Digital Open Badges
Practical Applications to Support Emerging Ecosystems

CompLeap 28.11.2018

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”

IN THE FUTURE, THERE WILL BE INCREASINGLY NUMEROUS WAYS TO DEVELOP COMPETENCES

ACHIEVEMENT ACQUIRED THROUGH TRAINING AND DEVELOPMENT RATHER THAN PROOF OF INTELLIGENCE (MCCLELLAND 1998; 1973)

THE DOMAINS OF KNOWLEDGE, SKILLS AND ABILITIES
(NICHOLS, KOBRIN, LAI, & KOEPFLER, 2017)

THE EUROPEAN REFERENCE FRAMEWORK OF KEY COMPETENCES FOR LIFELONG LEARNING (EUROPEAN UNION, 2007):THE CONCEPT OF “COMPETENCE” AS SKILLS AND ATTITUDES APPLIED APPROPRIATELY BASED ON THE CONTEXT.

THE ABILITY TO APPLY LEARNING OUTCOMES (KNOWLEDGE, SKILLS AND PERSONAL, SOCIAL AND/OR METHODOLOGICAL ABILITIES) ADEQUATELY IN BOTH EDUCATIONAL AND WORKPLACE CONTEXTS AS A RESULT OF PERSONAL OR PROFESSIONAL DEVELOPMENT (CEDEFOB, 2014).

EVEN IF COMPETENCES ARE ACQUIRED DIFFERENTLY, THEY SHOULD BE ASSESSED EQUALLY

”

Brauer, 2019

Digitalisation changes how we work, teach, learn and assess learning

It is **socially significant** to increase individuals' competences and not to start training from zero time after time

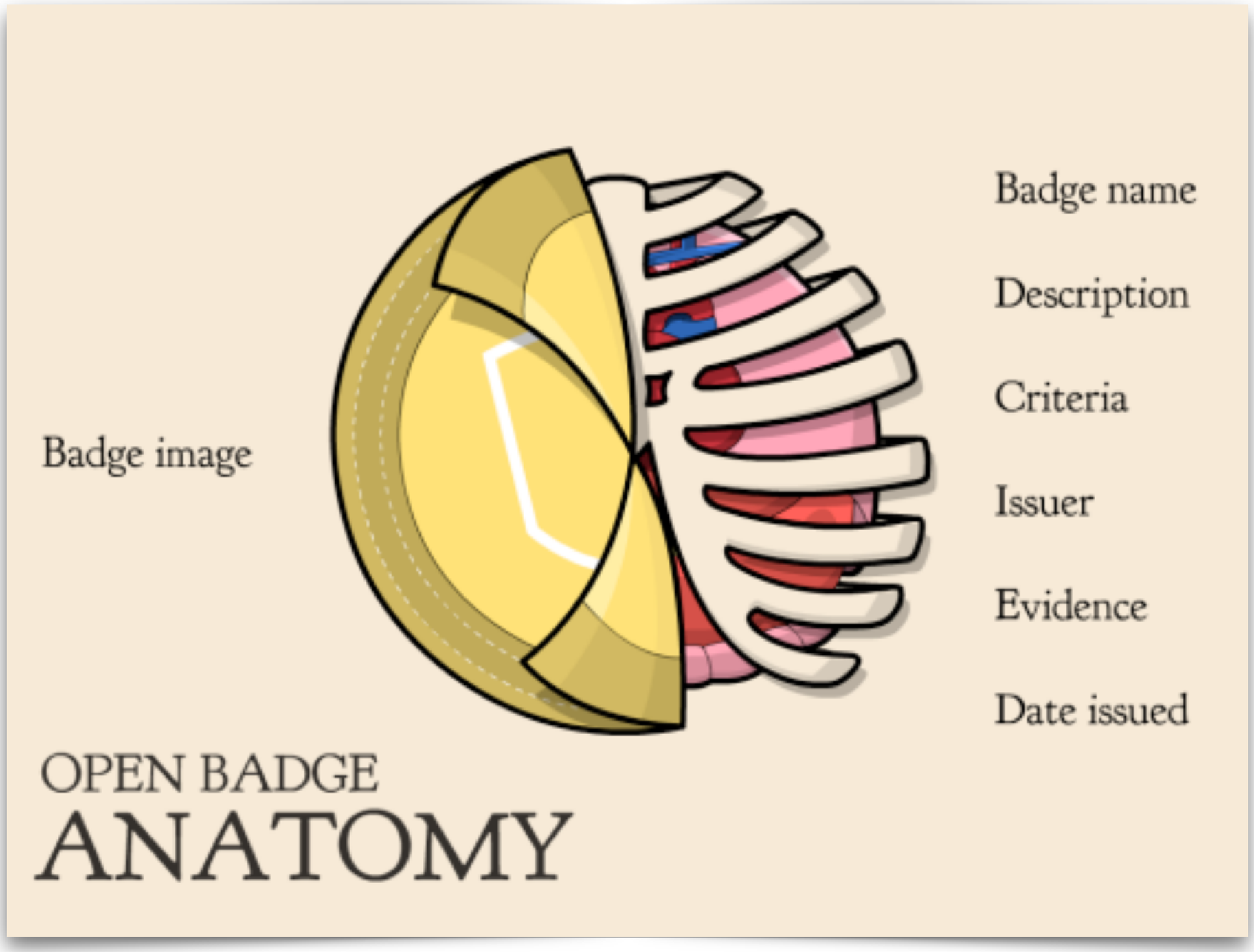
Training should meet the **requirements and needs of working life**

Identify and promote competences

- Electronic microcredentials, Digital Open Badges (Mozilla Open Badge)
- Refer to the student's, the earner's, participation in education or skills development; they may also be awarded following completion of a certificate.

Personalisation
Individualisation
Customisation

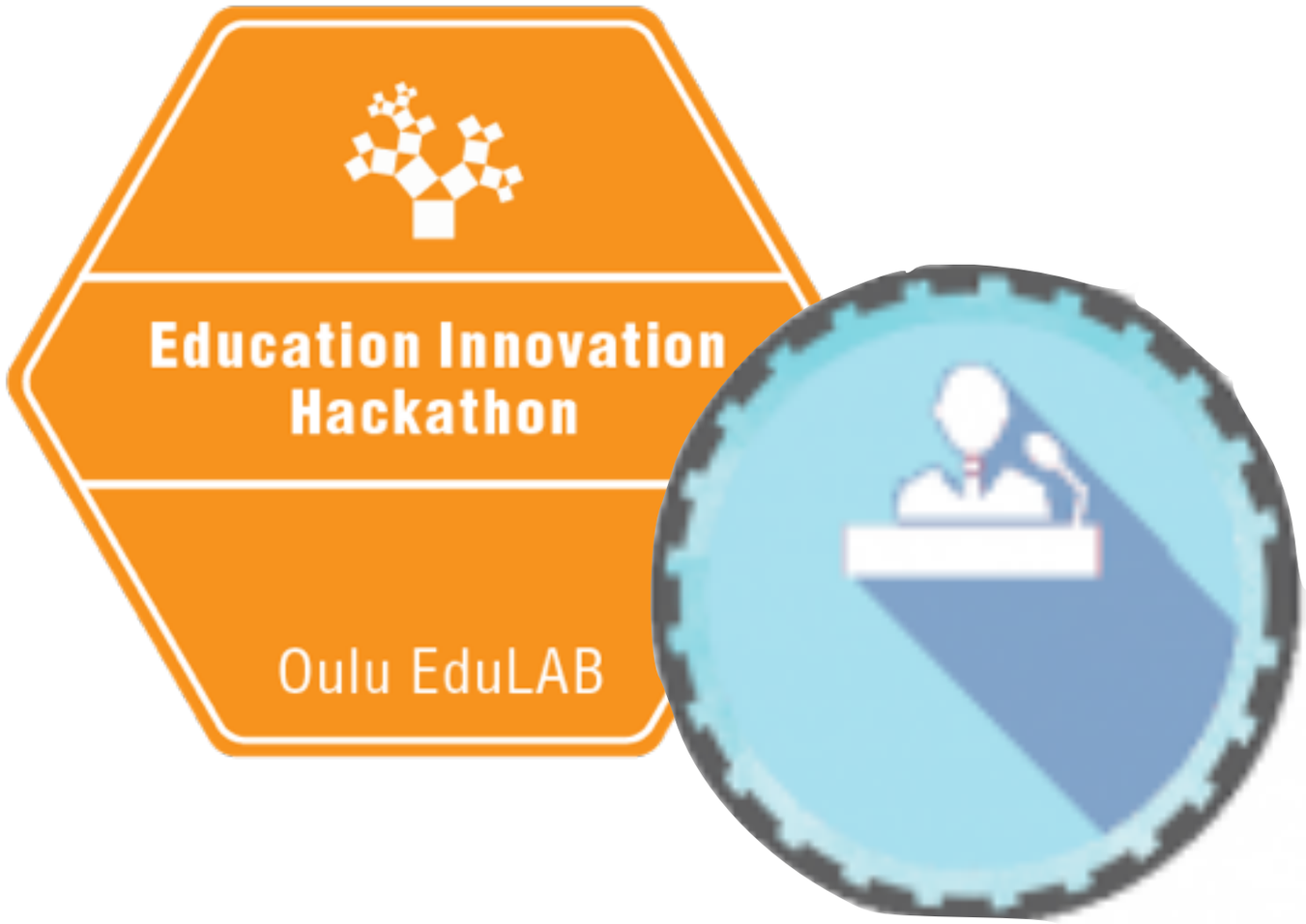
Different badge type affects motivation differently



