et al., (2017). The instrument was developed to enhance inclusive education practices.

The survey has 40 questions divided into three parts: I, II, and III. Part 'I' includes personal information for teachers and principals, including institution type, gender, teaching position, special education training, and professional experience. Part 'II' of the apparatus consists of 15 items conducted to collect opinions on 10 key issues related to necessary skills for positively initiate inclusive practices in the school's routines. Part 'III' describes 20 competencies for teachers and principals to implement inclusive education in secondary schools, including communication, collaboration, resource utilization, technology management, inclusive classroom management, inclusive teaching methods, effective use of specialized equipment, and active leadership. Part 'III' asks respondents to rate their knowledge or skills on a 5-point scale, with 1-5 indicating a lack of knowledge, 2 indicating a low level skill that requires further development, 3 indicating an intermediate level, 4 indicating a high level that requires minimal development, and 5 indicating a complete level. If the competency does not apply to the respondent's role in an inclusive education environment, they should mark "N/A." A space is provided for comments on training requirements and proficiencies.

### Procedure

The research tool was distributed to both teachers and principals by the principal investigator in collaboration with the co-principal investigator and three other team members. Through a series of collaborative sessions, research assistants received the necessary training. Statistical approaches used to examine the data and answer the research questions include percentages, means, standard deviations, and independent samples t-tests.

## 3. FINDINGS

After analyzing the first part of the survey, it was found that a significant proportion of respondents (65%) were female and 52% were under 40 years of age. Of the total cohort, they accounted for a majority of 78% (N = 51). The remaining 22% (N = 14) worked as school principals. A significant proportion of the participants (57%) is employed in privately-owned educational institutions and has accrued less than ten years of professional experience. Among the complete sample of participants, it was found that a mere 17 individuals (26%) reported having undergone training to effectively interact with students with disabilities. The data revealed that a significant majority, specifically 86%, of teachers reported having no prior experience instructing learners who possess disabilities. Table-1 presents data pertaining to the demography of the participants.



**Table 1**

The Socio-Demographic Characterization of the Sample [N = 65]

Factor	Categories	N	Percentage
Sex	Male	23	35
	Female	42	65
Age	< 40 years	34	52
	> 40 years	31	48
Position	Classroom teacher	51	78
	School principal	14	22
Governing by	Public sector	28	43
	Private sector	37	57
Education stage	Early childhood	09	14
	Primary	14	22
	Secondary	42	64
Teaching experience	< 10 years	41	63
	> 10 years	24	37
Training in Special Education	Yes	17	26
	No	48	74
Experience in Teaching CWDs	Yes	09	14
	No	42	86

The study examines the proficiency of teachers and principals in managing instruction and management competencies in an inclusive education setup. Teachers scored between 2.98 and 3.34, with standard deviations from 1.14 to 1.40. The mean perception scores exceeded the 3.00 cut-off point in all items. Principals had mean scores between 2.8 and 3.84, with mean perception scores exceeding the 3.00 cut-off value except for five out of 25 competencies. The study suggests that educators possess the necessary knowledge and competencies for comprehensive education in high schools, but there is room for improvement in accommodating diverse student needs, using technology, monitoring progress, handling resistance to change, and serving as inspiration and guidance for teaching staff.

**Table 2**

Difference from the average response of participants regarding the knowledge and skills necessary for instructional management

S. #	Knowledge and Skills	X- score of teachers	SD of teacher score	X- score of principals	SD of principal score
1	Effective communication with students in an inclusive classroom setting.	3.52	1.40	3.67	1.44
2	Participating in joint planning and teaching together with special education teacher.	3.63	1.32	3.76	1.31
3	Minimizing the negative impact of society's behavior on students.	3.55	1.22	3.78	1.27
4	Implementing methods to ensure educational inclusion.	3.58	1.24	3.73	1.11
5	Academically gaining knowledge about disability diversity.	3.52	1.18	3.47	1.05
6	Helping people engage in dialogue within an environment that promotes diversity.	3.48	1.14	3.40	1.21
7	Efficiently managing time within an inclusive environment.	3.46	1.19	3.31	1.34
8	Creating and organizing inclusive educational lessons.	3.44	1.16	3.04	1.38
9	Preparing to measure diverse learners and provide input.	3.34	1.18	3.84	1.38
10	Creating an effective strategy to manage behavior.	3.40	1.24	3.16	1.31
11	Utilizing various methods to communicate with CWDs.	3.34	1.25	3.07	1.13
12	Catering to the special educational needs and characteristics of each and every student.	3.34	1.25	2.96*	1.24
13	Using technology to cater to varying requirements of CWDs.	3.36	1.26	2.98*	1.25
14	Showing appreciation for varying types of students' characteristics, skills, and backgrounds.	3.51	1.17	3.04	1.22
15	Understanding the idea behind inclusive education.	3.35	1.25	3.13	1.03
16	Collaborating and exchanging ideas and knowledge with fellow teachers.	3.36	1.26	3.02	1.11

