UTILIZATION OF ASSISTIVE TECHNOLOGY IN CLASSROOMS FOR LEARNERS WITH SPECIAL NEEDS IN AN INCLUSIVE SETTING IN NIGERIA

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ABSTRACT

The utilization of Assistive Technology (AT) is a reliable tool considering the condition/impairment of some students in diverse area of endeavour such as education, sport, independent living etc. learners with special needs as those individuals with peculiar, unique and special condition (s) require the alter/adaptive special method of imparting knowledge to them. However, inclusive setting which is the implementation of main-streaming that emphasizes the maintenance of regular and special needs students to learn together is the best practice of educational system. Therefore, this paper focused on the concept of Assistive Technology (AT), its importance and the utilization of assistive technology (AT) in classrooms for learners with special learning needs.
Key words: Assistive Technology (AT), Special Needs and inclusive Setting.

Introduction

Assistive Technology (AT) is a devices designed for an essential use for people with special learning needs. It is considered as dependable and reliable tools that support the living, education and movement of children with disabilities. The concept of Assistive Technology Devices is an integral part of many individual with disabilities. It is the keystone of a fruitful, modern educational process for students with disabilities (Diso & Danlami, 2018). Therefore, this paper focuses on the concept of Assistive Technology (AT), children with special needs, the different types of assistive technology, problems of handling assistive technology of students with special needs, its importance in classrooms for learners with special learning needs and inclusive education. It concluded with some recommendations for the possible solutions of the challenges of AT in an inclusive setting.

Concept of Assistive Technology (AT)

Assistive technology is defined as "an item or piece of equipment or product system either acquired commercially, off the shelf, modified or customized and used to increase, maintain, or improve functional capability for individual with disabilities (Dantata, Haruna, Adamu, Bulus, Ahmad, Shuaibu and Maji, 2018). To Diso and Danlami (2018), Assistive Technology refer to the special devices and soft wares meant for educating special needs children and adults. In the word of Danlami (2016), Assistive Technology are devices used by individual with disabilities to perform functions that might otherwise be very difficult or impossible.

Special Need Education

Special Needs Education is intended to provide sound and adequate knowledge to people with special needs education is designed to help special need children (both gifted and disabled individuals) in making the maximum use to their capabilities in order to contribute their Quota to the socio economic development of their country.

In the National Policy on Education (2004) cited in Iroegbu and Obaje (2007), special needs education referred as the education of children and adult who have learning difficulties because of the different kind of handicaps, blindness, partial sightedness, deafness, hardness of hearing mental retardation, social maladjustment limb deformation or malformation e.t.c due to the circumstances of birth, inheritance, social position, mental and physical health pattern or accident in latter life. Ozoji (2003) Defined special education as the education of children that used special tools or "addressed the special learning needs of the exceptional child" special education is valued as education that is designed to cater for individual with special need e.g. learning disabilities, hearing impairment, visual impairment e.t.c and using special methods/materials for teaching them. Adaka (2016) indicated that special needs

education had been involved with the education and training of people to meet their potential needs in public school.

Special Needs Children

Children with special needs are basically referred to as exceptional children. The term implied that these are those who may not be able to learn together with their peers as a result of one disability or the other. Special needs children (SNC):- are those who experience difficulties in learning due to impairment, disability or handicap. They might not be able to perform certain functions which normal somebody can perform but they are limited in one or some areas of function, as such, they can function very well in other areas (Egaga, 2007).

According to Taura (2017) special needs children as exceptional children included persons with disabilities and gifted. They are those individuals that are different in one way or the other from other individuals who are considered normal by the greater segment of the society. The difference may be mental, physical, behavioral or social inadequacies. Apparently, such children may be found to be incapable of functioning adequately within the community and the school. Furthermore, exceptional children are those who deviated from the normal or average children in terms of intellectual, communication and sensory ability, or social behavior, neuro — motor or physical characteristics and mental handicap. The deviation is such to an extent that normal school curriculum must be modified before they can educationally benefit.

Classification/Types of Students with Special Needs
1. **Physical And/Sensory Impairment**
    i. Visual Impairment (V.I)
    ii. Hearing Impairment (H.I)
    iii. Spinal Cord Injured (SCI)
    iv. Physically Challenge etc.
2. **Cognitive Disability And/Exceptionality**
    i. Mentally Retarded (M.R)
    ii. Learning Disabilities (L.D)
    iii. Gifted/Talented (G/T)
    iv. Epilepsy etc.
3. **Emotional And Behavioral Disorder (Ebd)**
    i. ATTENTION Deficit and Hyperactivity Disorder (ADHD)
    ii. Concentration Disorder (CD)
    iii. Social and Interaction Disorder (SID)
    iv. Children with Autisticity condition etc. (Abdullahi, 2021).

