VIII CONGRESSO NACIONAL DA FORMAÇÃO PROFISSIONAL

FORMATO ONLINE NA FORMAÇÃO: FATORES CRÍTICOS DE (IN)SUCESSO

19 e 20 MAIO 2022

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Universidade Aberta (UAb)

Universidade de Lisboa - CFUL

Universidade Nova de Lisboa - CIPSH

https://indianaohindiana.com/wp-content/uploads/2016/08/family-of-robots.jpg

Viver, trabalhar e estudar em Casa ou no Carro

Aprender em qualquer lugar e a todo o momento

https://www.businessleader.co.uk/wp-content/uploads/2017/12/Driverless-car-1.jpg

O Futuro da Educação e da Formação

Yuki, o professor robot da Universidade Philipps de Marburg

https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.ie.edu%2Finsights%2Farticles%2Fwhen-education-meets-blockchain-and-ai%2F&psig=AOvVaw0Q_0za0a0FUTHV6soRx92O&ust=1634581487912000&source=images&cd=vfe&ved=0CAYQjRxqFwoTCNiHqZeL0vMCFQAAAAAdAAAAABAf

https://www.google.com/url?sa=i&url=https%3A%2F%2Fen.unesco.org%2Fartificial-intelligence%2Feducation&psig=AOvVaw0Q_0za0a0FUTHV6soRx92O&ust=1634581487912000&source=images&cd=vfe&ved=0CAYQjRxqGAoTCJjam9qI0vMCFQAAAAAdAAAAABCYAQ

Aprender numa Sociedade em Rede

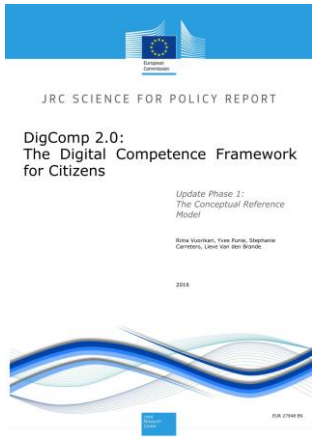
Aprendizagem tradicional

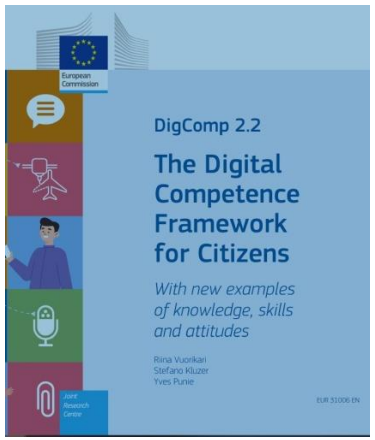
- Centrada no conteúdo e baseada em conhecimentos
- Uniforme
- Rígida
- Altamente estruturada
- Centralizada
- Competitiva
- Académica, curricular
- Memorizada/reprodutora da informação
- O erro é uma falha;
  medo de experimentar fora de certos parâmetros
- Testes / Exames

Aprendizagem no Século XXI

- Centrada no estudante e baseada en competências
- Contextualizada e Personalizada
- Flexível
- Social/colaborativa, fragmentária
- Desafiadora
- Autêntica, como na vida
- "Gamificada"
- Questionadora/criadora de conhecimento
- Experimental; o erro é uma oportunidade de aprendizagem
- Resolução de problemas
- Artefactos/eportfolios

A. Teixeira & J. Mota (2015). A Proposal For The Methodological Design Of Collaborative Language MOOCs





"**Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society.** It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking."

