APPLICATION OF COMMUNICATION SKILLS IN TECHNICAL AND VOCATIONAL EDUCATION PROGRAMS FOR LEARNERS WITH SPECIAL NEEDS IN KANO STATE, NIGERIA

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Abstract

This paper explores how communication skills are adapted and applied to support learners with special needs within technical and vocational education programs. It was discussed under the sub-headings: introduction, the categories of students with special needs, concept of physical disabilities, concept of intellectual disabilities, challenges and barriers which include social stigma, inadequate teacher training, unequal access to educational institutions, and the absence of effective guidance and counseling services, all of which hinder both academic achievement and psychological well-being. The paper also discussed application and adoption of communication skills in technical and vocational education programs, conclusion and suggestions. The paper concluded that integrating communication skills into technical and vocational education programs enhances employability, equity, independence, and workplace readiness. Based on the findings, the paper suggested that policy makers, technical and vocational education programs planners, and special education bodies (such as JONAPWD, NCPWD, and INGA), develop mandatory training modules on inclusive communication for technical and vocational education programs instructors, among others.

Keywords: Communication skills, Technical and Vocational Education, and Special Needs learners.

Introduction

Education is universally recognized as a fundamental human right, essential for individual empowerment and societal advancement. It equips individuals with the knowledge, values, and communication skills necessary for personal growth, social integration, and civic participation. Uwadia (2010) characterizes education as a deliberate and systematic process by which a mature individual imparts physical, intellectual, and social competencies to a less mature person, ultimately fostering holistic development. This comprehensive growth includes not only cognitive and physical abilities but also aesthetic, moral, and spiritual dimensions, thereby promoting well-rounded individuals who contribute meaningfully to society. In alignment with this perspective, UNESCO (2021) underscores education's role in nurturing the intellectual, emotional, and ethical capacities essential for sustainable development and human dignity.

Within the broader educational framework, Technical and Vocational Education (TVE) occupies a crucial space, particularly in its focus on practical skills and applied knowledge. Technical education emphasizes theoretical instruction in fields such as applied sciences and engineering, while vocational education centers on hands-on training for specific trades and occupations. As Oguntuyi (2013) notes, vocational education involves structured activities designed to impart competencies that enhance employability or entrepreneurial potential. When combined, TVE offers a dual approach that prepares learners for the demands of diverse industries, ranging from healthcare and information technology to construction and automotive services by bridging the gap between academic instruction and labor market needs. Beyond economic productivity, TVE holds the promise of social equity by empowering all learners, including those with special needs, with skills relevant to contemporary job markets.

However, for students with special needs, participation in TVE often depends on access to specialized educational support. Special education, as defined by Osakwe (2010), entails instructional methods, materials, and environments tailored to individuals with disabilities or learning challenges. These adaptations are not limited to academic content but extend to communication strategies that enable students to engage effectively with peers, instructors, and the curriculum. For students with disabilities, particularly those with speech, cognitive, or sensory impairments, these alternative forms of communication are critical to educational access and inclusion.

Despite the transformative potential of TVE, its benefits remain elusive for many students with special needs in Nigeria. The promise of economic empowerment and self-reliance is undermined by systemic barriers that exclude these learners from meaningful participation. Although Nigeria has ratified the Convention on the Rights of Persons with Disabilities (CRPD, 2006), which advocates inclusive education, implementation has been sporadic and insufficient. Structural inadequacies such as inaccessible facilities, lack of assistive technologies, and outdated instructional models are compounded by social stigmas and limited public awareness. For example, students with autism spectrum disorder (ASD), visual or hearing impairments, and intellectual disabilities often encounter a rigid, one-size-fits-all educational system that fails to accommodate their diverse needs.

Studies reveal that 84% of Nigeria's deaf population remains illiterate and economically marginalized (Eleweke et al., 2015), while many caregivers of children with ASD lack even a basic understanding of the condition (Bakare et al., 2009; Igwe et al., 2011). These challenges expose a critical paradox: technical and vocational education programs, which is intended to reduce social and economic inequalities, frequently reproduces exclusion for those who require inclusive practices the most. The failure to integrate adaptive communication tools, provide specialized teacher training, and cultivate inclusive pedagogies not only undermines Nigeria's commitments under international conventions but also limits the transformative potential of technical and vocational education programs. This paper, therefore, interrogates the contradictions between policy and practice in the delivery of inclusive technical and vocational education programs. By examining the intersections of communication, pedagogy, and

disability through a historical research method which analyzes past events and records to understand current phenomena (Best & Kahn, 2014).

