

THE ROLE OF ICT IN SEN

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Abstract

Nowadays the role of Information and Communication Technology (ICT), in the education sector plays an important role, especially for special educational needs. Being aware of the significant role of ICT in our life, especially in the educational activities, education authorities should be wise enough in implementing the strategies to empower ICT in supporting the teaching and learning process in the classroom. ICT is not just the bloom of the educational activities, but also it will be the secondary option to improve the effective and meaningful educational process.

Key Words: *Digital divide, Digital inclusion, Inclusive Education, Benefits.*

Introduction

The educational needs of people with disabilities are vastly diverse. On the one hand, they must, as their peers, get knowledge and skills required in the society in which they live. On the other, they have (by definition) additional demands (often referred to as special educational needs) caused by functional limitations which affect learners' ability to access standard educational methods of instruction, therefore, prevent educational progress.

In this context, ICT application is very important as it plays an essential role in providing high quality education for students with disabilities. ICTs have been introduced into the teaching-learning process in order to improve quality, support curricular changes and new learning experiences. In this way it is possible to meet the specific learning needs of different learner groups, including students with disabilities. Though specific applications of ICTs are extremely diverse and varied, they may be grouped into the following main categories:

- Compensation uses.
- Didactic uses.
- Communication uses.

With this in mind, the role of ICTs in special education will be described in accordance with the primary categories.

ICTs for Compensation Uses

That is the use of new technologies as a technical assistance that allows students with special needs to take active part in the process of interaction and communication: if a person has motor disability he may be helped to write, or to read if a person is

with a visual deficiency (among many other possible examples). From this point of view ICTs develop the students' ability to control their environment, make choices about their experiences, support problem-solving, give access to information, thereby enhance communication with others both in the immediate environment and around the world. In other words, technology can recoup or substitute the lack of natural functions.

ICTs for Didactic Uses

ICTs used as a learning tool have prompted a new dimension of education and launched the transformation of the educational approaches. ICT application brings a variety of new teaching and assessment strategies for students with different educational needs.²⁰ here we must note that information technologies as a didactical tool are suitable for implementing the inclusive education. In order to enhance personal development, educational initiatives within the inclusive curriculum must aim at meeting unique needs, differences, and abilities of an individual; hence they must be fully supported to achieve these goals at an appropriate pace. Information technologies, thereupon, will become a valuable resource for inclusion.

ICTs for Communication Uses

Technologies can mediate communication with people having disabilities (often referred to as Alternative and Augmentative Communication). Assistive devices and software to meet the needs of students with definite communication difficulties are specific to every disability. We talk about the computer as a resource that eases and makes the communication possible, allowing a person with

communicative disorders to exhibit his/her abilities in a more convenient way, or people with motor and communicative disorders to start communication, show the needs and make the demands. Furthermore, where teachers are in short supply (as in special education) distance teaching methods can help provide special services between geographically dispersed students and teachers.

Objectives of the study

1. To study the importance of Information and Communication Technology in people with Special Education Needs.
2. To study the role of ICT in Inclusive Education

Methodology

For the present study descriptive method and secondary data is used. As per nature of the study descriptive method is considered appropriate.

Supporting Inclusive Education through ICT

Implementation Inclusive education presents an opportunity for students with special needs to attend mainstream classrooms with their age-group peers. To realize this we need to provide for the relevant conditions of overcoming the barriers to the learning process. Particularly speaking, these conditions are attained via the facilitation of ICT infrastructure for SEN, integration of ICTs into SEN curriculum and training of ICT specialists in SEN.

Promoting ICT infrastructure for SEN is necessary in order to provide for the appropriate conditions of teaching and learning in the SEN context. The conditions in every type of inclusive educational area cannot be successfully created without the appropriate ICT tools applied. Assistive tools must be used to allow students with SEN to participate in the educational process based on special techniques and equipment.

For some students, a technological solution will be the only way to ensure that they can make their needs, opinions, and views known. For them, access to ICT-based solutions is a lifeline to inclusion. ICT support in inclusive education is important because it covers issues that apply to a spectrum of potential learning needs. The key ways in which ICTs can support educational opportunities for people with SEN are as follows:

- Identifying the preliminary level of personal development (experiences and skills), that is to say the starting point of a student;
- Assisting in personal development by shaping

new skills or updating existing ones;

- Improving the access to information;
- Overcoming geographical or social isolation via communication support and networks;
- Improving the image/perception of an area by enhancing motivation and awareness regarding the ICT benefits in SEN.

It is also important to recognize that with ICTs alone we cannot solve all problems. The second step requires the willingness of educators to develop innovative teaching methods or to change and adopt the existing approaches to accommodate new concepts of special needs education and modern technologies. If a learner is unable to manage a particular activity (due to physical or sensory barriers), alternative activities must be designed or adapted, so that he/she gets a chance to receive the needed information and demonstrate the results. To implement this intention ICTs must be fully integrated in SEN curricula. Curriculum modification is not about its simplification for some students or lowering of academic requirements or standards. The modified curriculum must preserve the skills or knowledge required for a particular course and distributes knowledge and training resources in a more creative way and on a more equal basis.