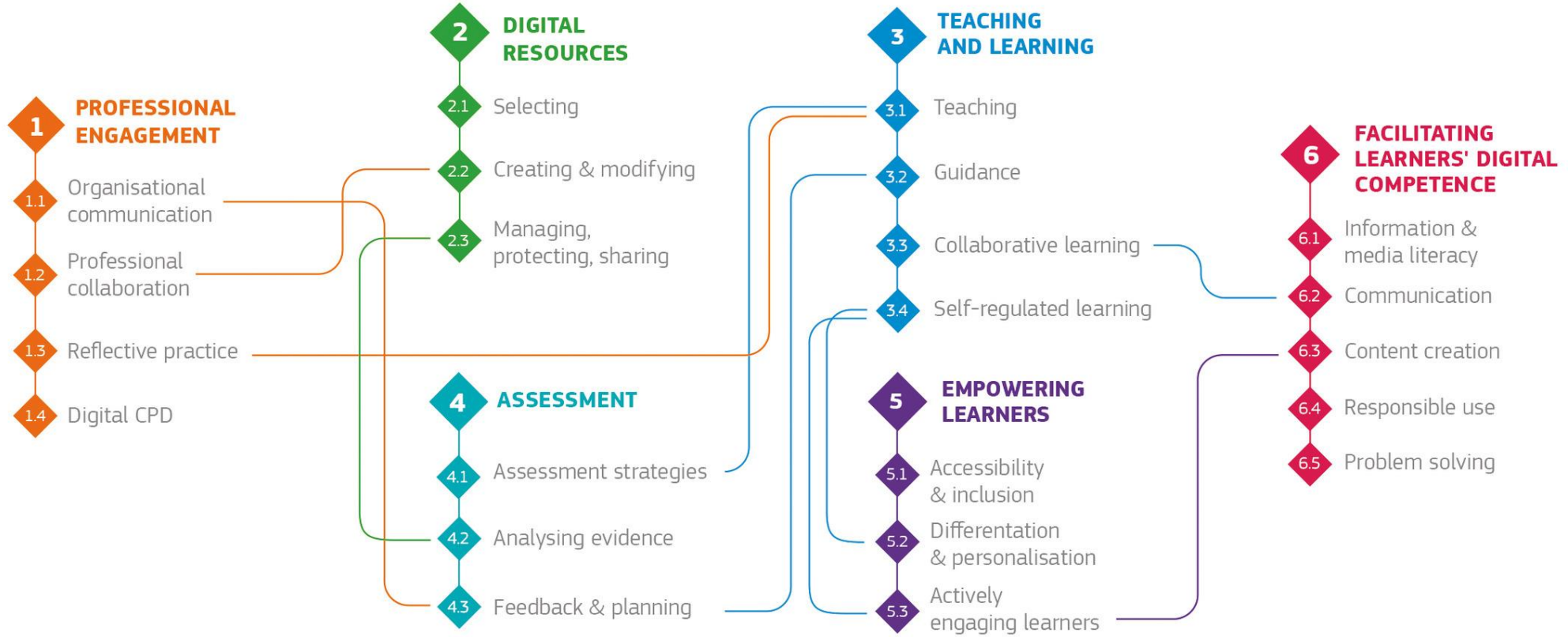
(Council Recommendation on Key Competences for Lifelong Learning, 22 May 2018, ST 9009 2018 INIT)

