

Teachers' Preparation and Professional Development on Inclusive Education Classrooms in Ringim Zonal Education Jigawa State

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ABSTRACT

This study examined teachers' preparation and professional development on inclusive education classrooms in Ringim Zonal Education Jigawa state. The purpose of the study was to investigate how teacher training and continuous professional development influence effective teaching and learning in inclusive educational settings. Two (2) research objectives guided the study with a corresponding two (2) research questions and two (2) null hypotheses respectively. The study adopted a descriptive survey research design. The population of the study consisted teachers in some selected secondary schools in Ringim zonal education with a sample size of 200 teachers. A structured questionnaire named Teachers' Preparation and Professional Development on Inclusive Education Classrooms Questionnaire (TPPDIECQ) with a reliability coefficient of $r=.792$, was used as the main instrument for data collection. Data collected were analyzed using descriptive and inferential statistics of Pearson's correlation and Regression analysis. The findings of the study revealed that teachers are moderately prepared for inclusive classrooms and that professional development significantly improves teachers' competence in inclusive education. The study also found that inadequate training, lack of instructional materials, and overcrowded classrooms are major challenges affecting the successful implementation of inclusive education. Based on the findings, the study concluded that effective teacher preparation and continuous professional development are essential for successful inclusive education practices. The study recommended that government, educational authorities, and teacher training institutions should organize regular training programs, provide adequate instructional materials, and strengthen policies that support inclusive education in schools.

Keywords: Inclusive Education, Teachers' Preparation, Teachers' Professional Development

INTRODUCTION

Inclusive education becomes a major focus in modern educational systems across the world. Inclusive education represents a shift from segregation to participation and equity. It is grounded in the belief that every child has the right to quality education within the general education system, irrespective of their physical, intellectual, social, or emotional differences (UNESCO, 2017). The teacher, as the key agent of change, plays a pivotal role in transforming this vision into practice. However, the success of inclusive classrooms heavily depends on the

preparedness, competence, and ongoing professional development of teachers (Florian & Black-Hawkins, 2011). Inclusive classrooms emphasize the right of every learner, regardless of disability, gender, ethnicity, language, or socioeconomic background, to participate fully in mainstream education. The success of inclusive education largely depends on teachers' competence, attitudes, and preparedness. Consequently, teacher preparation and professional development are essential for creating effective inclusive

classrooms. Teacher preparation refers to the training teachers receive before entering the profession, while professional development involves continuous learning opportunities that enhance teachers' skills throughout their careers (UNESCO, 2017). Both are critical in equipping teachers with the knowledge, strategies, and confidence needed to address diverse learners' needs. Inclusive education aims to provide all students, irrespective of their physical, intellectual, emotional, and social needs, with access to quality education in mainstream classrooms. The goal is to ensure that no child is left behind and that each student is provided with the necessary support to thrive in an equitable learning environment. However, the success of inclusive education largely depends on the preparedness and competency of teachers to effectively address the diverse needs of all students (UNESCO, 2017). This is where teacher training and professional development become crucial. Forlin, (2010) revealed that many teachers feel inadequately prepared to teach in inclusive settings, especially when dealing with students with special educational needs. Therefore, strengthening teacher education programs and continuous professional development is necessary for successful inclusive education.

Teacher preparedness refers to the knowledge, skills, attitudes, and confidence teachers possess to meet the needs of diverse learners in inclusive settings (Forlin, 2010). Studies emphasize that inclusive readiness involves not only pedagogical proficiency but also an inclusive mindset (Forlin, 2010). According to Kiel et al. (2019), teacher preparedness is the ability of educators to apply inclusive methods. This includes having a solid understanding of inclusive pedagogy, being proficient in differentiated instruction, having a good attitude towards students with Special Educational Needs and

Disabilities (SEND) and feeling comfortable managing diverse classrooms. Since instructors who lack the necessary training or confidence frequently find it difficult to modify their lessons for a diverse student body, research shows that teacher readiness is a critical factor in determining the effectiveness of inclusion (Soma et al., 2023). Since inclusive education necessitates constant adaptation to new approaches and evolving student demands, preparedness also goes beyond initial teacher education to ongoing professional development (Adu-Yeboah et al., 2024).

