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EFFECTIVE TEACHING STRATEGIES USED BY SPECIAL EDUCATION TEACHERS FOR STUDENTS WITH INTELLECTUAL DISABILITIES

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Abstract

Classroom effectiveness in special education largely depends on the pedagogical practices employed by teachers, particularly when working with children who have intellectual disabilities. This study aims to explore the pedagogical strategies and instructional techniques used by special education teachers to enhance learning outcomes and classroom engagement among children with intellectual disabilities. Emphasizing both structured and flexible approaches, the research investigates how these practices align with students' cognitive and behavioral needs. Using a quantitative research design, data were collected from 100 teachers selected through random sampling from both government and private sector institutions, ensuring representation of diverse educational environments. A self-developed questionnaire was used as the data collection tool, and it demonstrated high internal consistency, with a Cronbach's alpha reliability coefficient of .96. The findings indicated that teachers frequently relied on individualized instruction, step-by-step teaching, visual supports, positive reinforcement, and activity-based learning to meet the unique needs of their students. The study highlights the need for ongoing professional development and institutional support to further strengthen teaching practices. The insights gained from this research may help educators, administrators, and policymakers better understand and enhance instructional approaches for students with intellectual disabilities.

1. INTRODUCTION

The education of children with intellectual disabilities (ID) has undergone significant transformation over the past few decades, moving from segregated institutions toward inclusive and individualized learning environments. Intellectual disability is characterized by significant limitations in both intellectual functioning and adaptive behavior, which covers a range of everyday social and practical skills (American Association on Intellectual and Developmental Disabilities [AAIDD], 2021). These children often face challenges in memory, problem-solving, communication, and social interaction, making effective teaching strategies essential to their academic and functional development.

Special education teachers play a critical role in the academic and social progress of students with intellectual disabilities. Their ability to select and apply appropriate pedagogical practices ranging from differentiated instruction and task analysis to the use of visual supports and behavior management

strategies can significantly influence learning outcomes and classroom engagement (Westwood, 2014). Classroom effectiveness in this context is not solely determined by content delivery but by how well the instructional strategies are adapted to meet the unique learning profiles of each student.

Numerous studies highlight that effective pedagogy for children with ID involves structured, repetitive, and scaffold instruction embedded in real-life contexts (Scruggs & Mastropieri, 2017). Teachers must also employ multi-sensory methods, individualized education plans (IEPs), and positive reinforcement to maintain motivation and manage behavior. However, research indicates that the implementation of these strategies varies widely, often depending on teacher training, experience, class size, and the availability of resources (Sharma et al., 2017).

In Pakistan, although efforts have been made to expand inclusive education, many special education classrooms continue to lack the necessary training and tools required for effective pedagogical implementation (Rauf et al., 2020). There is a pressing need to explore and document the current pedagogical practices used by special education teachers, especially those teaching children with mild and moderate intellectual disabilities. Identifying these practices and assessing their perceived effectiveness will help bridge the gap between policy and classroom realities, ultimately improving educational outcomes for students with ID. Effective classroom teaching strategies are critical to achieving positive learning outcomes for children with intellectual disabilities (ID). These students typically face difficulties in reasoning, memory, attention, and adaptive behavior, requiring specially tailored instructional approaches. Teachers who implement structured, individualized, and engaging pedagogical practices can significantly enhance classroom effectiveness and student achievement (Scruggs & Mastropieri, 2017).

Task analysis involves breaking down complex activities into smaller, manageable steps that are taught sequentially. This method helps students with ID grasp and perform tasks that may otherwise seem overwhelming. For example, brushing teeth can be broken down into steps like picking up the toothbrush, applying toothpaste, brushing, rinsing, and so on (Westwood, 2014). This strategy supports the development of both academic and daily living skills. Visual supports such as picture cards, charts, and visual timetables—help students with ID understand instructions, follow routines, and transition between activities. These aids are especially beneficial for students with limited verbal comprehension (Dettmer, Thurston, & Dyck, 2005). A structured visual environment reduces confusion and increases independence.

Repetitive practice reinforces learning, while positive reinforcement—such as verbal praise, tokens, or small rewards motivates students to continue demonstrating desired behaviors. Repetition strengthens memory retention, and reinforcement encourages participation and sustained attention (Scruggs & Mastropieri, 2017).