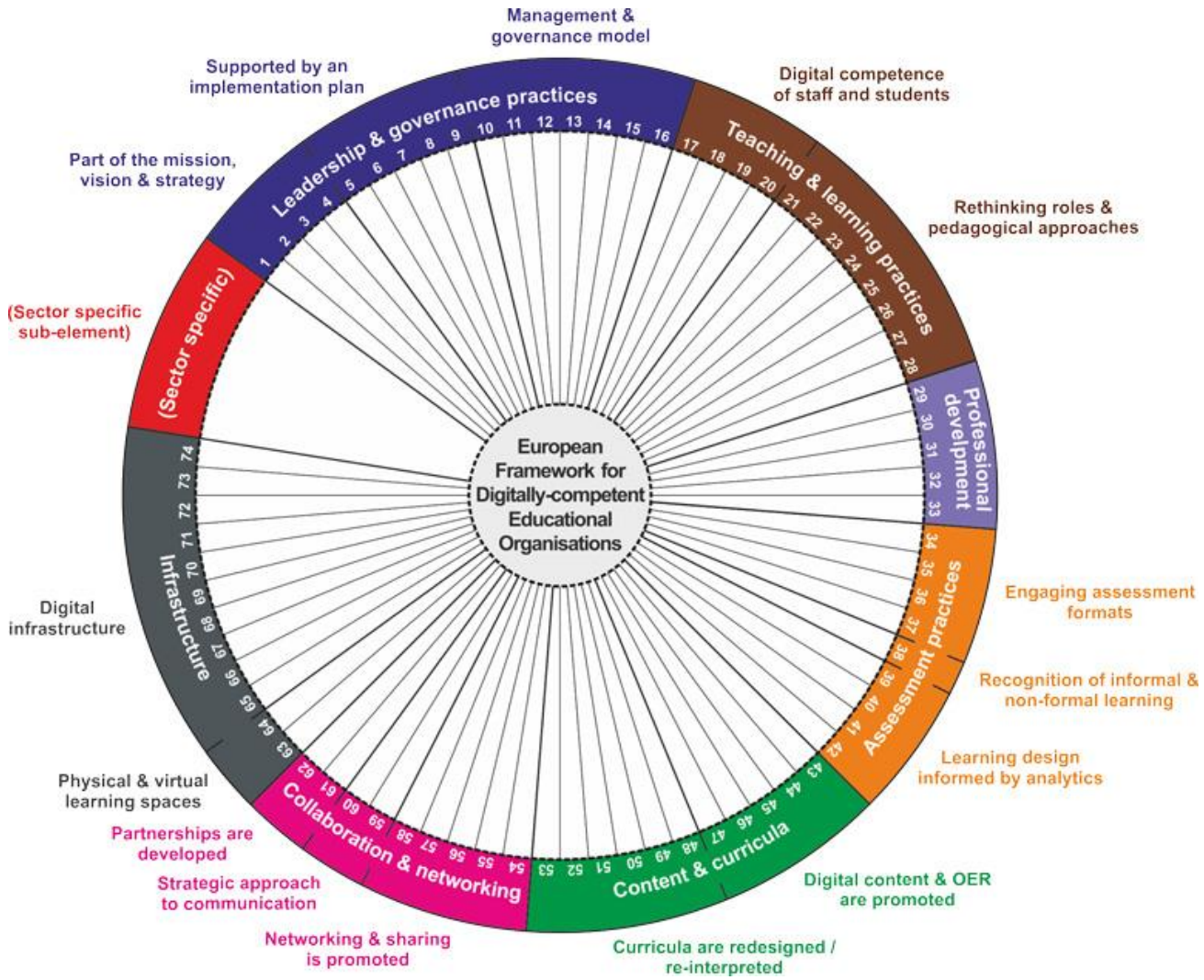
European Framework for the Digital Competence of Educators (DigCompEdu)

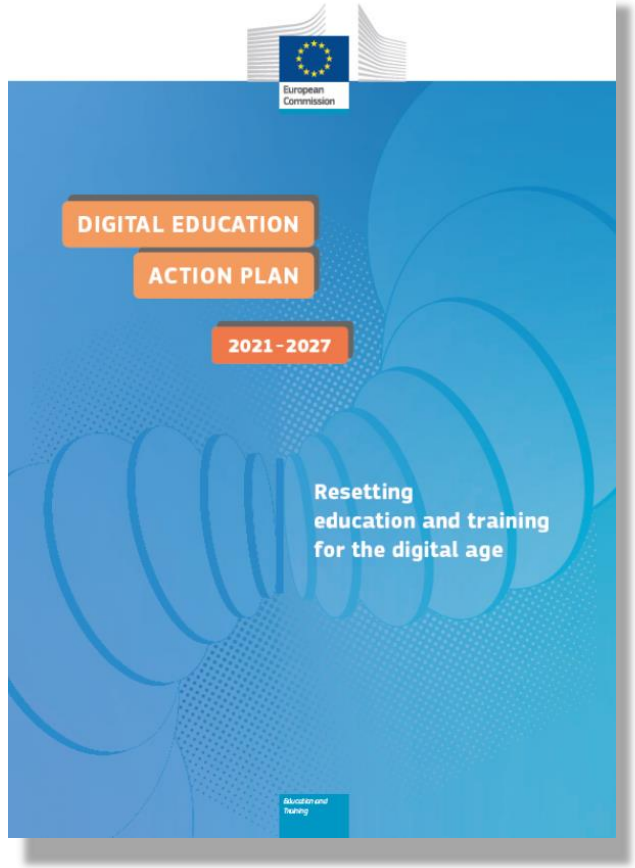
Educators' professional competences

Educators' pedagogic competences

Learners' competences




Management & governance model
Supported by an implementation plan
Digital competence of staff and students
Part of the mission, vision & strategy
Rethinking roles & pedagogical approaches
(Sector specific)
(Sector specific sub-element)
Leadership & governance practices
Teaching & learning practices
Professional development
European Framework for Digitally-competent Educational Organisations
Assessment practices
Engaging assessment formats
Digital infrastructure
Infrastructure
Recognition of informal & non-formal learning
Learning design informed by analytics
Physical & virtual learning spaces
Partnerships are developed
Collaboration & networking
Content & curricula
Digital content & OER are promoted
Strategic approach to communication
Networking & sharing is promoted
Curricula are redesigned / re-interpreted


