

TEACHERS' ATTITUDES TOWARDS THE USE OF TECHNOLOGY IN TEACHING STUDENTS WITH SPECIAL NEEDS IN KOGI STATE, NIGERIA

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Abstract

This study investigates teachers' attitudes towards the use of technology in teaching students with special needs in Kogi State, Nigeria. Despite the global emphasis on inclusive education and the potential of technology—such as assistive devices, adaptive software, and communication tools—to enhance learning outcomes for learners with disabilities. Employing a descriptive survey design, the study sampled all 29 teachers from selected special schools in Kogi State through purposive sampling. Data were collected using a self-developed questionnaire on teachers' attitudes, structured on a four-point Likert scale, and analyzed using descriptive statistics and one-sample t-tests at a 0.05 significance level. The result indicates that a significant proportion of the special teachers fall within the 30-39 years age bracket, accounting for 41.4% of the sample, this suggests that most teachers are in their early to mid-career stages, which could imply a reasonable balance of experience and energy levels conducive to effective teaching practices. Regarding educational qualifications, over half of the teachers (51.7%) hold a Bachelor's Degree in Education, suggesting that most are professionally trained at the undergraduate level. In terms of teaching experience, the largest group (41.4%) has between 6 to 10 years of experience. This indicates that most teachers are relatively experienced, which can positively impact their attitudes towards adopting new teaching methods, including technology. Moreover, the findings reveal that teachers' attitudes toward technology use is not statistically significant. It was concluded that attitudes of teachers towards the use of technology when teaching students with special needs are the same. It was recommendations include ongoing training, resource provision, institutional support, and culturally sensitive interventions to enhance teachers' acceptance and utilization of technology, ultimately contributing to more inclusive and effective learning environments for students with disabilities in Kogi State.

Keywords:

Inclusive Education, Teachers' Attitudes, Educational Technology, Special Needs Education, Nigeria

Introduction

Over the last few decades, the focus on inclusive education has been recognized worldwide, which advocates the rights to quality education for all students regardless of the existence of some special characters) integrating technologies into pedagogical practice has been a promising strategy to improve the learning of students with disabilities (Al-Azawei, Serenelli, & Lundqvist, 2016). Technology has an array of tools including alternative/augmentative communication devices, educational software, and adaptive learning systems, which can address individual learning needs and empower students with disabilities to function more independently (Rose & Meyer, 2002). It is therefore important to understand teachers' acceptance of such technology so as to enable successful implementation and sustainable inclusion.

Teachers' perceptions impact the implementation and the successful use of technology in the classroom. Positive attitudes are related to higher acceptance to using technology tools, hence higher potential engagement and learning outcome for students with disabilities (Ertmer & Ottenbreit-Leftwich, 2010). Conversely, negative or resistive attitudes can impede the integration process where resources may go underutilized and ultimately no additional learning environment benefits can be served. Then, understanding how teachers perceive and believe and their attitude toward using technology can offer significant perspectives of technology challenges and opportunity in special needs education.

There are a number of factors that may have an effect on teachers' intention to use technology in the education of students with disabilities. Among these, the factors that seem to be the most significant variables for teachers are their training, their experience with technology, the utility of technology, their sense of self-efficacy with the technologies, and institutional support (Inan & Lowther, 2010). Furthermore, teachers' attitudes may be influenced by their past experiences, cultural beliefs, and the extent of relevancy of technology to their teaching situation. Knowledge of these factors is important for informing focused interventions and professional development which lead to positive attitudes and effective technology use.

