Highlight: ICT and Early Childhood Care and Education

Benefits and risks of ICT use in early childhood
ICT can support different aspects of learning and development processes of young children, including language, creativity and problem-solving skills. Children can also play and learn together using ICT, which can foster their ability to communicate and collaborate. Moreover, ICT facilitate more personalized learning and thus can diversify and increase learning opportunities for every child, including children with special educational needs.

Educators’ attentive use key to maximizing ICT benefits in early years education
This article stresses that an attentive, thorough and knowledgeable integration of ICT across curriculum is the best answer to most concerns on using ICT in early year education. The question is not anymore whether young children should use ICT or not, but rather how educators and parents should use ICT effectively in order to enhance children’s learning and development avoiding potential risks.

Programmes & Projects
Developmentally appropriate technology for early childhood (DATEC)
The rapid expansion of low-cost computing has been accompanied by a push for digital devices in the classrooms of all students. In order to ensure the useful inclusion of ICT in education in an age where the difference between a useful, educational ICT and toys is not always clear, the European Union founded DATEC (Developmentally Appropriate Technology for Early Childhood)

News & Events
Learn by coding
"Knowing how to code?” or "literacy of the XXI century? ” - UNESCO's YouthMobile initiative and Intel Software hosted a round table on this peculiar issue on Friday, June 13 on the occasion of the 5th edition of Futur en Seine in Paris (France), with the support of Cap Digital.

81 nations represented at Conference on Early Care and Education
Eight hundred forty-one early childhood leaders and practitioners from 81 nations participated in the tenth World Forum on Early Care and Education held May 6 – 9, 2014, in San Juan, Puerto Rico. The focus of the event was to discuss the delivery of quality services to young children globally and to develop action plans for achieving quality in diverse settings.

International Conference “ICT in Education” in Mongolia
The International Conference “ICT in Education: Digital Pedagogy, Learning Technology, Teachers and OER” was held in Ulaanbaatar, Mongolia, on 6-7 May 2014. More than 350 educators from secondary schools and higher education institutions, education administrators and NGO took part in this conference. The main topics of the conference were digital pedagogy, teacher’s competencies and education management information system.
Resources
Recognizing the potential of ICT in early childhood education
The analytical survey “Recognizing the potential of ICT in early childhood education” undertaken by UNESCO Institute for Information Technologies in Education (IITE) involved a literature review and comprehensive analysis of theoretical approaches to early childhood education and the methods of ICT application to child development and early learning.

Technology and interactive media as tools in early childhood programmes serving children from birth through age 8
This position statement is intended primarily to provide guidance to those working in early childhood education programmes serving children from birth through age 8. Although not developed as a guide for families in the selection and use of technology and interactive media in their homes, the information here may be helpful to inform such decisions.

ICT skills progression: Early Years Foundation Stage and Key Stage 1
The Lancashire Schools’ Early Years Foundation Stage (EYFS) ICT skills progression has been produced in order to help and support EYFS and Key Stage 1 practitioners using ICT within the curriculum of the United Kingdom.

What’s lost as handwriting fades?
This article published by the New York Times is discussing several recent neurological and psychological studies undertaken in the USA which examined the effects on children’s educational development if too much emphasis on the usage of keyboards is given after they had been introduced to handwriting in kindergarten and first grade.

We can hardly imagine education institutions today without any presence of ICT. More and more children encounter modern communication technology such as computers, smartphones or tablets before they go to school, even before they go to preschool. Naturally, they are exposed to both positive and negative impacts of digital technologies. This newsletter edition with the theme “ICT and Early Childhood Care and Education” will take a closer look on usage of ICT in early years and its potential for a more comprehensive development of children before they go to school.

Our two highlighted articles examine the benefits and risks of ICT use in early childhood, one article by Mami Umayahara, written from her perspective as Programme Specialist for Early Childhood Care and Education, and the other by Polyxeni Evangelopoulou written from her experience as pre-school educator and researcher.
In its analytical survey “Recognizing the potential of ICT in early childhood education” UNESCO IITE suggests strategies for the development of ICT capability of early childhood education centres and gives recommendations for educators, parents and policy makers, based on extensive literature review and analysis of theoretical educational approaches.