European Commission
DIGITAL EDUCATION
ACTION PLAN
2021-2027
Resetting education and training for the digital age

UNIVERSIDADE ABERTA www.uab.pt

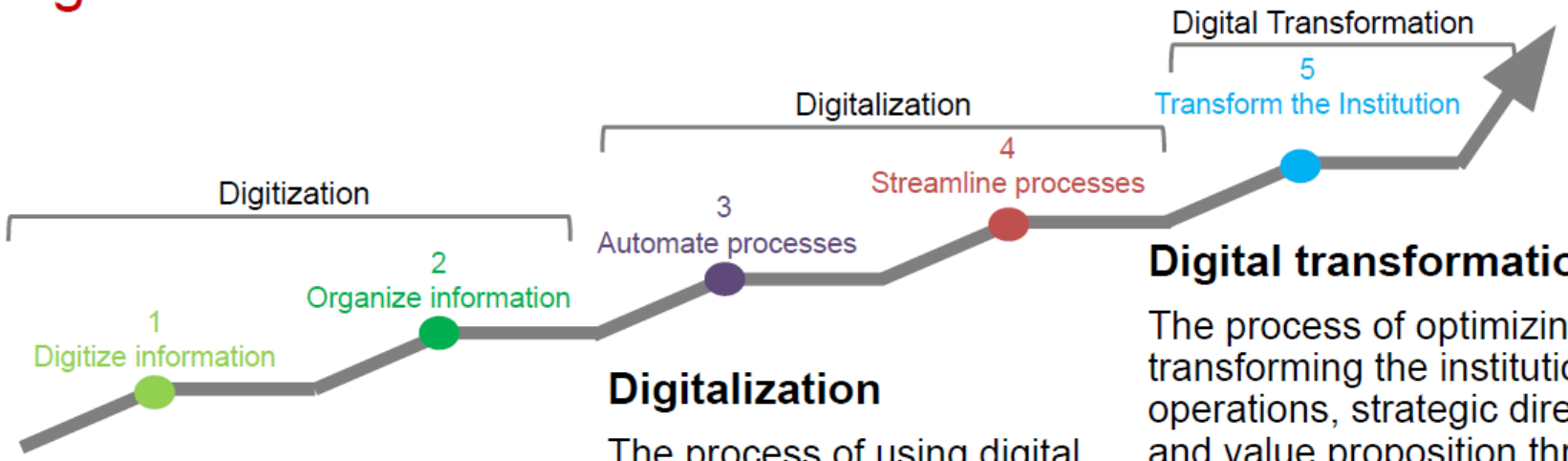
http://www.profxxi.org/wp-content/files/WPD2.1B_-_MarcoCompetencias-PROFXXI-.pdf

