

A person in dark clothing is captured mid-air, jumping over a wall in a narrow alleyway. The scene is dimly lit, with light coming from the end of the alley. The person is positioned on the right side of the frame, moving towards the left. The alleyway is flanked by dark walls and has a concrete floor with a drainage grate in the foreground. In the background, there are buildings and a white railing.

**COMPLEAP**

# Reference Group Webinar

28.11.2018

# AGENDA

1. QUICK RECAP ON COMPLEAP
2. OPEN BADGES
  - Erik van den Broek, DUO
  - Sanna Brauer, Oulu University of Applied Sciences
3. WHAT'S NEXT?

**COMPLEAP**



Compleap is a 2-year long (12/17-11/19) EU-project funded by DG Connect as part of creating the Digital single market

Creating services for learners with learners.



# COMPLEAP PARTNERS



FINNISH NATIONAL  
AGENCY FOR EDUCATION



UNIVERSITY  
OF OULU



Dienst Uitvoering Onderwijs  
*Ministerie van Onderwijs, Cultuur en  
Wetenschap*



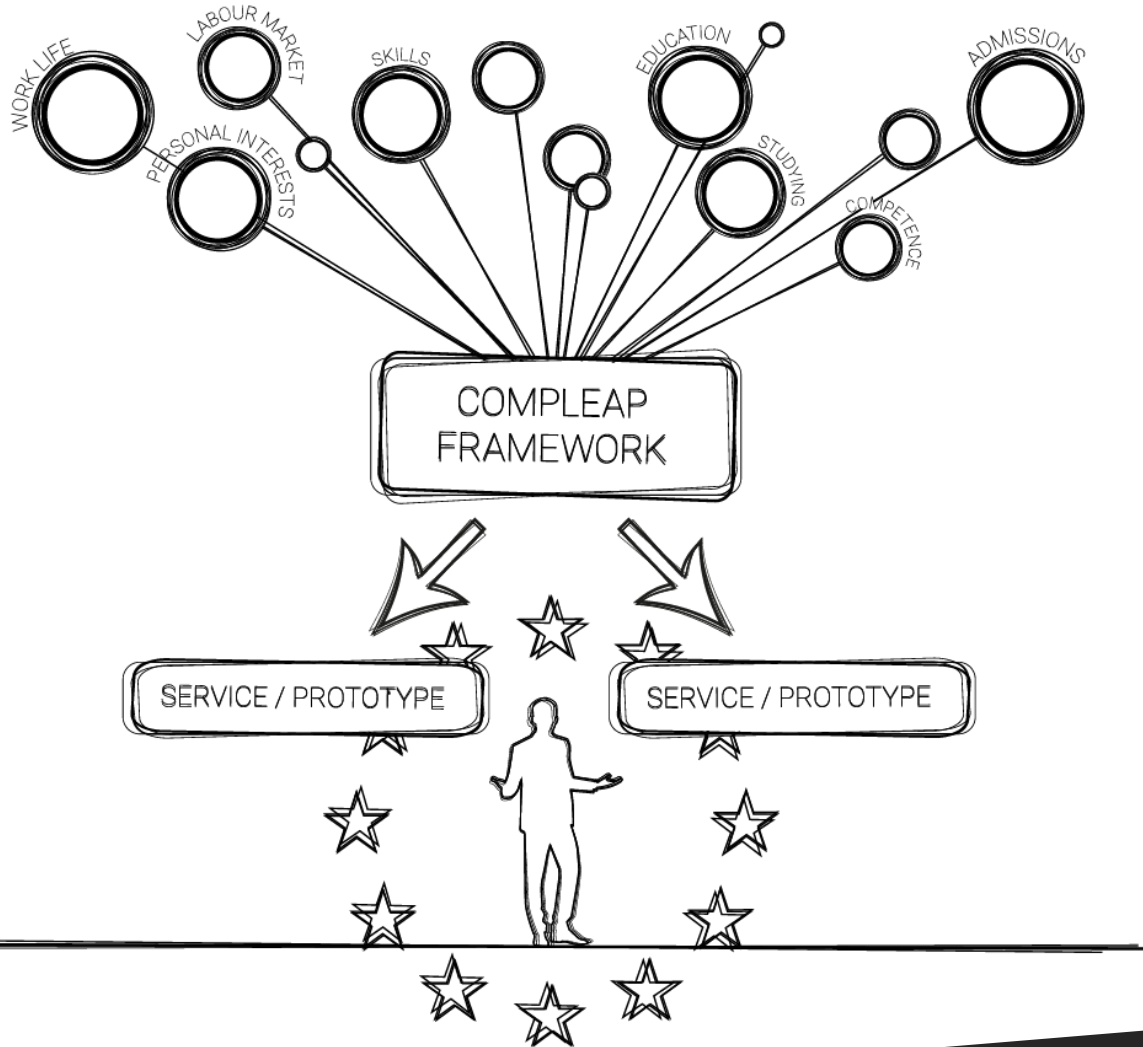
C S C

GRADIA

# WHAT ARE WE DOING?

- 1) **A Learner Path** - personal services for users to map competences throughout their life
- 2) **Learning Analytics** – to provide the user with insights out of data
- 3) **Depicting a wider service framework** of digital services for competence development

# DISTINCT MODULES FOR THE LEARNER PATH



The “Learner Path” includes a **Competence Profile**, which ties together user **competences, skills and interests**, with possibilities of guidance and **comparing existing education opportunities**



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Wetenschap*

# Introduction to open badges

**Erik van den Broek**, DUO,  
Groningen

badges are not new...

8



- recognise skills or achievements
- visual



# ... not only a reward

- badges have long use as a motivation tool in many different disciplines



# modern times

- digital learning environments
- digital job application
- digital student admission

(~~scanned paper diploma~~)

# something new is needed

11

**a digital certificate** that is visual and secure

offered by a new standard:

**OBI - open badge infrastructure**

a common framework for the issuing,  
collection, and display of digital badges

(originally developed by MacArthur and Mozilla  
Foundations → **non profit!** )

# open badge anatomy

12

- an image
- “baked” with data & *made unchangeable!*

- name
- description
- **issuer**
- **criteria**
- **evidence**
- {valid thru}
- *etc ....*



# how it might look:

13



“I can solve almost all problems that arise when using digital technology. I can choose the right tool, device, application, software or service to solve (non-technical) problems. I am aware of new technological developments. I understand how new tools work. I frequently update my digital skills.”

issued by: InternationalElectro Ltd

issued to: Piet Jansen

issuing date: November 20, 2018

valid thru: November 20, 2023

# what do you need?

As an organisation:  
an issuing platform

*(many tools/factories available)*



As an earner:


a backpack / e-portfolio  
*(many options available)*



# earner manages badges in a “backpack”

Open Badge Backpack Home Help: On gajbelshaw@gmail.com Sign Out mozilla ▾




## Badges




### Upload Badges

If you have badges you've been awarded, you can upload them manually

## Groups

Mozilla & P2PU     public

Other   public

Drag a Badge Here

[Terms of Use](#) | [Privacy Policy](#)

earner can share it from the backpack:

❖ social media



❖ digital cv



❖ eportfolio



❖ personal blog





# badge systems

**Badge systems** = a frame of several predefined badges used in a certain learning environment

**→ standardisation increases value**

# Badges for EU key competences?

18

DigiComp



# Badges for EU key competences?

19

**CEFR**



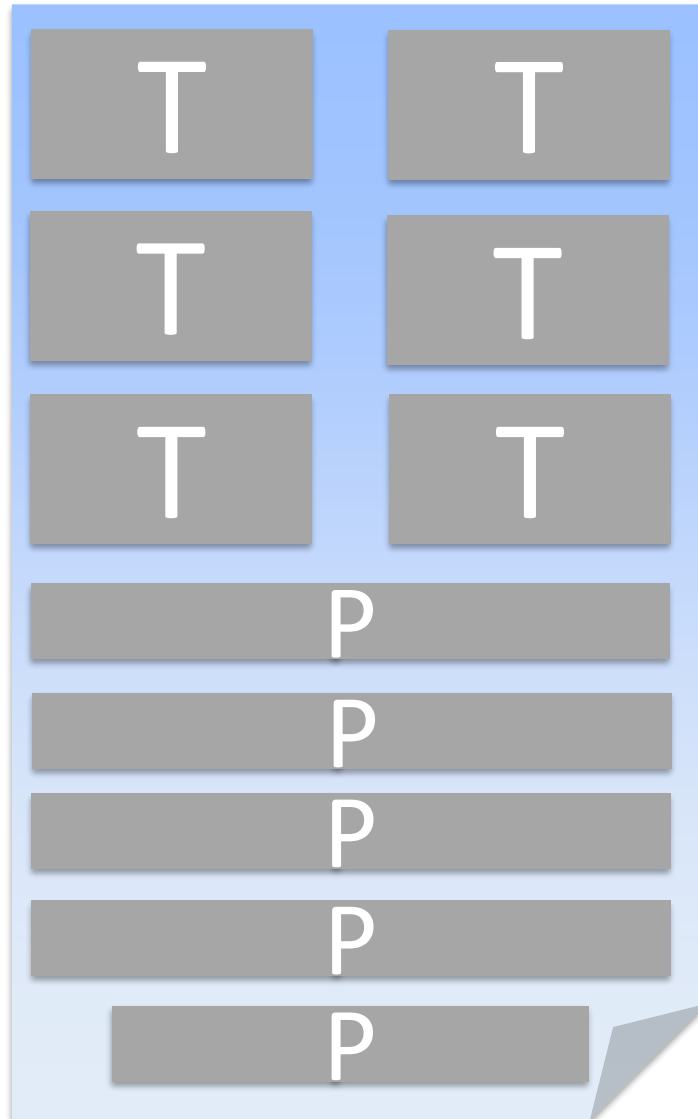


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bridging the gap between  
formal and non-formal  
education?