The long-term European research project “Developmentally appropriate technology for early childhood (DATEC)” culminated in a framework that identifies nine general criteria for determining the appropriateness of the ICT applications and tools to be applied in early childhood education.

Further useful resources featured in this newsletter include a guiding document published for those working in early childhood education programmes on both the opportunities and the challenges of the use of technology and interactive media; and the Lancashire Schools' Early Years Foundation Stage (EYFS) ICT skills progression, which provide planning grids for educators on how ICT can be integrated in early years education.

Lastly, a more critical stance towards ICT in early childhood education is taken in an article published by the New York Times, which introduces several neurological studies that showed negative development effects on children if they are not exposed enough to handwriting in their early years.

Please let us know in case you have any comments or suggestions for us.

We hope that you enjoy reading our newsletter!

**Highlight: ICT and Early Childhood Care and Education**

**Benefits and risks of ICT use in early childhood**

*by Mami Umayahara, UNESCO Bangkok*

Today it is common to see toddlers and pre-schoolers watching video, playing games on tablets or surfing on internet. In the Republic of Korea, 93% of children between 3 and 9 years of age go online for average 8 to 9 hours per week\(^1\). As younger and younger children are exposed to ICT, there are concerns among researchers and parents alike over the safety of ICT use by young children as well as their effective use for their learning.

Early childhood refers to the period from birth to 8 years of age. We now know from research that significant brain development occurs during early childhood and 75 per cent of brain development takes place during the first six years of life. We also know that good nutrition, positive stimulation, affection and a safe environment influence how the brain cells connect; the

---

\(^1\) Cited in Holloway et al. (2013) *Zero to Eight: Young Children and their internet use.*
brain architecture is thus literally shaped by the quality of environment, particularly the child’s interactions with other humans. And once developed the brain is much harder to modify, and developmental delays before age 6 are particularly difficult to compensate (see Figure).

Research findings on effects of ICT use in early childhood, except those related to television, are sparse and quite divided. In the words of John Medina, a developmental molecular biologist and the author of Brain Rules for Baby:

I have never seen messier research literature in my life, particularly regarding brains, behaviors, and video games. Even a cursory review of the work that’s out there reveals shoddy designs, biased agendas, lack of controls, non-randomized cohorts, too few sample sizes, too few experiments – and lots of loud, even angry, opinions.

On the other hand, there seems to be little strong opposition against the 2011 policy statement of the American Academy of Pediatrics that discourages media use by children younger than 2 years because of:

- no evidence supporting educational or developmental benefits for media use;
- potential adverse health and developmental effects; and
- adverse effects of parental media use (background media) on children.

Moreover, some potential risks for young children are repeatedly pointed out, including:

---

• physical and ergonomic safety risks due to prolonged usage or repetitive motions, such as musculoskeletal injuries, visual strain and myopia, obesity and other complications of a sedentary lifestyle, and possible risks of radiation exposure;
• exposure to harmful contents, such as violence and sexual content, commercial/advertising content, and gender and cultural stereotypes;
• invasion to children’s privacy, by inadvertently exposing their personal data online or their families posting videos and photos (including fetal ultrasound images) and creating their digital footprints even before their birth!

These are real and serious concerns and applicable to older children and even adults. However, many of these risks are preventable if children’s ICT use is properly supervised and the duration is limited.

Siraj-Blatchford and Siraj-Blatchford (2003), for example, recommend children should use computers in short spells, and children under 3 years should use not more than 10 to 20 minutes at a time and children under 8 years not more than 40 minutes.3

Some educationalists and parents are concerned about children’s isolation from social interactions or ICT displacing other play and learning activities. In response, what literature points to is the critical importance of the adult’s role and developmentally appropriate use of the tools. This means that safe and effective use of ICT in early childhood largely depends on the knowledge and skills of parents, guardians and practitioners (e.g. preschool teachers).

In fact, when used judiciously, ICT can support different aspects of learning and development processes of young children, including language, creativity and problem-solving skills. Children can also play and learn together using ICT, which can foster their ability to communicate and collaborate. Moreover, ICT facilitate more personalized learning and thus can diversify and increase learning opportunities for every child, including children with special educational needs. The benefits of ICT in children’s learning and development are particularly high when applications are educational, play-based, free of harmful contents and stereotypes; encourage collaboration, allow children to be in control of their learning processes (see more in the Developmentally Appropriate Technology in Early Childhood, DATAC, in UK4).

