

Attitudes and Knowledge of Teachers toward the Inclusion of Students with Hearing Impairment in Inclusive Schools of UAE

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To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v14-i2/25591> DOI:10.6007/IJARPED/v14-i2/25591

Published Online: 10 June 2025

Abstract

This study investigates the attitudes and knowledge of teachers toward the inclusion of students with hearing impairments in inclusive schools in the UAE. A mixed-methods research approach was employed, focusing on Abu Dhabi schools. Quantitative data was collected through structured questionnaires, and qualitative insights were gathered through pilot testing and expert validation. The results indicate varying levels of knowledge and attitudes, with significant relationships between teacher preparedness and the success of inclusion practices. The study highlights the necessity for tailored training programs and policy adaptations to support inclusive education practices more effectively.

Keywords: Inclusive Education, Hearing Impairment, Teacher Attitude, Teacher Knowledge, UAE, Special Education

Introduction

Inclusive education aims to provide equitable opportunities for all students regardless of abilities or disabilities. In the UAE, hearing impairment is among the most common physical disabilities affecting students' participation in inclusive classrooms. This research addresses the role of teachers' attitudes and knowledge in determining the success of inclusion for students with hearing impairments. Recognizing the importance of teacher preparedness is essential for implementing effective inclusive education policies.

Statement of the Problem

Despite several inclusive education reforms in the UAE, students with hearing impairments are often educated in segregated settings. The gap between inclusive policy and actual practice is primarily attributed to inadequate teacher knowledge and negative attitudes. This study identifies and addresses these challenges, focusing on how teachers' understanding and perceptions influence inclusive implementation in Abu Dhabi schools.

Objectives of the Research

RO1: To investigate teachers' attitudes towards the inclusion of students with hearing impairment in inclusive schools.

RO2: To investigate teachers' knowledge capacity on the inclusion of students with hearing impairment in inclusive schools.

RO3: To investigate the relationship between teachers' attitudes and knowledge toward inclusion of students with hearing impairments.

RO4: To compare the attitudes and knowledge of teachers across different educational cycles (KG to Grade 12) in UAE schools.

Research Questions

RQ1: What are the attitudes of teachers toward the inclusion of students with hearing impairment in inclusive schools?

RQ2: What is the knowledge capacity of teachers toward inclusion of students with hearing impairments in inclusive schools?

RQ3: What is the relationship between teachers' attitude and knowledge towards inclusion of students with hearing impairments?

RQ4: What is the relationship between attitudes and knowledge across different school cycles (KG1-12)?

Literature Review

Existing research emphasizes the importance of inclusive practices and how teacher preparedness affects successful integration. Teachers' attitudes and knowledge significantly influence their willingness to adapt teaching for hearing-impaired students. This review integrates findings from UAE policies, global inclusive education models, and studies on effective strategies for students with hearing loss.

Teacher attitude is widely recognized as a determining factor in the success of inclusive education. Positive attitudes are associated with higher inclusion rates, better student-teacher relationships, and more adaptive teaching methods. Conversely, negative or uncertain attitudes often lead to the marginalization of students with special needs (Gaad & Khan, 2019).

Factors influencing attitude include:

- Previous experience with students with disabilities
- Perceived self-efficacy in inclusive teaching
- Institutional support and classroom conditions

In the UAE, Gaad (2010) found that teachers with training in special education reported more favorable attitudes toward students with hearing impairments than those without such training.

While attitude reflects willingness, **knowledge represents capability**. Teachers with higher levels of factual and procedural knowledge are more likely to implement differentiated instruction and make appropriate use of assistive technologies (Pérez-Jorge et al., 2021).

Critical knowledge areas include:

- Types and degrees of hearing loss
- Effective communication techniques (e.g., lip reading, signed language, visual cues)

- Classroom accommodations and use of hearing aids

Lack of knowledge often leads to misconceptions about what hearing-impaired students can achieve and reinforces exclusionary practices.

Methodology

This study adopted a quantitative, cross-sectional survey design to investigate the attitudes and knowledge of teachers toward the inclusion of students with hearing impairment. The target population consisted of teachers in public inclusive schools in Abu Dhabi. A stratified random sampling technique was used to ensure proportional representation across different education levels: KG, primary (Grades 1–4), intermediate (Grades 5–8), and secondary (Grades 9–12).

