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Themes: Knowledge Management, Cybersecurity, Learning, and Information Technology

<https://iiakm.org/conference/>

1st Day Closing Keynote Lecture

Reinventing the wheel in Educational Technology: A perpetual drama?

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Keynote Overview:

History of educational technology is not remembered. Seasoned researchers and practitioners complain that artifacts and practices are presented as new and innovative when most often they are neither new nor inventive: prior research and field experience are either unknown or not considered. We can observe new “wheels” for different topics every 10–30 years and that newly hyped educational solutions are mostly technology-driven. For example, educational videos came into existence over 100 years ago and are being sold as a miracle solution every now and then, the last time for Covid emergency teaching and before that during the Massive Open Online Course (MOOC) “tsunami”. Both ignored decades of theoretical and practical work on distance education and media-enhanced learning, leading to low-quality learning experiences. Similar observations can be made for educational designs that use computer-assisted learning, simulations, constructive environments, virtual environments, gamification, analytics, Artificial Intelligence (AI)-based recommenders, communities of learning, etc. Reinventing the wheel does lead to innovation but according to “a three steps back, four steps forward” principle resulting in innovation life cycles of 30–100 years. We will discuss some ideas to improve the progression, including knowledge management architectures and initiatives, incentives for sharing knowledge, shared Open Educational Resources (OER), communal constructivism and other knowledge building pedagogies, sustainable software initiatives, very long-term funding for educational reforms and environments. Additionally, we will speculate why knowledge conservation and transmission fails. We will conclude that change may require substantial reform of the educational, research and development systems.

About the Keynote Presenter:

Daniel K. Schneider was a former associate professor at TECFA, research and teaching unit in the faculty of psychology and education, University of Geneva. Holding a PhD in political science, he has been working in educational technology since 1988 and participated in various innovative pedagogical and technological projects. He has been a prime mover towards the introduction of creative pedagogical strategies and ICT technologies. His long-term R&D interests focused on modular, flexible and open Internet architectures supporting rich and effective educational designs. His more recent interests included digital design and fabrication (e.g., 3D printers in education, collective intelligence, learning process analytics, E-learning literacy and learning with technology in informal settings (e.g., citizen science). Within TECFA's “blended” master program in educational technology (MALT), he taught educational information & communication systems, foundations of educational technology, “making” and research methodology. Since his retirement in July 2020, he founded Arbores Tech Sàrl, a consultancy for e-learning, program design, and quality assurance, online collaboration and digital design and fabrication in education. He spends most of his time in the Fab Lab of the University of Geneva (the FacLab) where he works as a resident on open source “making” projects and as a volunteer to teach digital design and fabrication.