As online security problems and antisocial behaviours (e.g. cyber bullying, game/internet addiction) become well known and wide-spread, we are becoming more aware of the need to foster digital citizenship through safe and responsible use of ICT. We must recognize the critical importance of early childhood in this. It is during the first years of life when the child’s brain is developing at an incredible speed and they are acquiring new knowledge and skills in their environment, particularly through interactions with people around them. In so doing,

important social and emotional development takes place, and habits and core values, such as empathy, peer social skills and emotional control, are formed – much before they start school (see Figure). Again, it is possible but more difficult to modify these habits and values later in their life. Therefore, providing parents and families as well as early years practitioners with information and guidance on safe and effective use of ICT is critical not only to promote these young children’s safety and optimal development in early childhood but also to prevent future problems when they grow older.

**Learning begins at birth** (World Declaration on Education for All, Article V).

*The author of this article, Mami Umayahara, is a Programme Specialist for ECCE and Programme Cycle Management Specialist at UNESCO Bangkok.*

Further information:

- [R-learning = improved learning results?](#)
- [Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT](#)
- [Good practice guides on online safety](#)
- [Growing up wired](#)
- [Common Sense Media - providing trustworthy information in a world of media and technology](#)
- [UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools](#)
- [Early "Science" is vital for girls](#)

Previous issues of the e-newsletter:

- [UNESCO "ICT in Education" Announcement e-newsletter](#)

What do you think about this topic?

- Visit our on-line forum and share your views

Realisation of importance and benefits of ICT use for children in early years

*by Polyxeni Evangelopoulou, Stockholm*

In today’s world, ICT has become an important component of our life. In this context, internet access and exposure to video-games, computers and mobile phones at a very young age are rising globally. This change has been recognised by both researchers and policy makers and attempts
have been made to investigate the potential of ICT to support early childhood education effectively through a variety of functions. Several researchers claim that ICT carries the potential to support education administration and management, student access to quality education, professional development of teachers and development of locally relevant content. But to what extent could ICT be beneficial as a learning tool for children in the early years (0-8 years of age)?

Creative and innovative applications of ICT have been used as important potential tools by both parents and early childhood educators in order to provide support for children’s early learning at home and within early year settings. Although there are certain critics against the introduction of ICT in early childhood education, a number of studies have shown that ICT, when used responsibly, can actually support children’s learning by offering beneficial opportunities in the areas of language and communication, emergent literacy and reading readiness, mathematical thinking, creativity, and positive attitudes towards learning. Besides, for many children, who need additional support in order to participate effectively in classroom settings, such as children with disabilities and children from culturally or linguistically diverse backgrounds, ICT can provide a technological solution to overcome some of their impairment and be included in appropriate and meaningful learning opportunities facilitating their inclusion in the society.

Siraj-Blatchford and Whitebread (2003) consider it important that young children begin to develop technological literacy, which is defined as a new form of literacy that is increasingly considered to represent an essential element in any broad and balanced curriculum for the 21st century. Much of the literature argues that children can begin to develop ICT literacy and ICT capability as part of their early childhood experiences. For example, when children in their early years use computers at home and learn to handle successfully the desktop and the computer mouse or to produce and print their digital creations, they become better acquainted with the technological knowledge they will need in order to be prepared for our digital society.

According to Papert (1996), one of the earliest advocates for ICT for children from even the 1960’s, computers open opportunities for new forms of learning that are far more consistent with the nature of young children than that of the majority of older people. In that sense, ICT tools are the technical tools that can help children tell and listen to stories, draw or create something, interact with other people etc.

Immediate positive reinforcement is another advantage that computers can offer for children’s learning. Through appropriate educational programmes and video games, children are allowed progress to a higher level of difficulty and motivated to continue their learning, depending on the quality of their learning outputs of the previous level.

Related to this, the American National Association for the Education of Young Children (NAEYC) proposes that well-designed early childhood software should not only engage children in creative play, problem solving and conversation, but also provide an opportunity for assessment while leaving the child in control.
ICT can also support children to weave together words, pictures and sounds, thereby providing a variety of ways for children to communicate their ideas, thoughts and feelings, as well as foster the development of writing and reading skills by e.g. listening to an electronic book, linking pictures with written words and sounds etc.