# national qualification structure for VET

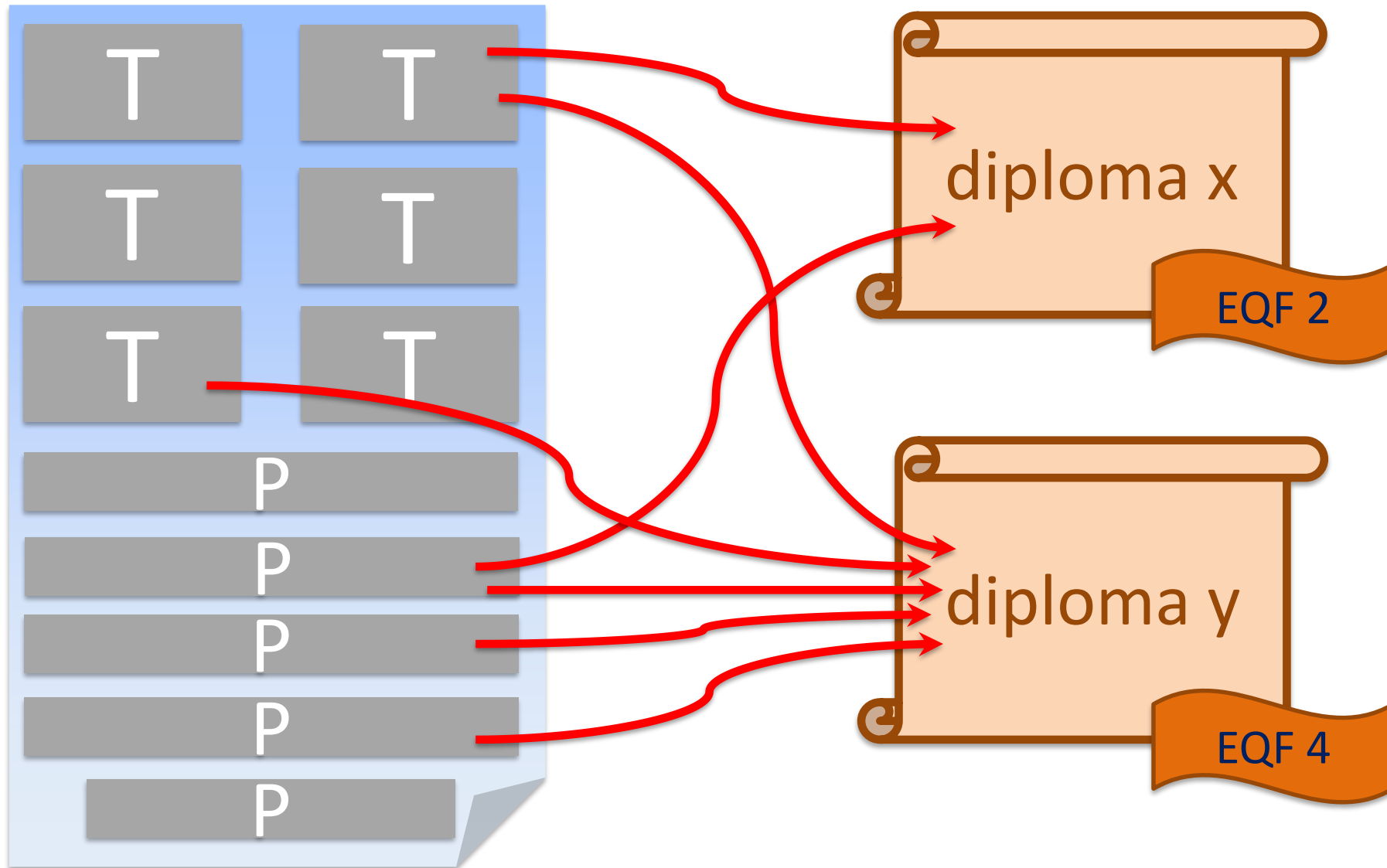
21



Describes the theoretical (T) and practical (P) content of all the formal VET qualifications (EQF 2-4)

# dutch qualification structure for VET

22



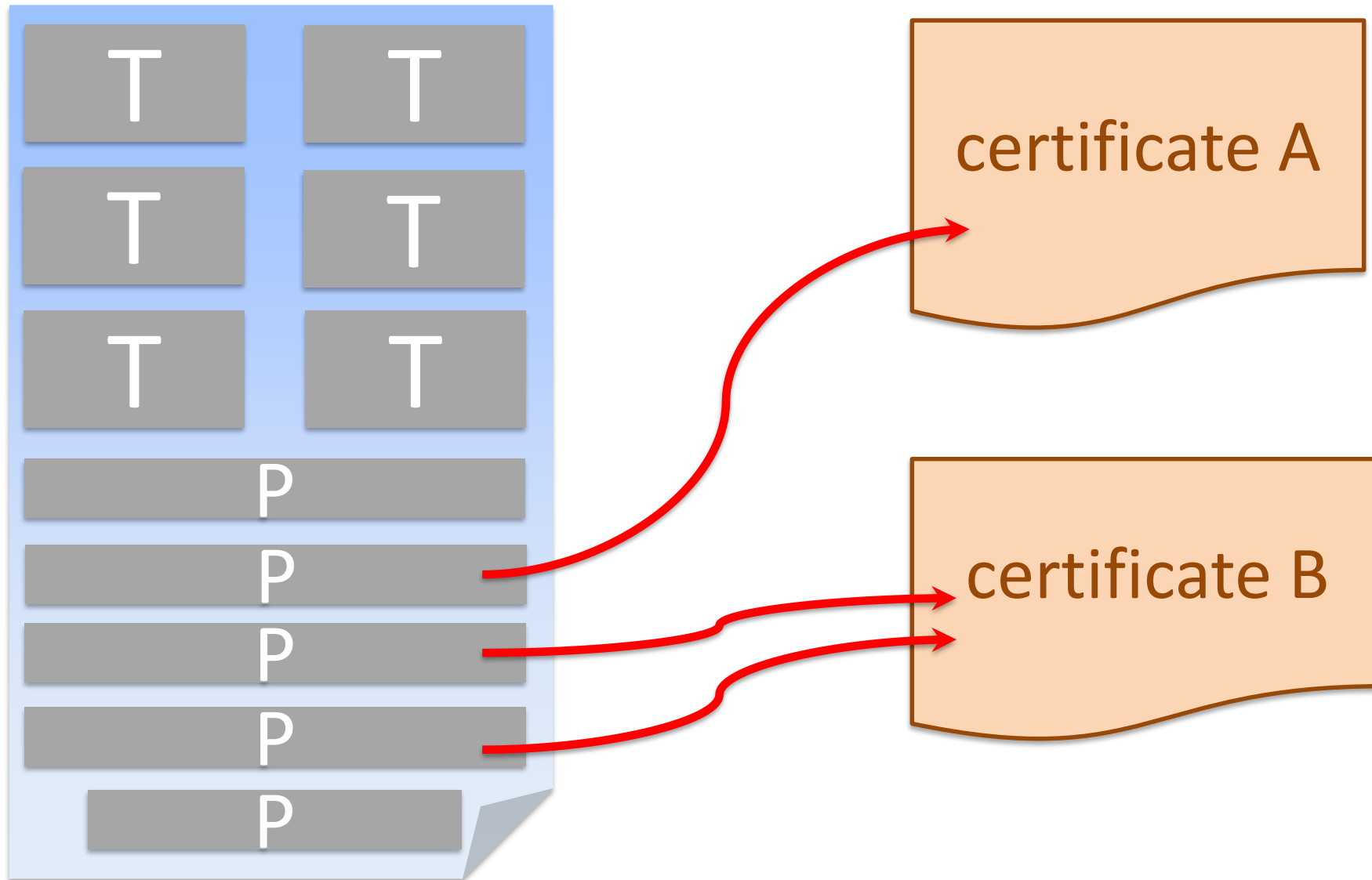
# diplomas not reachable for all

23

- EQF-2 diploma was defined as the desired minimum level before leaving school
- but.... not everyone is able to accomplish that

