

ICT FOR CREATIVITY AND INNOVATION IN EDUCATION

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ABSTRACT

Creativity is the ability to generate innovative ideas and manifest them from thought into reality. The process involves original thinking and then producing. Many of the core indicators of creative thinking and behavior can be seen in individuals who enjoy the process of learning through experimentation and exploration. These processes employ elements of play, exploring alternative approaches (looking at and thinking about things differently), applying imaginative thinking to achieve an objective, making connections with previous and new learning and thinking critically about ideas, actions and outcomes. All of these process-based activities can be developed with the aid of ICT, and increasingly the use of ICT is the medium of choice or the means by which an outcome is created. CT can support learning across a range of intelligences like interpersonal, intrapersonal, linguistic naturalist, Spatial, Musical others. ICT can use pedagogical innovation with new tools, Support innovative organizations, and technological innovations.

Keyword: - ICT, Knowledge, Technology

1. INTRODUCTION

What is Creativity and **Innovation**?

Creativity is the act of turning new and imaginative ideas into reality. Creativity involves two processes: thinking, then producing. Innovation is the production or implementation of an idea. If you have ideas, but don't act on them, you are imaginative but not creative. "Creativity arises three components: - Knowledge, - Creative thinking skill, Motivation. Innovation means **"The intersection of invention and insight, leading to the creation of social and economic value."**

1.1 ICT in the Creative learning

Technology moves on very quickly and schemes of work often don't reflect changing technologies, times and contexts. We are in a position to personalize the curriculum in what children learn, how they learn, where they learn, with whom and with what resources.

As children develop their skills using ICT both inside and outside school with innovations such as the internet, broadband, games consoles, Wiis, Nintendo DSs, iPods, iPads etc, children could be in the position where they use more technology outside school than in the classroom and perhaps even 'dumb down' as far as their achievements and their understanding of what technology can do. The knowledge, skills and understanding of our children varies greatly depending on their experiences with technology outside school.

In order, to utilize the skills that the children already have, in school we encourage teachers to allow the children to choose when it is appropriate to use technology (and when not). We also suggest teachers don't teach children a set of skills as a whole class but teach skills as and when it's appropriate. Teaching a skill at that point of need key to

children remembering it and using it again. To encourage a more flexible use of computers, we have asked schools to reevaluate traditional ICT suites in favor of having the technology on hand in the classroom as and when they need the use of ICT suites and timetabled lessons can limit student access to IT. The ability of students to make creative use of ICT as and when their learning requires can be inhibited if ICT is delivered as a standalone subject. One example would be, edit these sentences adding capital letters when necessary using the shift key. It would be better to teach the usage of the shift key at a time when the children are typing letters, addressing envelopes, postcards linked to a geography topic, letters to a pen pal or a thank you note. The skill they need to be taught needn't wait until their timetabled lesson later in the week or term but when they are asking for the answers. Having the freedom to choose how the children learn under the direction of the teacher and what technology and software they use, enables teachers to support children with different learning styles, personalizing learning and addressing multiple intelligences. Traditionally, ICT has focused on supporting children whose strengths lie in linguistic and logical (mathematical) intelligences. There should be one aspects of ICT teaching:

- Through ICT supporting learning in other subjects; applying skills in real contexts, using AFL should identify the next steps in their learning in both the above.

School may have designed activities, identified skills and non-negotiable items for you to incorporate into your planning. In addition, most schools allow teachers a freedom to look at a themed topic and decide upon what applications or other ICT activities will enhance children's learning in that area. If possible, teachers should look at a range of activities over the school year that builds on the children's prior learning. In ICT, an established assessment for learning (AFL) strategy can transform the rate at which the children adopt technology. In many cases, children learn skills from their peers (and from their mistakes!) before their teachers. CT has the potential to transform learning. Too often schools substitute paper based activities for computer based ones. This undermines the capacity of technology and is wasteful of resources. A vast range of solutions, information, examples and perspectives can be offered only through the use of ICT.

2. SUPPORT PEDAGOGICAL INNOVATIONS WITH NEW TOOLS:

Encouraging experimentation.: Innovations in the process of learning and teaching emerge from different actors, both learners and teachers. Policies should aim to empower educational actors and institutions in their local contexts to develop innovative approaches to learning with added value in their environment, (e.g. with different local languages, or by using digital tools and media creatively for specific learning topics).

Networking and best practice exchanges: Teachers should be encouraged and supported to document and share the innovative practices they have developed and encountered in their teaching, as knowledge of practical applications for new approaches in different environments is scarce. Incentives for the objective assessment of enabling and disabling factors should be implemented.

Teacher Training and Support: ICT and social computing can improve the effectiveness of learning and the learning outcomes, but results depend on the approaches used. Hence, initial and in-service teacher training should disseminate insights and best practices with new innovative approaches, encouraging teachers to experiment with digital and media technologies and to reflect on the learning impacts of their own teaching practices. Establishing and participating in teacher networks and following innovative practice development of the field should become part of teacher training.

Open and networked institutions: Policies should encourage institutions to embrace the networking opportunities available. By opening their learning materials (open educational resources), institutions can attract learners and also support informal learning outside institutions. Networking between institutions can enrich the curricula provided for students and transfer subject-related knowledge between practitioners. Institutions should promote collaborative networks between teachers, researchers, and professional networks, in order to support the emergence and sharing of learning innovations

Develop and support favourable culture for ICT innovation and learning: Using new tools for old processes does not create change or innovation. Institutions should facilitate emergence of innovative learning approaches by

(i) ensuring that learners, teachers, managers and parents are aware of their potential and (ii) by supporting them in curricula, teaching guidelines, and teacher training. Institutions should acknowledge and encourage innovations coming from actors on different levels and develop their practices accordingly, thereby becoming reflective, learning organizations.

Research on ICT impacts on learning: More research is needed for finding evidence on how technology can enhance learning. Together, tool developers and educational researchers should study and develop models for embedding new tools such as computer-based assessment in teaching and learning approaches. This would provide institutions and teachers with proven practical models that support the take up of innovative tools.

3. CONCLUSIONS

New technologies, and especially social computing, provide new opportunities for education and training, as they enhance learning and teaching, and facilitate collaboration, innovation and creativity for individuals and organizations. The benefits of deploying social computing and ICT for learning depend on the learning approach used, emphasizing the role and the skills of the teacher and the need for supportive settings for both learners and teachers.

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