Effective teachers adapt their instruction based on the student's Individualized Education Plan (IEP), aligning teaching strategies with each child's learning goals, pace, and needs. This personalized approach improves comprehension, task mastery, and academic performance (Smith, Polloway, Patton, & Dowdy, 2015).

Multi-sensory instruction involves using a combination of visual, auditory, tactile, and kinesthetic modalities to engage learners. For example, using textured letters, action songs, or hands-on manipulatives enhances understanding and retention for students with diverse learning preferences (Tomlinson, 2014; Westwood, 2014).

Assistive technologies such as speech-to-text software, talking dictionaries, and augmentative communication devices help students with ID overcome communication and learning barriers. These tools enhance accessibility and engagement in the learning process (Blackhurst & Edyburn, 2000).

Peer tutoring and cooperative learning strategies allow students with ID to work alongside peers, promoting both academic and social growth. These strategies improve communication, confidence, and classroom participation (Vaughn, Bos, & Schumm, 2018).

PBS involves proactive strategies for promoting desirable behavior and preventing disruptive conduct. Teachers set clear expectations, use behavior charts, and apply consistent reinforcement,

contributing to a more structured and effective classroom environment (Sugai & Simonsen, 2012).

The functional curriculum focuses on teaching practical skills such as personal hygiene, money management, and transportation use that are essential for independent living. This approach makes learning meaningful and directly relevant to real-life situations (Browder & Spooner, 2006).

A well-organized and predictable classroom environment helps reduce anxiety and behavioral issues. Clearly defined routines, physical space organization, and consistent transitions contribute to greater classroom control and learning effectiveness (Dettmer et al., 2005).

Despite growing recognition of the importance of inclusive and specialized teaching methods for students with intellectual disabilities, there remains a lack of empirical evidence regarding the classroom strategies used by special education teachers. Teachers often rely on personal experience rather than evidence-based practices, which may hinder classroom effectiveness. This study addresses the need to document and analyze pedagogical practices that contribute to improved classroom performance and student engagement in special education settings.

Objectives of the study

1. To identify the pedagogical practices commonly used by special education teachers for students with intellectual disabilities.
2. To know the significant difference of special education teachers in using pedagogical practices used by special education teachers to achieve classroom effectiveness for children with intellectual disability based on their gender.
3. To suggest recommendations for improving classroom practices in special education.

Questions of the study

1. What teaching strategies are most commonly used by special education teachers working with students with intellectual disabilities?
2. How to know the significance difference of special education teachers in using pedagogical practices used by special education teachers to achieve classroom effectiveness for children with intellectual disability based on their gender?
3. What are the suggested recommendations for improving classroom practices in special education?

Significance of the Study

The study will contribute to the understanding of how pedagogical practices influence classroom effectiveness for children with intellectual disabilities. It will assist:

1. Special education teachers in improve their instructional methods.
2. Teacher training institutions in designing effective professional development programs.
3. School administrators and policymakers in resource planning and curriculum support.

Methodology

Population and Sample

The population of this study comprised teachers of children with intellectual disabilities working in special education institutions across the Punjab province. A total sample of 100 teachers was selected through the random sampling technique. Participants were drawn from both government and private sector institutions, ensuring representation across diverse educational settings.

Instrument Development

A structured close-ended questionnaire was developed by the researchers based on an extensive review of related literature. The instrument consisted of 13 statements, designed to measure teachers' preferences and practices in teaching life skills to children with mild and moderate intellectual disabilities.

Each item was rated on a five-point Likert scale, where:

5 = Very Much
4 = Somewhat
3 = Undecided
2 = Rarely
1 = Never

Validity and Reliability

To ensure content validity, the questionnaire was reviewed and validated by a panel of experts in the

field of special education. Necessary modifications were made based on their feedback.

The internal consistency reliability of the instrument was calculated using Cronbach's Alpha, yielding a value of $\alpha = 0.96$, which indicates excellent reliability (George & Mallery, 2003).

Data Collection Procedure

The questionnaires were personally distributed to the selected teachers by the researchers and later collected in person. This direct approach facilitated clear communication and resulted in a 100% response rate, enhancing the validity and completeness of the data.