# a new “sub-diploma” level certificate

24





# a new “sub-diploma” level certificate

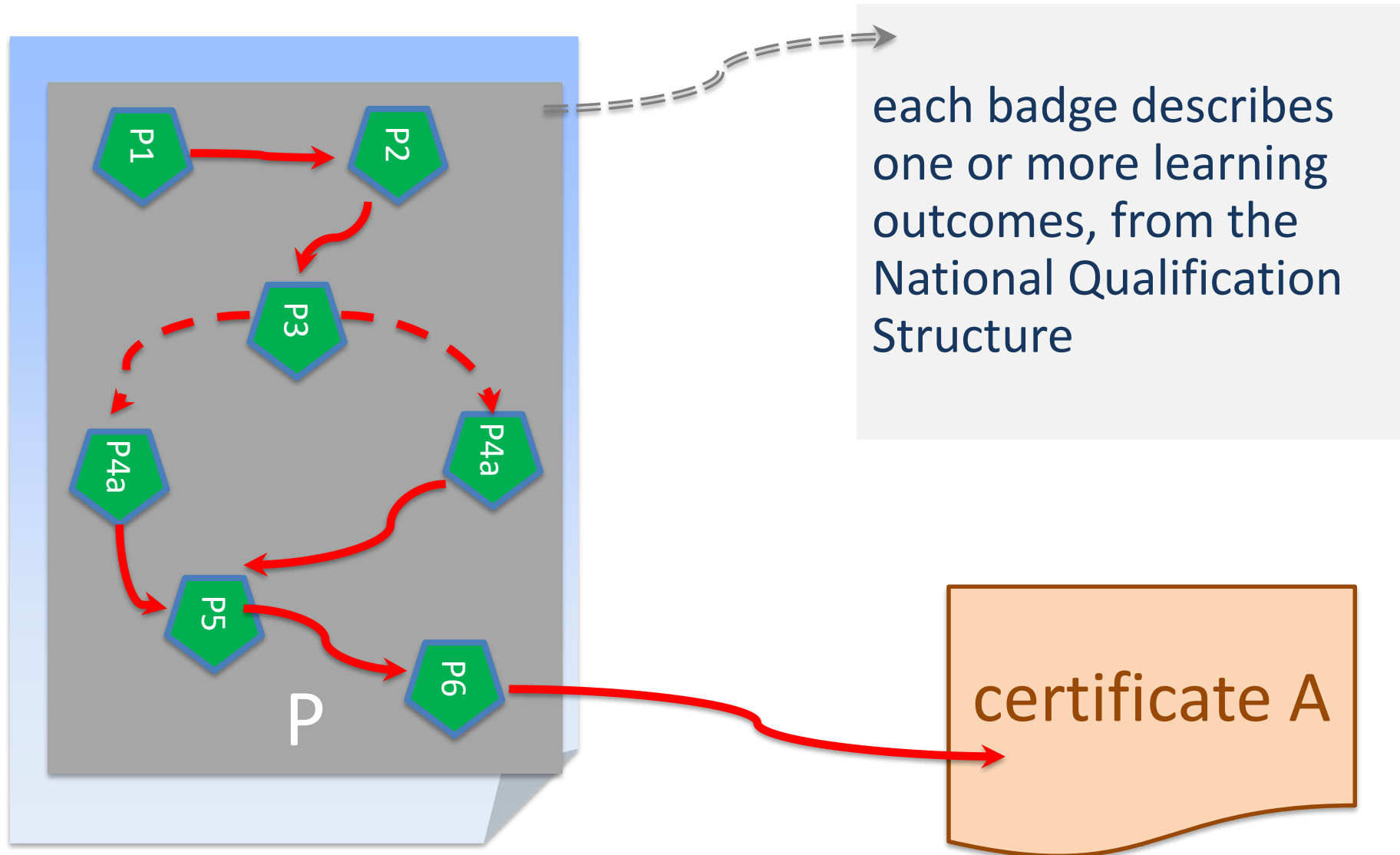
25

- issued by company, officially recognised for workplacements
- defined as minimum level for an entry level paid job
- content of the certificate is split into smaller units → badges



etc....

# learning pathway



# a new “sub-diploma” level certificate

27

- stackable (small badges earn larger badges)
- motivator for learning
- usable in non-formal and formal settings

# europass

Europass... since 2005, a portfolio for LLL

- essentially paper based
- 10 years later “not fit for purpose”

2018 May: New Europass Decision

2018 October: Europass Advisory Group

# direction (Q4-2019)

## **A secure digital portfolio**

- Europass in “the cloud”, also for badges  
→ CV with credentials!

Export to Eures e.a.

Original 5 documents remain for now

# direction (Q4-2019)

## Central information portal

- Euroguidance
  - Ploteus
  - EQF
  - Skills Panorama
  - ...
- one “brand”

# direction (after 2019)

## Issuing services for organisations

open badges

- based on EU key competences?
- based on ESCO?

digital diploma's on blockchain?

- Europass Diploma supplement?



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**Thank you for your attention!**



# Digital Open Badges

## Practical Applications to Support Emerging Ecosystems



Sanna Brauer MSci PhD Researcher  
Oulu University of Applied Sciences, School of Professional Teacher Education

”

**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 (CEDEFOP, 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

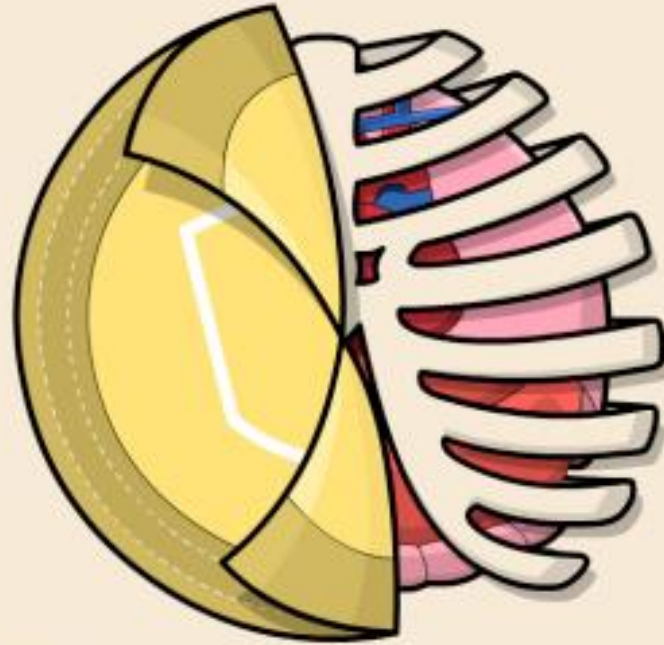


- Electronic microcredentials, Digital Open Badges (Mozilla Open Badge)
- Refer to the student's, the earner's, participation in education or skills development; they may also be awarded following completion of a certificate.

Personalisation  
Individualisation  
Customisation

Different badge type affects  
motivation differently

Badge image



OPEN BADGE  
ANATOMY

Badge name

Description

Criteria

Issuer

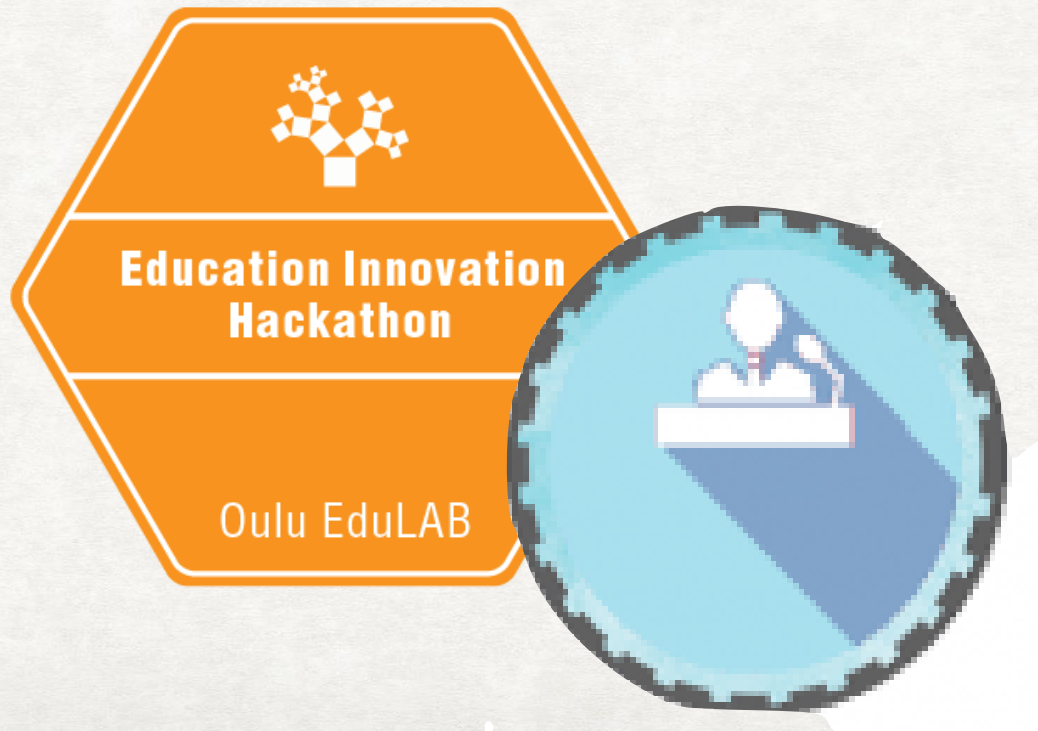
Evidence

Date issued

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

# [OppiminenOnline.com](http://OppiminenOnline.com)

From participation awards to  
addictive learning and  
competence-based assessment



