

Challenges of electronic environments to learning and education

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UNESCO Chair in
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CHALLENGES OF CIVILIZATIONS

<http://unesdoc.unesco.org/images/0022/002273/227336E.pdf>

- *“the changing requirements in the type and level of knowledge, skills and competencies for today’s knowledge-based economies and the insufficient opportunities to access higher levels of learning, including for the acquisition of knowledge and skills on ICT (**‘e-literacy’**), especially in developing/low income countries, are resulting in a knowledge divide, with major economic and employment consequences in today’s mainly technology-driven world.”*
- UNESCO Position Paper on Education Post-2015

https://www.infodev.org/infodev-files/resource/InfodevDocuments_154.pdf

- “It is generally believed that ICTs can empower teachers and learners, promote change and foster the development of ‘21st century skills’, but data to support these beliefs are still limited”

CIVILIZATIONS, TECHNOLOGY AND LITERACIES

- Can we speak of global civilization? What is the role of the media in global education and in cultural diversities? The question of the world order and the trend towards global civilization has inspired scholars, communicators, educators and spiritual leaders to answer questions on how the world works
- Smart machines and artificial intelligence vs **human personalities**
- Real life learning – network learning
- Challenges of New Humanism and Noosphere to information technology in education

“Open Education” Noosphere development, Noosphere education (Natalia V. Maslova) Collective intelligence



THE ROLE OF MEDIATOR AND PERSONALITY

Communication and the Media

- Dewey: education and communication
- Debray: mediology would like to bring to light the function of medium in all its forms, over a long time span since the birth of writing and without becoming obsessed by today's media

E-learning, OER, MOOC: the role of mediation as a promoter of higher mental processes

- Reuven Feuerstein: instead of measuring a child's acquired knowledge and intellectual skills, the ability to learn was evaluated first – intelligence was not a fixed attributed, measurable once and for all – intelligence can be taught and was in fact the ability to learn
- qualitatively good mediation
- Howard Gardner: multiple intelligences

Lev Vygotsky and ITC

- the acquisition of new knowledge is dependent on previous learning, as well as the availability of instruction – the assistance of a more capable person
- lower and higher mental processes: practical intelligence including the simple use of material tools, and sociocultural process that produces more advanced and symbolic tools developed by humans

Problems and Questions Related to e-Learning, OER, and MOOC

- Are we concentrating too much on “lower mental processes” (Vygotsky), practical and simple tools and ignoring slower development of sociocultural processes?
- Is the technology-push approach pushing aside the main human mediating force: the personality?
- Is New Humanism creating a genuine spirit?

TVET

UNESCO Strategy for TVET (2016-2021) (199 EX/6)

- Fostering youth employment and entrepreneurship
- Promoting equity and gender equality
- Facilitating transition to green economies and sustainable societies

Key Trends in the Changing World of Work related to ICT and Education

- Distinction between academic and practical/vocational work becoming blurred
- Overcoming the division between liberal education and vocational training
- Move from the industrial age and information age (knowledge, innovation, imitation, stagnation) towards social age (communities) and creative age (entrepreneurship)
- Personal learning environments
- Employment, unemployment, selfemployment
- Learning, relearning, delearning, selflearning
- Role of Media, Information and Communication

Drivers of Change

(IFTF 2011: Future Work Skills 2020)

- extreme longevity
- rise of smart machines and systems
- computational world
- new media ecology
- superstructured organizations
- globally connected world

Forces Stimulating Disruption

<http://www.strategicinitiatives.com>

Late 20th Century

Knowledge Age

- Sense of financial wealth
- Knowledge scarcity
- High production quality
- Experts and institutions
- Research associated with universities
- Vertical knowledge integration
- Employers depend on universities to filter talent
- Graduates seek a job

Job Seekers

Early 21th Century Age of Disruption & Creativity

- Sense of financial limits/stress
- Knowledge abundance
- “Good enough” production quality, immediacy
- Individuals, groups and communities
- Distributed research and citizen scientists
- Virtual knowledge integration
- Employers use multiple sources to filter talent
- Lifelong learners create value

Job and Success Makers

Ten Skills for the Future Workforce

(source: IFTF)

- transdisciplinarity
- design mindset
- virtual collaboration
- cross-cultural competency
- new media literacy
- cognitive load management
- computational thinking
- social intelligence
- novel and adaptive thinking
- sense-making

Key competences (EU)

- 1. Communication in the mother tongue
- 2. Communication in foreign languages
- 3. Mathematical competence and basic competences in science and technology
- 4. Digital competence
- 5. Learning to learn
- 6. Social and civic competences
- 7. Sense of initiative and entrepreneurship
- 8. Cultural awareness and expression

Entrepreneurship and Innovation as the Defining Competences

(Strategic Initiatives Inc.)