When studying the effects on mathematical thinking and problem-solving, Clements (2002) mentions different studies showing that computer tasks can actually be more beneficial for preschoolers in counting, sorting and numeral recognition than those taught by a teacher. He also stresses that through computer tasks or properly chosen computer games young children can develop an increased ability to monitor their comprehension and problem-solving processes, make choices and decisions and improve their critical thinking skills. Additionally, UNESCO’s IITE (2010) explains how ICT extends an opportunity for preschool children to learn contemporary mathematics by giving them a chance to act in visualized mathematical micro worlds.

While there is little clear evidence about the impact of using ICT in the early years, many authors argue that early childhood educators should be aware of the potential benefits and risks of integrating ICT in early childhood education and be provided guidance in identifying the most appropriate applications of ICT. In order to encourage discussion, creativity, problem-solving, risk-taking and flexible thinking, ICT integration demands a play-centred environment and well trained early years educators, who are skilled in the appropriate uses of ICT with young children.

Specifically, UNESCO (2010) states that the only efficient way to eliminate or minimize the effect of safety concerns regarding the integration of ICT in early childhood education is to focus on the “teacher’s responsibility to appraise proper forms of ICT critically and employ them to support creative play and expression, not only through the selective and supported use of particular software applications, but also through the use of a range of different forms of ICT”.

In other words, an attentive, thorough and knowledgeable integration of ICT across curriculum is the best answer to most of the concerns. The question is not anymore whether young children should use ICT or not, but rather how educators and parents should integrate ICT effectively into early childhood education in order to enhance children’s learning and development.

References


Polyxeni Evangelopoulou is a preschool educator. She holds a M.A. Early Childhood Intervention (Universidad Complutense de Madrid) and a M.Sc. International and Comparative Education (Stockholm University). You may contact her through email: p.evangelopoulou@gmail.com

Note: The opinions expressed in the articles included in this newsletter are those of the authors and editors and do not necessarily reflect the policies or views of UNESCO, nor of any particular Division or Office.

Further information:

- **R-learning = improved learning results?**
- **Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT**
- **Good practice guides on online safety**
- **Growing up wired**
- **Common Sense Media - providing trustworthy information in a world of media and technology**
- **UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools**
- **Early "Science" is vital for girls**

Previous issues of the e-newsletter:

- **UNESCO "ICT in Education” Announcement e-newsletter**

What do you think about this topic?

- **Visit our on-line forum and share your views**

Programmes & Projects

**Developmentally appropriate technology for early childhood (DATEC)**

The rapid expansion of low-cost computing has been accompanied by a push for digital devices in the classrooms of all students. In order to ensure the useful inclusion of ICT in education in an age where the difference between a useful, educational ICT and toys is not always clear, the European Union founded DATEC (Developmentally Appropriate Technology for Early Childhood)
The organization’s mission was to provide guidance materials to parents and early childhood educators. In the first few years of the organization’s existence, they did extensive research on appropriate forms of ICT in early childhood education in UK, Sweden and Portugal.

During the project time, a systematic and comprehensive survey of current (and planned) developments in the application of information and communication technology to early years education (ages 0-8) was successfully conducted.

DATEC’s major outcome has been the curriculum guidance materials produced for educational policy makers and primary and pre-school practitioners. It also included a policy statement on developmentally appropriate practice in ICT education for 0–8 year olds, and twelve multimedia case studies of ‘good practice’.

This work culminated in DATEC’s ‘final report’ and “seven principles of good practices”.

A guiding principle in the literature on ICT in early childhood education is the concept of the developmental appropriateness, which provides a useful general framework for practitioners to develop their skills in recognizing and applying the most appropriate ICT products, forms and procedures. DATEC project developed a framework that identifies seven general criteria for determining the appropriateness of the ICT applications and tools to be applied in early childhood education.

The seven principles are:

1 Ensure an Educational Purpose
   If the application (DATEC uses “application” to mean an use of ICT) does not have a clear educational purpose, it should be avoided. Furthermore, drill and practice programmes - while educations - had such limited educational value that they should be avoided.

2 Encourage Collaboration
   The application should allow students together. As children collaborate, they gain valuable problem solving, information evaluation, and consensus building skills.