Data Analysis and results

After data collection, the responses were analyzed using SPSS (Statistical Package for the Social Sciences). Both descriptive statistics (e.g., mean, SD, percentage) were applied to examine the trends and patterns in the data.

Results of the Study:

Statements	Very Much	Somewhat	Undecided	Rarely	Not at All
Scheduling the classroom routine for all children with intellectual disability affects classroom effectiveness.	*41%*	*36 %*	*9 %*	*6 %*	*6 %*
Cognitively oriented instructions for children with intellectual disability affect classroom effectiveness.	*43%*	*33%*	*13%*	*4 %*	*4 %*
Concrete learning experiences for children with intellectual disability affect classroom effectiveness.	*49%*	*27%*	*15%*	*3%*	*3%*
One-on-one explanation to children with intellectual disability affects classroom effectiveness.	*46%*	*30%*	*6%*	*10%*	*6%*
Peer tutoring for children with intellectual disability affects classroom effectiveness	*36%*	*40%*	*16%*	*4.6%*	*1.5%*
Repetition of the concept over the day for children with intellectual disability affects classroom effectiveness	24%	52%	34%	7%	6%
Providing supplementary aids and services to children with intellectual disability affects classroom effectiveness	32%	44%	15%	3 %	4.6%

Giving Immediate feedback to children with Intellectual disability affects classroom effectiveness.	36%	44%	12%	3 %	3 %
Continually rewarding classroom rules to children with intellectual disability affects classroom effectiveness	40%	30%	18 %	7.7 %	3%
Teaching baby steps to children with intellectual disability affects classroom effectiveness.	38%	40%	12%	6 %	3 %
Managing the teacher-student ratio affects classroom effectiveness.	36	35%	16%	7.7%	3 %
Maintaining a strict environment positively affects the classroom	32%	40%	20%	4.6%	3 %
Providing a quiet classroom environment for children with intellectual disabilities to learn and practice skills enhances classroom effectiveness.	44%	30%	6.2 %	12%	4.7%

The study explored teachers' perceptions of various pedagogical practices and their impact on classroom effectiveness for children with intellectual disabilities. A majority of **41**% of teachers indicated that **scheduling the classroom routine** "very much" affects classroom effectiveness for children with intellectual disabilities. **43**% of teachers reported that **cognitively oriented instruction** has a significant positive effect on classroom effectiveness. **49**% stated that providing **concrete learning experiences** "very much" enhances classroom effectiveness. **46**% believed that giving **one-on-one explanations** to students with intellectual disabilities "very much" improves classroom outcomes. **40**% of teachers felt that **teaching in small, manageable steps (baby steps)** "somewhat" affects classroom effectiveness.

40% of teachers responded that **peer tutoring** "somewhat" contributes to classroom effectiveness. **52**% of teachers indicated that **repetition of concepts throughout the day** "somewhat" affects classroom effectiveness. **44**% of teachers believed that giving **immediate feedback** "somewhat" improves classroom effectiveness. **40**% of respondents noted that **continually reinforcing classroom rules** "very much" enhances classroom functioning.

Provision of assistive aids, 44% of teachers agreed that providing **supplementary aids and services** "somewhat" affects classroom effectiveness. Another **40**% responded that offering **supplementary aids specifically for learning and practicing skills** also "somewhat" contributes to effectiveness.

As far as Environmental Modifications are discussed, 44% of teachers stated that ensuring a **quiet workspace** for students "very much" improves their ability to learn and practice skills. **36**% believed that managing an appropriate **student-teacher ratio** "very much" affects classroom effectiveness.