- It all begins with pervasive, perpetual connectivity and engagement, enabled by ICT (**Media literacy is key**; it builds capacity for continuous human development and enables the role of continuous mentor. ICT and media literacy make knowledge and learning abundant, not scarce.)
- Pervasive ICT enables entrepreneurship for everyone
- In the 20th Century and earlier, a number of learning pathways were key to success
- In the 21st Century, economies have been unable to create sufficient jobs to keep pace with population growth -True in developed and developing countries
- A new ethos is required – turning young people into “job/success makers”
- Soul, spirit, and skill (Head, heart, and hand)

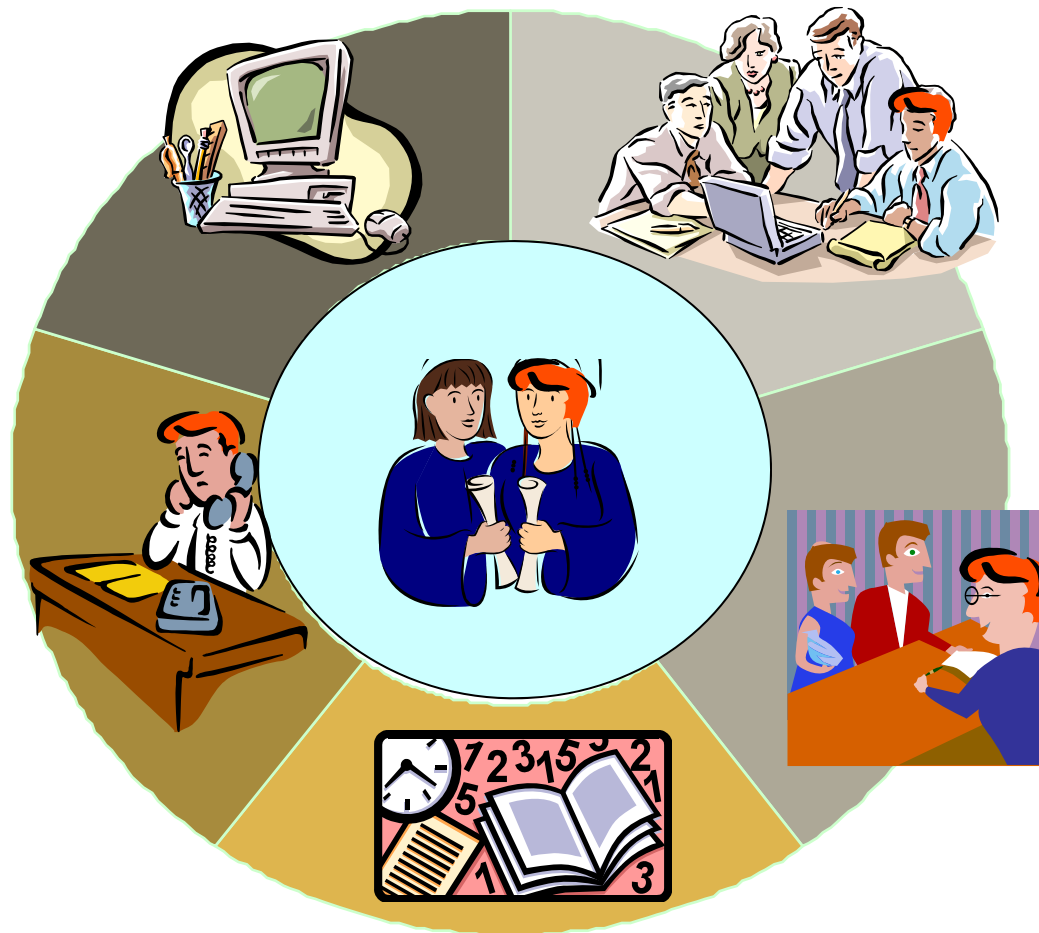
TECHNOLOGY ENHANCED AND BLENDED LEARNING

Finland: Strategy 2015

Knowledge and Education

- New pedagogical approaches
- Dialogue between educational institutions and working life
- New learning environments and digital materials
- Reform of vocational upper secondary education: learning in the workplace
- Cooperation between the upper secondary level and higher education will be increased