Concept of Physical Disabilities

Effective inclusion in technical and vocational education programs requires accessible infrastructure such as ramps, modified workspaces adaptive instruction, and flexible assessments to ensure all students can fully participate in practical learning. Physical disabilities, which affect mobility or dexterity, can limit students' ability to engage in hands-on vocational activities. However, the common physical disabilities commonly include **visual** and **hearing impairments**, which present unique challenges in the technical and vocational education programs context.

Visual Impairment: Visual impairment, which ranges from low vision to total blindness, presents significant barriers in vocational education that often relies on visual tools and materials. Without appropriate accommodations such as Braille, magnification devices, or audio resources, students with visual impairments are at risk of exclusion. Adetoro (2009) critiques Nigeria's tendency to provide visually impaired learners with materials based on availability rather than relevance, which reinforces dependency. Inclusive VTE must prioritize the development of accessible instructional content and train educators in multimodal teaching strategies to ensure full participation.

Hearing Impairment: Students who are deaf or hard of hearing face serious communication and learning barriers. In Nigeria, these challenges are exacerbated by limited access to sign language interpreters, captioned educational content, and assistive hearing devices. Treat (2016) estimates that 23.7% of Nigerians experience some form of hearing loss. Eleweke et al. (2015) report that approximately 84% of the deaf population remains illiterate and economically marginalized. In VTE settings, where verbal instructions and safety protocols are vital, inclusive strategies such as visual cues, peer mediation, and tactile learning methods are essential for effective participation.

Concept of Intellectual Disabilities

Students with intellectual disabilities face both cognitive and adaptive challenges, often requiring structured support to succeed in technical and vocational education programs. These challenges may include difficulties with memory, problem-solving, and applying skills across different contexts. Furthermore, in conflict-affected regions of Nigeria such as those impacted by Boko Haram students with intellectual disabilities also experience displacement and trauma, which can further disrupt their learning (Kingsley, 2016). An example of intellectual disabilities is **Autism Spectrum Disorder (ASD).**

Autism Spectrum Disorder (ASD): Students with Autism Spectrum Disorder (ASD) typically struggle with social interaction, communication, and may exhibit repetitive behaviors, which can hinder their adjustment to conventional classroom routines and peer collaboration. In Nigeria, awareness of ASD remains limited among parents, educators, and healthcare

professionals (Bakare et al., 2009; Bakare & Munir, 2011). This lack of understanding delays early diagnosis and intervention (Igwe et al., 2011), increasing the risk of exclusion from academic and vocational opportunities. In technical and vocational education programs environments where routine and collaboration are essential students with ASD benefit from structured settings, visual aids, and alternative communication strategies.

Inclusive technical and vocational education programs should therefore integrate trauma-informed and community-based approaches to effectively support learners with trauma histories or intellectual disabilities. This approach involves several key strategies, beginning with the creation of a safe and supportive learning environment where students feel secure and respected. It also emphasizes professional development for educators, enabling them to understand the effects of trauma and adapt their teaching accordingly. Other essential components include individualized support plans, flexible and adaptive teaching methods, collaboration with families and caregivers, strong school-community partnerships, access to mental health and counseling services, and peer support or mentoring programs. Together, these measures aim to promote a sense of belonging, build resilience, and foster trust, ultimately ensuring a positive and inclusive learning experience for all students.

Challenges and Barriers

Students with special needs often face significant challenges in accessing and benefiting from education, particularly in technical and vocational education (TVE). While technical and vocational education programs aims to equip learners with practical and industry-relevant skills, students with disabilities frequently encounter barriers that hinder their full participation and learning outcomes. One critical strategy for improving inclusivity and accessibility in technical and vocational education programs is the effective application of communication skills. However, several systemic and social challenges persist that limit the learning experiences of these students. These challenges include: social stigma and discrimination, shortage of specialized educators in technical and vocational education programs, limited access to inclusive education facilities and insufficient parental and institutional support.