Canva: Outi Loikkanen

1

## Start a blog

Create a blog or use your existing blog. You will document all the somenovice tasks on that blog.

How  
to  
play?



2

## Complete the tasks

You can select the tasks you like most and the order and schedule is also up to you. 10 tasks must be completed and documented.

3

## Collect keycodes



When you finish a task you will receive a keycode. Keycodes form a password you need for applying the somenovice badge and 2 credit points.

4

## Apply for the badge



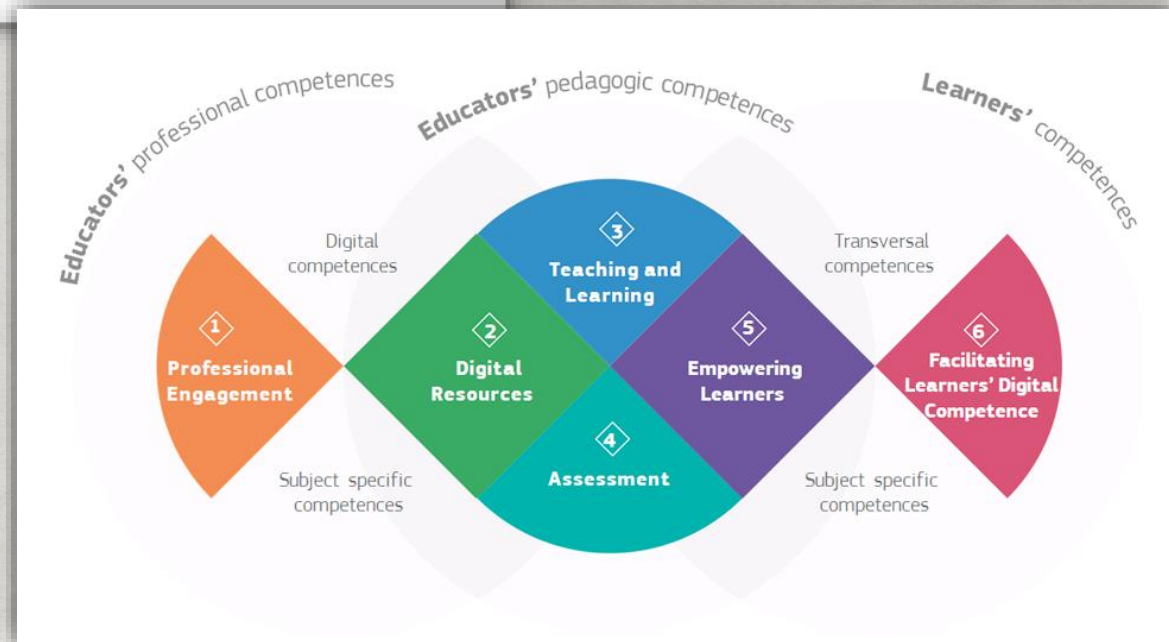
THE UNESCO ICT COMPETENCY FRAMEWORK FOR TEACHERS			
	TECHNOLOGY LITERACY	KNOWLEDGE DEEPENING	KNOWLEDGE CREATION
UNDERSTANDING ICT IN EDUCATION	Policy awareness	Policy understanding	Policy innovation
CURRICULUM AND ASSESSMENT	Basic knowledge	Knowledge application	Knowledge society skills
PEDAGOGY	Integrate 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)

Standardisation of Competence Development Continuum -

Levels of Achievement

“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 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.

100%

70%

10%

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

Ope.fi



# 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](http://www.hamk.fi/openmerkit)  
Funded by Ministry of  
Education and Culture