Blended learning Methods

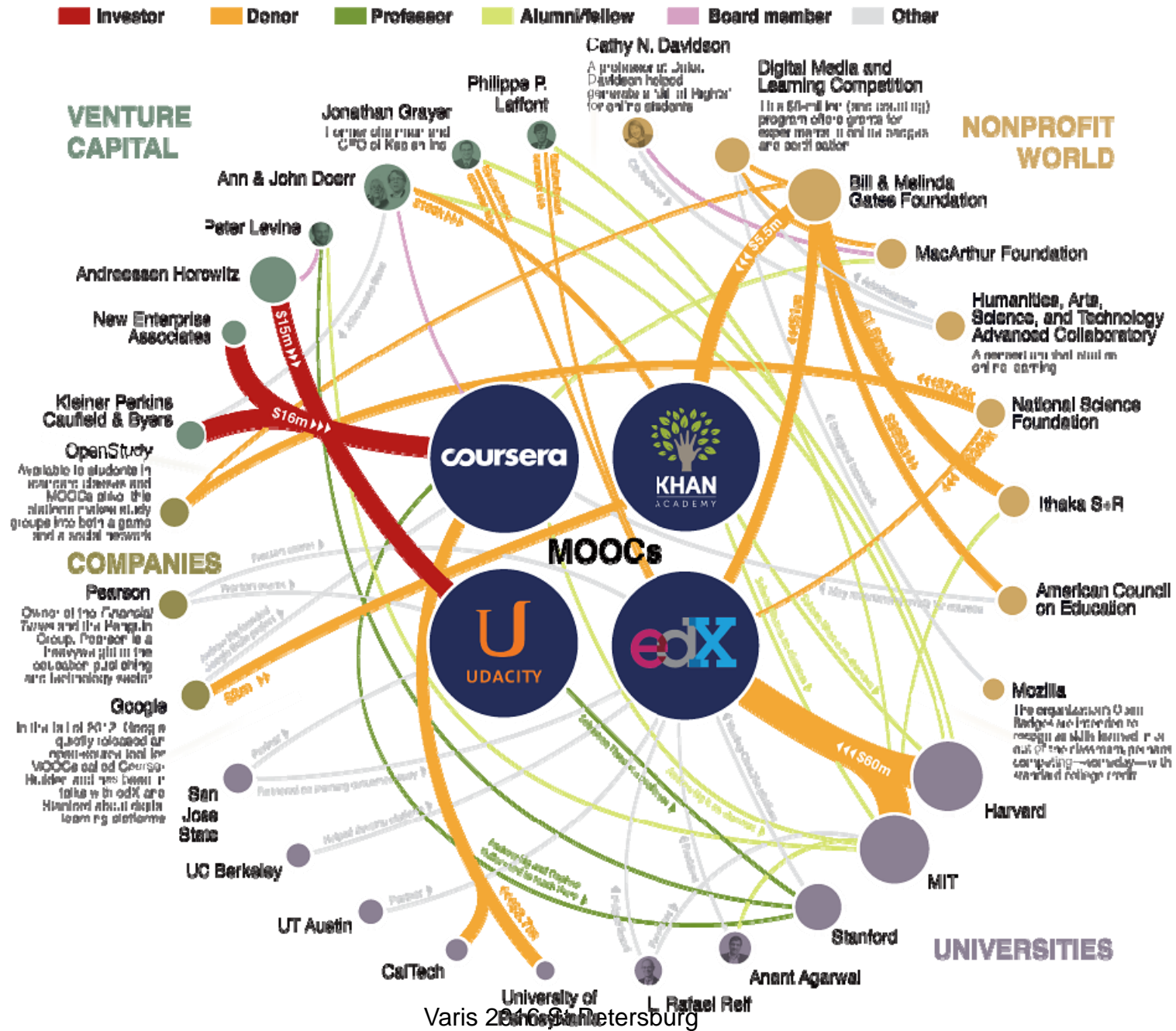


- Classroom teaching
- On-the-job learning
- Guided self-studies
- Teamwork etc. methods
- Distance learning by E-Learning

Trends in Technology enhanced learning

Hybrid Personal Learning Environment (HPLE)

Informal Learning	Free-Choice Learning Environments	PLE	HPLE
Non-Formal Learning	Educational Programs	Non- Formal Blended Learning	Open Courseware
Formal Learning	Formal Educational Institutions	Formal Blended Learning	e- Learning
	Physical Environments	Hybrid Environments	Digital Environments



Conflicting perspectives on MOOCs divide education communities

- Elite institutions in The Academy, primarily leading US universities, are widely engaging enthusiastically in MOOCs by lending brand, content, funds, staff, badging and policy support.
- Smaller or less prestigious institutions have not so far engaged strongly with MOOCs, either through lack of appetite, lack of capacity, or lack of opportunity.

Open Questions

- Training for new skills may be fast but education for deeper competences is always slow
- Who determines what type and level of knowledge is needed?
- Employability?
- What new competences are needed for Noosphere Education and New Humanism?

CHALLENGES OF "NEW HUMANISM"

UNESCO DG Irina Bokova: New Humanism (2010 -)

- Not only theoretical but also practical
- New humanism in the global society must prioritise a new sense of respect for multiplicity and cultural diversity and must support media development with the goal of consolidating the new culture of peace

New humanistic awareness

<http://iite.unesco.org/publications/3214678/>

NEW HUMANISM

- Human being over technology
- Critical to technology
- Autonomy over global communication
- Diversity
- Universal rights and responsibilities

OLD HUMANISM

- Human being over theology
- Critical to classic texts
- Discovery of self
- New world
- Cosmopolitanism

Challenges of Posthumanism?

- Antihumanism (critical of traditional humanism)
- Cultural posthumanism (critical of the foundational assumptions of Renaissance humanism and its legacy)
- Posthuman discourse: loss of subjectivity based on bodily boundaries
- Transhumanism (technologies that eliminate aging, enhance human intellectual, physical, and psychological capacities (“posthuman future”))
- AI takeover (humans replaced by artificial intelligence)
- Voluntary human extinction (“future without humans”)