Sustainable Education in a Digital Age of rapidly Emerging Technologies

IFIP TC3 Zanzibar Declaration – Outcomes of Webinar 2:

Impact of Computer Networks and Communication on the Economic and Ecological Transformations of Society – Educational Perspectives

26 April 2021, 01.00-2.30 p.m. GMT

IFP TC3 is taking forward the Zanzibar Declaration (ZD) through a series of four webinars and a follow-up conference. The second webinar was on the topic "'Impact of Computer Networks and Communication on the Economic and Ecological Transformations of Society – Educational Perspectives".

Over 160 participants were registered for the webinar, and over 30 took part in the event live. Accompanied by 2 co-moderators, 5 panellists from different countries (Denmark, Northern Ireland, The Philippines, Portugal, and South Africa) discussed the topic from different perspectives and from their respective cultural and working contexts.

Further information on the panellists and the content and discussion of the webinar can be found on the ZD website: https://zanzibardeclaration.cicei.org

The webinar was recorded and the video can be viewed asynchronously:
https://vimeo.com/541761904/0aacff1a74

Examples of statements and questions discussed in the webinar were:

- Bandwidth and latency - availability in fixed and mobile locations, network neutrality, distribution of accessibility and quality are parameters that determine the present and future networks and are also decisive for different forms and potentials of educational applications.
- The market for mobile subscriptions is growing faster than for fixed subscriptions. 5G technology is providing sufficient technical characteristics for all kind of applications. But mobile network distribution is not equal all over the world.
- Inter-school networks can connect schools and provide crucial infrastructure and services (e. g. archiving, backup, storage, school applications, local storage, whole-class teaching tools) to support the enhanced use of ICT in schools by connecting public and private clouds and communities.
- School networks can enable highly collaborative open learning. Regionally managed networks are not necessarily restrictive; they can offer choice for customisation of learning environments, considering specific curriculum aspects and needs. They can support the management of

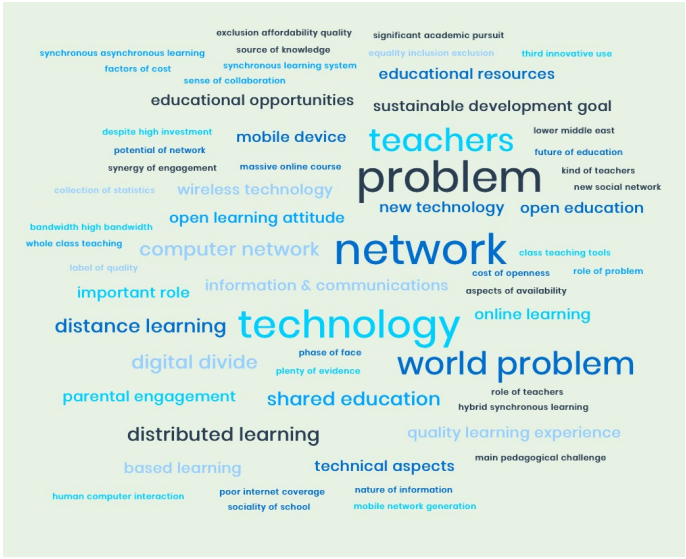
information and facilitate the synergy of engagement with parents and those in other schools. Networks can support community building, shared education, and joint learning opportunities.

- The introduction of networks in schools does not necessarily close the digital gap. Despite high investment in infrastructures, Wifi access, and free device loans, some parents do not wish their children to engage. Education only works when there is an open learning attitude on the part of all stakeholders. In particular, such network-based learning environments require continuous professional development for teachers.
- Different forms of open and distance learning can be characterised by the parameters of high versus low bandwidth, high versus low immediacy, and synchronous versus asynchronous learning opportunities.
- Even with growing access to the Internet and wireless communication, inequality in broadband access and educational gaps in operating a digital culture tends to reproduce and amplify class, ethnicity, race, age, and gender structures of social domination between countries and within countries.
- Network-based open education is characterised by open admissions, open curricula, open educational resources, online learning, transnational education, and learner-initiated pedagogy. But open education does not necessarily mean it is free of cost. Open online learning offerings require a balance of cost, access and quality factors.
- Computer networks enable learning and working with people in different parts of the world and thereby creating new social networks. Thus, computer networks can foster sustainable development goals by initiating projects with real social impact and applying problem-based learning to real-world problems.
- Successful network-based projects enable close collaboration between stakeholders to ensure the project creates value for partner organisations and communities. Environmental, social and economic sustainability should be based on a holistic view of society.

- How will networks evolve and develop concerning technical features and social purposes, in terms of human relationship?
- What will be the ‘network of the future’ in technical and social terms?
- How can technical or social networks facilitate the transformations of society, especially concerning sustainability and social equity and justice?
- How can networks and digital technologies improve ‘shared education’, open online and distributed learning and students’ collaboration?
- What are the main pedagogical challenges when using technical networks, distributed data sources, social networks and social media?
- What is the new role of teachers in this context?
- How is it possible to provide ‘affordable quality access at scale’ to all?
- How can we have agency in and manage the ‘Information and Communication World’ rather than only being driven and dominated by it?
- How can we reach all communities, and improve inclusion and reduce exclusion through networks?

The following word clouds were created based on the notes of the two moderators and on transcript excerpts of the Webinar and the discussion contributions in the chats.

The first shows an unfiltered version, while the second shows a filtered version applying AI methods.



The next webinar
The next webinar focuses on 'Ethical Issues of Autonomous Systems – Educational Concerns', and will be held on 21 June 2021, 02.00 - 3.30 pm GMT.

For further details and registration please visit the Website:
https://zanzibardeclaration.cicei.org/mod/page/view.php?id=18

Please contribute to the Zanzibar Declaration
To contribute to the Zanzibar Declaration and to the discussion on the impact of ICT on education and society, please enter short contributions in the ZD-grid: https://jsilab.ch/zdApp/

Event organisers
Co-moderator: Prof Bernard Cornu
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ZD matrix creation: Prof Raymond Morel
Organisational planning: Dr Christophe Reffay
Organisational support: Prof Don Passey