Findings of the Study:

	Mean	SD	Min	Max
Schedule class routine	4.02	1.152	1.00	5.00
Cognitively oriented instructions	4.06	1.088	1.00	5.00
Concrete learning	3.82	1.038	1.00	5.00
One-on-one explanation	4.22	1.237	1.00	5.00

Peer tutoring	4.05	.933	1.00	5.00
Repetition of the concept over the day	3.92	1.088	1.00	5.00
Providing supplementary aids	3.82	1.015	1.00	5.00
Giving Immediate feedback	4.09	.947	1.00	5.00
Continually reward classroom rules	3.09	1.089	1.00	5.00
Teach baby steps	3.89	1.022	1.00	5.00
Manage student-teacher ratio	4.0	1.067	1.00	5.00
Maintain strict rules	3.00	.988	1.00	5.00
Providing a quiet workplace	3.99	1.208	1.00	5.00

This table shows that the teachers of special education institutions in Punjab use the same types of strategies in the classroom. One-on-one explanation is mostly used in the classroom effectiveness of teachers of intellectual disability. Among all strategies, one-on-one explanation recorded the highest mean score of 4.22, highlighting the perceived importance of individualized instruction. This finding aligns with research emphasizing that individualized teaching allows educators to adapt instruction to learners' cognitive pace, sensory needs, and attention capacities, particularly for children with learning difficulties or neurodevelopmental conditions such as Autism Spectrum Disorder (ASD) and Sensory Processing Disorder (SPD) (Tomlinson, 2014; Odom et al., 2018).

Similarly, giving immediate feedback (M = 4.09) and cognitively oriented instructions (M = 4.06) were rated highly. Immediate feedback plays a crucial role in reinforcing correct responses, improving task engagement, and preventing error repetition (Hattie & Timperley, 2007). Cognitively oriented instruction supports executive functioning, working memory, and problem-solving skills, which are often compromised in children with attention and sensory processing challenges (Diamond, 2013).

The strategy of peer tutoring (M = 4.05) also demonstrated strong endorsement. Peer-mediated learning has been widely recognized for promoting social interaction, academic engagement, and cooperative learning, especially in inclusive classroom settings (Kamps et al., 2015).

In contrast, continually rewarding classroom rules (M = 3.09) and maintaining strict rules (M = 3.00) received the lowest mean scores. This may reflect a shift away from rigid, compliance-based behavior management toward more flexible, relationship-centered, and needs-based approaches (Mushtaq, 2024). Research suggests that excessive rule rigidity may increase anxiety and behavioral dysregulation in children with sensory and attention difficulties (Greene, 2016).

Conclusion

The findings of this study highlight the significant role of evidence-based pedagogical practices in improving classroom effectiveness for children with intellectual disabilities. Teachers reported that structured routines, cognitively oriented instruction, concrete learning experiences, and one-on-one explanations have a strong positive impact on student engagement and learning outcomes. These strategies support the need for individualized, consistent, and accessible instructional approaches in special education settings.

Moreover, practices such as peer tutoring, repetition of concepts, and immediate feedback were acknowledged as moderately effective, indicating their usefulness in reinforcing learning when appropriately applied. The emphasis on repetition and scaffolding reflects the importance of reinforcing content through multiple exposures for children with intellectual limitations.

The findings also suggest that supplementary aids and services, manageable student-teacher ratios, and quiet workspaces contribute meaningfully to creating an effective learning environment. These environmental and instructional supports are essential in minimizing distractions, accommodating diverse needs, and ensuring focused learning.

Overall, the study underscores the importance of equipping special education teachers with practical strategies and resources that align with the unique learning profiles of children with intellectual disabilities. Investing in teacher training, classroom accommodations, and individualized instructional planning is vital for fostering inclusive, effective, and developmentally appropriate classrooms.

Recommendations

Based on the analysis of teachers' responses regarding effective classroom strategies, the following recommendations are proposed to enhance the teaching and learning process for children with intellectual disabilities:

Develop and Maintain a Structured Classroom Routine

Educational institutions should encourage special education teachers to implement clearly defined and consistent classroom schedules, as structured routines were shown to significantly impact student performance.

Incorporate Cognitively-Oriented Instructional Methods

Teachers should use instruction that stimulates thinking, problem-solving, and comprehension skills tailored to the cognitive levels of students with intellectual disabilities.

Emphasize Concrete Learning Experiences

Hands-on, real-life, and practical learning activities should be integrated into lesson plans, as these methods support better understanding and engagement among students.

Promote One-on-One Teaching Support

More opportunities for individualized instruction should be provided to address specific learning needs and pace of students with intellectual disabilities.

Use Repetition and Step-by-Step Instruction

Teachers should repeat key concepts throughout the day and break down tasks into smaller, manageable steps to enhance retention and mastery.