Social Stigma and Discrimination: One of the most pervasive barriers faced by students with special needs is the stigma associated with disability. Individuals with intellectual, physical, or developmental challenges often face public discrimination and social exclusion. Lazarus and Oluwole (2017) identify four key types of stigma as: public stigma**:** societal stereotypes and negative perceptions, **i**nstitutional stigma**:** systemic policies or practices that marginalize these individuals, **s**elf-stigma**:** internalized feelings of inadequacy or shame stemming from societal bias, anticipated stigma: the expectation of discrimination, which can reduce participation in education or social life. Combating stigma is thus foundational to achieving equitable technical and vocational education programs outcomes requiring targeted awareness campaigns, policy reform, and inclusive pedagogy to dismantle harmful perceptions at societal, institutional, and personal levels.

Shortage of Specialized Educators in TVE: A major limitation in the effective delivery of technical and vocational education programs for students with special needs is the lack of trained teachers who are proficient in both vocational subjects and inclusive pedagogy. Research has shown that most teachers lack the expertise required to adapt technical content for diverse learners. For example, Balogun (2012) found that only 825 certified special education teachers were employed in government-assisted schools in Oyo State, Nigeria. Similarly, Hammed (cited in Yusuf, 2023) observed that even though there are 1,177 special needs schools in Nigeria, students with disability struggle profusely to see willing teachers to take them. This shortage results in inadequate learning support and compromises the quality of education for students with disabilities.

Limited Access to Inclusive Educational Facilities: Despite national and international efforts to promote inclusive education, many children with disabilities remain out of school. Aliman (2013) highlighted that over 150 million children with disabilities globally lacked access to education in 2011. In Nigeria, the situation is even direr. According to the World Health Organization (2011), only 0.3% of the 690,000 primary school-aged children with disabilities were enrolled in school as of 1997. Factors such as poor infrastructure, inaccessible school environments, and lack of adaptive learning materials further compound this problem, making technical education nearly inaccessible to many.

Insufficient Parental and Institutional Support: Support from both families and institutions is critical for the academic success of students with special needs. However, many students face neglect, either due to lack of awareness or social stigma. Nolan et al. (2006) emphasize that a low level of parental involvement and advocacy can significantly hinder students' academic progress and emotional well-being. When parents are not actively engaged in their children's education whether through communication with teachers, participation in school activities, or support at home students may lack the encouragement, structure, and reinforcement necessary for effective learning. This disengagement can be especially detrimental for students with special needs, who often require consistent support and advocacy to navigate academic and social challenges.

Application and Adoption of Communication Skills in TVE

In the context of Technical and Vocational Education (TVE), the strategic use and adaptation of communication skills play a pivotal role in fostering inclusive and effective learning environments for students with special needs. Communication serves not only as a tool for instruction but also as a fundamental means of facilitating social interaction, cognitive development, and skill acquisition. In light of its importance, the application and adoption of communication in technical and vocational education programs are examined separately in the following sections.

Application of Communication in TVE

Effective communication strategies within TVE settings foster meaningful engagement, facilitate understanding, and support the diverse learning needs of students with physical, sensory, cognitive, and developmental disabilities. Mehrabian (2017), communication break down into: Verbal (the actual words used), Vocal (tone, pitch, volume), Visual/nonverbal (gestures, facial expressions, body language). Verbal communication encompasses both spoken and written language, enabling the transmission of technical instructions, academic feedback, and collaborative dialogue. In TVE classrooms, verbal modalities are used during practical demonstrations, oral presentations, and written documentation. However, reliance solely on verbal instruction may marginalize learners with hearing impairments, language processing difficulties, or intellectual disabilities.

Non-verbal communication comprising gestures, facial expressions, proxemics, and body movements serves as an essential supplement, especially for students with expressive language challenges or autism spectrum disorders. These cues often convey affective meaning, reinforce spoken words, and provide alternative channels for interpretation. Similarly, visual communication, which involves the use of diagrams, icons, color codes, info-graphics, and digital media, is instrumental in scaffolding abstract concepts and reinforcing technical processes. For learners with cognitive processing issues or low literacy, visual supports can bridge comprehension gaps and improve retention.