3 Integrate with Other Aspects of Curriculum
   For DATEC, educators need to show students that ICT is a tool that can help solve problems in the real world. Instead of stashing computers in a specialized room, digital devices should be used in the everyday curriculum for everyday purposes.

4 Ensure the Child is in Control
   Ensuring the child is in control means more than limiting adult participation. It means choosing applications where the software does not herd the learners towards one, inevitable answer. When children know that a problem has only one answer, they quickly realize that
systematically guessing every option is the most efficient strategy. For children to be in control, the power of both adults and the software must be limited.

5 Choose Applications that are Transparent
   The controls, function, and purpose of each task of the application should be readily apparent to the user.

6 Avoid Applications Containing Violence or Stereotyping
   Parents and teachers should not assume that all educational applications are free from stereotyping and distasteful ideas.

7 Be Aware of Health and Safety Issues
   DATEC recommends that young children use digital devices for only 10-20 minutes at a time.

In addition to the seven principles, DATEC recently published an updated list of approved material under the “Exemplars Today” section of their website. All of the recommendations - which include PC software, apps, and websites - meet the organization’s standards for good practice.

This work has continued in the UK and in research currently being carried out in Taiwan and in Kenya. The modality of the DATEC project has been furthermore applied in Botswana, where it successfully identified the most appropriate applications of Information and Communication Technology to support the development of children under eight years of age in Botswana’s context.

Further information:

- Developmentally appropriate technology for early childhood (DATEC)
- Extract from: Developmentally Appropriate Technology in Early Childhood (DATEC) Final Report
- An Integrated Approach to ICT Education
- Developmentally Appropriate Technology in Early Childhood (DATEC) in Botswana: In-Service Teachers’ Perspectives

Related links:

- R-learning = improved learning results?
• Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT
• Good practice guides on online safety
• Growing up wired
• Common Sense Media - providing trustworthy information in a world of media and technology
• UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools
• Early "Science" is vital for girls

Previous issues of the e-newsletter:

• UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

• Visit our on-line forum and share your views

News & Events

Learn by coding
"Knowing how to code?” or "literacy of the XXI century? ” - UNESCO’s YouthMobile initiative and Intel Software hosted a round table on this peculiar issue on Friday, June 13 on the occasion of the 5th edition of Futur en Seine, with the support of Cap Digital.

Learning how to code is emancipation. It is no longer only about training engineers, but rather to give all citizens the means to create, work, manage a lot of information, take a critical look at technology and having fun in doing so. In this context, “coding” must be seen as a new way to learn more than the mere teaching the “coding techniques”.

With its new "YouthMobile” initiative, UNESCO wants the largest number of girls and boys have the opportunity, through the code, to put technology at the service of local and global issues related to sustainable development. UNESCO and its partners strive to provide young people with the high level skills and confidence necessary for the development, promotion and sale of mobile applications.

Many volunteers around the world are already deploying “coding” trainings but these programmes are often not easy to replicate, translate, or to be adapted by parents or teachers, not technicians.
Intel® Coding for Kids, an open source package of trainings and software incorporating international best practices in this field, can meet the criteria of UNESCO's YouthMobile initiative. Educational and/or non-profit partner associations can freely adapt and build their own programmes, within the framework of an international deployment.

In this approach, the code is used as a means of artistic creation, understanding of social, scientific and environmental problems. The proposed pedagogy model is based on peer-to-peer. Technically, the code is introduced very gradually and at each step the learner acquires ready-to-use expertise.

In addition, the round table organized by UNESCO and Intel Software will focus on other innovative approaches recently adopted in France, such as Simplon.co and Ecole42 and will try to assess the feasibility of larger deployments and sustainability of similar initiatives, particularly in emerging countries.

The Futur en Seine festival will take place from 12 to 22 June 2014, in the heart of Paris and across the Île-de-France. For more information: http://www.futur-en-seine.fr/fens2014

Further information:

- Learn by coding

Related links:

- Scratch - a programming language with learning and education in mind

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

- Visit our on-line forum and share your views

81 nations represented at Conference on Early Care and Education

Eight hundred forty-one early childhood leaders and practitioners from 81 nations participated in the tenth World Forum on Early Care and Education held May 6 – 9, 2014, in San Juan, Puerto Rico. The focus of the event was to discuss the delivery of quality services to young children globally and to develop action plans for achieving quality in diverse settings.
Presentations were made at the World Forum by more than 250 early childhood professionals from all over the world, including Afghanistan, Colombia, Egypt, Ethiopia, Iraq, Myanmar, Pakistan, Peru, Qatar, and Zimbabwe.