LEVEL OF COMPETENCE	OBJECTIVE	DIMENSIONS (A-E) AND COMPETENCES (1-5)				
		A. Teacher Support	**B. Student Support**	**C. Leadership, Culture and Transformation**	**D. Technology for Learning**	**E. Evidence-based Practices**
1	**Development**	A1. Identify innovative good practices with high impact considering the institutional educational project and local, national and international trends and good practices. A2. Design a model and/or actions for teacher training and counselling based on good practices and the characteristics of the disciplines. A3. Implement initially designed actions considering different scenarios and contexts.	B1. Diagnose student characteristics and needs in order to enhance teaching and learning processes. B2. Develop actions to support students considering the diagnosis, the educational project and the characteristics of the disciplines. B3. Implement actions or initiatives, considering emerging situations, and adjustments for continuous improvement.	C1. Identify stakeholders, taking into account characteristics, socio-cultural scenarios, leadership and cultural particularities within the institution. C2. Analyze previous experiences within the institution, linked to organizational cultural changes, identifying strengths, weaknesses and challenges. C3. Conceive a plan for the TLC adapted to the University's strategy, taking into account international reference models and good practices.	D1. Systematize prior learning in digital education and Technology Enhanced Learning (TEL), implemented within the institution. D2. Design a pedagogical model for quality digital education and TEL. D3. Implement digital education and TEL actions, in an initial way, considering the contexts and available resources.	E1. Identify available evidence and good practice in relation to teaching and learning at higher education level and disseminate these findings within the education community. E2. Collect initial results and effects on the actions taken, considering feedback from stakeholders and external non-participating peers.
2	**Innovation**	A4. Set up benchmarking and innovative experiences. A5. Promote innovation processes among teachers that have an impact on learning. A6. Encourage the coverage of teachers who implement innovations.	B4. Promote meaningful practices and tools for learning among students in the various disciplines. B5. Foster the articulation of teaching innovation with the effective learning experience of students.	C4. Promote groups of innovative teachers and support their transformational dynamics. C5. Generate collaboration and work networks among the various members of the university community.	D4. Train the various actors of the university community for the development of innovative practices with the use of digital technology. D5. Observe new TEL trends at international level.	E3. Use available evidence on teaching and learning. E4. Promote peer exchange related to innovative practices in teaching and learning.
3	**Value Generation**	A7. Disseminate innovative internal models and experiences of excellence for teaching practices. A8. Generate changes in teaching practices and their effects on the student experience.	B6. Contribute to increasing the quality of learning. B7. Bring about positive effects on the student experience.	C6. Actively participate in the generation of an institutional culture of sustainable transformation and quality. C7. Position the unit as relevant within the educational process.	D6. Encourage the increased implementation of TEL in everyday learning. D7. Model TEL best practices among the educational community.	E5. Generate evidence on results, outcomes and impacts. E6. Share the evidence collected among the different levels and actors of the organization.
4	**New Challenges and Opportunities**	A9. Visualize new horizons on teaching practice, capable of fostering transformative pedagogical practices.	B8. Visualize new challenges and scenarios in student learning as lifelong practice. B9. Ensure the overall increase of student learning outcomes.	C8. Define metrics and indicators to evaluate the impact of pedagogical innovation. C9. Contribute to the process of transforming the University into a learning and innovative organization.	D8. Sustainably involve the teaching staff in TEL pedagogical practices.	E7. Systematize the new challenges arising from the work, the available evidence and the good practices in actions for the institutional strategy.
5	**Public Accountability of Impacts for Continuous Improvement**	A10. Ensure tools to monitor and report on the quality of innovative teaching practices. A11. Support institutional decision-making based on challenges and good practices.	B10. Implement evaluation surveys on the university and student learning experience. B11. Support institutional decision-making based on the student experience.	C10. Evaluate the transformative impact of innovative teaching practices. C11. Generate spaces for dialogue and meetings that foster co-responsibility for results, effects and impacts among the different actors in the educational community.	D9. Implement public reports that account for the effects of TEL on educational practice.	E8. Communicate scientifically in different formats and external academic communities, the processes implemented within the unit.

The PROF XXI Framework

Institutional Competences for 21st Century Advanced Learning

Digital Transformation in Context: The 3 Ds



Digitization

The process of changing from analog to digital form

Examples: paper records and texts, in person lectures, ID cards, etc.

Digitalization

The process of using digital technologies and information to transform individual institutional operations

Examples: admissions, course registration, research administration, payroll, procurement, etc.

