

Examination on ICT integration into Special Education Schools for Developing Countries

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ABSTRACT

Information, communication and technology (ICT) is a bridge in fostering learning who have special needs in education. It becomes a medium of connecting their way of lives and their socialization within education life. Integration of ICT plays a great role in special education. Most of the developing countries pay attention to ICT practices in their education reports in order to provide equality in education and make all citizens active and digital capable. In reports, education context, ICT policy, ICT in curriculum and teacher education, ICT and digital resources were highlighted. Some of the reports of developing countries did not set special education needs, learners and ICT support for their learning. Although they pay attention to learners who have special needs, there is an intensified need to make comprehensive analysis of ICT integration into special education schools. This research study aims to analyze ICT integration and facilities in special education schools in North Cyprus in order to set ICT policy in education. Documentary analysis and interviews were conducted to gain reflections and tendencies about ICT integration in special education. This research study shows adaptability of developing country to European ICT policy and furthermore the research provides comparison between context capacity with other countries in terms of a situational analysis.

Keywords: Digital age, digital divide, special needs education, policy

INTRODUCTION

Information, communication technology shaped the facilities and services of lives. The way of learning, the way of sharing experiences has been changed. ICT becomes integral of our lives and it promises opportunity for learners to gain equality in education within diverse contexts and services. In this respect, recent studies focus on the perceptions of participants on ICT, the uses of ICT and practical implications in special needs education (Brodin, Lindstrand, 2003; Peltenburg, Heuvel-Panhuizen, Robitzsch, 2010; Heemskerk, Volman, Admiraal, Dam, 2012), there is a little attention on policy of ICT within the integration of education especially special needs education. The study of Yusof, Daniel, Low, Aziz (2014) discussed teachers' perception of m-learning applications in special education. It is seen that there are limitations of using ICT in special needs education and it is suggested to use augmented reality, game-based educational software and animation projects. As ICT plays a great role to foster learning in special needs education, planning ICT in education and establishing standards through ICT policy is essential.

Liasidou (2010) puts emphasis on special needs is not personal trouble, it is public issue, therefore societies in their system need to pay attention on their policy and create a standard for the uses of ICT for upgrading the quality and equality of the special needs education. In this respect, ICT integration within education, considering the aspects of context, teacher education for ICT, ICT policy, context, digital learning resources, ICT in curriculum is crucial. While reforming the ICT in education sufficient body of knowledge; active citizenship; key competences need to be highlighted and the great role of ICT in special need education need to be discussed. Therefore this research study aims to analyze ICT integration and facilities in special education schools in North Cyprus in order to set ICT policy in education.

Diffusion of knowledge in digital age is rapidly changing. The impact of technology in learning become core area of research in literature however integration of ICT in special education stays partial. Being digital native, digital inclusion and leadership role in ICT integration in education require strategic planning and management process which ICT inclusion and provision are vital in order to cope with global standards as developing countries education system. Therefore, this research study aims to make comprehensive analysis of ICT integration into special education schools and examine ICT integration and facilities in special education schools in North Cyprus in order to set ICT policy in education.

METHODOLOGY

The research has qualitative nature which patterns and meanings have potential influence to understand the research focus. Thus research aims to examine the ICT integration into special education programmes and courses within education system, reflections and policies provided a ground to understand the further strategies and strategic plans in respect to special education and ICT policy based on European standards.

Qualitative research provides in-depth examination of the patterns and meanings in respect to research focus which emic perspective can reveal the better understanding of issue or problem for better action oriented policies (Creswell, 2009). Silverman (2000) pointed out that qualitative research is inductive process to understand the process in a detailed way with all patterns and meanings.

Research Approach

This research stands on case study approach. Case study approach provides examination of particular situation or event to propose better solutions to the problem. In this study, case study approach was employed to examine the current situation of ICT integration into special education as ICT policy for sustainable development within education system (Creswell, 2009; Yin, 1994).

