

Future of Higher Education – Bologna Process Researchers'
Conference
4th Edition (FOHE-BPRC4)

29-31 January 2020 Bucharest

**‘Re-thinking an educational model suitable for 21st
Century needs.’**

Tim Birtwistle and Robert Wagenaar

Introduction - what is it all about?

- **Change** (and the pace of change) is the only constant:
 - Society
 - Categorisation of persons
 - Family units
 - Migration
 - Communications
 - Work patterns and types
 - Education at all levels
 - Politics
 - Groupings/parties/aims
 - Technology
 - Artificial intelligence and robotics
 - Green agendas
 - Climate

Higher Education – change in progress

- Why?

- Evidence

- From within, subject to pressure from society
 - Widening participation
 - Access to learning
 - Participative learning required rather than mainly input teaching
 - Different patterns of employment and changing skill sets
 - Reskilling and life long learning

- What?

- Demands

- Curriculum changes
 - Pedagogical and andragogical changes
 - Focus to be on skills, or knowledge, or both
 - Going digital
 - Credential/qualification changes

- How?

- Many changes

How (continued)

- Models of learning
 - Current most used methodologies
 - Surely not lectures and unseen knowledge based examinations? Research does show this to be the case
 - Other methodologies that are used
 - Flipped classrooms
 - Blended learning – is this merely a way of delivering existing learning patterns?
 - Distance learning – is this too merely a delivery vehicle rather than a learning change?
 - Methodologies that seemingly best fit learning
 - To match the needs of the learner (mature students, part time students, commuting students, campus based students etc.)
 - To match the needs of learning (skills, competences, knowledge, analysis, technology)
 - To match the needs of ensuring the quality of the credential/qualification
 - To ensure that there is learning alignment (learning/teaching/assessment)
- Credentials/qualifications – quality assured and matching specifications
 - Do they affect learning?
 - How might they change?
 - Will change reflect external demands?
- Note institutional and system:
 - Structures }
 - Finance } another day, another time, another focus.
 - Governance }

Contradictory tendencies (push and pull)

- How does knowledge sit alongside competences and skills?

- Is this “just” an issue of the curriculum?

“The curriculum is totemic at every stage of education – so frequently overburdened with the hopes and demands of educators, policymakers, students, and the public that it seems constantly on the verge of toppling over under the weight of all that expectation. Debates over depth versus breadth, and the balance of academic and technical knowledge and skills versus soft/generic/life skills, are hardy perennials.”

per WONKHE Briefings 13/01/2020

- What about styles of learning?

- Learning outcomes (and the outcomes of learning)
 - Delivery and reception: didactic teaching (dependent learner?); flipped classroom (interdependent?); heuristic learning (independent?)

Packaging

- Credits – ECTS model - at variance with CBE (competency based education) or fully compatible?
- Qualifications/credentials – frameworks.
 - Created and quality controlled
 - Unbundled and rebundled
 - Ladders and climbing frames facilitating entry and exit points
 - Stacking – horizontal (breadth), vertical (depth), and hybrid (both)
 - Micro credentials (facilitate change? Encourage LLL? As all bundle credits)
- Push and pull
 - Academic rigour vs breadth?
 - Knowledge vs competences and skills?
 - Employer led demand vs learning as the aim?
- Life span of credentials decreases, value of learning increases

Employment as a driver?

- Skills not jobs

- The workplace is changing:
 - Gig economy
 - Flexible working
 - Home working
- AI is impacting quickly across the range of work tasks: ground work (e.g. tunnels), manufacturing, opticians, surgery, proof reading, translation, etc.
- Employer surveys take place across the globe, the direction of travel of responses focuses on a wide range of skills/competences, flexibility, communication, work ethic, radical change in the types of jobs lost and created, rapid decrease in valuing persons “holding raw data in their brain”, etc.

HE Institutions and Lifelong Learning

World Economic Forum 2020:

- Education models need to reflect the demand for **lifelong learning** to cope with the technological and social changes brought by the Fourth Industrial Revolution.
- **Skills** not degrees may be the reality of the future.
- **Start-ups and new business models** are disrupting traditional educational institutions and operating models.

Is there **a future** for the current predominant - full time - HE teaching and learning model? **Probably not.**

Towards a new model

What is offered?

Curriculum for Freshmen

What is needed?

LLL Curriculum ('60-years')

Primary Ed. 6-12	Secondary Ed. / VET 12- 15/17	Tertiary Ed. 17-25/27	Workplace / Lifelong learning 16-70
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At present LLL needs of learners not served by traditional providers (HEIs)
Required: Re-training / additional training at a regular basis

World Economic Forum 2020

Four key issues:

1. Increasing need for life-long learning in a non-linear world
2. Evolving needs and expectations of the “student-consumer”
3. Emerging technologies and business models
4. Towards a “skills over degrees” model

Strength and Weaknesses current model

Present strengths of HE sector:

- Offer **social environment** of learning (learning communities)
- Offer **core knowledge and skills** for a particular field of studies: either disciplinary or thematic (multi-disciplinary / inter-disciplinary)
- Offer robust basis for **developing new knowledge** (based on fundamental and applied research)