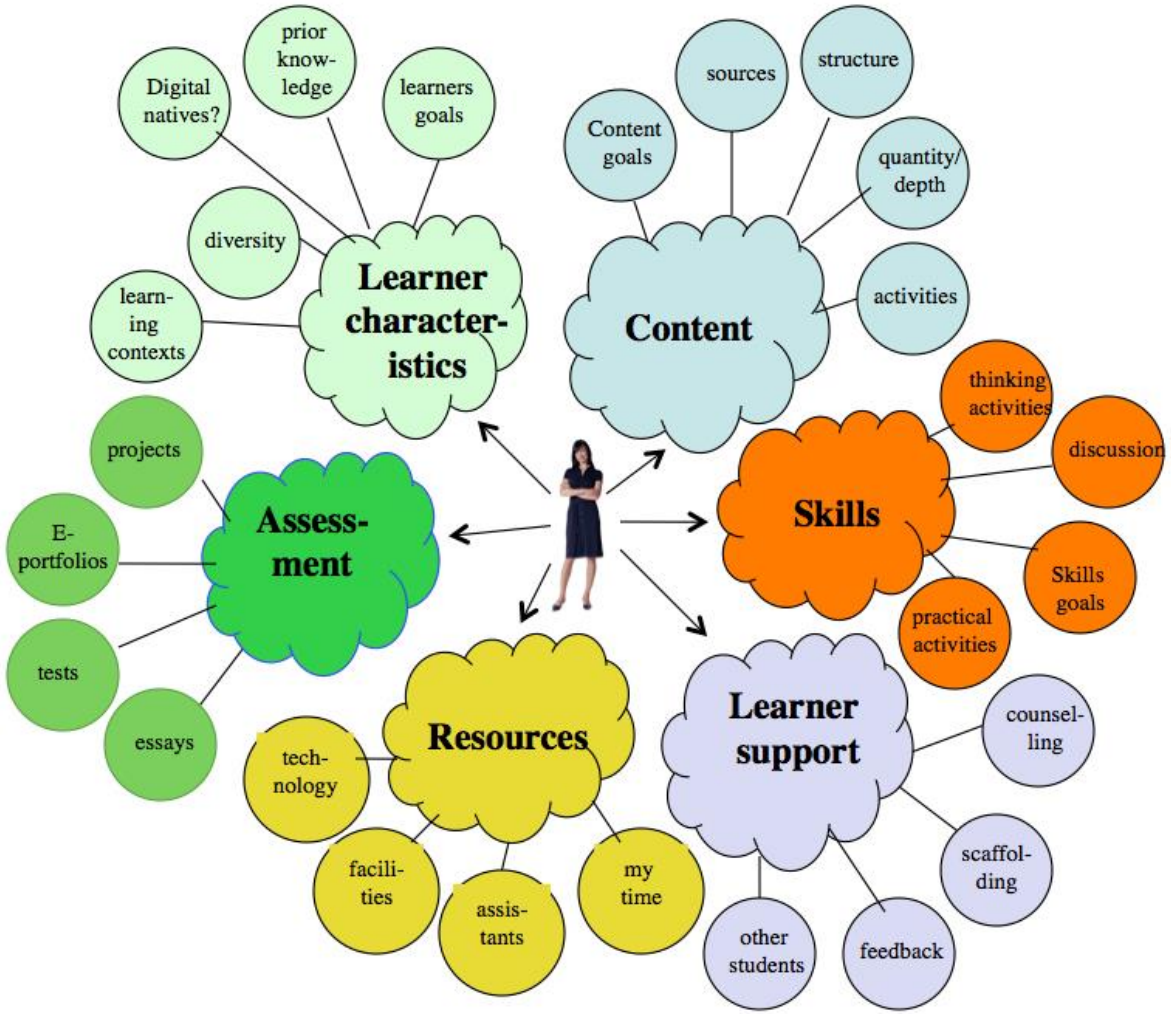
Digital transformation

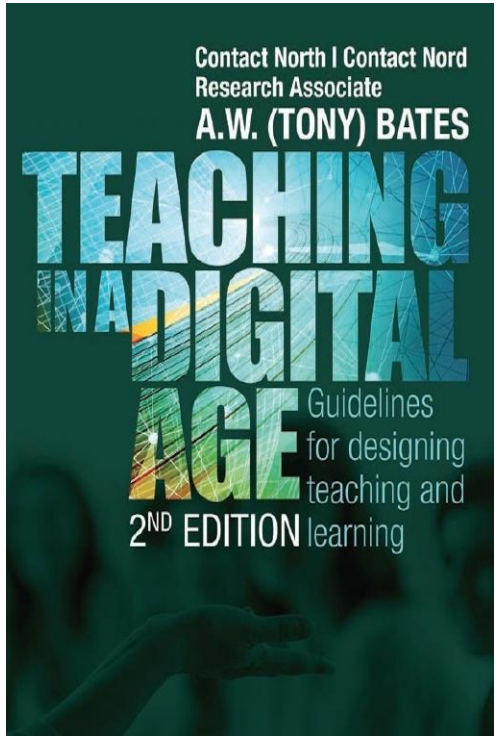
The process of optimizing and transforming the institution's operations, strategic directions, and value proposition through deep and coordinated shifts in culture, workforce, and technology