In Nigeria, while the policy framework for inclusive/special needs education is well-established, including guidelines from the National Policy on Special Needs Education (SNE) Nigeria (2015), Nigeria is involved in Special Needs Education but the present practices are not fully consistent with existing global best practices. More so, the inclusive classrooms laboratories in the country are not yet technology driven. The reality of inclusive education in classrooms still faces significant challenges. One of the most prominent challenges is the lack of adequate teacher training and professional development to equip educators with the necessary skills and knowledge to teach in an inclusive environment. Without proper training, teachers may struggle to manage classrooms with diverse needs, resulting in either neglecting the needs of certain students or failing to provide an environment conducive to learning for all. The need for comprehensive teacher training and continuous professional development becomes even more crucial when considering the unique challenges faced by students with disabilities, those from marginalized communities, and those who require additional learning support. In this context, teacher training programs must not only focus on theoretical knowledge but also

provide practical, hands-on strategies for differentiation, classroom management, and the use of assistive technologies. Moreover, it is vital that professional development programs move beyond one-time workshops and engage teachers in continuous learning, offering regular opportunities to reflect, collaborate, and implement inclusive teaching practices.

While some states in Nigeria have taken significant steps to integrate inclusive education training into teacher education programs, many teachers still lack the knowledge and professional skills to effectively support a diverse student body. The quality of teacher training programs varies across the teacher training colleges and faculties, and there is often a gap between policy intentions and classroom realities. Therefore, improving teacher training and professional development is critical for achieving the broader goal of inclusive education in Nigeria. This paper aims to explore the current state of teacher training and professional development for inclusive education in Ringim Zonal Educational Office Jigawa state, analyzing the existing programs, challenges, and opportunities for improvement. It will also examine the role of government policies and teacher education institutions, in enhancing teacher preparedness for inclusive classrooms.

Research Objectives

The study was guided by the following objectives:

1. To examine teachers' preparation on inclusive education classrooms in Ringim Zonal Education Jigawa state.
2. To explore the nature and extent of professional development on inclusive education classrooms in Ringim Zonal Education Jigawa state.

Research Questions

In line with the objectives, the study seeks to answer the following research questions:

1. What are teachers' levels of preparation on inclusive education classrooms in Ringim Zonal Education Jigawa state?
2. To what extent of professional development on inclusive education classrooms in Ringim Zonal Education Jigawa state?

METHODOLOGY

The study employed a descriptive survey design. Because the design enable the researchers' collection of teachers' opinions, attitudes, and practices across sizable populations (Creswell & Creswell, 2018). Descriptive surveys are especially helpful in education research (Etikan, 2016). A survey offers the breadth necessary for a thorough study since inclusive education encompasses a variety of elements, including teacher knowledge, attitudes, and resource availability. This study's population consisted of all the one thousand four hundred and sixty one (1,461) senior secondary school teachers working in the public senior secondary schools in Ringim Zonal Education Jigawa state. The study sample consisted of 200 teachers in total. Yamane's (1967) formula, which is frequently used in social and educational research, was used to get this sample size:

$$n = \frac{N}{1 + (e^2)}$$

$$1 + (e^2)$$

Where:

- n = sample size
- N = population size (1,250 teachers)
- e = margin of error (0.05 at 95% confidence level)

According to the computation, 303 teachers were the bare minimum sample size needed. However, the researcher used a practical sample of 200 teachers because of time, resource, and accessibility issues; this sample is still within an acceptable range for

educational surveys (Taherdoost, 2019). For survey research in education, researchers contend that samples larger than 150 offer sufficient statistical power, especially when the population is homogeneous (Hair et al., 2019). A sampling strategy with multiple stages was used. To guarantee representation, schools were first divided into public and private institutions. The number of participants from each stratum in relation to their population was then chosen using proportionate sampling. Lastly, teachers within each school were selected by simple random sampling. This combination reduces sampling bias and guarantees representativeness (Etikan & Bala 2017). A structured questionnaire named Teachers' Preparation and Professional Development on Inclusive Education Classrooms

Questionnaire (**TPPDIECQ**) with a reliability coefficient of $r=.792$, was used as the main instrument for data collection. Data collected were analyzed using descriptive and inferential statistics of Pearson's correlation to explore associations between teacher preparedness and inclusive classroom outcomes and Regression analysis to determine the predictive power of preparedness and support on student outcomes.

For instance, if correlation analysis yielded $r = 0.62$, $p < 0.01$, it would suggest a strong positive relationship between teacher preparedness and inclusive classroom outcomes, supporting the assumption that well-prepared teachers foster more inclusive participation

RESULTS

Research Question One: What are teachers' levels of preparation on inclusive education classrooms in Ringim Zonal Education Jigawa state?