As teachers have an important role in the enactment of inclusive education policies, attitudes towards the use of technology are central. Positive dispositions can motivate individuals to use technology tools and enable learners with diverse disabilities to be active participants and to accomplish learning objectives (Schrum & Levin, 2017). Negative attitudes or fears, then, can lead to underutilization of resources, and contribute to persistent gaps in access and quality to education. Thus, evaluating teachers' attitudes is a stepping-stone towards formulating measures for enhancing technology introduction within special education. In Nigeria and in Kogi State in particular, there are issues of poor infrastructure, dearth of access to assistive tools, and lack of training of teachers to support the successful use of technology in support students with disabilities (Akinwale, 2018). Nonetheless, some teachers believe that technology has potential for inclusion in the classroom environment. Yet, there is a dearth of knowledge on teachers' attitudes towards the use of such technologies in this region, which in turn could influence the uptake and quality of education for learners with disabilities. Studies conducted worldwide have indicated that belief and attitude are two influential factors which determine the success of technology integration (Hew & Brush, 2007) With Nigeria as a case study, specific challenges ranging from lack of training, and infrastructural inadequacy have been observed to affects teachers' disposition towards the adoption of technology (Akinwale, 2018). However, relatively little is known about teachers' attitudes related to use of technology when teaching students with special needs.

Hypothesis

There is no significant in teachers' attitudes towards the use of technology when teaching students with special needs in Kogi State, Nigeria.

Methodology

The study adopted survey research design survey research design refers to the systematic approach used in conducting surveys to collect data from a target population. It involves several key components and steps to ensure the validity, reliability, and generalizability of the research findings (Bhatti, 2019).

All teachers in Kogi State special school, Nigeria make up the population for this study. The population is twenty nine (29) special teachers and availability sampling procedures were adopted for this study.

The questionnaire on teachers' attitudes towards the use of technology when teaching students with special needs developed by the researcher, was the instrument utilized for the study. The instrument was divided into three parts. The section A asks for background information on the respondent status. Teachers' attitudes toward the use of technology when teaching students with special needs was section B.

A four-point Likert Rating Scale with the options strongly agree, agree, disagree, and strongly disagree was used to structure the surveys. Each receive Strongly Agree= 4, Agree= 3, Disagree= 2, Strongly Disagree =1 grade. The test-retest reliability test were employed for the pilot study's self-developed questionnaire also covered the knowledge and utilization of artificial intelligence (AI) among Postgraduate students, with reliability coefficient of 0.83. Descriptive statistics of frequency counts and percentages will be used. At a significance level of 0.05, one sample t-test were employed to evaluate each of the formulated null hypotheses. Using SPSS version 27, a statistical tool for social science.

Results

Table 1 demographic characteristics of the respondents

Variables	Frequency (n=29)	Percentage (%)
Age Group		
20-29 years	8	27.6%
30-39 years	12	41.4%
40-49 years	5	17.2%
50 years and above	4	13.8%
Educational Qualifications		
Diploma in Special Education	10	34.5%
Bachelor's Degree in Education	15	51.7%
Master's Degree (M.Ed.)	4	13.8%

Variables	Frequency (n=29)	Percentage (%)
Years of Teaching Experience		
1-5 years	9	31.0%
6-10 years	12	41.4%
11-15 years	5	17.2%
16 years and above	3	10.3%

Table 1, indicates that a significant proportion of the special teachers fall within the 30-39 years age bracket, accounting for 41.4% of the sample. This suggests that most teachers are in their early to mid-career stages, which could imply a reasonable balance of experience and energy levels conducive to effective teaching practices. The 20-29 age group comprises 27.6%, indicating a considerable number of relatively young teachers who may be new to the profession or still gaining experience. Teachers aged 40-49 years constitute 17.2%, reflecting a smaller but substantial segment with potentially more experience. The 50 years and above category makes up 13.8%, representing the oldest teachers. Regarding educational qualifications, over half of the teachers (51.7%) hold a Bachelor's Degree in Education, suggesting that most are professionally trained at the undergraduate level. About a third (34.5%) possess a Diploma in Special Education, indicating specialized training relevant to their roles. A smaller proportion (13.8%) have attained a Master's Degree (M.Ed.). In terms of teaching experience, the largest group (41.4%) has between 6 to 10 years of experience. This indicates that most teachers are relatively experienced, which can positively impact their attitudes towards adopting new teaching methods, including technology. Teachers with 1-5 years of experience make up 31%, possibly representing newer educators who are more adaptable and open to innovation. Those with 11-15 years of experience constitute 17.2%, likely bringing a mix of seasoned expertise and openness to change. The group with 16 or more years of experience comprises 10.3%.

