FACT SHEET 2
LEARNING AND CREATIVITY

ETHICAL CONSIDERATIONS AND RISKS

▬▬ The first five years of a child's life is a critical period in child development. This is when, through neuroplasticity, the "architecture" and functioning of the brain is defined. These early years will therefore have a direct impact not only on how a person learns, but also on his or her social and emotional well-being. In today's world where many parents need to go out to work, equitable child-care facilities for all is a major challenge for society if all children are to have equal opportunities to learn and to develop their creativity.

▬▬ A second ethical concern is related to the intensive use of technology in early childhood. Reputable sources such as OFCOM in the UK show that a majority of European children are online before the age of 2, with 3 to 4-year-olds spending 71 minutes online daily in the UK. Watching YouTube videos has become the second favourite pastime of the under 5s, at an age when physical activity and exploration- and play-driven learning are meant to be shaping a child's body, mind and social-emotional abilities. What is the impact of heavy technology use at this age on brain development, and how do we build the awareness of well-meaning parents about the likely repercussions for their child's future and their capacity for creativity?

▬▬ How equipped are our schools, teachers and learning materials for the technological age? Is the treasure chest of learning opportunities that digital technology has opened slowly transforming into a Pandora's box because our education systems are unable or too slow to adapt?

▬▬ According to the UNCRC, children from their earliest age have a fundamental right **t**o equitable education opportunities that cater to their individual needs, yet this remains a major ethical challenge. Affordable child-centred education plays a big role in shaping the future of every citizen, and ultimately of society.

▬▬ Creativity crisis: standardised test results in the USA and elsewhere are causing researchers to fear that society is becoming "less verbally or emotionally expressive or sensitive and less empathetic, less responsive in a kinaesthetic and auditory way, less humorous, less imaginative, less able to visualize ideas, less able to see things from different angles, less unconventional, less able to connect seemingly irrelevant things together, less able to synthesize information, and less able to fantasize or be future-oriented".[20] Are we doing enough as a society to foster creativity, and what can be done to counter the impact of growing cultural consumerism when so much entertainment is laid before us at the click of a mouse?

▬▬ The cut-paste-copy-download nature of the online world can easily erode the livelihood of creators, and it is therefore important to discuss copyright issues with children at every age. New business models building on open source/licensing and supported by direct and voluntary contributions via crowdfunding, online charity platforms or blockchain-powered art and digital content, should be explored as well to provide innovative ways for users to support their favourite artists, rather than rely solely on existing copyright models.

---

20. Powers J. (2015), "The Creativity Crisis and what you can do about it", *Pyschology Today*, available at https://bit.ly/2wmuClt.

IDEAS FOR CLASSROOM WORK

▬▬ Imagination.org is a recent initiative inspired by a 9-year-old American boy's creation of a "cardboard arcade". His story and those of Inventor's Challenge winners feature in an annual report (http://imagination.org/inventors-challenge/). They offer plenty of ideas that can get children started creating their own cardboard or other constructions. Schools from across the world can create their own volunteer-led "Imagination Chapter", or students can test their creative skills by independently entering their own inventions.

▬▬ The Web We Want (available in a dozen languages at www.webwewant.eu) is a series of activities designed by teens and supported by a teacher's handbook that facilitates integration across the curriculum:

▶ Chapter 2.2 describes class, small group and individual activities in creative online journalism

▶ Chapter 6, "The artist in you", takes a closer look at copyright, with a checklist for teens to evaluate their online practices.

▬▬ Teaching 2 and 3-year-olds (https://teaching2and3yearolds.com/activities/) presents ideas and creative activities for children through to the end of primary or elementary school, across a range of subject areas from maths to art, from cooking to music. It also provides some interesting tips on classroom and playroom set-up and management to promote exploration-driven, self-managed learning.

▬▬ Invite students to do a short research project on "creativity today and yesterday". Have them compare and contrast journal entries from children in the 1950s or 60s with online blogs or vlogs from children of today. Does the same sense of creativity exist? Does creativity change because of the media we use, or because of the period in which we live?