Correlation Analysis

Table 1: Correlation Matrix of Key Constructs

Variable	Knowledge	Attitudes	Efficacy	Support	Outcomes
Knowledge	1.000	0.42	0.45	0.38	0.41
Attitudes	0.42	1.000	0.46	0.39	0.44
Efficacy	0.45	0.46	1.000	0.47	0.52
Support	0.38	0.39	0.47	1.000	0.49
Outcomes	0.41	0.44	0.52	0.49	1.000

(All correlations are Pearson r ; values rounded to two decimals.)

The five constructs have positive, moderate connections, according to the correlation matrix. Teachers who report more understanding of inclusive education also typically report better classroom outcomes,

according to a moderate correlation between knowledge and outcomes ($r = 0.41$). There is a

moderate correlation between attitudes and outcomes ($r = 0.44$), indicating that higher perceived efficacy is associated with more positive attitudes towards inclusion. The strongest bi-variate connection between teacher self-efficacy and results ($r = 0.52$) suggests that improved perceived classroom outcomes are strongly correlated with one's confidence in one's capacity to modify instruction and manage varied learners. Additionally, there is a

strong correlation between institutional support and outcomes ($r = 0.49$), indicating that administrative assistance, specialized input, and resources are crucial facilitators of inclusive practice. A network where preparedness (knowledge, attitudes, and efficacy) and support are positively correlated

and jointly connected to higher reported inclusive outcomes is suggested by the correlation pattern. To investigate distinct predictive contributions, these bi-variate correlations support moving further with multivariate modeling.

Research Question Two: To what extent of professional development on inclusive education classrooms in Ringim Zonal Education Jigawa state?

Multiple Regression Analysis

Model: Outcomes = $\beta_0 + \beta_1(\text{Knowledge}) + \beta_2(\text{Attitudes}) + \beta_3(\text{Efficacy}) + \beta_4(\text{Support}) + \varepsilon$ ($N = 200$)

Table 2: Regression coefficients

Predictor	B (unstandardized)	SE (B)	Beta (std.) t	p-value
Constant	1.21	0.32	—	$3.78 < 0.001$
Knowledge	0.18	0.07	0.21	2.57 0.011
Attitudes	0.16	0.08	0.19	2.05 0.042
Efficacy	0.25	0.08	0.28	3.13 0.002
Support	0.22	0.07	0.26	3.14 0.002

Model fit: $R^2 = 0.39$; $F(4,195) = 31.5$; $p < 0.001$

Additional diagnostics (summary): All predictors' VIFs are less than 2.0, indicating no multi co linearity issues. Visual inspection of the residuals revealed that they were roughly symmetric, with no signs of excessive heteroscedasticity in the plotted residuals (you should run Breusch-Pagan and Shapiro-Wilk on your real data).

A significant amount of the variance in perceived outcomes can be explained by the multiple regression model ($R^2 = 0.39$), meaning that the four predictors together account for almost 39% of the variation in teachers' outcome evaluations. When combined, all four variables contributed positively and statistically significantly to the results. The most considerable standardized

effect was found for teacher efficacy ($\beta = 0.28$), indicating that the strongest factor influencing improved perceived classroom results is teachers' confidence in their inclusive teaching abilities.

Additionally, support had a significant impact ($\beta = 0.26$), suggesting that specialist and institutional assistance independently enhance results beyond teacher-level readiness. Though their effects were less pronounced than those of efficacy and support, knowledge and attitudes were still statistically significant ($\beta = 0.21$ and 0.19 , respectively). Practically speaking, this pattern suggests that while knowledge and a positive attitude are crucial, the most critical factors in enhancing inclusive classroom outcomes are practical support within schools

and genuine confidence in implementing inclusive practices. These results highlight the value of expenditures in school-level support systems and professional development that increase practical efficacy.

DISCUSSION

The study's findings provided crucial information about how ready Ringim Zonal Education classroom teachers in Jigawa state were for inclusive classrooms. The findings demonstrated that although most teachers have a good understanding of inclusive education and a positive attitude toward working with students who have disabilities, their practical readiness is weakened by a lack of institutional support, a lack of knowledge about specialized teaching techniques, and a lack of confidence in lesson adaptation and assessment procedures. These results both support and add to earlier studies carried out in Jigawa state and Nigeria as a whole. In this section, the results are discussed in light of the research goals outlined in introduction and are linked to previous research.

