Zanzibar Declaration Workshop on 'Sustainable Education in a Digital Age of rapidly Emerging Technologies' at the WCCE 2022

Johannes Magenheim[1], Don Passey[2], Javier Osorio[3], Christophe Reffay[3], Raymond Morel[5]

[1] University of Paderborn, Germany
[2] Lancaster University, UK
[3] Universidad de Las Palmas de Gran Canaria, Spain
[4] Université de Franche-Comté, France
[5] University of Geneva, Switzerland
jsm@uni-paderborn.de

Abstract. IFIP Technical Committee 3 (TC3) agreed in its Annual General Meeting in April 2019, held in Zanzibar, Tanzania, to initiate development of a declaration on 'Sustainable Education in a Digital Age of rapidly Emerging Technologies'. This 'Zanzibar Declaration' (ZD) would focus on future educational challenges that arise from rapidly emerging technologies impacting societies and communities and is closely related to the UN's Sustainable Development Goal 4 (SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all).

Experts from different disciplines and from across TCs of the IFIP were invited to a subsequent series of four webinars in 2021. Together with practitioners, decision-makers, and researchers from the education sector, they discussed specific questions regarding contexts of this topic. As a basis for finding topics for these webinars, a matrix was used. The matrix consisted of various emerging IT technologies positioned against different social areas in which these technologies are applied with corresponding social effects listed. For the four webinars, four thematic clusters of IT technologies and social impact areas were identified that were not entirely free of overlap but of specific interest for education.

Details of the ZD process, the four webinars (videos and outcomes) and the ZD grid can be found on the ZD website: https://zanzibardeclaration.cicei.org

Keywords: Sustainability, Emerging Digital Technologies, Social and Educational Implications.

1 The WCCE 2022 Workshop

The workshop is intended to offer panellists, but also a broader interested audience, the opportunity to contribute to the topic from their specific perspectives (teacher, researcher, policy maker, etc.) and educational contexts (country, region, level of education, etc.).

These contributions can be related either to one of the thematic clusters of the four webinars or to other thematic areas that consider connections between ICT development, its social impact and resulting challenges to the education system. In particular, contributions would be welcomed that explore the issues of how new technologies are used to support learning processes and the extent to which their basic technological principles should be made understandable to students, for example, in computer science (informatics) lessons.

The contributions should be assigned to a sub-area of one of the following topics that link one or more of the 'technologies' listed below with one or more of the 'impacts on society' listed below. They can do this in the broadest sense, but may also indicate links to other elements of the ZD grid.

Technologies: Big Data Analysis, Machine Learning, Artificial Intelligence Methods and Algorithms for Decision Making, Computer Networks and Communication, Autonomous Systems, Internet of Things, Quantum Computing, Blockchain, 3D/4D Printing, Virtual and Augmented Reality, Cloud Computing, Humanoids, Transhumanism, Nano Technologies, Recognition (Tracking), Robotics, Emerging Future Technologies.

Impacts on Society: Educational Challenges and Perspectives, Ethical Issues, Cyber Security, Privacy, Social Surveillance, Decent Work, e-Government, e-Administration, e-Law, Environmental Ecology Sustainability, Mobility, Digital Equity, Gender Equity, Enduring Information and Quality of Information, Future Society Components, Energy.

Contributions may present research findings in thematic areas but may also include well-documented and well-founded practice reports or country-specific perspectives on a related topic.

Contributions will be invited and may be selected, but the key themes for this workshop will focus on important topics for social and educational futures. For example:

- Computer Networks and Communication and Mobility.
- Recognition (Tracking) and Enduring Information and Quality of Information.
- Robotics and Decent work.
- Virtual and Augmented Reality and Social Surveillance.
- Cloud Computing and Privacy.
- 3D/4D Printing and Energy.
- Humanoids and Digital Equity.