In the new millennium, online delivery has become the most prevalent way of presenting the up-to-date information to students in the quickest, most flexible and innovative ways possible. Educational courses can utilize a variety of technologies to facilitate learning and interaction between participants: asynchronous and synchronous communication and collaboration tools (e-mail, bulletin boards, whiteboards, chat rooms, videoconferencing, and teleconferencing), interactive elements (simulations, immersive environments, and games), various testing and evaluation methods (self-assessment, multiple choice testing, etc.). Educational content can be presented in various media: text on a website, multimedia, such as digital audio, digital video, animated images, and virtual reality environments. This content can be created in a multiplicity of ways, utilizing a variety of authoring tools. As a result, ICTs transform educational dynamics by providing alternative, authoritative sources of information, which requires teachers to become facilitators and, in some cases, intermediaries between specific information sources and a learner. At the same time, ICTs can break teacher's isolation, providing them

with prospects to communicate beyond the traditional school-management hierarchy

Benefits of ICT Use in Education for People with SEN

According to the research of British Educational Communications and Technology Agency (BECTA, 2003), ICT usage in schools to support students with SEN can enable learners to communicate, participate in lessons, and learn more effectively. Key evidence is outlined below.

General ICT benefits

- Enables greater learner autonomy.
- Unlocks hidden potential for those with communication difficulties.
- Enables students to demonstrate achievement in ways which might not be possible with traditional methods.
- Enables tasks to be tailored to suit individual skills and abilities.
- Provides opportunities for human being to interact with one another in new ways easily.

ICT benefits for students

- ❖ Computers can improve independent access for students to education (Moore and Taylor, 2000; Waddell, 2000);
- ❖ Students with special educational needs are able to accomplish tasks working at their own pace (ACE Centre Advisory Trust, 1999);
- ❖ Visually impaired students using the internet can access information alongside their sighted peers (Waddell, 2000);
- ❖ Students with profound and multiple learning difficulties can communicate more easily (Detheridge, 1997);
- ❖ Students using voice communication aids gain confidence and social credibility at school and in their communities (Worth, 2001);
- ❖ Increased ICT confidence amongst students motivates them to use the Internet at home for schoolwork and leisure interests (Waddell, 2000).

ICT benefits for Teachers, Non-Teaching staff

- ✓ Reduces isolation for teachers working in special educational needs by enabling them to communicate electronically with colleagues (Abbott and Cribb, 2001; Lewis and Ogilvie, 2002); Supports reflection on professional practice via online communication (Perceval-Price, 2002);
- ✓ Improved skills for staff and a greater

understanding of access technology used by students (Waddell, 2000);

- ✓ Enhances professional development and the effectiveness of the use of ICTs with students through collaboration with peers (Detheridge, 1997; Lewis and Ogilvie, 2002);
- ✓ Materials already in electronic form (for example, from the Internet) are more easily adapted into accessible resources such as large print or Braille (Waddell, 2000).

ICT benefits for Parents and Careers

ICT helps in reducing social inequalities between pupils, as they work in cohesion to achieve a given task- the very principles that parents want to inculcate in their children. Parents should embrace the endless possibilities that come armed in ICT and leverage in to secure a bright future for the words. Use of voice communication aids encourages parents and careers to have higher expectations of children's sociability and potential level of participation (Worth, 2001).

In conclusion, we must stress that there exists a considerable potential in the educational uses of ICTs alongside with many challenges and dangers. New technologies can provide the means to explore new forms of learning that break the traditional hierarchies of educational systems and develop genuine alternatives to rigid, passive approaches to learning of people with SEN. However, these technologies can turn up as obstacles to education if they are applied without a commitment to the principles of equality, participation, and responsibility

Key Terms

Digital divide: A term which refers to the gaps between those who can effectively use new information and communication tools, such as the Internet, and those who cannot.

Digital inclusion: Several initiatives that work socially and technologically in order to reduce the existing gap in access to information and communication technologies and networks for people with special needs.

Information Age: The period of social development when the production of information is more important than the production of physical goods; the service sector is much larger than the manufacturing sector.

Information Society: Characterizes the level of community development being formed as a result of the fusion of information, media and telecommunications including far-reaching

organizational and institutional changes in all aspects of human activity (e.g. workplace, leisure, shopping, commerce, education).

Summary

- The current period of educational system development is characterized by the increasing role of ICTs which have become an important new component of the curriculum, adding a valuable set of new resources and didactical tools suitable to support the learning process.
- Speedy development of the Information Age brings people with special needs a danger of losing their most basic rights, caused by new threatening barriers.
- In order to exploit the whole potential of the ICTs to provide for the equality, it is necessary to understand the barriers to learning faced by those who are seen to have SEN.
- Barriers to learning prevent students from getting sufficient level of knowledge as well as from giving a teacher a true evaluation of the students' competence. Though the applications of ICTs in education of people with special needs are extremely diverse, there are three main areas for their use – compensation uses, didactic uses, communication uses.
- In order to implement inclusion in education there is a need to create appropriate conditions for students with SEN.
- The achievement of conditions for successful inclusion in all areas of education can be realized by means of providing for appropriate technological infrastructure, modification of the curriculum, and training of new specialists in special education, capable to use ICTs.

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