The mission of the World Forum Foundation, a tax-exempt, non profit organization, is to promote an ongoing global exchange of ideas on the delivery of high-quality services for young children in diverse settings. Additional information about the World Forum Foundation is available at www.WorldForumFoundation.org.

International Conference “ICT in Education” in Mongolia

The International Conference “ICT in Education: Digital Pedagogy, Learning Technology, Teachers and OER” was held in Ulaanbaatar on 6-7 May 2014. The conference was organized by the Mongolian University of Science and Technology, UNESCO Institute for Information Technologies in Education, Mongolian University of Education and Teacher Training Institute under the auspices of the Mongolian Ministry of Education and Science.

More than 350 educators from secondary schools and higher education institutions, education administrators and NGO took part in this conference. The Conference was opened by Ms. Urgamaltsetseg, the Deputy Minister of Education and Science, Mr. Tsagaan, Chief of the President’s Office, and member of the IITE Governing Board, Prof. B.Ochirbat, the President of MUST, and the Prof. Munkhjargal, the President of the Mongolian University of Education.

The main topics of the conference were digital pedagogy, teacher’s competencies and education management information system. UNESCO IITE experts Prof. P. Kommers (University of Twente), Prof. L.C. Ping (Hong Kong University of Education), Prof. K. Changheon (KERIS), Prof. T. Otani (Nagoya University), Prof. D. Badarch (IITE) contributed to the conference deliberations as keynote speakers. Dr. Enkhbat, ONE Mongolia, Dr. Buyantsogto, Chairman of the MUST Governing Board, Mr. Luvsanjams, Director, the Ministry of Education and Science, were among the speakers of the panel session, which was chaired by Prof. D. Badarch.

The conference outcome document includes the following recommendations:
• to promote OER, open education and penetration of ICT in education and to include them in the Government policy on education development in 2014-2024;
• to develop a competency model of the teachers in line with the international experiences and national context;
• to promote and support a different initiatives in developing and implementing projects on new pedagogical practices, development of mobile learning, OER, MOOC and other areas;
• to develop and implement education management information system, including university management information system based on the MUST experience of implementing a credit-based curriculum;
• to organize the conference once every two years in cooperation with other leading universities.

Further information:

• International Conference “ICT in Education” in Mongolia

Related links:

• How can we use ICT to promote Lifelong Learning?: Central Asia Symposium on ICT in Education
• IITE and UNESCO Bangkok strengthen collaboration on ICT in education policy and practice

Previous issues of the e-newsletter:

• UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

• Visit our on-line forum and share your views

Resources

Recognizing the potential of ICT in early childhood education
The analytical survey “Recognizing the potential of ICT in early childhood education” undertaken by UNESCO Institute for Information Technologies in Education (IITE) involved a literature review and comprehensive analysis of theoretical approaches to early childhood education and the methods of ICT application to child development and early learning.
Innovative practices are illustrated by case studies based on experience observed in kindergartens and child development centres in various countries. Analysis of different aspects of ICT use in kindergartens, with due recognition of the advantages and risks, made it possible to reveal the opportunities that creative integration of ICT opens for more advanced development of children.

The survey suggests strategies for the development of ICT capability of early childhood education centres and recommendations, which should be helpful for educators, parents and school policy decision makers in their efforts to adapt the child development process to the continuous evolution of the digital universe.

Read the study:

- Recognizing the potential of ICT in early childhood education

Related links:

- R-learning = improved learning results?
- Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT
- Good practice guides on online safety
- Growing up wired
- Common Sense Media - providing trustworthy information in a world of media and technology
- UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools
- Early "Science" is vital for girls

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

- Visit our on-line forum and share your views

Technology and interactive media as tools in early childhood programmes serving children from birth through age 8

This joint position statement document issued by the National Association for the Education of Young Children (USA) and the Fred Rogers Center for Early Learning and Children’s Media at
Saint Vincent College is intended primarily to provide guidance to those working in early childhood education programmes.