http://classhack.com/post/39932979863/badgeanatomy

OppiminenOnline.com

From participation awards to addictive learning and competence-based assessment



Standardisation of Competence Development Continuum -

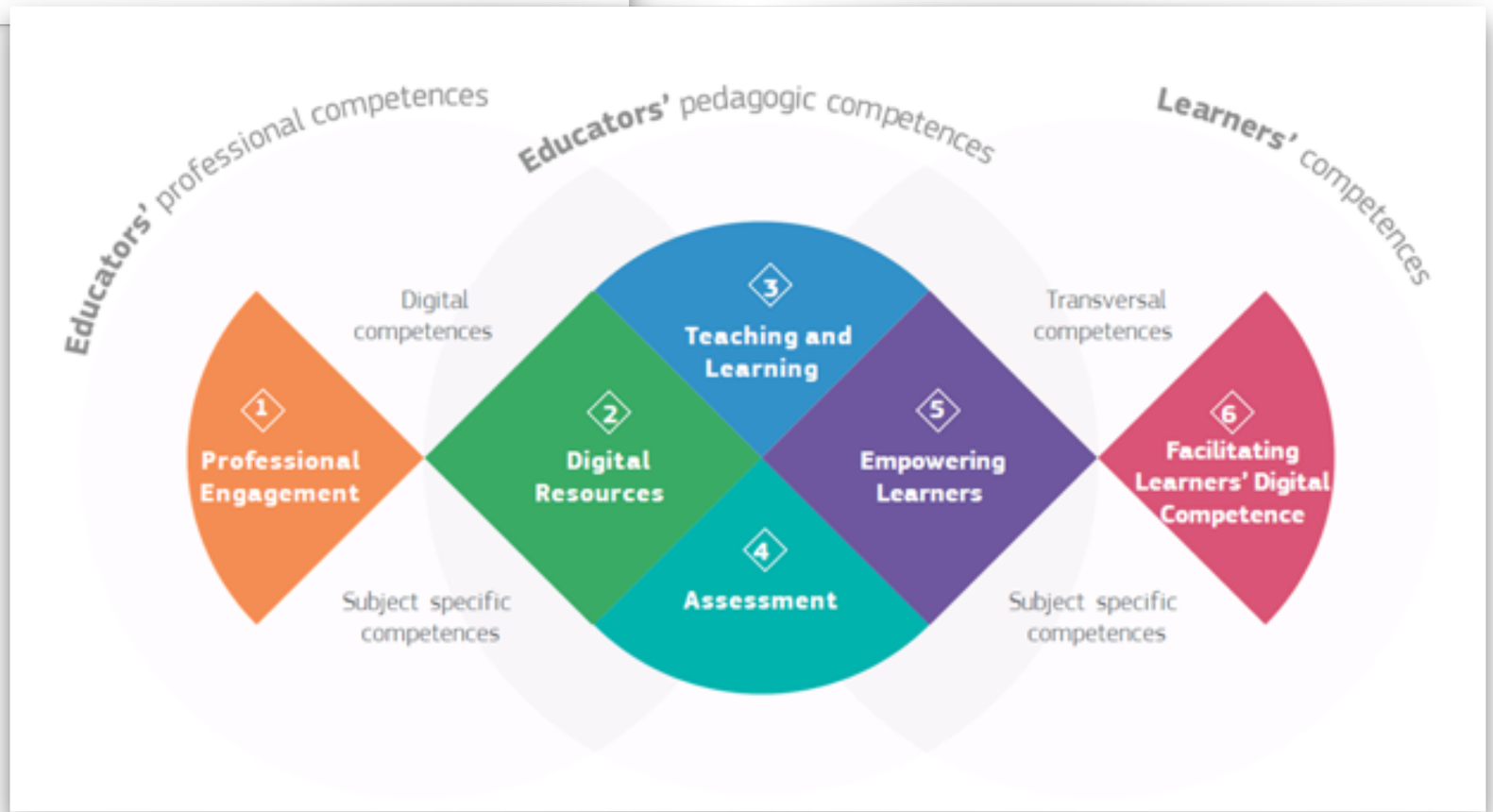
Levels of Achievement

THE UNESCO ICT COMPETENCY FRAMEWORK FOR TEACHERS

	TECHNOLOGY LITERACY	KNOWLEDGE DEEPENING	KNOWLEDGE CREATION
UNDERSTANDING ICT IN EDUCATION	Policy awareness	Policy understanding	Policy innovation
CURRICULUM AND ASSESSMENT	Basic knowledge	Knowledge application	Knowledge society skills
PEDAGOGY	Integrate technology	Complex problem solving	Self management
ICT	Basic tools	Complex tools	Pervasive tools
ORGANIZATION AND ADMINISTRATION	Standard classroom	Collaborative groups	Learning organizations
TEACHER PROFESSIONAL LEARNING	Digital literacy	Manage and guide	Teacher as model learner

UNESCO's ICT Competency Framework for Teachers (UNESCO, 2011, p. 3)

"Different digital pedagogical competence frameworks seek to support teaching personnel, educational institutions and policymakers in developing **effective and meaningful criterion-based competence development** (Kools & Stoll, 2016)."



Digital competence framework for educators: Areas and scope (Redecker, 2017, p. 15).

Digital Pedagogical Competencies

Digital pedagogy means applying new technologies to teaching and learning in online, hybrid and face-to-face learning environments.

Digital pedagogy combines theory with practice, and making with thinking, aiming to foster creativity, play and problem solving among learners (Spiro, 2013).

Learning Online

Learning Online is a national professional development program for vocational teachers started in 2014.

Learning Online was built on a national ICT-competence framework (Ope.fi) aligning with the Unesco ICT competency framework for teachers.

The requisite skill sets consists of three levels, and assessment is based on identification and recognition of competences.

The learning process on Learning Online is facilitated by a MOOC (Massive Open Online Course) with gamified elements. Learning Online provides approximately 50 different subjects for online study (http://www.oppiminenonline.com) at one's own pace.

Ope.fi

100%
70%
10%

SoMe-Novice = Ope.fi I
SoMe-Expert = Ope.fi II
SoMe-Developer = Ope.fi III

Piloting a National Ecosystem 2017-2019

Teacher's badges

The aim of the Open merkit (teacher's badges) project is to create and establish **a national digital badges system to support the recognition and acknowledging of professional competences of vocational teachers during their teacher studies as well as their entire professional career.**

www.hamk.fi/openmerkit

Funded by Ministry of Education and Culture

HAMK HÄMEEN AMMATTIKORKEAKOULU HÄME UNIVERSITY OF APPLIED SCIENCES · Haaga-Helia · jamk.fi Jyväskylän ammattikorkeakoulu · OAMK · OULUN AMMATTIKORKEAKOULU · TAMPEREEN AMMATTIKORKEAKOULU · YA! Yrkesakademin i Österbotten · Åbo Akademi University

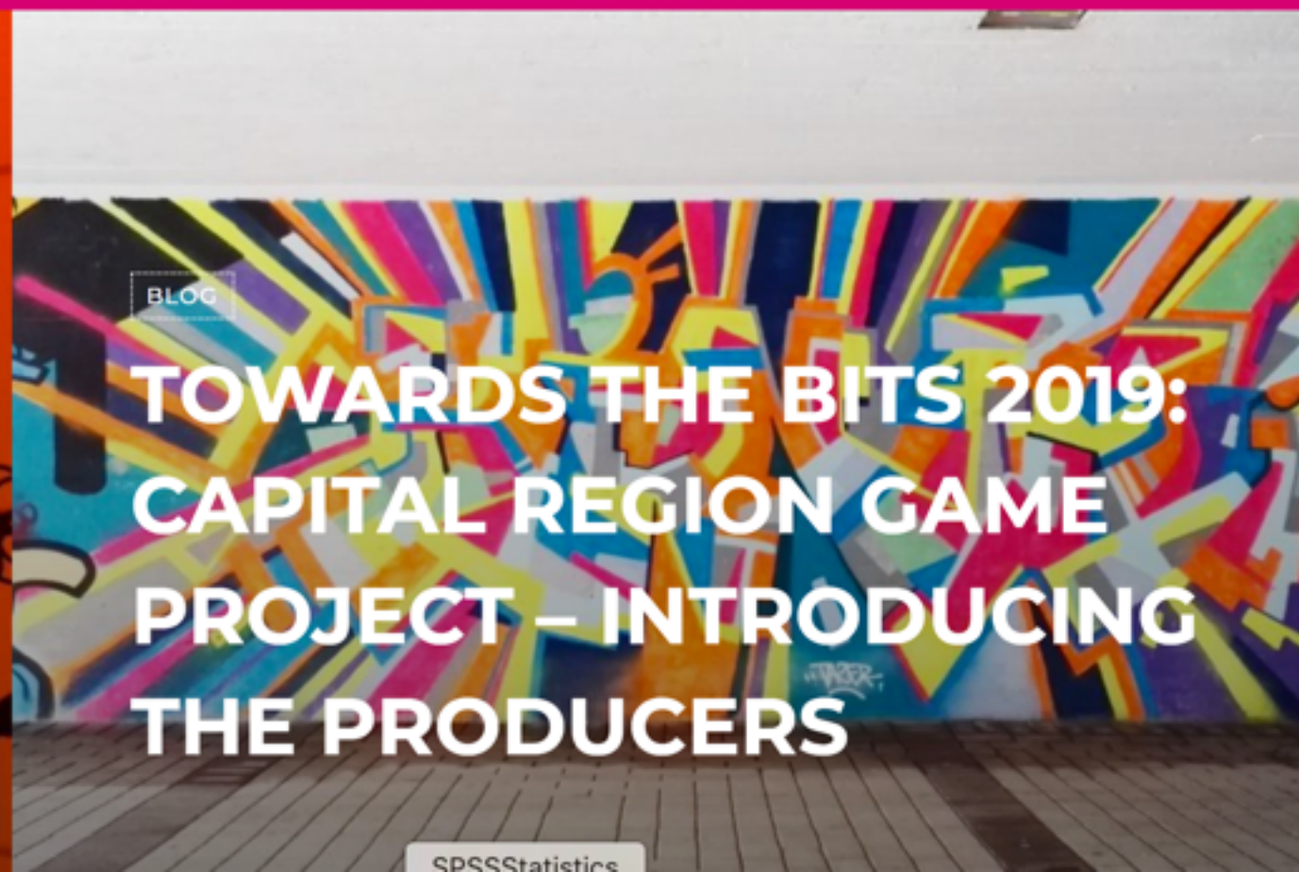
The system to be created will consist of