Examples: new institutional strategic direction leading to data driven culture, new workforce roles, and more agile technology

EDUCAUSE

Um Ambiente de Aprendizagem Efetivo (**segundo Tony Bates**)





Necessário mas não Suficiente

Pensar e implementar estas componentes pode ser necessário, mas não são suficientes por si só para assegurar um ensino e uma aprendizagem de qualidade. Para destas, um ensino ou formação eficaz necessita também das seguintes características:

Desenho pedagógico adequado

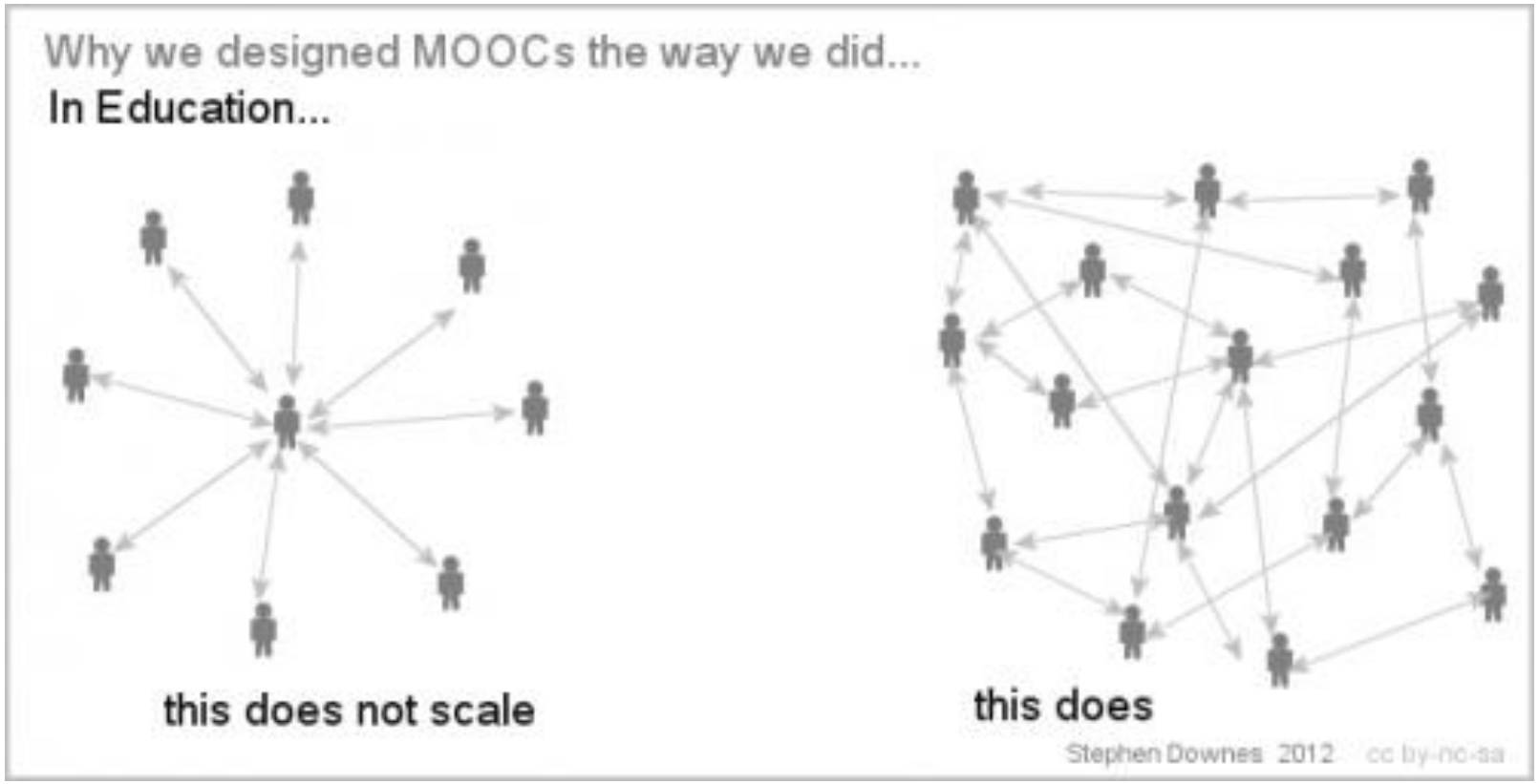
Empatia pelos alunos / formandos

Competência do professor / formador

Imaginação para criar um ambiente de aprendizagem eficiente.

