TEACHER-EDUCATION: MEETING THE NEEDS OF THE NEW GENERATION

(A Peer-reviewed Research Papers of
the Fourth National Conference of Teacher Educators)

Christian College of Education
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ICT BASED CLASSROOM TECHNOLOGY IN THE PRIMARY SCHOOL CURRICULUM

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ABSTRACT

Information and Communication Technology has become an integral and accepted part of everyday life for many people. Technology is increasing in importance in people's lives and it is expected that this trend will continue, to the extent that technological literacy will become a functional requirement for people's work, social, and personal lives. The creative use of Information and Communications Technology (ICT) in education has the capacity to increase the quality of people's lives by enhancing teaching and learning. Since the launch of the Primary School Curriculum (PSC) in 1999 there have been significant developments in the use of Information and Communications Technology (ICT) in education. The general aims of the PSC are to prepare the child for further education and lifelong learning, to develop as a social being through living and cooperating with other and to realize his/her potential. Some children will need such technology in order to lead fuller lives as children and to assist them in their learning. They may need assistive technology to support their communication, interaction, mobility, and general participation within the classroom. Undoubtedly, ICTs are potentially a useful tool for primary school curriculum. ICT may also be a significant motivational factor in primary school students' learning, and can support students' engagement with collaborative learning.

Keywords: ICT, Primary School Curriculum, Assistive technology

Information and Communication Technology

Information and Communication technology (ICT) is an accepted

element in all our lives and has a central role to play in educa... Many developed and developing countries are using ICT ena... education as a tool for quality education and to fill the gap betw... traditional methods and new methods of teaching and learning... the term refers that includes any communication device or applicat... encompassing: radio, television, cellular phones, computer and netw... hardware and software, satellite systems, etc. as well as the vari... services and application associated with them, such... videoconferencing and distance learning in education" (Dr. P... Swarts).

Primary School Curriculum

The Introduction to the Primary School Curriculum stat... *"Technological skills are increasingly important for advanceme... in education, work, and leisure. The curriculum integrates I... into the teaching and learning process and provides childr... with opportunities to use modern technology to enhance the... learning in all subjects" Primary School Curriculum, 1999, p.2...*

ICT and the learning principles of the Primary Scho... Curriculum

The Primary School Curriculum presents a vision of educatio... which is expressed in three general aims:

- o to enable the child to live a full life as a child, and to realise hi... or her potential as a unique individual
- o to enable the child to develop as a social being through livin... and cooperating with others and so contribute to the good o... society
- o to prepare the child for further education and lifelong learning...

Using ICT in teaching and learning may be approached i... three ways:

Learning about ICT: teachers and children develop skills an... knowledge in the potential uses of ICT to support learning.

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Learning with ICT: teachers and children use ICT resources to support the classroom curriculum.

Learning through ICT: teachers and children use ICT to transform the process of teaching and learning, learning in new ways.

Specific aims for ICT use in the primary school include:

o   to enable the child to use a range of ICT tools in a relevant curriculum context

o   to enable the child to develop and use ICT skills in the attainment of curriculum learning objectives

o   to develop the child's understanding and practice of the safe use of ICT

o   to inform the child's attitudes regarding the role of ICT in society, including the benefits and challenges of ICT use

o   to support the development of the child's social skills through cooperative learning and problem-solving.

Assistive Technology

The term assistive technology refers to the range of technological devices or systems designed to improve the functional capabilities of individuals with disabilities and maximise their quality of life. Some children will need such technology in order to lead fuller lives as children and to assist them in their learning. They may need assistive technology to support their communication, interaction, mobility, and general participation within the classroom. For example, a non-verbal child may use a portable device to generate electronic speech, or a child with visual impairment may find magnifying software or screen reader software beneficial in augmenting their learning experience using computer software.

Classroom planning

When planning the use of ICT in the classroom, it is important for teachers to identify the role that ICT can play in adding value to teaching and learning across curriculum areas.

For example, word-processing facilitates editing, redrafting presentation in the writing process in ways that were previous inaccessible using pen and paper. This can be particularly valuable when dealing with a child who has difficulty with writing, as the child can be helped to correct mistakes as often as necessary without t frustration of re-doing the entire piece.

Classroom management

The following are some practical guidelines for ICT use in t classroom:

- negotiate and agree rules for appropriate and responsible u of ICT in the classroom
- set up a Rota (schedule) system to ensure that all children ha access to classroom computers
- post a list of frequent commands and shortcuts in a promine place near the computer
- place a clock or timer near the computer. This will allow childr to monitor their time at the computer
- provide children with headphones to reduce the noise leve when the volume is turned on
- introduce computer software to one group of children, who turn can act as peer tutors for others in the class
- assign an older child to use the digital camera with young children.

Assessment planning

The Primary School Curriculum emphasises that assessment an essential part of teaching and learning. Some of the ways in whi ICT extends the teacher's and children's repertoire of assessme tools are described in this section.

In general, assessment planning needs to take account of

- the use of electronic portfolios
- the use of ICT as an assessment tool

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- o the use of ICT in recording and analysing assessment information
- o the importance of ongoing evaluation and review of the use of ICT in the teaching and learning process both at school and classroom levels.

School level planning for assistive technology

A variety of information and communications technology (ICT) equipment can help children with learning disabilities. These include:

- o funding and grants for assistive technology, including equipment, training and support
- o co-ordination of staff, equipment and training
- o liaison with parents, therapists and other relevant personnel
- o continuous planning, as the child's needs change
- o fostering an inclusive positive attitude to children using assistive technology
- o storage, maintenance, repair and insurance.

Additional ICT equipment to support children with special needs may include:

- o alternatives to the traditional keyboard such as overlay keyboards, concept keyboards, or on-screen grids for children who have difficulty in accessing or controlling the keyboard
- o Touch screens, with which teachers and children may be familiar from interactive displays in museums, react to the touch of a finger.
- o spell checkers, glossaries, dictionaries and thesaurus can support dyslexic children and other children by enabling them to check the accuracy of their work
- o speech recognition systems enable the child to create text, or to control the computer by voice input
- o drill and practice software may support the child who needs to 'over learn' concepts

Conclusion

Undoubtedly, ICTs are potentially a useful tool for primary school curriculum. The use of ICT in appropriate contexts in Primary school education can add value in teaching and learning, by enhancing the effectiveness of learning, or by adding a dimension to learning that was not previously available. ICT may also be a significant motivational factor in primary school students' learning, and can support students' engagement with collaborative learning.

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