- a shared administrative model which is applicable across educational sectors.
- a shared structure, model, and awarding criteria for badges.
- a quality assurance model.
- a piloted and implemented badges collection for digital competencies.
- shared guidelines for future expansion of the badges system.
- guidelines for graphical design
- a shared network-based process model
- a national badges portal
- guidelines for resourcing, responsibilities, assessment and guidance.

Chips For Game Skills -project focuses on identifying the **needs of the game industry** and develop the education on the basis of them. The goal is to create a common evaluation criteria – a digital open badge system – which clarifies the definition and understanding of the learning objectives in the games industry.

Chips For Game Skills

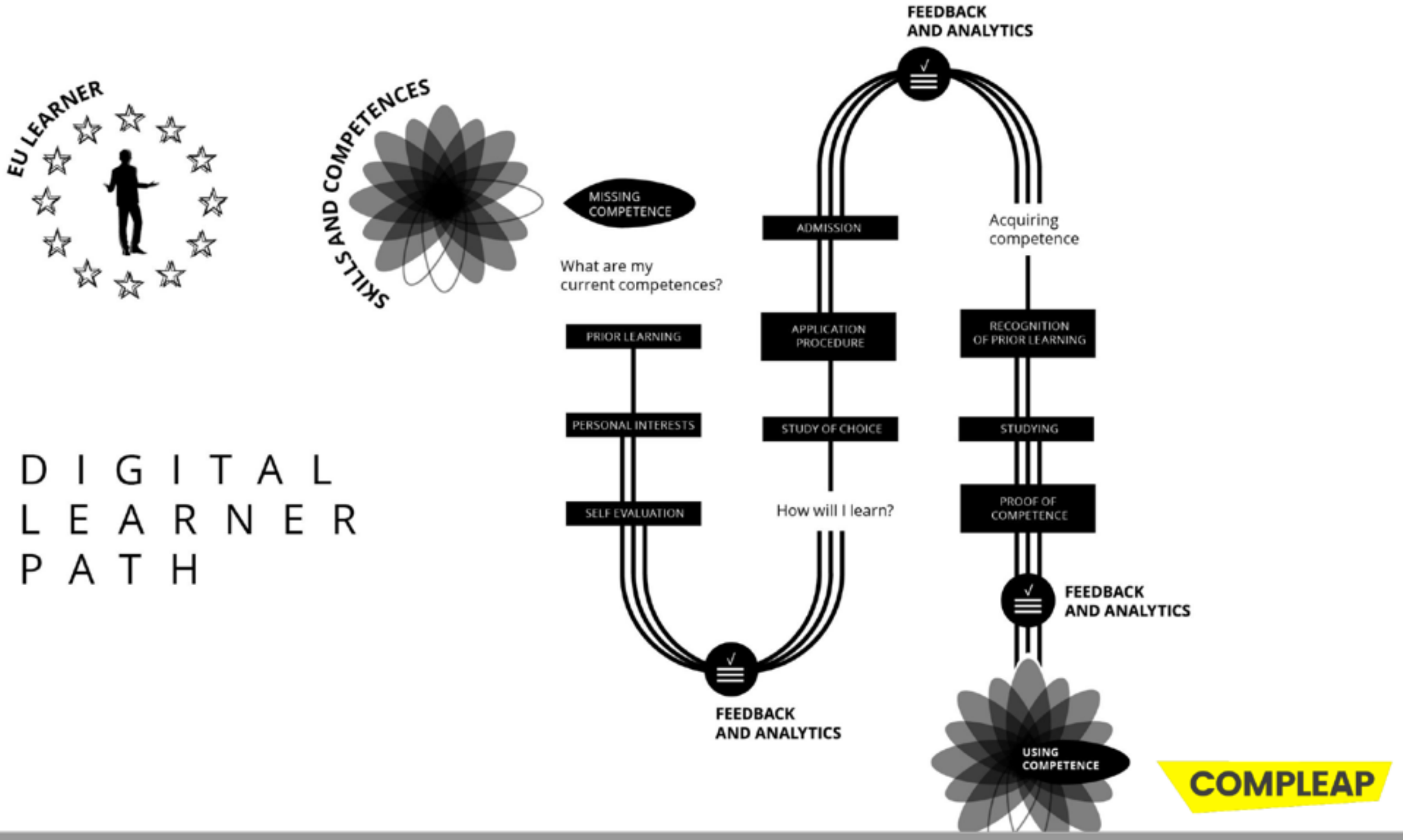
Osaamisen pelimerkit



’Work-Integrated Pedagogy in Higher Education’ (WORKPEDA)

Identification and Recognition of *Desired* Competences

UNIVERSITY OF OULU



DEMO: https://invis.io/8XNRS737TF9

#openEPIC18 #ePIC18

#openrecognition

OULUN AMMATTIKORKEAKOULU

UNIVERSITY OF OULU

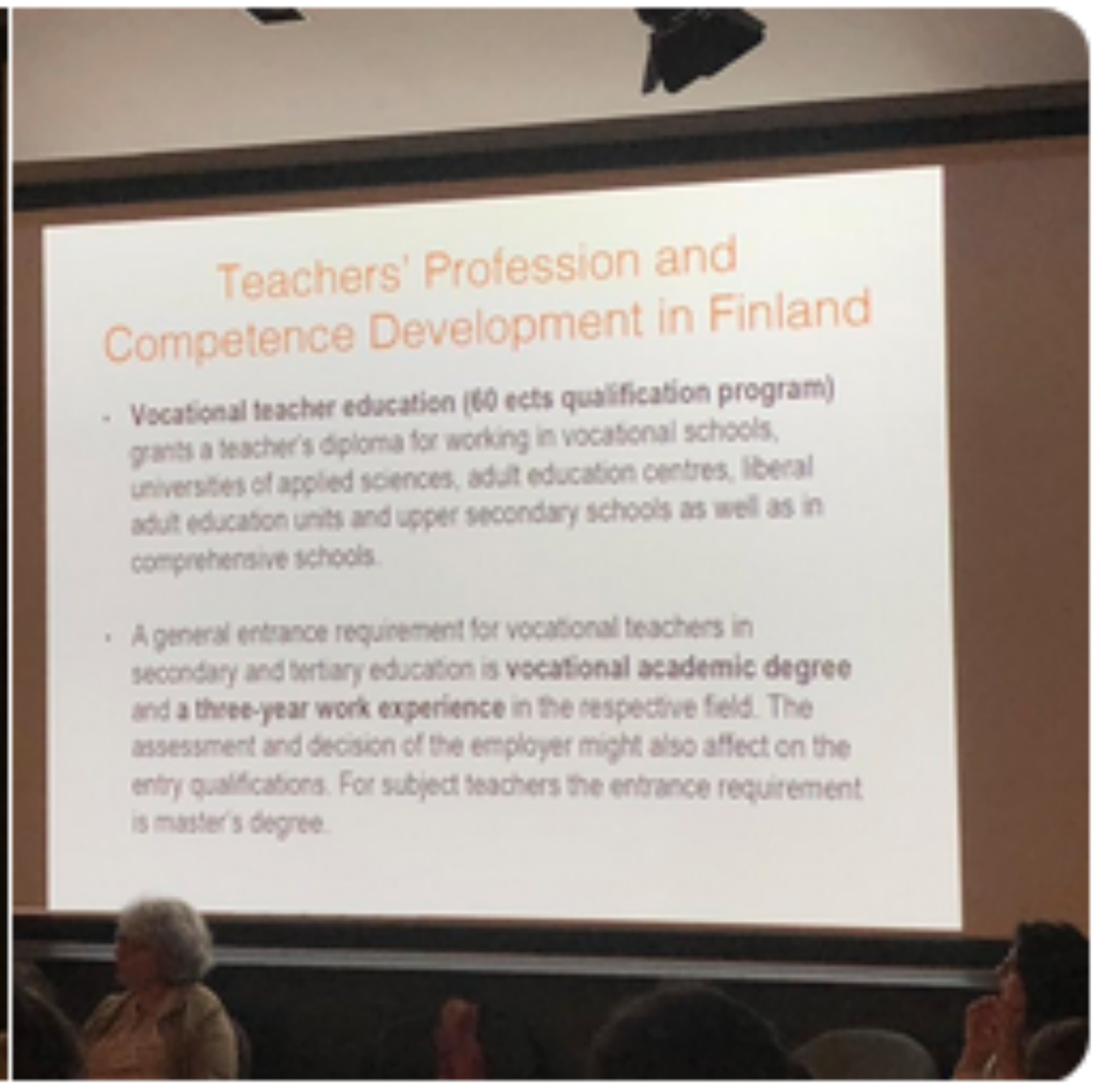
LAPIN YLIOPISTO
UNIVERSITY OF LAPLAND

Uudelleentwiittasit

juliekeane @juliekeane · 25. lokak.