(Tony Bates, *Teaching in a Digital Age*, 2019)

O foco da aprendizagem enriquecida pela tecnologia volta-se agora para o impacto da **Abertura Digital** e a **Escalabilidade**



Desafios Emergentes da Aprendizagem Digital

- **Maior enfoque nos aprendentes e aumento da sua participação nos processos** (co-desenho da aprendizagem, aprendizagem e avaliação por pares, personalização...)
- **Evolução dos modelos de avaliação e de certificação das aprendizagens** (*eAssessment*, avaliação baseada em contextos reais/autênticos, novas formas de recolher evidências de aprendizagem e de certificar competências – ex: *open digital badges*...)
- **Maior flexibilidade e profundidade da aprendizagem** (enfoque na comunicação assíncrona, aprendizagem para o desenvolvimento de futuras competências "*future skills*"...)
- **Transformação do ecossistema de ensino-aprendizagem** (PEAs, *PLEs, learning analytics,* inteligência artificial, modelos de tutoria diferenciados – foco nos tipos de apoio científico, pedagógico y tecnológico...)

Modelo PrACT - Dimensões da Avaliação Alternativa Digital

Pereira, A., Oliveira, I, Tinoca, L., Pinto, M.C., Amante, L. (2015). *Desafios da avaliação digital no Ensino Superior*. Lisboa: Universidade Aberta.

- Facilitating community of practice building efforts
- Creating ePortfolios
- Reflecting on learning
- Mentoring & Collaborating

TeSLA
Adaptive trust-based e-assessment

An Adaptive Trust-based e-assessment System for Learning

Instructor imports or creates an assessment.
Then he/she decides what level of assurance and security (which instruments) to include for this specific assessment.

Face recognition and anti-spoofing

Plagiarism, text matching and authorship validation

Voice recognition and anti-spoofing

Keystroke patterns

http://tesla-project.eu

A interoperabilidade gerada pela IoT, ao criar perfis, pode conduzir à padronização dos itinerários de aprendizagem, a uma perfilização em lugar de uma verdadeira personalização.

A emergência de uma pantecnologia inconsciente, embora integrada nas práticas educativas, gera exclusão e limita a liberdade humana e a capacidade deliberativa autónoma.

É fundamental desenvolver una aprendizagem enriquecida pelas tecnologias digitais inteligentes que potencie uma personalização de proximidade.

Enhancing the Human Experience of Learning with Technology:
New challenges for research into digital, open, distance & networked education
European Distance and E-Learning Network (EDEN) Proceedings
2020 Research Workshop | Lisbon, 21-23 October, 2020
ISSN 2707-2819
doi: 10.38069/edenconf-2020-rw0024

ETHICAL CHALLENGES IN THE USE OF IOT IN EDUCATION: ON THE PATH TO PERSONALIZATION

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Laboratory of Distance Education and eLearning (LE@D), Universidade Aberta, Portugal

Abstract

In the research on the ethical challenges related to the Internet of Things (IoT) and the personalisation of the learning process, four key categories have been identified: Security, Privacy, Automation, and Interaction. Based on this framework, using Constructivist Grounded Theory (CGT), we've conducted a study with twenty one actors in the field which have reflected on the advantages, risks and challenges, creating and developing theoretical solutions from technological, pedagogical, and ethical-philosophical perspectives. Coupled with the challenge of interoperability on IoT highways, the educational process generates disadvantages associated with access, use, monitoring and ownership of data, as well as standardization that falls under "profiling" rather than personalization. This leads to problems like exclusion, redundancy of the human being in education through its homogenization and determinism that leads to a loss of sense of freedom, control and choice. The consequence is surveillance associated with corporativism and the loss of the notion of the Common Good in general and in the education in particular. In this paper we discuss how IoT,

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Agradecimentos

Organização

forma-te

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McDonald's

Apoio Institucional

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MESTRE CLIQUE SISTEMAS DE INFORMAÇÃO LDA