**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





IDENTIFICATION  
AND  
RECOGNITION  
OF  
*DESIRED*  
COMPETENCES



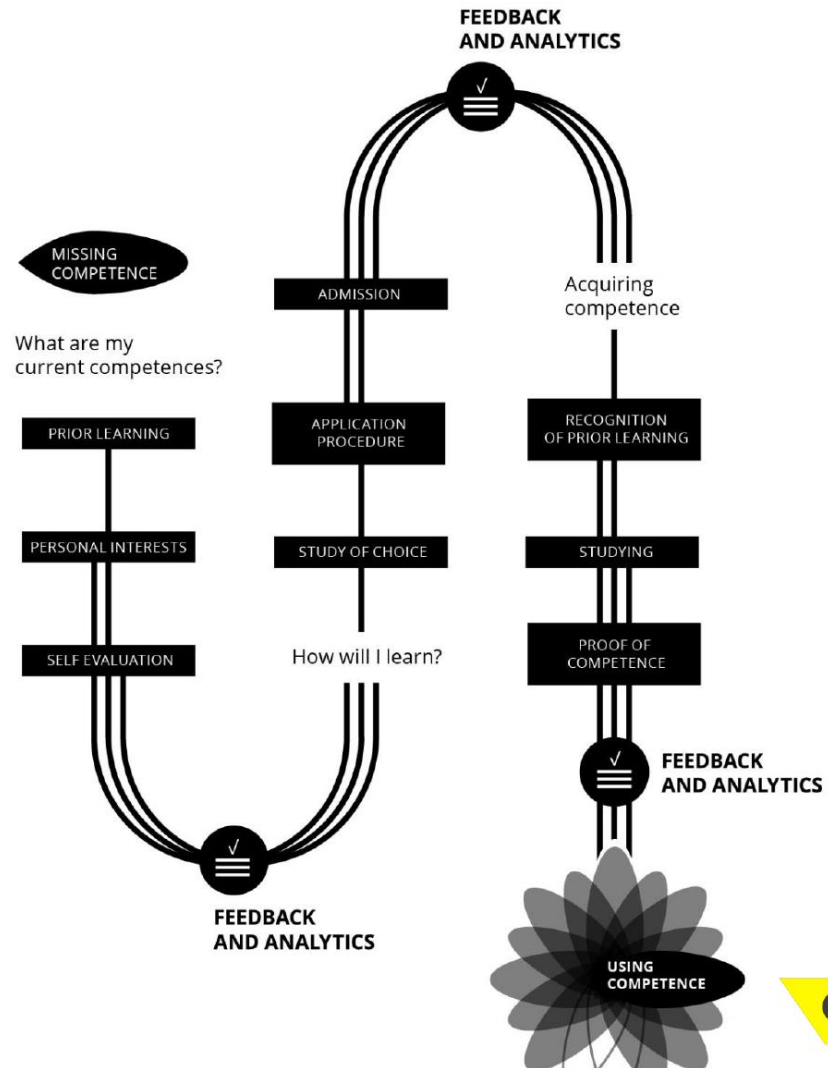
**UNIVERSITY OF OULU**

'WORK-  
INTEGRATED  
PEDAGOGY  
IN HIGHER  
EDUCATION





# DIGITAL LEARNER PATH

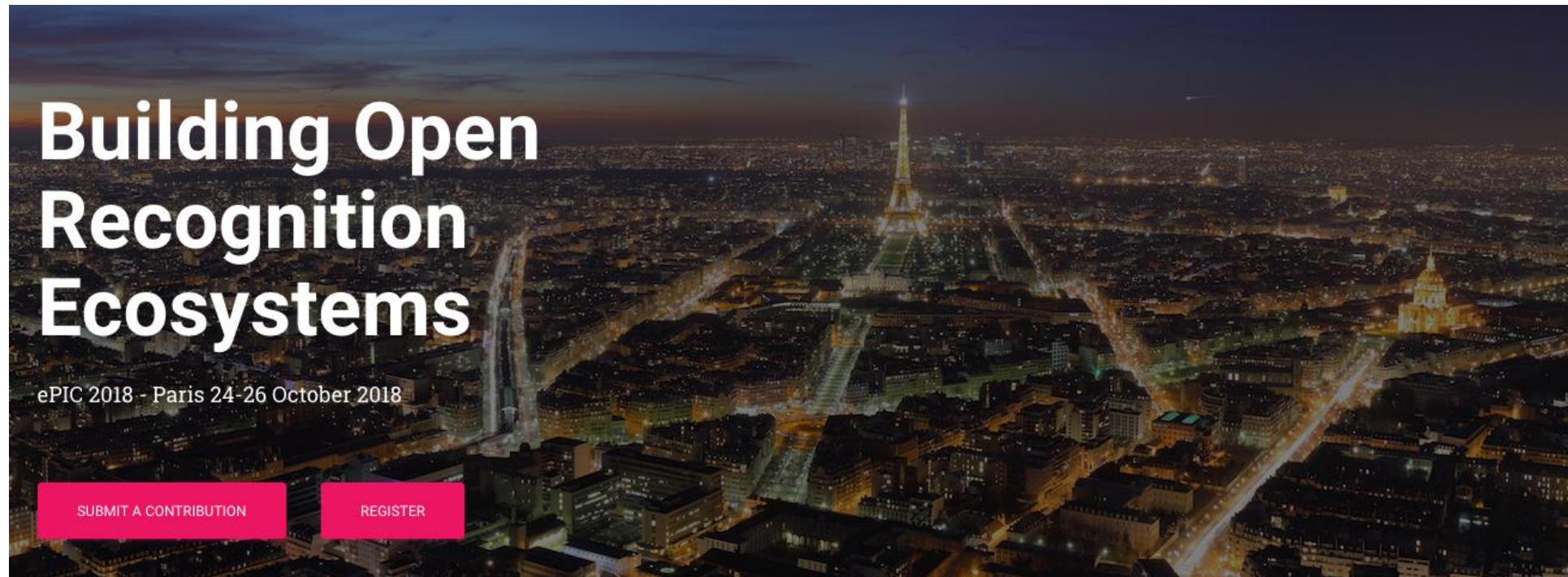


**COMPLEAP**

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

# #ePIC18

# #openrecognition



**OAMK**  
OULUN AMMATTIKORKEAKOULU



LAPIN YLIOPISTO  
UNIVERSITY OF LAPLAND

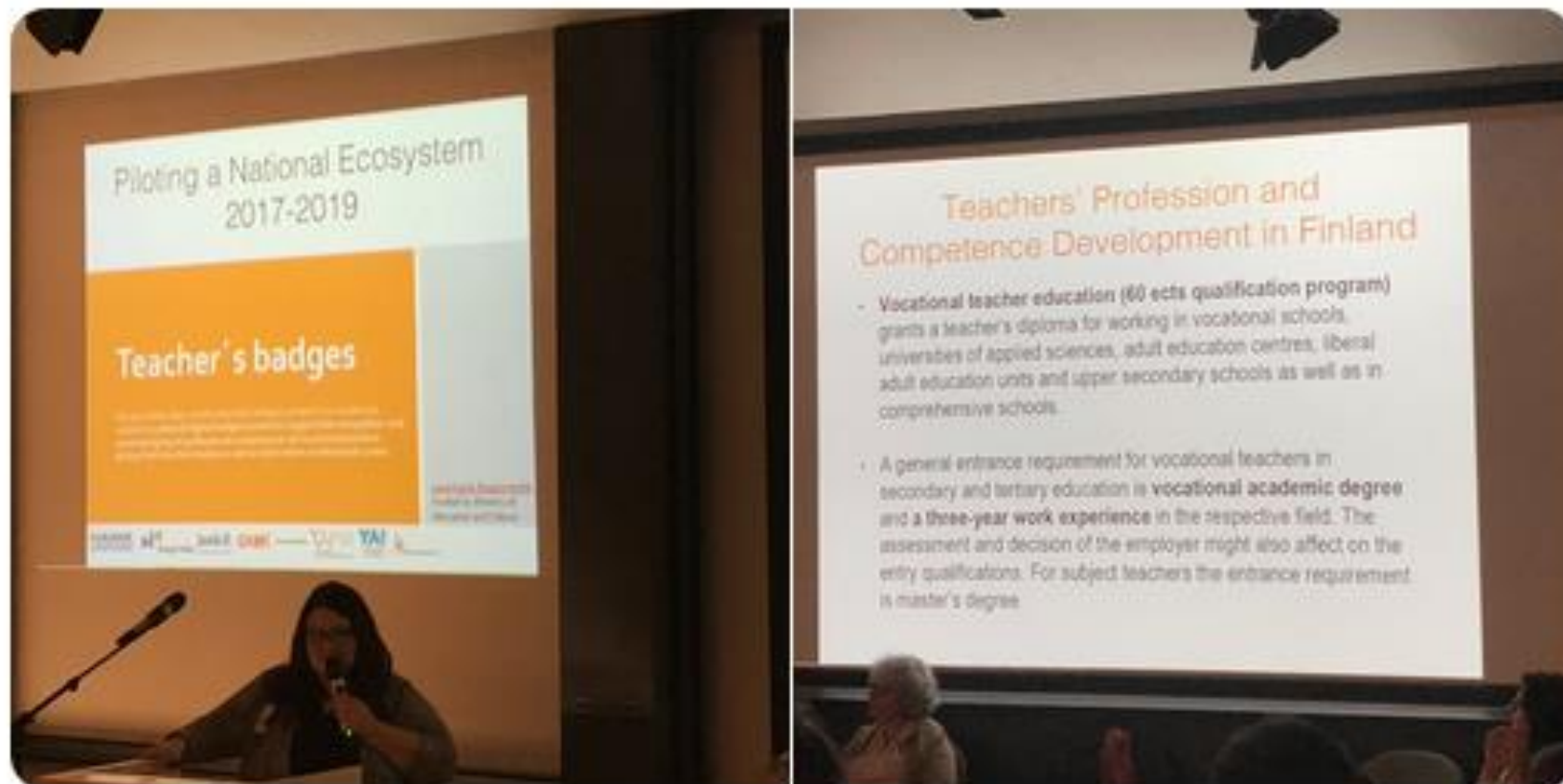
Uudelleentwiittasit



**juliekeane** @juliekeane · 25. lokak.

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

Käännä twiitti





Bestr @joinBestr · 25. lokak.

Sharing our experience at #epic18 #openepic18 #openRecognition

## Higher Education Student Life Cycle



### Open Badges?

the **value** of the **Badge** every **step** in the student life  
improve University **internal processes**