Of course Finland is developing a national #openbadges ecosystem for teachers #openepic #openepic2018

Käännä twiitti



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Bestr @joinBestr · 25. lokak.
Sharing our experience at #epic18 #openepic18 #openRecognition
Higher Education
ent Life Cycle
Exams
Credits acquisition& recognition
Degree
Alumni
Open Badges?
the value of the Badge every step in the student life
improve University internal processes
.B
Focus on Higher Education Student Life Cycle
Orientation
Admission and enrollment
Exams
Credits acquisition& recognition
Degree
Alumni
Why Open Badges?
1. Enhance with the value of the Badge every single step in the student life
2. Digitize or improve University internal processes


Companies
Organizations 80
Universities .....
tform leveraging
ls to valorize
de Learning
Published badges 700
BLOCKCERTS
COMPLIANT
.B
3+ years
Companies
Organizations 80
Universities .....
Bestr is a digital platform leveraging
Digital Credentials to valorize
Lifelong & Lifewide Learning
90K+ Issued Badges
Published badges 700
We issue
OpenBadges
BLOCKCERTS
COMPLIANT

2 3

BESTR PROJECTS

https://bestr.it/project/explore

Blockchain and Open Badges:
Bestr becomes a digital credentials ecosystem
The Bestr platform implements Blockcerts and evolves becoming a complete Digital Credentialing system

DigComp - Digital Competencies

This Badge, is exclusive to TIM employees and certifies the acquisition of the competencies covered by the 5 areas of competence of the DigComp Framework: Information, Communication, Creation of content, Security and Problem Solving.

The DigComp - Digital Competencies e-learning Process, designed by TIM, provides better preparation of its employees to face the constant challenges arising from digitalisation of work and society in general.

The training modules of the e-learning Process offered by TIM deal with the topics foreseen by the 5 areas of the DigComp Framework

Credits recognition

1- A Badge is created in Bestr

2- The university endorses the Badge on Bestr

3- The university records the Badge as recognized

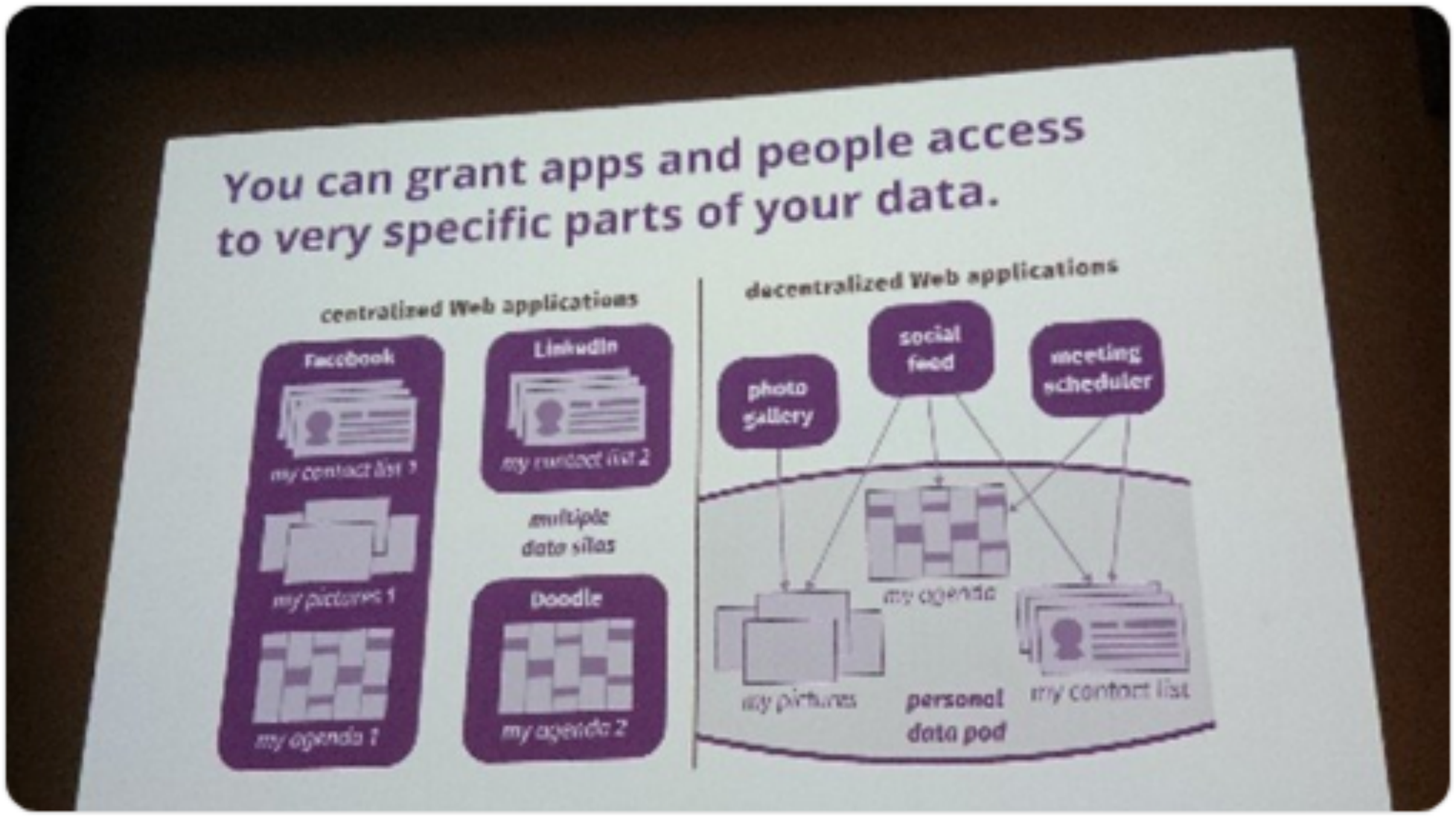
4- A learner earns the Badge

...and presents it to the university

Sanna Brauer @sannabrauer · 24. lokak.