Research Participants

Volunteer headmasters of the special education schools become part of the research process. Although two of the headmasters reflect their thoughts and experiences on ICT integration in special education, responses of headmasters supported documents upon ICT integration in special education field.

Research Context

The research was implemented in North Cyprus which is developing country. As a developing country, ICT integration in education system has limited facilities. Although there are attempts in ICT integration in education, there is limited facilities for special education according to records and documents. Two special education schools become part of this research study to reveal the current situation of the system upon ICT integration policy into special education.

Data Collection Techniques and Analysis

Documents and in-depth interviews were employed in this research. Documents as regards the ICT policy in education system, European standards in ICT integration studies and reports were used to do cross examination of current situation and set policy suggestions for the system. According to reports, education context, ICT policy, ICT in curriculum and teacher education, ICT and digital resources were highlighted. Furthermore, in-depth interviews were conducted with two headmaster to reveal the system practices upon education context, ICT policy, ICT in curriculum and teacher education, ICT and digital resources. For documents, documentary analysis was done and thematic analysis was done for interviews (Creswell, 2009, Denzin, Lincoln, 2003).

RESEARCH FINDINGS

The research revealed that education system in terms of ICT policy, ICT in curriculum and teacher education, ICT and digital resources have limited facilities and system needs strategic planning and management to set policy for the integration of ICT in special education.

Education Context and ICT Policy

ICT can improve the quality of teaching, learning and management in schools which literature pays attention on ICT is significant for improving learning of children. Although literature pays attention on ICT and its implications to education system, there is little attempt on using digital technologies instead of traditional applications. Documents and interview findings highlighted that ICT provision and implementation in special education is not sufficient.

ICT in Curriculum and Teacher Education

The tendency to integrate ICT in special education is even in preliminary stage in curriculum and teacher education programmes. Within the system, there are new programme and courses to capture ICT competence and literacy for special education field. The awareness of necessity on ICT integration in special education become current system issue and problem which need to be investigated and planned in detail through strategic planning and management.

ICT and Digital Resources

The most challenge of using ICT in education, significantly in special education is the digital resources. Using digital resources and educational infrastructure within the system are very limited for special education upon

documents and interview results. As regards the critical analysis on digital and interactive learning environments, applications and competences are not satisfactory. Although literature points out positive correlation between success and using digital resources in special education, there is no evidence on practice within this system.

Overall Evaluation

Documents and in-depth interview results showed that there is potential need to integrate ICT in education, significantly in special education. There is limited experts in special education who have potential competence on ICT literacy in special education. Furthermore, there is no practical implementation and policy oriented actions. In addition, there is intensified need to consider digital resources to increase the learning and performance of the children who are part of the special education upon their individual characteristics and needs.

CONCLUSION AND RECOMMENDATIONS

Information and communication technologies (ICT) are accepted as enhancing learning as regards the diffusion of knowledge in digital age. However, it is still a problem in developing countries which adaptation process takes time to integrate ICT in education system. Although literature pays attention on evidence of learning outcomes upon ICT practices in learning process, this study aims to reflect critical analysis on ICT in special education. Difficulty of traditional practices, infrastructure and specialisation in the field can be listed as obstacles in ICT integration in special education for developing countries upon documents and interviews results. The critical success factor of ICT integration in special education is the digital literacy which need to be resolved and considered within the system.

Technology management process needs to be considered within the system to set priorities and action plans for further development. In this respect, system needs to consider ICT policy for special education, put emphasis on curriculum and teacher education programme and courses, digital resources and literacy to get success in special education field. Technology management process requires strategic planning process which this process propose participatory decision making process of team experts. Technology management process and in-service trainings to the teachers and families are very crucial. Internalization of digital citizenship within the system is necessary. Therefore, reaching out success and constructive performance on integrating ICT into special education programme and courses even in management process of the schools need contextualization and ICT policy and digital literacy. This study provides a ground and opens a debate on ICT in special education and this study confirms that there are limited facilities in ICT integration. For further studies, longitudinal studies may be conducted and strategic planning, technology management process can be revealed with evidence and results.

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