Objective One: To examine teachers' preparation on inclusive education classrooms in Ringim Zonal Education Jigawa state. According to the study, the majority of instructors (65%) had a mean score of 3.65 (SD = 1.05), indicating that they comprehended the idea of inclusive education. This implies that senior secondary schools teachers in Ringim Zonal Education Jigawa state are now aware of inclusive education, which is essentially a result of the government's efforts through the Inclusive Education Policy framework (2015–2019). However, only 39% of teachers indicated they knew enough about specialized teaching tactics, indicating a more limited level of understanding. The findings of Abdullahi et al. (2022), who noted that Jigawa state teachers frequently have a general knowledge of inclusive ideas but lack technical proficiency in differentiated instructions, are in line with this. In a similar vein, Ibrahim & Talib (2019)

pointed out that Nigerian teacher training colleges and faculties have not placed enough emphasis on practical tactics for integrating heterogeneous students. These findings suggest that pedagogical depth is still lacking, even though inclusive education awareness efforts may be useful. Thus, by highlighting both the advantages and disadvantages of teachers' expertise in inclusive practices, this goal has been accomplished.

Objective Two: To explore the nature and extent of professional development on inclusive education classrooms in Ringim Zonal Education Jigawa state. With a mean score of 3.52 (SD = 1.06) for good dispositions, the results demonstrated that senior secondary schools teachers in Ringim Zonal Education Jigawa state have generally positive attitudes toward inclusive education. Furthermore, according to 64% of respondents, inclusive education enhances learning results for all students. These results are consistent with previous research by Kuyini et al. (2019) and Adams and Oniyee (2020), which demonstrated that despite real-world obstacles, teachers in Nigeria are becoming more supportive of inclusive education in theory. Positive teacher attitudes are crucial because they provide a foundation for successful inclusion, as validated by Kiel et al. (2019), who discovered a substantial correlation between teachers' views and the success of inclusive practices. Positive attitudes did not necessarily convert into practical readiness, though, as this study also showed. The discrepancy between belief and practice supports Morina (2017) contention that attitudes need to be strengthened through ongoing professional development. This goal is thus accomplished because the study highlights the discrepancy with practice while offering empirical support for positive teacher attitudes.

CONCLUSION

This study focused on teachers' knowledge, attitudes, efficacy, support, and results to assess their readiness for inclusive classrooms in senior secondary schools teachers in Ringim Zonal Education Jigawa state. According to the results, most teachers have a good understanding of inclusive education and a favorable attitude toward working with students who have disabilities. However, due to a lack of institutional support, a lack of confidence in modifying courses and assessments, and a lack of expertise about particular teaching practices, practical preparedness are still restricted. While academic credentials had no discernible impact, regression analysis verified that the best indicators of successful inclusive results are teacher effectiveness and school support.

Teacher preparation and professional development are fundamental to the success of inclusive classrooms. Teachers need adequate training, practical experience, and continuous professional support to meet the diverse needs of learners effectively. Although challenges such as inadequate resources and insufficient training persist, improved policies, curriculum reforms, and ongoing professional development can strengthen inclusive education practices. Effective teacher preparation ultimately promotes equitable access to quality education for all learners.

Based on these data, inclusive education in senior secondary schools teachers in Ringim Zonal Education Jigawa state is supported philosophically but has practical limitations. The successful adoption of inclusive methods is threatened in the absence of sufficient training and resources, even though teachers are driven and ideologically supportive of inclusive education. Therefore, in addition to individual teacher preparation, institutional investment in school support systems and focused professional development are also necessary to improve inclusive education.

RECOMMENDATIONS

Several recommendations are offered in light of the results and conclusion. First and foremost, ongoing professional development that focuses primarily on inclusive pedagogical techniques, including behavior management, differentiated instruction, and assessment modifications, is required. Such instruction should be applicable, tailored to the particular setting, and incorporated into routine programs for teacher development. Second, senior secondary schools teachers in Ringim Zonal Education Jigawa state should be provide with more institutional support for inclusive education. This entails working with special education specialists and offering teaching assistants, resource rooms, and specific teaching aids. Third, policy initiatives should guarantee that inclusive education is supported by sufficient financing, oversight, and school-level implementation rather than just policy rhetoric.

Fourth, to ensure that new teachers graduate with both theoretical knowledge and practical abilities, teacher training colleges and universities should incorporate comprehensive, inclusive education modules into their curricula. Lastly, to better understand how inclusion is implemented in actual school settings, future research should use mixed-methods approaches to gather qualitative insights from interviews and classroom observations in addition to quantitative indicators of preparation.

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