Types of Assistive Technology (AT)

Seven principles of universal design to be considered when designing an AT devices as identified by the trace center in Wisconsin includes: equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for effort, low physical effort, size and space for approach and use appropriate needs (Dantata, Haruna, Adamu, Bulus, Ahmad, Shuaibu and Maji, 2018). They further mentioned the following as the types of Assistive Technology (AT):

1. Word processor.
2. Speech synthesizers
3. Spell-check programs.
4. Computer software/hardware such as voice recognition programs, screen readers and screen enlargement application etc.
5. Hearing aids.
6. Mobility aids.
7. Adaptive switches.
8. Light weight, high performance wheel chairs.
9. Assistive devices such as automatic page turners, book holders and adaptive pencil grips etc.

Mosunmola (2009) said that Children with special needs improved by the emergence of AT. These included hearing aids like ear-mould machine, voice synthesizers, language skills acquisition library, diagnostic kit, independent audiometers, among others. Kazure (2009) the types of AT may also included: adapted toys, computers, powered mobility, augmentative communication devices, special switches and thousands of commercially available or adapted tools to assist an individual with learning, working and interacting socially.

Importance of AT to Learners with Special Needs.

Assistive Technology offers persons with special needs the tools necessary to be more successful in school, at work and at achieving independence in daily living. Silas (2009) viewed the following as the most important role of AT to learners with special needs in an inclusive setting:

1. It encourages independent living.
2. It encourages individualized instructional and independent study programme.
3. It aids in the assessment of special needs programme.
4. It provide a rich contest for language exploration and allows special needs children to experiment at their own interest, pace, talent and potential abilities.
5. It is used for intervention for remediating and enhancing the learning capacity of special needs students.
6. It serves remedial and compensatory purposes.

7. Extra sensitivity to special needs diagnosis and prognosis.
8. It encourages social behavior. Etc.

Assistive Technology may be considered appropriate because it enables students to perform functions that can be achieved by any means. It provides access for participation in programmes or activities which otherwise would have been closed to the individual (Kazaure, 2009). She added that, AT increased endurance or ability to persevere and complete tasks that otherwise are too laborious to be attempted on routine basis. In connection with that, AT enables students to concentrate on learning tasks, rather than mechanical tasks and provides greater access to information, support participation in the best least restrictive educational environment.

Inclusive Education

Inclusive is literally, to include which means putting together two or more things or parts in single community and instruct them together. Inclusive education is derived from improvement or main-streaming which emphasizes the maintenance of learning clusters, both in theory and practice (Egaga, 2009). The rationale of implementation of inclusive education can lead to the development of high self-esteem on the part of learners as well as enhancing their integration and re-integration into societal main-stream. Apart from addressing the social psychological and educational needs of learners inclusive education is a panaceas to the employment, self-reliance, therapeutic and educational needs of special learners (Maiwada, 2021). Inclusive education is a full placement of persons with special needs in to a regular school or classroom. This is to say that inclusive is a developmental approach seeking to address the learning needs of all children, youths and adults with specific focus on those who are vulnerable to marginalization and exclusion.

Benefits of Inclusive Education to Deaf Individual

Students with hearing impairment can benefits from inclusive education in the following ways:

I. Creating opportunities for making friends with hearing individuals.
II. Vocabulary development for students with hearing impairment.
III. Students get confident in themselves and relate socially and educationally (Isa, 2019).
IV. Create a competition between persons with hearing impairment and their counterparts
V. Psychological balance.
VI. Development of speech and spoken languages.
VII. Creating opportunities for them to display their potential.

To Justina (2009), inclusive education holds a lots of prospects in Nigeria. Such prospects include:

1. Promotes a sense of cooperation and the feelings of togetherness in the learner.
2. Promotion of a healthy competition among children of different abilities, endowment and background.
3. Presents an avenue for full utilization of the resources of the members of the community and the teachers.
4. Provides a means of building a cooperative school community where all are accommodated and able to participate.
5. Inclusive schooling is cost effective as all the learners are accommodated in the same environment using virtually the same facilities. Unnecessary duplications of cost that are associated with segregation arrangements are avoided.

Conclusion

The inclusion of students with special needs together with conventional students can be best achieved when there are availabilities of Assistive Tchnology (AT) in the planning, placing, implementation, teaching and learning. Hence, word processing, editing, spell-checkers, and grammatical tools commonly found in high-end software facilitate the inclusion of students with learning disabilities in regular classrooms by allowing them to keep up much of the class activities (DIso, 2014).

Recommendations

1. Assistive Technology (AT) should be included in post primary education schools as a subject/course in a curriculum of inclusive education
2. Charity organizations, special needs associations, government, agencies etc. should give more hands on the training of teachers of students with special needs.
3. Sensitizations, workshops, conferences, etc. should occasionally if not weekly be organized on inclusive education and AT devices utilization and handling.

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