17	Creating personalized/individualized learning plans.	3.39	1.30	3.07	0.96
18	Observing and evaluating each child's learning progress.	3.39	1.19	2.89*	1.15
19	Producing and utilizing teaching – learning materials.	3.48	1.19	3.20	1.12
20	Acquiring the skill of effectively handling the performance of a team.	3.48	1.15	3.13	1.12
21	Acquiring the knowledge to effectively handle opposition towards changes.	3.39	1.20	2.91*	1.14
22	Being knowledgeable on how to increase receptiveness towards new concepts.	3.46	1.15	3.11	1.09
23	Acquiring expertise in operating specialized teaching equipment.	3.39	1.19	2.80*	1.23
24	Effectively handling distractions and disturbances.	3.44	1.14	3.16	0.97
25	Utilizing active techniques for learning.	3.44	1.26	3.13	1.17
NOTE: X- = Mean, SD = Standard Deviation, *Mean<3.00					

Table 3 shows the knowledge and skills perceived and reported by participant educators regarding the management and use of professional support services. With the exception of one variable (item 7), we observed the following: Teachers' average perception scores for all items are above the criterion cutoff value of 3.00. The school principal's average perception score for all assessed competencies exceeded her 3.00 baseline cutoff, except for their two skills: mobility and leadership, and knowledge of managing and using audiovisual equipment.

**Table 3**

Difference in participants' average responses regarding the knowledge and skills needed to access professional support services

S. #	Knowledge and Skills	X- score of teachers	SD of teacher score	X- score of principals	SD of principal score
1	Understanding of the Braille system and associated technologies	3.01	1.47	3.11	1.07
2	Understanding and utilization of convert text to voice software.	3.10	2.22	3.20	1.05
3	Management and utilization of a Braille reader.	3.13	1.37	3.27	1.09
4	Management and utilization of audiometers.	3.11	1.38	3.20	1.01
5	Effective management and utilization of speech training tools.	3.08	1.45	3.18	1.13
6	Understanding and use of sign language.	3.07	1.43	3.13	1.01
7	Understanding about mobility & orientation.	2.98*	1.41	2.87*	1.23
8	Managing and using crutches.	3.09	1.39	3.07	1.05
9	Managing and using abacus.	3.22	1.39	3.13	1.17
10	Using and managing audio-visual equipment.	3.44	1.26	2.96*	1.18
NOTE: X- = Mean, SD = Standard Deviation, *Mean<3.00					

Table 4 outlines the top inclusive education training requirements for teachers and principals. Teachers need training in organizational skills, community engagement, curriculum design, teaching techniques, teamwork, equipment usage, inclusion considerations, and implementation. Principals need training in resource distribution, meeting diverse student needs, curriculum development, policy implementation, disability understanding, managing classrooms and schools, community involvement, diversity, teamwork, special equipment, leadership roles, and transforming practices for students with disabilities.

**Table 4**

Percentage of participants' responses to areas where training is needed for implementing inclusive education

Area of Priority	Teachers' Priority [N = 51]			Principals' Priority [N = 14]		
	N	%	Rank	N	%	Rank
Efficient structuring and administration of educational institutions and individual learning needs.	44	86	1	13	95	2
Active community engagement and participation in the promotion of inclusive education.	40	79	2	8	57	8
Comprehending the concept of diversity within education.	39	77	3	11	84	5
Designing and improving educational programs for CWDs.	38	74	4	12	89	3
Comprehensive grasp of inclusive education principles and practices.	36	71	5	12	89	3
Pedagogical approaches utilized in inclusive education.	35	69	6	10	71	6