## Focus on Higher Education Student Life Cycle



### 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**





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



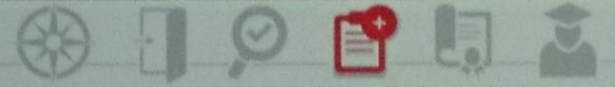
DigComp - Digital Competencies

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



2- The university endorses the Badge on Bestr



1- A Badge is created in Bestr



3- The university records the Badge as recognized



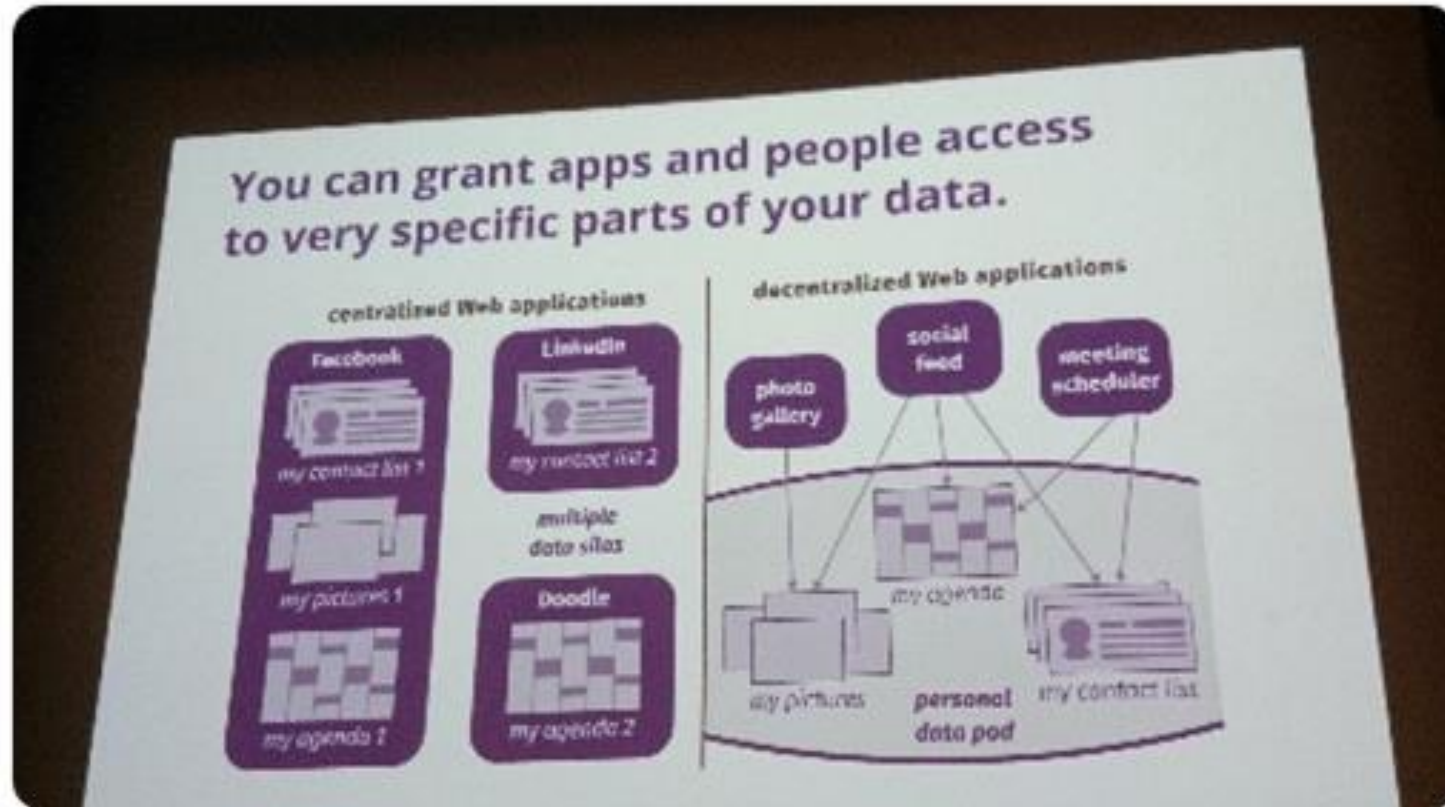
4- A learner earns the Badge  
...and presents it to the university



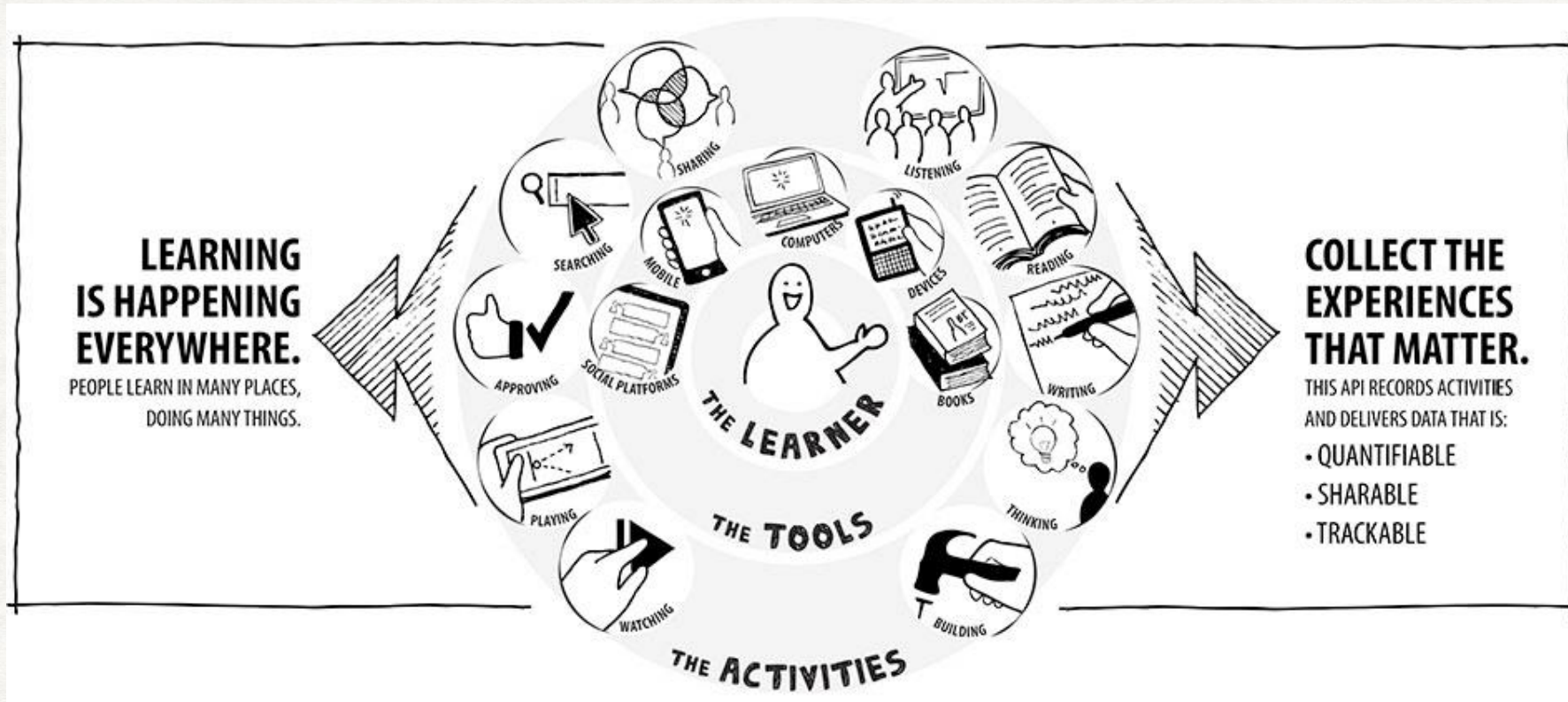
Sanna Brauer @sannabrauer · 24. lokak.

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

Uudelleentwittasit



Bestr @joinBestr · 25. lokak.

