

Technology and People with Special Needs – Research Sections

Dr. Hamood Mohammed Hamed Alhasani*

Ph.D. in Curriculum and Instruction (Educational Technology) And Senior Information Systems Specialist – Ministry of Education

Corresponding Author: **Dr. Hamood Mohammed Hamed Alhasani** (Ph.D. in Curriculum and Instruction (Educational Technology) And Senior Information Systems Specialist – Ministry of Education)

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Abstract: This paper examines the role of technology in supporting people with special needs and ensuring their equal participation in education and society. With the rapid expansion of digital tools, access to technology has become a fundamental right that enables individuals to communicate, learn, and work effectively. The study highlights the efforts of the Sultanate of Oman and similar Arab countries in promoting digital accessibility by providing technological resources tailored to various disabilities. It also discusses the importance of inclusive classrooms, adaptive educational tools, and workplace technologies that empower people with special needs. The paper concludes by emphasizing the necessity of continuous development of educational and institutional technologies to enhance inclusion and independence for this social group.

Keywords: Technology; Digital Accessibility; People with Special Needs; Inclusive Education; Assistive Technology; Oman; Educational Technology; Equal Access.

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Introduction

Technology today has become an essential component of daily life, influencing communication, learning, and social interaction. Digital accessibility—defined by Ribble (2011) as “full electronic participation in society”—has emerged as a basic human right, ensuring that all individuals can interact with digital content regardless of their physical, intellectual, or sensory abilities.

People with special needs represent an important social group that requires specialized support to overcome challenges that stem from genetic, neurological, sensory, or environmental factors. In recognition of these challenges, the Sultanate of Oman and many Arab countries have adopted policies and initiatives aimed at providing equal opportunities in education and employment. These efforts include the integration of assistive technologies, the establishment of inclusion classrooms, and the development of educational content tailored to individual capabilities.

This paper explores how technology contributes to improving the quality of life for people with special needs, enhances their learning experiences, and promotes their participation in society.

Methodology

This paper relies on a descriptive analytical approach, in which existing literature, governmental efforts, and educational practices related to technology and people with special needs are examined and interpreted.

Literature Review: Analysis of definitions, concepts, and previous studies related to digital accessibility and assistive technology.

Document Analysis: Review of national initiatives in the Sultanate of Oman that support people with special needs, including educational and workplace programs.

Analytical Discussion: Interpretation of how technological tools, inclusive classrooms, and institutional support systems contribute to improving learning and societal participation.

This approach allows for a clear understanding of the current situation and the technological needs of this social group.

Conclusion

Ensuring equal access to technology for people with special needs is no longer optional—it is a fundamental requirement for achieving social justice, educational equality, and national development. The Sultanate of Oman has demonstrated commendable commitment through inclusion programs, assistive tools, and supportive work environments that empower individuals with disabilities.

Technology, when thoughtfully designed and implemented, can greatly enhance independence, academic achievement, and professional productivity. Moving forward, continuous investment in assistive technologies, ongoing training for educators and employees, and the reinforcement of inclusive policies will be essential. By doing so, societies can ensure that people with special

needs are fully integrated contributors to development and progress.

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