This is certainly #ePIC18 #openrecognition @RubenVerborgh @comp_leap #auroraai

Käännä twiitti



Identification process in Italy is similar to Koski-service in Finland

https://xapi.com/overview/

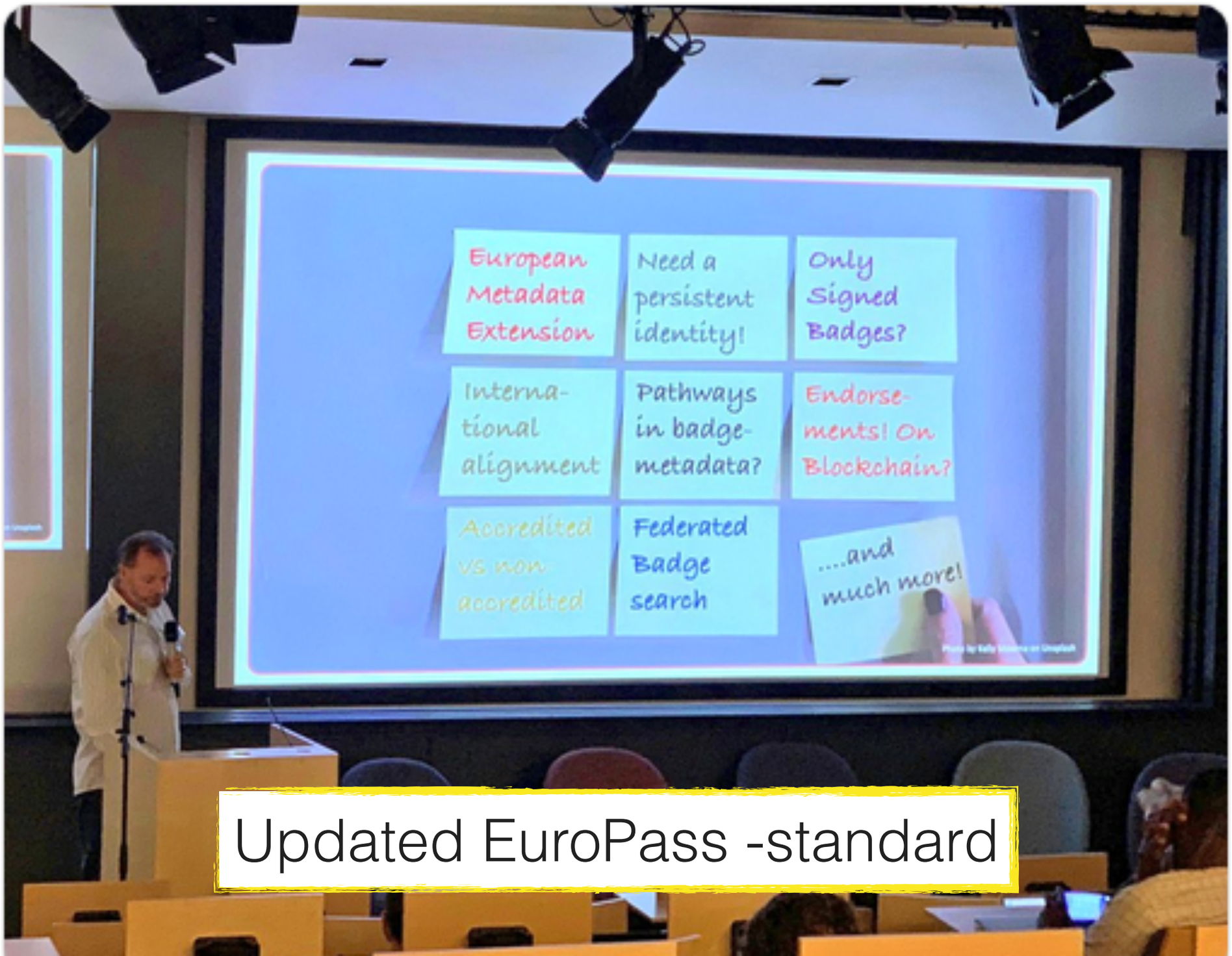
Badge - LMS - Diploma
Learning analytics

Uudelleentwiittasit

Bestr @joinBestr · 25. lokak.

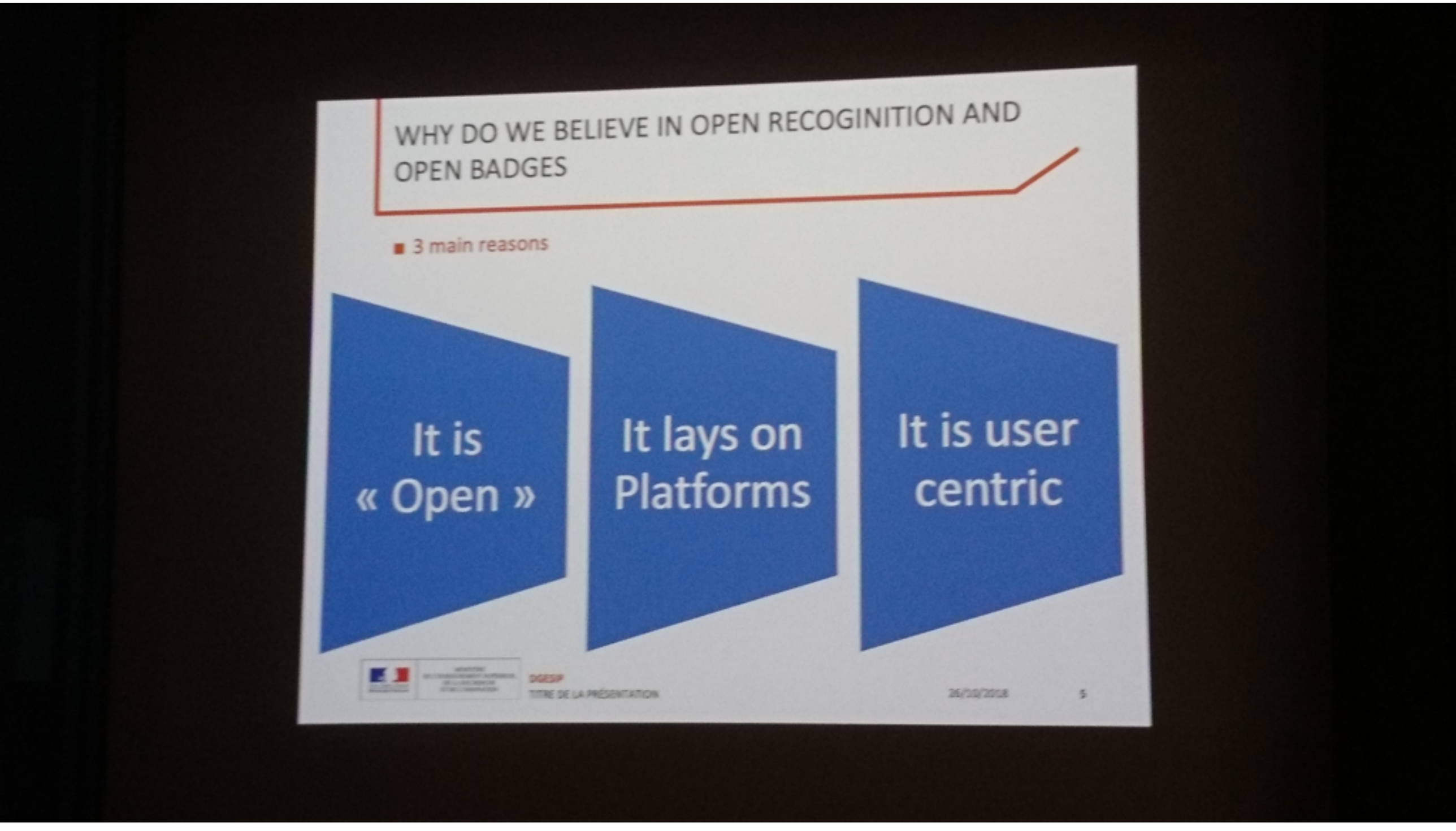
New challenges for Dutch #openbadges from @SURFnet - we share so many! #epic18 #OpenRecognition #openepic18

Käännä twiitti



The ESCO Skills/Competences classification

Technological development and open recognition from the ministry point of view



Sanna Brauer @sannabrauer · 26. lokak.

#openepic2018 #ePIC18 #openrecognition #greatattitude #bitoftrust #spreadthespirit caring and sharing instead of fear and risks

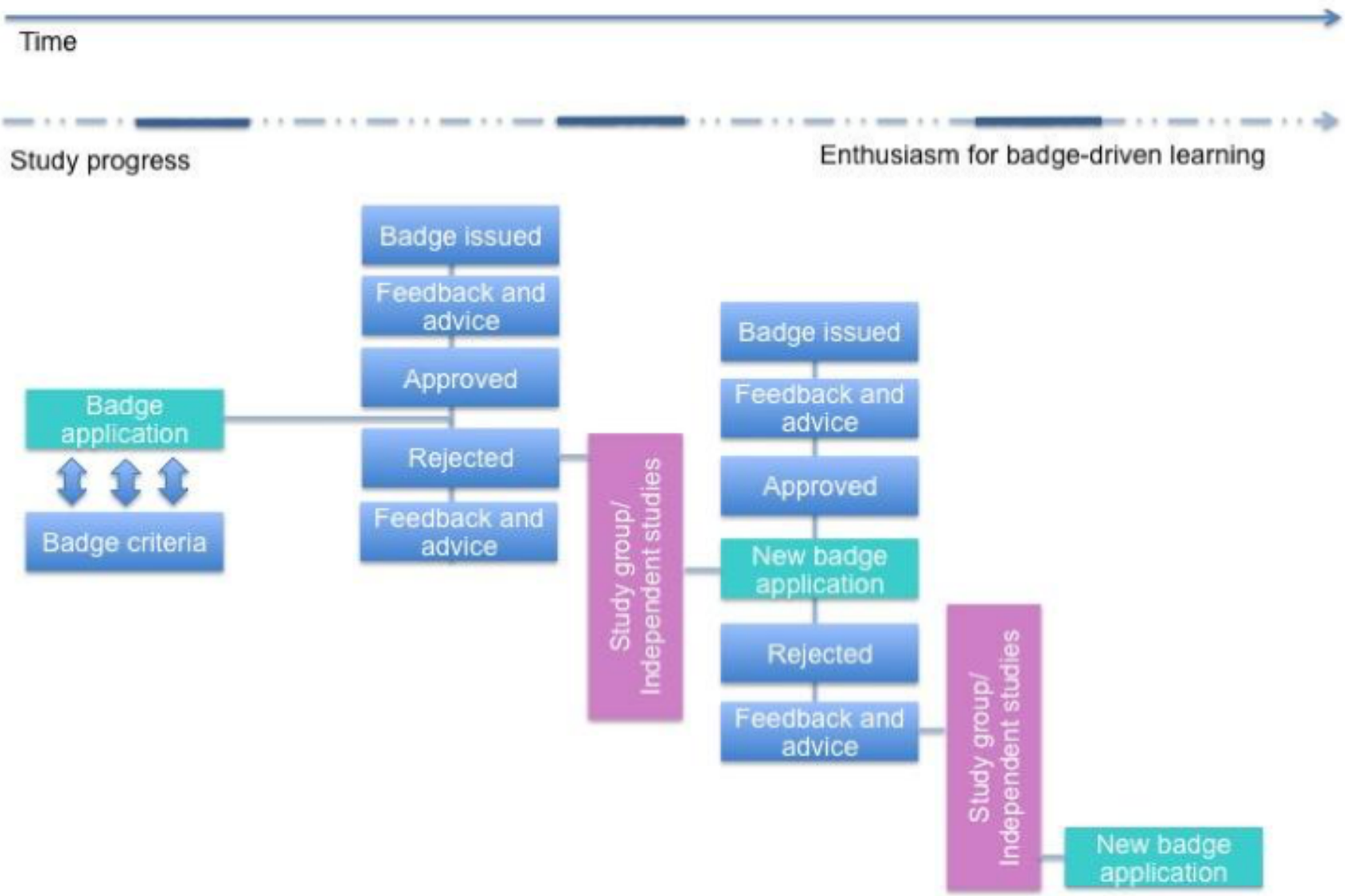
Käännä twiitti

A world class innovation: Digital Open Badge-Driven Learning

Why do we believe in Open Recognition and Open Badges? https://mirva.openrecognition.org/?p=757