GOOD PRACTICE/LIVING DIGITAL CITIZENSHIP

▬▬ Linking learning to citizenship – Give your students a list of thought leaders who combined education and citizenship: some examples include Aristotle, Socrates, Rousseau, Leonardo da Vinci, Einstein, Gandhi and Sugata Mitra, although teens will rapidly come up with a list of their own. Invite them to research these thought leaders until they can find the links between education and citizenship. Encourage them to create a quiz about their findings that they can share online with other students in their school or further afield.

▬▬ Share the Council of Europe butterfly of competences (Introduction in this publication) with your students. Have them use the four-area model to create and present their own project on digital citizenship competences of a famous thought leader in a specific period in history.

▬▬ Periodically, open a discussion with your students on issues that they have completely taken for granted, for example: "If all schools were abolished, where would you be educated?" This will not only spark their imagination, but also lead them to actually think about the purpose and value of customs and national institutions.

▬▬ Ask the students if they have played an online game such as Minecraft where the players create and live in another world. Have them identify all the different rules that players must adhere to in order to live in that online world. Consider what types of tools the players use and whether they learn about different items in their gaming world. Then consider to what extent players must be creative to continue to exist, and how creativity furthers the online world and gameplay.

FURTHER INFORMATION

▬▬ The Council of Europe has materials relevant to this fact sheet in the *Internet literacy handbook*; please see ILH Fact sheet 12, "Distance learning and MOOCs"; Fact sheet 14, "Videos, music and images on the internet"; Fact sheet 15, "Creativity"; Fact sheet 16, "Games"; Fact sheet 24, "Artificial intelligence, automation and disruptive technologies"; and Fact sheet 25, "Virtual and augmented reality".

▬▬ Take a look at the comprehensive checklist on child development stages and the elements that will impact learning and creativity on the Facts for Life global website, supported by major worldwide institutions including UNICEF, UNDP, WHO and the World Bank: www.factsforlifeglobal.org/03/development.html.

▬▬ Hodder Education at www.hoddereducation.co.uk explores interesting perspectives on different types of learning (flipped learning, for example) as well as learning tools and platforms for all subjects at different school levels.

▬▬ The Khan Academy (www.khanacademy.org) offers free online modules on a wide range of subjects for registered users. Learners can map their progress on each module and put together their modules any way they wish to create their own customised course.

▬▬ The European Commission's publication *The European Digital Competence Framework for Citizens* (http://ec.europa.eu/social/BlobServlet?docId=15688&langId=en) provides further explanation of the five curricular areas put forward by the IPTS as well as an overview of implementation across the EU.

▬▬ *Global Citizenship Education – Preparing learners for the challenges of the 21st century* outlines UNESCO's approach to digital citizenship (http://unesdoc.unesco.org/images/0022/002277/227729e.pdf) and *Global Citizenship Education – Topics and learning objectives* (http://unesdoc.unesco.org/images/0023/002329/232993e.pdf) proposes a detailed breakdown of K1-12 achievement levels.

▬▬ Tinkering Labs (http://aim.gov.in/atal-tinkering-labs.php) have been implemented in schools in India to give opportunities for children to play. This initiative has not only improved child creativity, but lab mentors play a vital role in children's overall learning. "Innovation stations" are packaged into a bus and one lab can support 32 schools.

▬▬ The Consortium for School Networking has created a Digital Accessibility Toolkit in partnership with the Center on Technology and Disability to support schools in harnessing technology and innovation: https://cosn.org/digitalaccessibility.

▬▬ Google Arts & Culture provides online access to cultural heritage from across the world. Users can explore certain world famous museums and examine paintings from Vincent van Gogh and other great Masters right down to their tiniest brushstroke: https://artsandculture.google.com/.

▬▬ Expeditions is a virtual-reality teaching tool. Users can swim with sharks, visit outer space, walk through a museum and more without leaving the classroom. There are close to 500 expeditions available and more in development: https://edu.google.com/expeditions/#about.