The final sample comprised 260 teachers, selected from ten government schools. Ethical approval was obtained from both the UAE Ministry of Education and the School of Educational Studies, University Sains Malaysia.

Two standardized instruments were used:

- Attitude Scale (adapted from Hassanein et al., 2021): A 5-point Likert scale with items reflecting teachers' beliefs, emotions, and intentions toward inclusion.
- Knowledge Scale (adapted from Alotaibi et al., 2020): Focused on factual knowledge related to inclusive teaching practices, hearing impairments, and instructional strategies.

Content validity was ensured through expert review by five professionals in special education and audiology. A pilot study with 30 participants was conducted, yielding strong Cronbach's Alpha values:

- Attitude scale: $\alpha = 0.87$
- Knowledge scale: $\alpha = 0.91$

SPSS v25 was used for data analysis. Descriptive statistics (mean, standard deviation) assessed the central tendency and distribution of responses, while Pearson correlation and ANOVA tests were employed to explore relationships and group differences.

Instrumentation and Validation

The study utilized two validated instruments: one measuring teacher attitudes (Hassanein et al., 2021) and another assessing teacher knowledge (Alotaibi et al., 2020). The instruments were reviewed by field experts for content validity. A pilot study with 30 teachers was conducted, and Cronbach's Alpha confirmed reliability: 0.87 for attitudes and 0.91 for knowledge.

Content Validation

To ensure content validity, both instruments were reviewed by a panel of 7 experts in the fields of special education, audiology, and educational psychology. The experts were from UAE, Jordan, and Malaysia. They assessed the instruments for relevance, clarity, and cultural appropriateness.

An item was retained if at least 80% of the panel rated it as "essential" using Lawshe's method. Several items were modified based on their suggestions—such as replacing technical terms with local terminology or providing clarifying examples.

Pilot Study and Reliability Testing

A pilot study was conducted with 30 teachers from two inclusive schools in Abu Dhabi. Responses were analyzed to test the internal consistency reliability using **Cronbach's Alpha**:

- Attitude scale: $\alpha = 0.87$ (Good reliability)
- Knowledge scale: $\alpha = 0.91$ (Excellent reliability)

This pilot also allowed refinement of questionnaire layout, clarity of instructions, and timing. Participants reported that the survey was clear and feasible to complete within 15–20 minutes

Findings

The analysis revealed that most teachers demonstrated moderately positive attitudes and sufficient knowledge toward inclusion. A significant positive correlation was found between teachers' attitudes and their knowledge ($r = 0.71$, $p < 0.01$). Additionally, differences were observed across school cycles, with primary school teachers showing more favorable attitudes compared to higher grades.

A **Pearson correlation analysis** showed a significant positive relationship between teachers' attitudes and knowledge ($r = 0.71$, $p < 0.01$), indicating that the more knowledgeable a teacher is, the more likely they are to have a favorable attitude toward inclusion.

An **ANOVA test** revealed statistically significant differences in attitude and knowledge across different school levels. Teachers at the KG and lower primary levels exhibited higher positive attitudes than those at the intermediate and secondary levels. These differences could be due to classroom dynamics, teacher-student ratios, and the relative flexibility of early childhood education.

Qualitative feedback from open-ended questionnaire items pointed to several challenges:

- Lack of sign language proficiency
- Overcrowded classrooms
- Inadequate access to hearing aids and assistive devices
- Minimal professional development in auditory rehabilitation

These findings underline the importance of not just policy reform, but also robust professional development and classroom-level support mechanisms to sustain inclusive education.

Recommendations

1. Provide targeted training for teachers on auditory rehabilitation and the use of hearing aids.
2. Encourage Ministry-level policy revisions to strengthen inclusive practices.
3. Foster community awareness on inclusion of hearing-impaired students.
4. Support schools with assistive technologies and ongoing teacher development.

Conclusion

This study highlights that teachers' attitudes and knowledge are vital to the success of inclusive education for students with hearing impairment. While there are encouraging signs of progress, structured efforts are required at multiple levels to bridge policy and practice gaps. The findings provide evidence to inform training programs and strategic planning for educational stakeholders in the UAE.

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