Conceptualising Digital Open Badge-Driven Learning

Structure and components of a digital open badge-driven learning process: competence-based assessment and badge management related to guidance



Brauer & Siklander, 2017

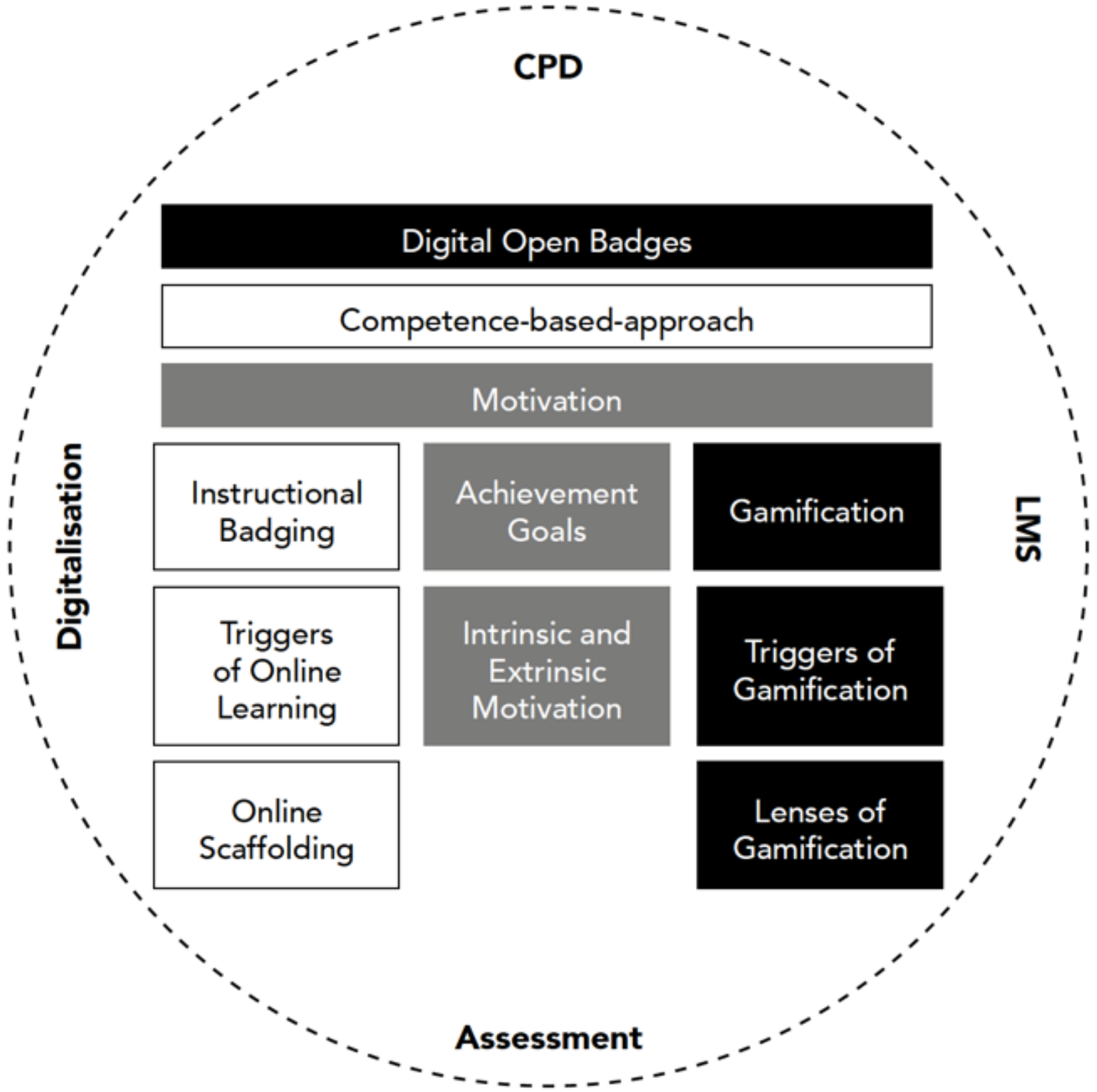


Figure 2.

Theoretical concepts and research themes.

Brauer, S. 2019

How digital open badges structure the gamified competence-based learning process?

RESEARCH QUESTIONS

1) What motivates students in the digital open badge-driven learning process?
2) How do students experience scaffolding in badge-driven learning?
3) What triggers learning in the badge-driven process?
4) How do learners experience the competence-based approach in the badge-driven learning process of professional development?

Brauer, 2019

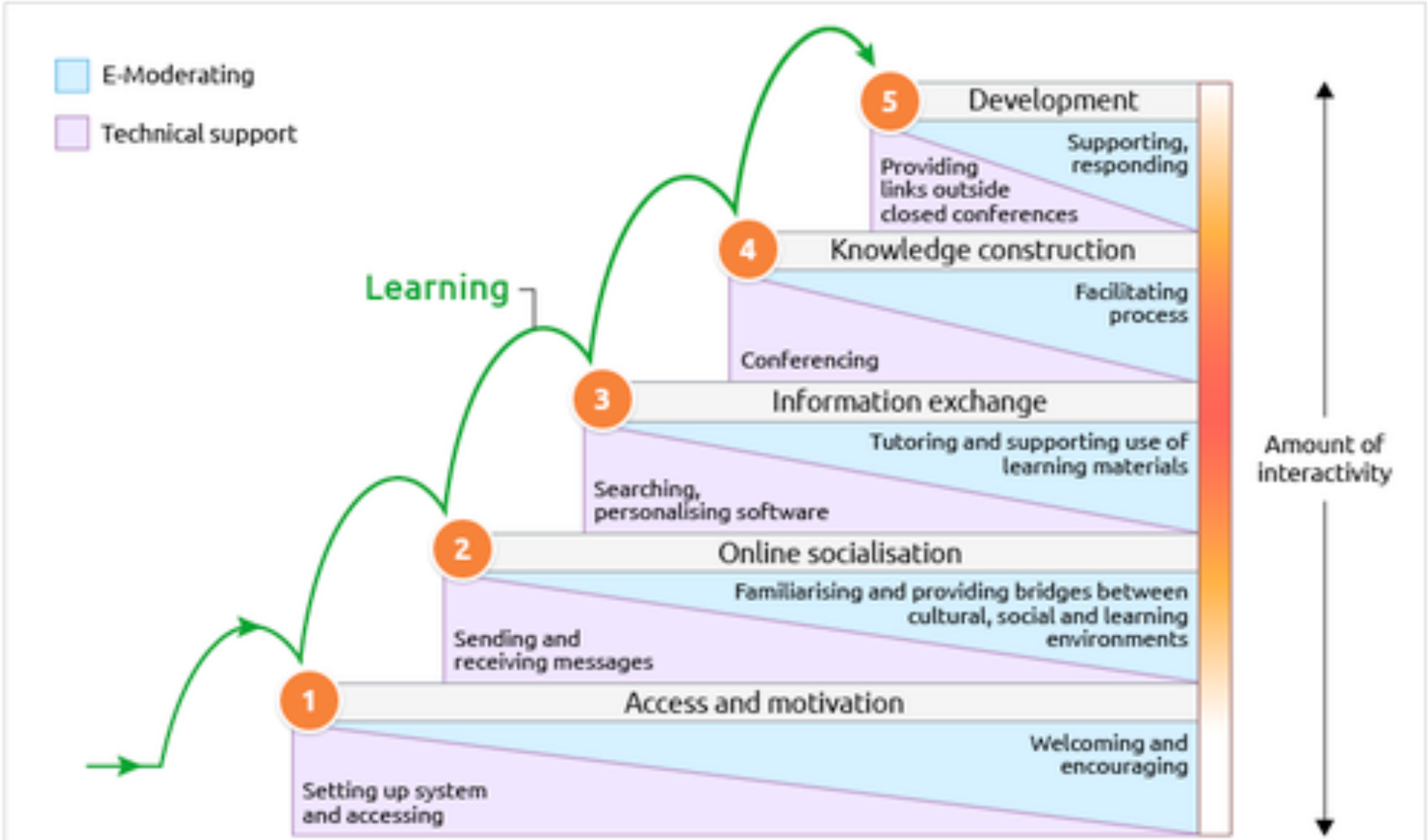
Conceptualising Digital Open Badge-Driven Learning

A competence-based learning process grounded on the badge constellation of competences.