Implement Peer Tutoring Strategically

While peer tutoring was moderately rated, structured peer support programs can promote social interaction and cooperative learning when appropriately facilitated.

Ensure Availability of Supplementary Aids and Services

Schools must provide adequate teaching aids, visual supports, and assistive technologies to help reinforce classroom learning.

Offer Immediate and Positive Feedback

Providing timely feedback helps students understand their progress and areas needing improvement, reinforcing positive behavior and learning outcomes.

Establish Behavior Management through Reinforcement of Rules

Continuous reinforcement of classroom rules and expected behaviors helps create a stable learning environment.

Maintain an Optimal Student–Teacher Ratio

Policy makers and school administrators should ensure manageable classroom sizes to enable teachers to offer individualized attention.

Provide Quiet and Low-Stimulation Workspaces
Classrooms should have designated quiet areas that allow students to focus on tasks, particularly those needing extra concentration or sensory regulation.

Ongoing Teacher Training and Professional Development
Special education teachers should receive regular training on effective pedagogical strategies, classroom management techniques, and differentiated instruction tailored to students with intellectual disabilities.

REFERENCES

American Association on Intellectual and Developmental Disabilities. (2021). *Definition of intellectual disability*. https://www.aaidd.org

Blackhurst, A. E., & Edyburn, D. L. (2000). A brief history of special education technology research. *Journal of Special Education Technology, 15*(1), 19–33.

Browder, D. M., & Spooner, F. (2006). *Teaching students with moderate and severe disabilities*. Guilford Press.

Dettmer, P., Thurston, L. P., & Dyck, N. J. (2005). *Consultation, collaboration, and teamwork for students with special needs*. Pearson.

Diamond, A. (2013). Executive functions. *Annual Review of Psychology, 64*, 135–168. https://doi.org/10.1146/annurev-psych-113011-143750

Dunn, W. (2007). Supporting children to participate successfully in everyday life by using sensory processing knowledge. *Infants & Young Children, 20*(2), 84–101.

Greene, R. W. (2016). *Raising human beings*. Scribner.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112. https://doi.org/10.3102/003465430298487

Kamps, D., Thiemann-Bourque, K., Heitzman-Powell, L., Schwartz, I., Rosenberg, N., Mason, R., & Cox, S. (2015). A comprehensive peer network intervention to improve social communication of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 45*, 1809–1824.

Mushtaq, T., Fazil, H., & Parveen, Z. (2024). Impact of High-Sensory Issues on Attention: Understanding the Negative Effects. *Pakistan Social Sciences Review, 8*(3), 988–996. https://doi.org/10.35484/pssr.2024(8-III)80

Odom, S. L., Collet-Klingenberg, L., Rogers, S. J., & Hatton, D. D. (2018). Evidence-based practices in interventions for children and youth with autism spectrum disorders. *Preventing School Failure, 62*(3), 145–155.

Rauf, M., Qureshi, M. A., & Imran, H. (2020). Challenges faced by special education teachers in implementing inclusive education in Punjab, Pakistan. *Journal of Inclusive Education*, 4(1), 45–58.

Scruggs, T. E., & Mastropieri, M. A. (2017). *Strategies for teaching students with learning and behavior problems* (10th ed.). Pearson.

Sharma, U., Forlin, C., & Loreman, T. (2017). Impact of training on pre-service teachers' attitudes and concerns about inclusive education in Pakistan. *International Journal of Inclusive Education*, 21(1), 1–15. https://doi.org/10.1080/13603116.2016.1184325

Smith, T. E. C., Polloway, E. A., Patton, J. R., & Dowdy, C. A. (2015). *Teaching students with special needs in inclusive settings* (7th ed.). Pearson.

Sugai, G., & Simonsen, B. (2012). *Positive behavioral interventions and supports: History, defining features, and misconceptions*. Center for PBIS.

Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). ASCD.

Vaughn, S., Bos, C. S., & Schumm, J. S. (2018). *Teaching students who are exceptional, diverse, and at risk in the general education classroom* (7th ed.). Pearson.

Westwood, P. (2014). *Learning and learning difficulties: A handbook for teachers*. ACER Press.

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