Table 2: Summary of One-Sample t-test on teachers' attitudes towards the use of technology when teaching students with special needs in Kogi State, Nigeria

	N	Mean	Std. Deviation	df	t-test	Prob	decision
teachers' technology attitudes towards the use of	29	2.3580	0.42836	28	0.458	0.2001	Accepted
Mean		2.5					

Table 2, presents results from a one-sample t-test examining 29 teachers' attitudes toward using technology for special needs education in Kogi State. The mean attitude score of 2.3580 (likely on a 4-point Likert scale where 2.5 would be neutral). The standard deviation of 0.42836 reveals that most teachers' responses clustered within about ± 0.43 points of the mean, showing moderate consistency in attitudes among participants. The analysis compared the observed mean (2.3580) against a hypothesized neutral value of 2.5. With 28 degrees of freedom, the t-test yielded a statistic of 0.458 and a probability value (p-value) of 0.2001. This non-significant p-value (greater than the conventional 0.05 threshold) led to accepting the null hypothesis. Therefore, there is no significant in teachers' attitudes towards the use of technology when teaching students with special needs in Kogi State, Nigeria.

Discussions

Research findings have sometimes indicated that teachers across different backgrounds, levels of experience, or institutional settings exhibit similar attitudes towards using technology with students with special needs. Alquraini and Gut (2012) found that although teachers valued assistive technologies, their overall attitudes did not significantly differ based on years of teaching experience. This suggests a generally uniform perception of technology's potential benefits or limitations, regardless of individual differences. Similarly, Chiu and Churchill (2016) examined teachers' attitudes across multiple school districts and reported no statistically significant variation based on teachers' age, educational qualifications, or prior exposure to assistive technology. Their findings imply that perceptions towards technology may be more influenced by overarching factors such as institutional culture or policy environments rather than individual differences.

Universal Exposure to Technology: With the proliferation of digital devices and internet access, teachers across diverse backgrounds may have similar levels of exposure, leading to comparable attitudes (Ertmer & Ottenbreit-Leftwich, 2010). Many teachers participate in district-wide or national training programs, resulting in homogenized perceptions regardless of personal variables (Bauer & Kenton, 2005). Educational policies emphasizing inclusive education and technology use may standardize teachers' attitudes across different demographics (Edyburn, 2010). Some studies may utilize measurement tools with limited sensitivity to detect subtle differences, leading to findings of no significant variation (Chiu & Churchill, 2016). While some research indicates no significant differences, it is essential to interpret these findings cautiously. The absence of significant differences does not necessarily mean that perceptions are identical across all groups; rather, it may reflect methodological limitations such as sample size, measurement instruments, or contextual factors (Ertmer et al., 2012). Moreover, other studies have reported significant differences based on variables like teachers' age, training, or years of experience (Edyburn, 2010). For instance, experienced teachers might be more resistant to adopting new technologies due to entrenched pedagogical practices, whereas newer teachers might be more receptive (Chiu & Churchill, 2016).

Recommendation

From the findings of this study, the following recommendations were made in order to teachers' attitudes and promote effective technology integration in special education needs in Kogi State, Nigeria:

Plan and execute on-going training sessions specific to the technology currently in use. Teacher professional development programs of this kind also ought to increase teachers' self-efficacy and knowledge of what is available, while correcting any misconceptions or fears.

Work with government and non-government agencies for better infrastructural supports such as constant electricity, internet, distribution of assistive devices etc. Sufficient resources are essential for a positive attitude and continued use.

Develop policies that support and incentivize use of technology for innovative teaching. Leaders' backing of new practices influences in a cardinal way teachers' perceptions and their intention to implement them.

Promote the success stories and evidence-based benefits of technology used to support disabled students through awareness-raising campaigns. Showing by example will make a difference in the way teens feel about people and thus react to them.

Converse with the teachers to learn their cultural beliefs and what contextual difficulties they face that may contribute to their attitudes. If interventions are tailored to address concerns, they may be more readily accepted and less opposed.

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