The process includes identifying and recognising different competences using digital open badges.

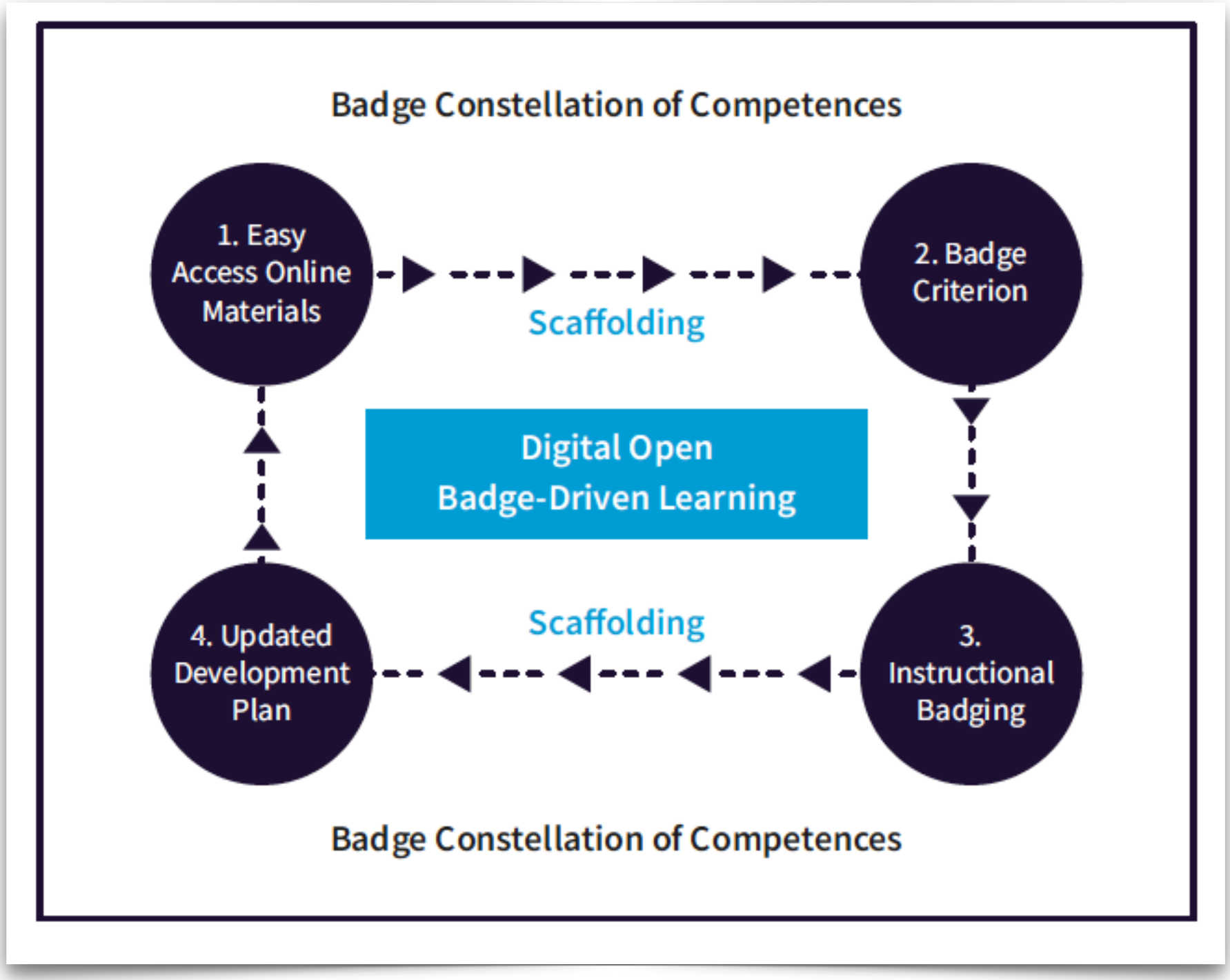
The entity of digital open badge-driven learning involves learning materials, badge criterion, instructional badging, scaffolding and peer support.

Brauer, 2019



Five-stage model from Salmon 2018 / cf Brauer, Korhonen, Siklander, 2018

Stages of the badge-driven learning process



Brauer, 2019; cf. Salmon, 2018

Competence-based Approach to Motivation, Gamification and Triggers of Digital Open Badge-Driven Learning

enthusiasm for
badge-driven learning (67)

Achievement Goals

inspiring gamification (55)

Total
122

progressive challenges and
the extent of required performance (91)

Triggers of Online Learning

option to study regardless
of time and place (28)

Total
119

study progress (58)

Intrinsic and Extrinsic motivation

optional study paths (17)

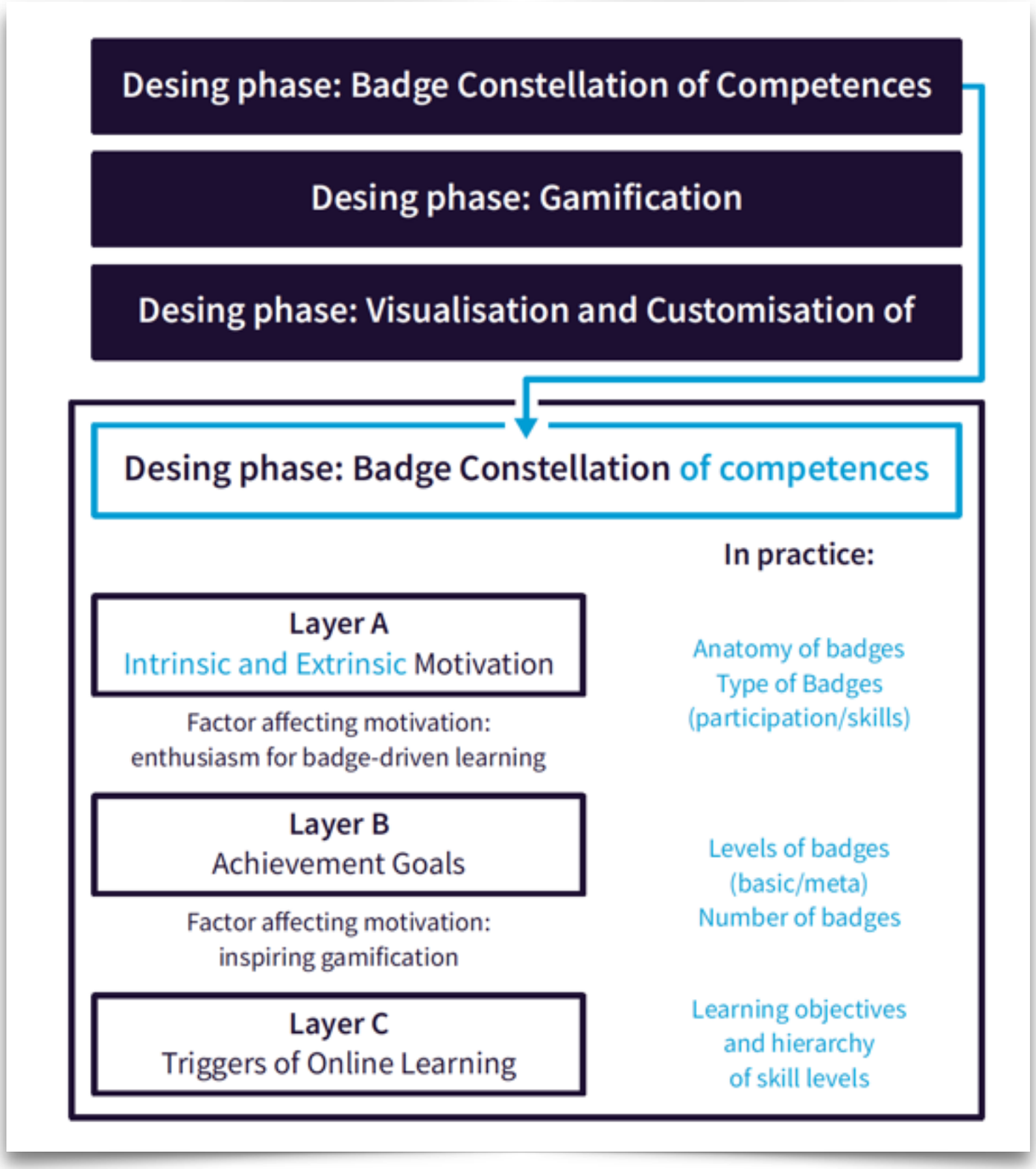
Total
75

Brauer, Siklander & Ruhalahti, 2017

"designing interactive systems around experiential goals"
Deterding, 2015

Stacks and Layers

Example of different layers in the creation of badge constellations, adopted from Brauer, Siklander and Ruhalahti (2017, p. 17-19).