Furthermore, inclusive instructional practices such as differentiated pacing, multimodal content delivery, individualized feedback, and structured routines are essential for facilitating meaningful communication. One-on-one interactions and consistent teacher-student engagement provide personalized support and help student's process information at their own pace. These adaptations align with Universal Design for Learning (UDL) principles, which emphasize the removal of systemic barriers and the promotion of multiple means of engagement, representation, and expression. The role of communication in fostering inclusive learning environments in TVE cannot be overstated. It not only facilitates access to curriculum content but also shapes learners' sense of agency, identity, and belonging. For instance, students with profound disabilities may communicate their needs and emotions through nuanced behaviors such as eye gaze, vocalization, or body posture (Chung & Stoner, 2019).

Adoption of Communication in TVE

Vocational and technical education, by design, aims to equip individuals with occupational competencies relevant to specific trades, industries, and professions. Its goals include enhancing employability, promoting entrepreneurship, and addressing labor market gaps. In Nigeria, TVE institutions such as polytechnics, technical colleges, and skills acquisition centers offer structured programs in fields ranging from engineering and agriculture to business and hospitality (Ojimba, 2012; Oguntuyi, 2013). The National Policy on Education (FRN, 2004) articulates objectives for TVE that include the development of a skilled labor force, application of scientific knowledge to address environmental problems, and cultivation of self-reliant, enterprising citizens.

However, the attainment of these objectives is contingent upon the effective integration of communication competencies within instructional and professional training processes. Communication is not merely ancillary to skill development it is constitutive of it. For instance, the ability to understand safety protocols, read technical manuals, or convey troubleshooting procedures requires advanced literacy and communication skills tailored to specific vocational contexts. In this light, communication functions not only as a skill set in itself but also as a foundational enabler of other technical competencies. Ojimba (2012) emphasizes that the overarching goal of technical and vocational education programs is to prepare individuals for gainful employment by equipping them with both technical and interpersonal competencies. In this regard, communication skills are not peripheral but central to vocational success. For students with special needs, the mastery of communication within technical and vocational education programs contexts directly impacts their capacity to function independently, collaborate in diverse teams, and respond effectively to workplace demands. Building on this**,** the significance of integrating communication skills in technical and vocational education programs for students with special needs can be understood through several dimensions:

Enhanced Employability: Effective communication facilitates workplace readiness by enabling students to comprehend instructions, interact with supervisors, and convey ideas clearly. It also increases their competitiveness in a labor market that increasingly values soft skills alongside technical expertise.

Increased Independence: Communication empowers students to express preferences, seek assistance, and assert their rights, which is critical for self-determination and autonomy in both educational and occupational settings.

Improved Social Integration: By fostering the development of interpersonal skills, communication enhances social inclusion, peer collaboration, and participation in school and community life.

Workplace Safety and Efficiency: In vocational fields where instructions are task-specific and environments may be hazardous, clear and adaptive communication ensures operational safety, teamwork, and compliance with protocols.

Conclusion

Education, at its core, serves as the foundation for individual growth and societal advancement by cultivating knowledge, skills, and the capacity for meaningful social interaction. Within this framework, Technical and Vocational Education (TVE) plays a pivotal role in equipping learners with practical, industry-relevant competencies that lead to gainful employment or entrepreneurial ventures. However, students with special needs often confront systemic barriers ranging from limited access to specialized resources and trained instructors to social stigma and inadequate guidance services that impede their full participation in technical and vocational education programs programs. Effective communication lies at the heart of overcoming these obstacles: by employing a variety of verbal, nonverbal, and assistive strategies, educators can

bridge gaps in understanding, foster independence, and promote social integration. When communication skills are thoughtfully integrated into technical and vocational education programs curricula through individualized instruction, accessible materials, and adaptive technologies students with disabilities gain not only the technical know-how but also the confidence and self-advocacy needed to navigate both educational and workplace environments successfully.

Suggestions

In light of the discussions, this paper offers the following suggestions for policy makers, TVE educational planners, and special education professionals including bodies such as the Joint National Association of Persons with Disabilities (JONAPWD), National Commission for Persons with Disabilities (NCPWD), Special needs initiative for growth (INGA) among others, to:

1. Develop mandatory training modules on special education and inclusive communication strategies for all TVE instructors to ensure they are equipped to support learners with diverse needs.
2. Integrate low-cost, scalable communication aids such as pictorial boards, gesture-based applications, and mobile AAC (Augmentative and Alternative Communication) platforms into TVE classrooms. These tools will enable learners with varying abilities to engage with instruction at their own pace.

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