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

Käännä twiitti



Updated EuroPass -standard

# The ESCO Skills/Competences classification


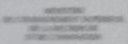


# Technological development and open recognition from the ministry point of view

WHY DO WE BELIEVE IN OPEN RECOGNITION AND OPEN BADGES

■ 3 main reasons

- It is « Open »
- It lays on Platforms
- It is user centric

  **DGESIP**  
TITRE DE LA PRÉSENTATION

26/10/2018 5





**Sanna Brauer** @sannabrauer · 26. lokak.

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

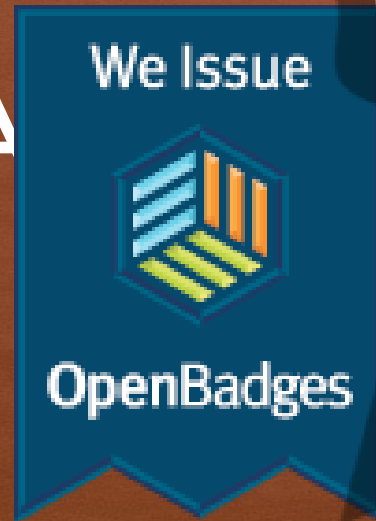
🌐 Käännä twiitti



# A WORLD CLASS INNOVATION: DIGITAL OPEN BADGE-DRIVEN LEARNING

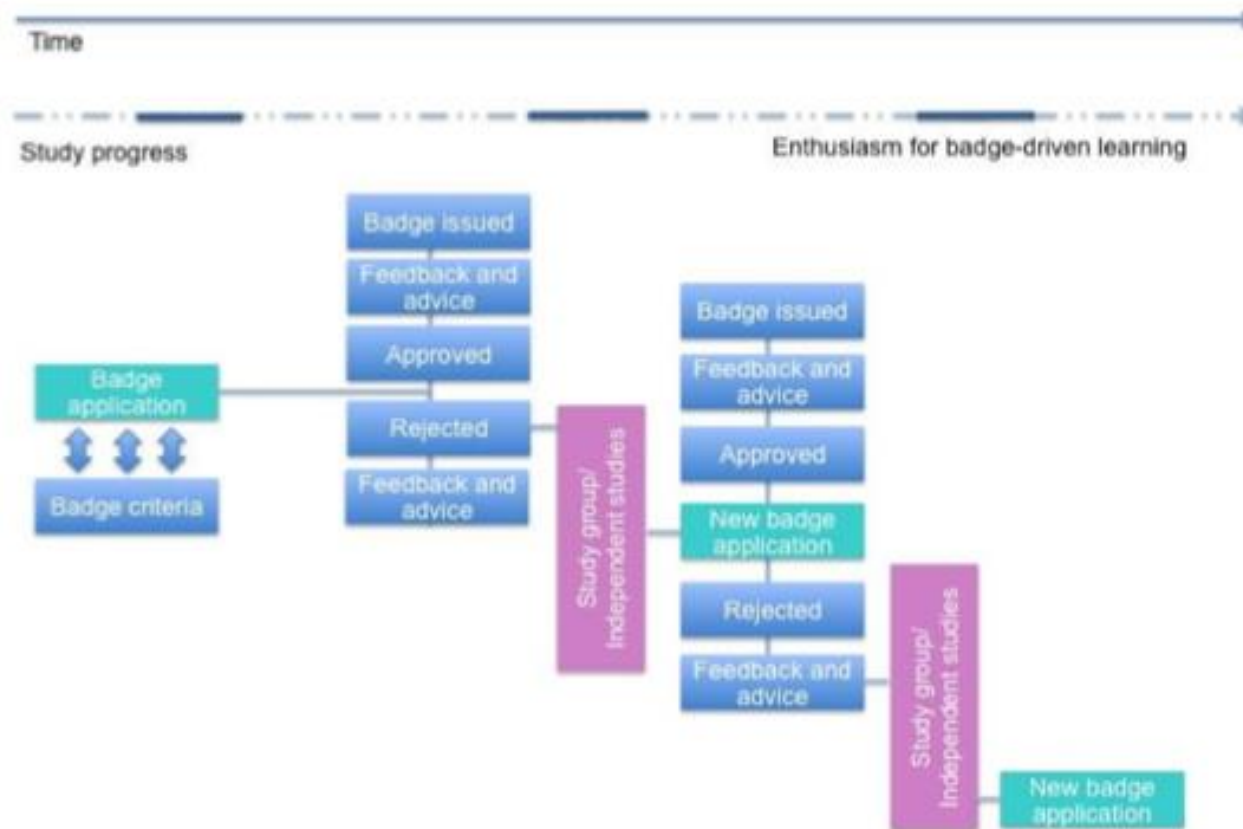
Why do we believe in  
Open Recognition and  
Open Badges?

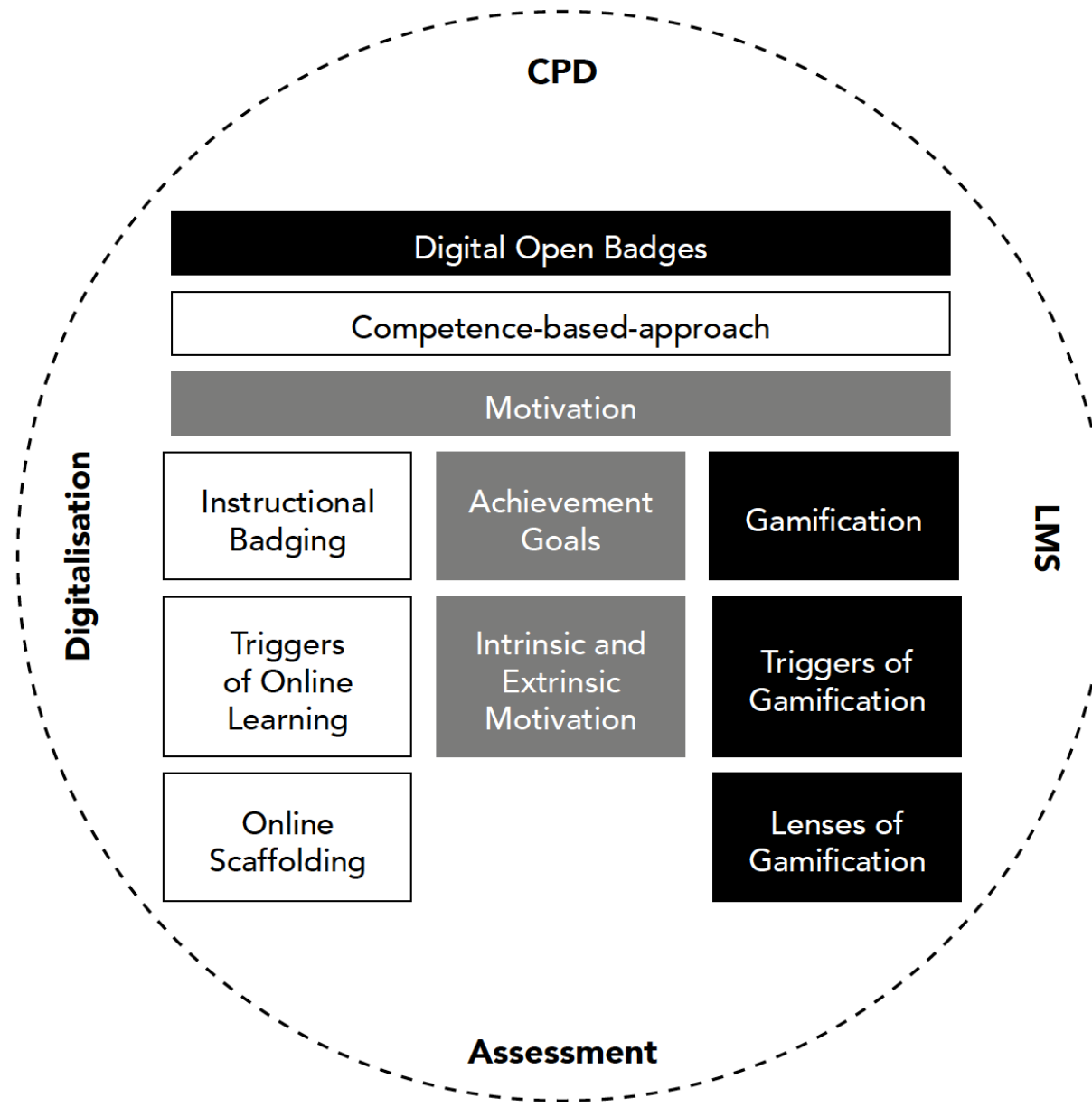
<https://mirva.openrecognition.org/?p=757>



## 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





**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?

## Conceptualising Digital Open Badge-Driven Learning

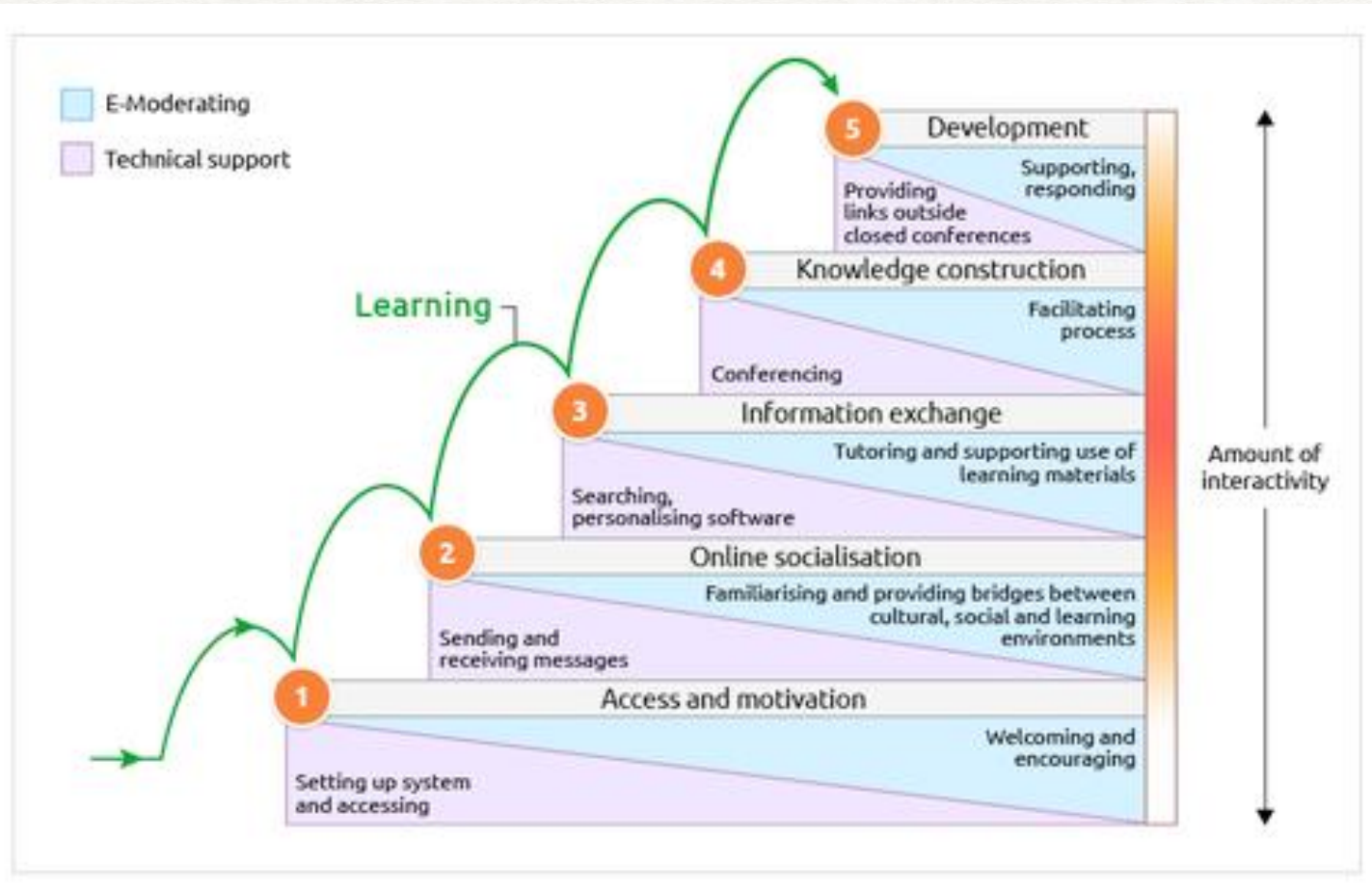
*A competence-based learning process grounded on the badge constellation of competences.*