Gamification is a

convivial technology.

Photo by Buster Benson

Badges explain

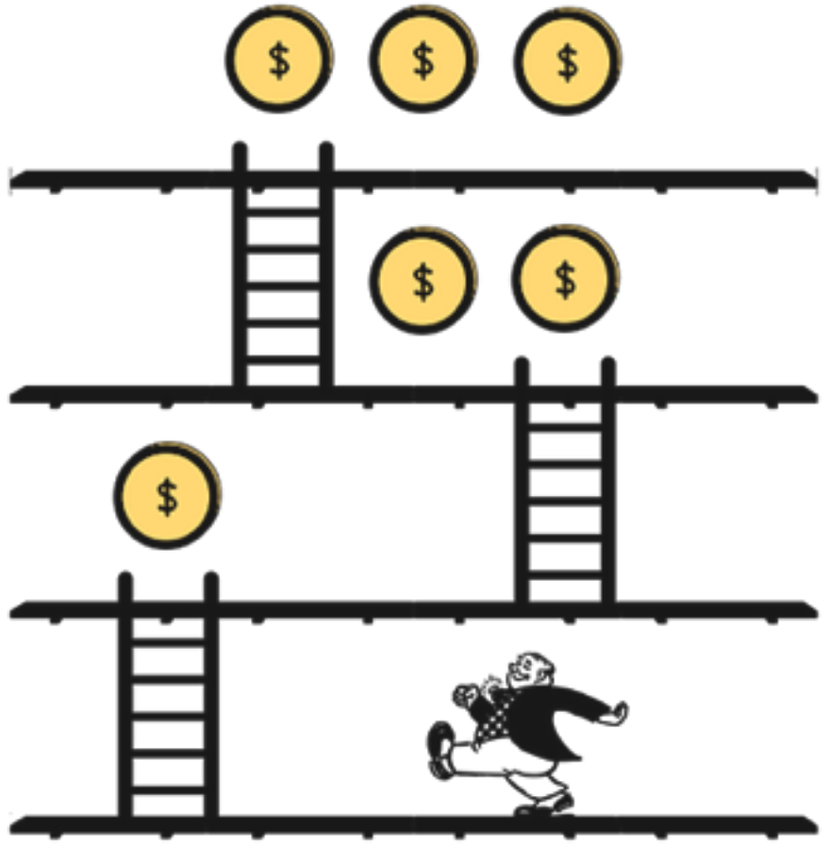
WHAT STUDENTS EXPERIENCE, LEARN AND THEN APPLY

- Triggers offer to affect learning **arousing and maintaining interest** (Hidi & Renninger, 2006; Järvelä & Renninger, 2014; Renninger & Bachrach, 2015) until **final completion of the desired learning action** (Dichev et al., 2014).

- Triggers allow students to **continue studying** after completing the initial task (Dichev et al., 2014; Werbach, 2014).

- The prompting trigger of learning might help students **visualise their learning** as a reward badge (Brauer, Siklander, & Ruhalahti, 2017, Fitz-Walter et al., 2011; Gamrat et al., 2016; Hamari, 2017; Montola et al., 2009; Reid et al., 2015).

- Students also gain a **sense of excitement** similar to that of playing games (Deterding, 2012; 2015). They benefit from **facilitators' interaction, collaboration and feedback** during the learning process (Siklander et al., 2017).



Brauer, 2018

Phenomenographic Study of In-Service and Pre-Service Teachers' Ways of Experiencing the Competence-Based Approach in Digital Open Badge-Driven Learning

	CATEGORIES				
DIMENSIONS OF VARIATION	**Compulsory Performance**	**Completing Learning Assignments**	**Supporting Professional Competence Development**	**Supporting Individual and Customised Learning**	**Building a Learning Community**
Attitude	Negative	Concerned	Neutral	Positive	Enthusiastic
Significance of Digital Badges	No added value	Reward	Encouragement	Achievement	Appreciation
Digital Badging in Practice	Grading	Tracking progression	Development planning	Competition	Shared expertise
Learning Materials	Not used	Forced need	Systematic	Comprehensive	Advanced
Scaffolding	None	Imitative learning	Differentiation	Scaffolding	Peer support and peer scaffolding
Performance	Compulsory	Selective	Progressive	Customised	Applying
Emotions	Forced	Joy	Enthusiasm (badges)	Enthusiasm (team)	Addiction
Situational Motivation	Mandatory	Identification and recognition	Practical	Gaming	Promoting competences

Brauer, Kettunen, & Hallikainen, 2018

Profiling Badge Earners

In-Service and Pre-Service Teachers' Ways of Experiencing the Competence-Based Approach in Digital Open Badge-Driven Learning

Badge Enthusiastic

Team Builder

Assignment Doer

Team Player

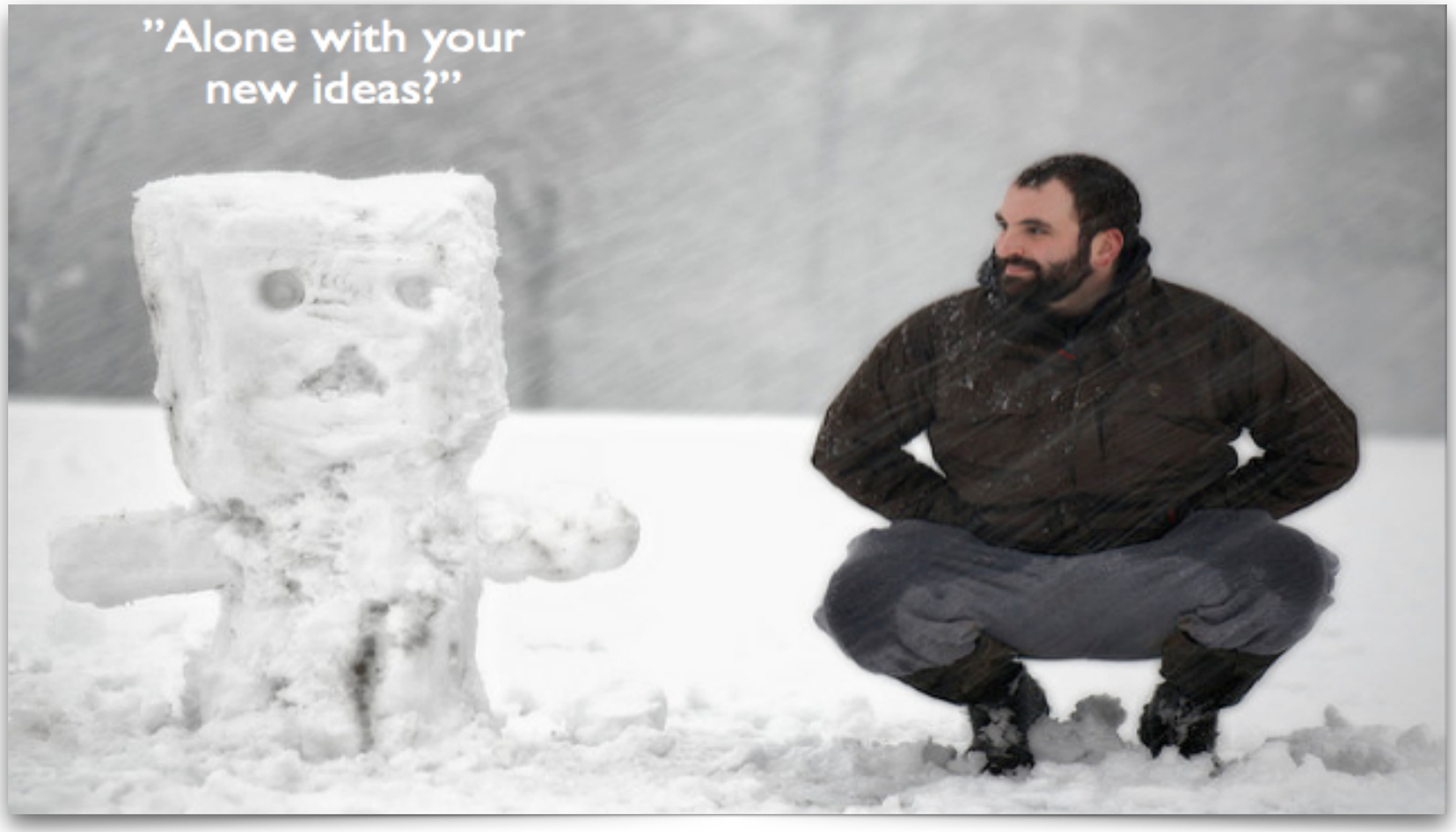
Brauer, 2018

“The competition between teams was nice, but the most important thing was playing. I used to play Mafia Wars for four hours a day until my husband banned it. This is how I satisfy the craving when going to bed but not feeling sleepy yet. One more. I got one more badge. It seemed to me the best quality (of education), the most addictive and interesting learning experience of my life, although not an easy achievement.”

In-service teacher on skills set developer-level III

Share the Attitude!

Self-education and learning by doing should be considered the predominant ways to acquire expertise in the digital age.



Networking

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https://www.researchgate.net/profile/Sanna_Brauer

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CompLeap bit.ly/2Rhe489

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