Based on research-based knowledge of how young children grow and learn, the statement guides on both the opportunities and the challenges of the use of technology and interactive media. The statement focuses on their use in early childhood programmes—schools, centres, family child care—serving children from birth through age 8.

Key messages of the statement:

- When used intentionally and appropriately, technology and interactive media are effective tools to support learning and development.
- Intentional use requires early childhood teachers and administrators to have information and resources regarding the nature of these tools and the implications of their use with children.
- Limitations on the use of technology and media are important.
- Special considerations must be given to the use of technology with infants and toddlers.
- Attention to digital citizenship and equitable access is essential.
- Ongoing research and professional development are needed.

Although not developed as a guide for families in the selection and use of technology and interactive media in their homes, the information here may be helpful to inform such decisions.

Read the full statement:

- [Technology and interactive media as tools in early childhood programmes serving children from birth through age 8](#)

Related links:

- [R-learning = improved learning results?](#)
- [Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT](#)
- [Good practice guides on online safety](#)
- [Growing up wired](#)
- [Common Sense Media - providing trustworthy information in a world of media and technology](#)
- [UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools](#)
- [Early "Science" is vital for girls](#)
Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

- Visit our on-line forum and share your views

ICT skills progression: Early Years Foundation Stage and Key Stage 1

The Lancashire Schools’ Early Years Foundation Stage (EYFS) ICT skills progression has been produced in order to help and support EYFS and Key Stage 1 practitioners using ICT within the EYFS and KS1 curriculum of the United Kingdom.

The materials have been designed to show how the nine elements of ICT (Text and Multimedia, Images, Video and Animation, Sound, Electronic Communication, Digital Research, Data Handling, Data logging, Logo and Control, Simulations and Modelling) taught throughout the primary phase, can be introduced within the British EYFS Framework (2012). While specifically designed for the United Kingdom, the materials can also be applied in other context.

In addition to the EYFS ICT Progressions, there are suggestions as to how ICT can be incorporated into the areas of Learning and Development (EYFS July 2012). There are seven planning grids combining both the areas of Learning and Development, and ICT, providing suggestions of activities that can be incorporated into the Early Learning Goals, and links to support materials.

For instance, the planning grid “Expressive Arts and Design” advises on how ICT can be used to stimulate children’s imagination in different ways, such as in dance, drawing, singing, making and listening to music. This grid provides learning goals such as “Exploring and using media and materials” or “Being imaginative” and proposes ICT skills which may be helpful to achieve these goals. Additional activities related to the topic that teachers may conduct are suggested as well.

The document had been recently updated to link to the new EYFS Framework 2012 and is available from the following website:

Further information:

- ICT skills progression: Early Years Foundation Stage and Key Stage 1
Related links:

- R-learning = improved learning results?
- Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT
- Good practice guides on online safety
- Growing up wired
- Common Sense Media - providing trustworthy information in a world of media and technology
- UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools
- Early "Science" is vital for girls

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

- Visit our on-line forum and share your views

What’s lost as handwriting fades?
This article written by Maria Konnikova and published on 2 June 2014 in the New York Times is discussing several recent neurological and psychological studies undertaken in the USA which examined the effects on children’s educational development if too much emphasis on the usage of keyboards is given after they had only been introduced to handwriting in kindergarten and first grade.

Researchers found that children made better learning progress when they first learned to write by hand, but also were better able to generate ideas and retain information. Moreover, when children composed text by hand, they produced not only more words than they did by using the keyboard, but also expressed more ideas. Learning is becoming easier for them.

This research findings have been supported by neurological examinations using brain scanners which showed that children had increased activity in three areas of the brain when they had drawn a letter freehand, while such effect did not show when they typed or traced the letter.

Read the full article in the New York Times:
• What’s lost as handwriting fades?

Related links:

• R-learning = improved learning results?
• Experts’ meeting for fostering digital citizenship through safe and responsible use of ICT
• Good practice guides on online safety
• Growing up wired
• Common Sense Media - providing trustworthy information in a world of media and technology
• UNESCO Bangkok released two new CD-ROMs: Collection of E-Learning Tools
• Early "Science" is vital for girls

Previous issues of the e-newsletter:

• UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

• Visit our on-line forum and share your views