Collaborative efforts and team-based work within an inclusive environment.	33	65	7	14	100	1
Utilization of specialized equipment and facilities in a variety of academic practices.	32	63	8	10	71	6
Factors within the school environment that facilitate the implementation of inclusive educational practices.	31	61	9	8	57	8
Incorporating inclusive teaching techniques in educational settings.	30	58	10	8	57	8

A survey was conducted to assess the knowledge and skills of participant educators in the areas of inclusive classroom management, implementation of professional support services, and diversity and inclusion. There was a significant difference between the classroom management scores of teachers and principals, with higher scores for teachers ( $M = 86.90$ ,  $SD = 14.09$ ) and higher scores for principals ( $M = 79.76$ ,  $SD = 14$ ) is shown as statistically significant t-value test [ $t(348) = 3.175$ ,  $p = 0.002$ ]. However, Table 5 shows that there was no significant differences in ability to manage and use professional support services/equipment or general knowledge and skills. This result suggests that teachers have higher abilities in classroom management compared to head teachers.

**Table 5**

Comparison of mean differences in participants' responses regarding the knowledge and skills they have to implement inclusive education

Variable	Group	N	Mean	SD	df	t	P value
Managing teaching & learning	Teacher	51	86.90	14.09	348	*3.175	.002
	Principal	14	79.76	14.09			
Management and Use of Specialized Support Services	Teacher	51	30.94	10.57	348	-.0106	.916
	Principal	14	31.11	7.62			
Competencies Required for understanding diversity & inclusion	Teacher	51	134.30	19.12	348	-0.040	.968
	Principal	14	134.42	17.54			

## Discussion

The main objective of this study was to identify training requirements for teachers and school leaders to successfully implement inclusive education. Quantitative data showed that teachers had clear knowledge of the principles of inclusive education and its components. The current findings contradict those reported by Memisevic and Hodzic (2011), as well as Ogba and Igu (2011) argue that teachers play a critical role in the delivery and implementation of inclusive education, highlighting the importance of teacher assistance and dedication in ensuring implementation of inclusive practices. This conclusion contradicts the conclusions of a previous study by Avramidis et al., (2000), which revealed inadequate teacher preparation. Comparing the mean difference between teachers' and principals' responses to knowledge and skills, trainers have a significant advantage. However, there were no statistically significant differences between the two groups regarding the management and utilization of professional support services and general knowledge and skills.

This finding is not surprising considering that teachers engage with students in the classroom on a daily basis and so have a better grasp of how to teach children in inclusive environment. This conclusion is consistent with the findings expressed in various studies that adequate preparation is necessary for teachers who use direct instruction methods and school leaders who must manage both human and material resources. Developing these skills, according to Cook (2001), Kern (2006), Igwe (2017), and Taweechais-upapong (2014), is crucial in assisting individuals to successfully and efficiently carry out their assigned responsibilities. One of the present study's disadvantages is that its sample was limited to teachers and administrators who were actively engaged in researching modern philosophies and new educational innovations [studying teacher education program]. As a result, these people have a fundamental grasp of inclusive education.

The data revealed that teachers are more supportive of inclusive education than their administrative colleagues, but further training is needed to improve their ability to foster communicative talents in an inclusive classroom context. Educators must also learn assessment skills to monitor the academic development of students with disabilities and their individual special educational requirements. The study concluded that the implementation of inclusive education in Pakistan, particularly in Sindh, is defined by a lack of comprehensive uniformity. This deficiency manifests in the insufficient acquisition of necessary knowledge and skills among teachers and principals, whose roles include providing effective pedagogical teaching and fostering cohesive collaboration. The study also demonstrates a failure on

the part of educational actors to recognize each child's unique value and specific requirements in an inclusive learning environment. The conclusion suggests the need for adequate professional development opportunities for teachers and administrators to equip them with the necessary knowledge and abilities to achieve the intended goals of inclusive education. This study contributes to the literature by providing empirical information for the Sindh Higher Education Commission's capacity development training project.

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### Data Availability Statement

Due to privacy concerns, the data is not publicly available. But, certain de-identified data is accessible upon request.

### Conflicts of Interest

The authors declare that they have no conflicts of interest. The funders had no say in the study design, collection, analysis or interpretation of the data, preparation of the manuscript, or decision to publish the results.

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