Present weaknesses of HE sector:

- Lack of level and intensity of **staff development** required to offer student-centred learning
- Lack of **programme formats** which are fit for purpose in a LLL context

New challenges:

- Taking the UN Millennium **Sustainability Goals** into account
- Present and up-coming **societal topics**: plurality and related issues - ensuring sustainable societies

Educational model of the (near) future

- **Highly flexible**, allow for personalised tailoring; learning to be relevant
- **Multi-functional**: allow for different type of learners (full time, adult /LLL learners) to be educated at the same time
- **Multi-dimensional**: allow for state of the art formats of learning, teaching and assessment (Blended Learning formats)
- **Develop** identified **key generic competences**: critical thinking, teamwork, leadership, communication, complex problem solving, ethical judgement and decision making (reflective judgements, in stead of determined – rule based – judgements), innovation and creativity (in framework of learning community)
- **Combine** the core field of studies with generic competence development and electives (e.g. micro-credentials and the like)
- **Guarantee** that STEAM fields are offered, by avoiding focus on STEM only: **Humanities and Social Sciences** are fundamental conditions for Sustainable Societies (Millennium Goals)

TUNING-CALOHEE and other Reference Frameworks

- ❖ Conditional for high quality and relevant programmes and learning modes
- ❖ It is all about the learner and what to be learned

- Tuning CALOHEE (Assessment) Reference Frameworks
- Tuning CALOHEE Reference Framework for Civic Social and Cultural Engagement
- Council of Europe Reference Framework for Competences for Democratic Culture

CALOHEE: <https://www.calohee.eu>

Council of Europe:

<https://www.coe.int/en/web/education/competences-for-democratic-culture>

Which skills and competences?

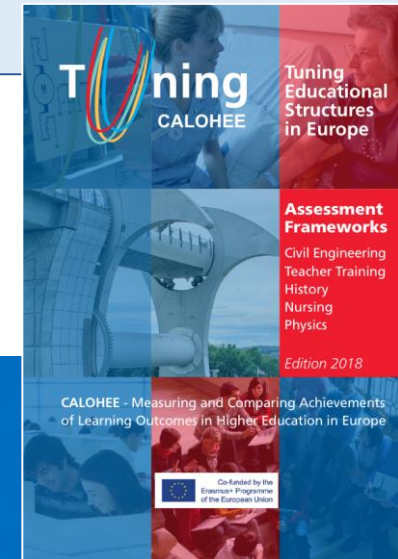
2022 Skills Outlook

Growing

- 1 Analytical thinking and innovation
- 2 Active learning and learning strategies
- 3 Creativity, originality and initiative
- 4 Technology design and programming
- 5 Critical thinking and analysis
- 6 Complex problem-solving
- 7 Leadership and social influence
- 8 Emotional intelligence
- 9 Reasoning, problem-solving and ideation
- 10 Systems analysis and evaluation

Declining

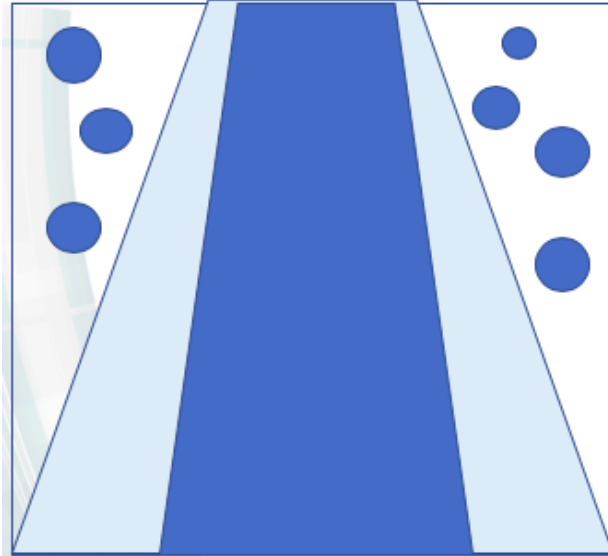
- 1 Manual dexterity, endurance and precision
- 2 Memory, verbal, auditory and spatial abilities
- 3 Management of financial, material resources
- 4 Technology installation and maintenance
- 5 Reading, writing, math and active listening
- 6 Management of personnel
- 7 Quality control and safety awareness
- 8 Coordination and time management
- 9 Visual, auditory and speech abilities
- 10 Technology use, monitoring and control



The new LLL model: a new role for HEI



MA



BA

Point of departure:

- ❖ T-Shape approach: vertical (deep disciplinary) expertise is combined with horizontal (cross-cutting) knowledge
- ❖ Integrated transferable (soft) skills / generic competence
- ❖ Course units open to regular students and LLL students
- ❖ Educate civic, social and cultural engagement, including sustainability

Developing deep knowledge and appropriate skills sets require systematic training over a longer period of time in a stimulating learning environment



Core programme



Generic Competences / Transferable Skills as integral part programme



Electives / LLL units / Micro-credentials: Multi-use ECTS credits

- Societies and Cultures: Interculturalism
- Processes of information and communication
- Processes of governance and decision making
- Ethics, norms, values and professional standards
- Sustainable development (climate change)