*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.*

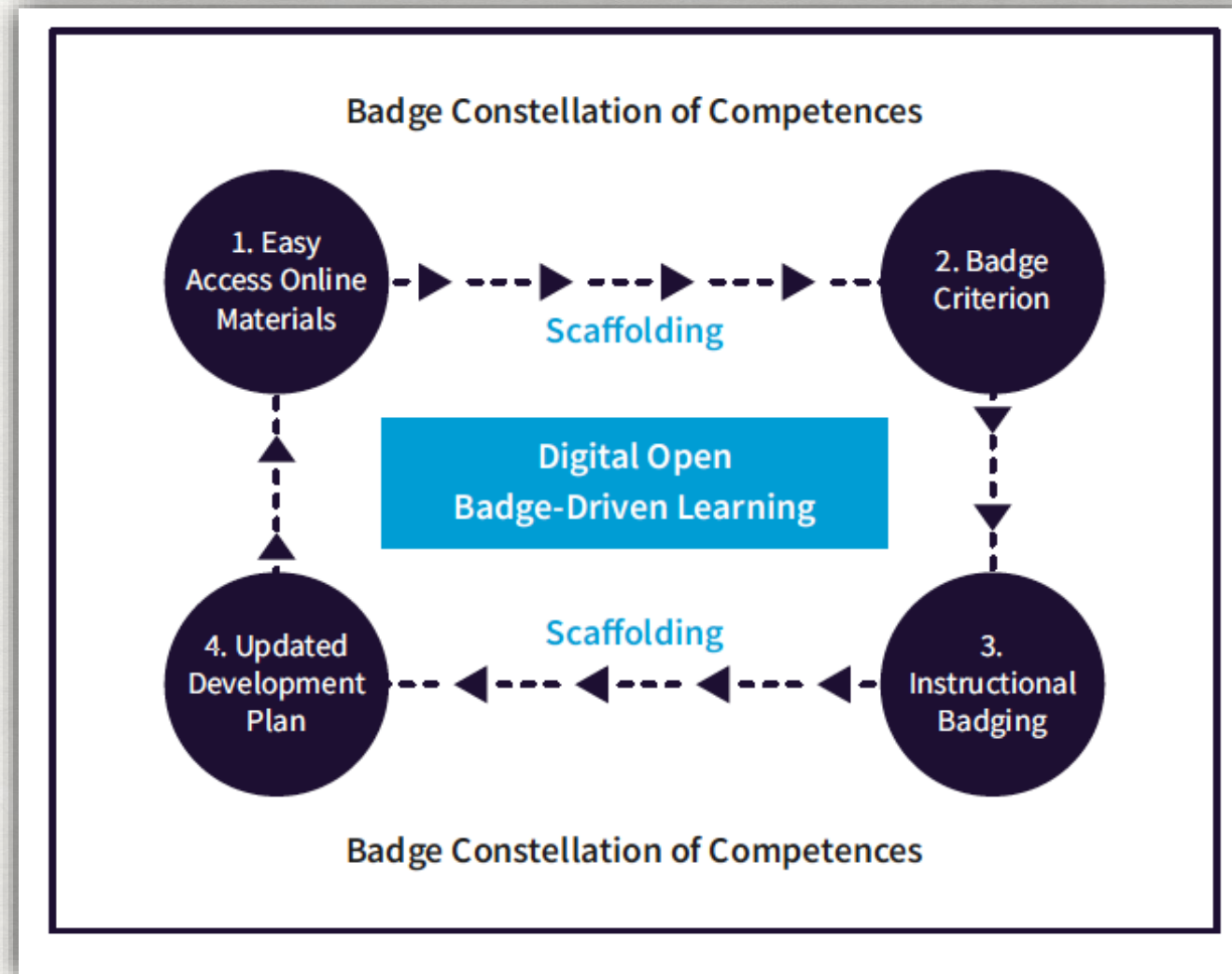
Brauer, 2019





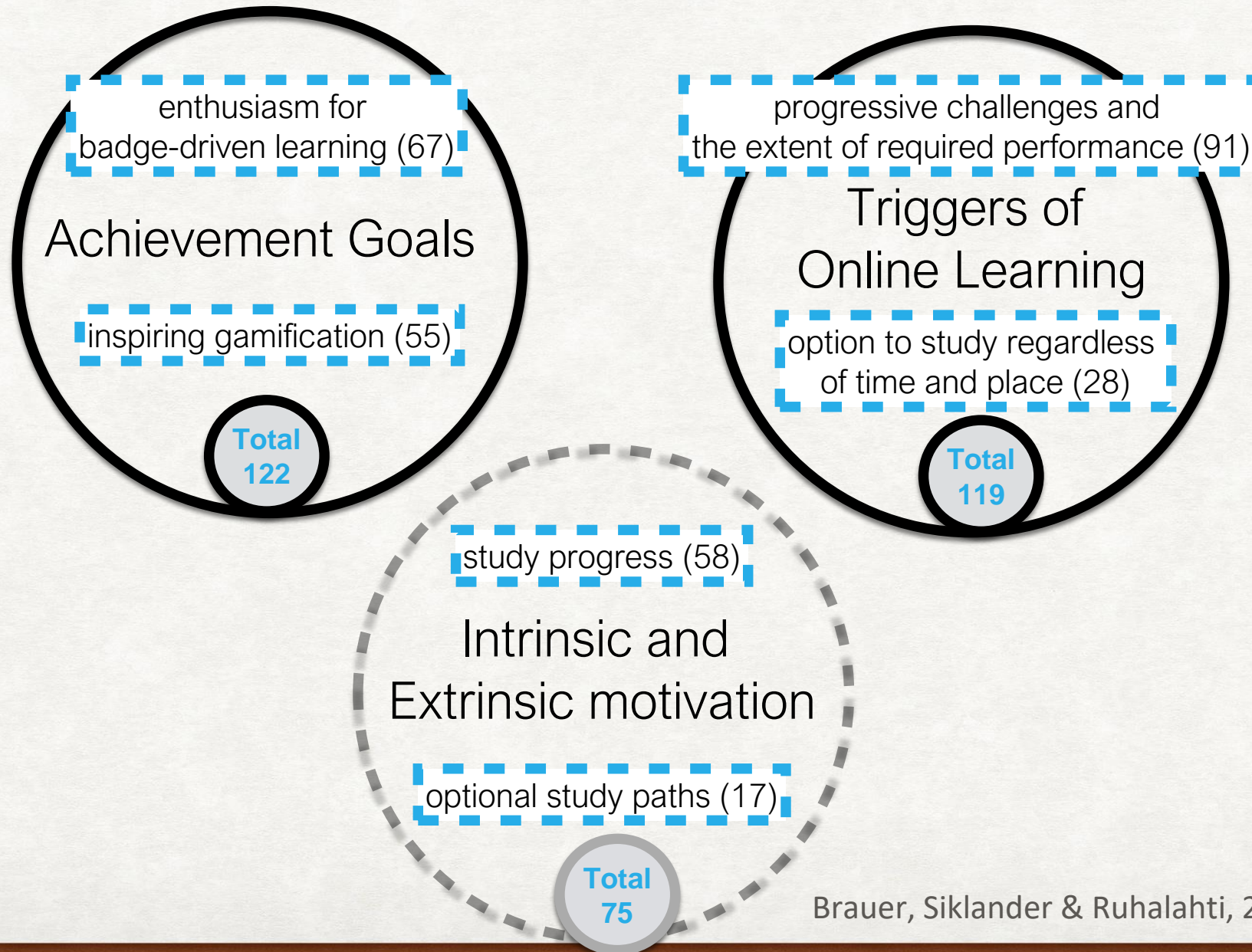
Five-stage model from [Salmon 2018](#) / cf Brauer, Korhonen, Siklander, 2018

## Stages of the badge-driven learning process





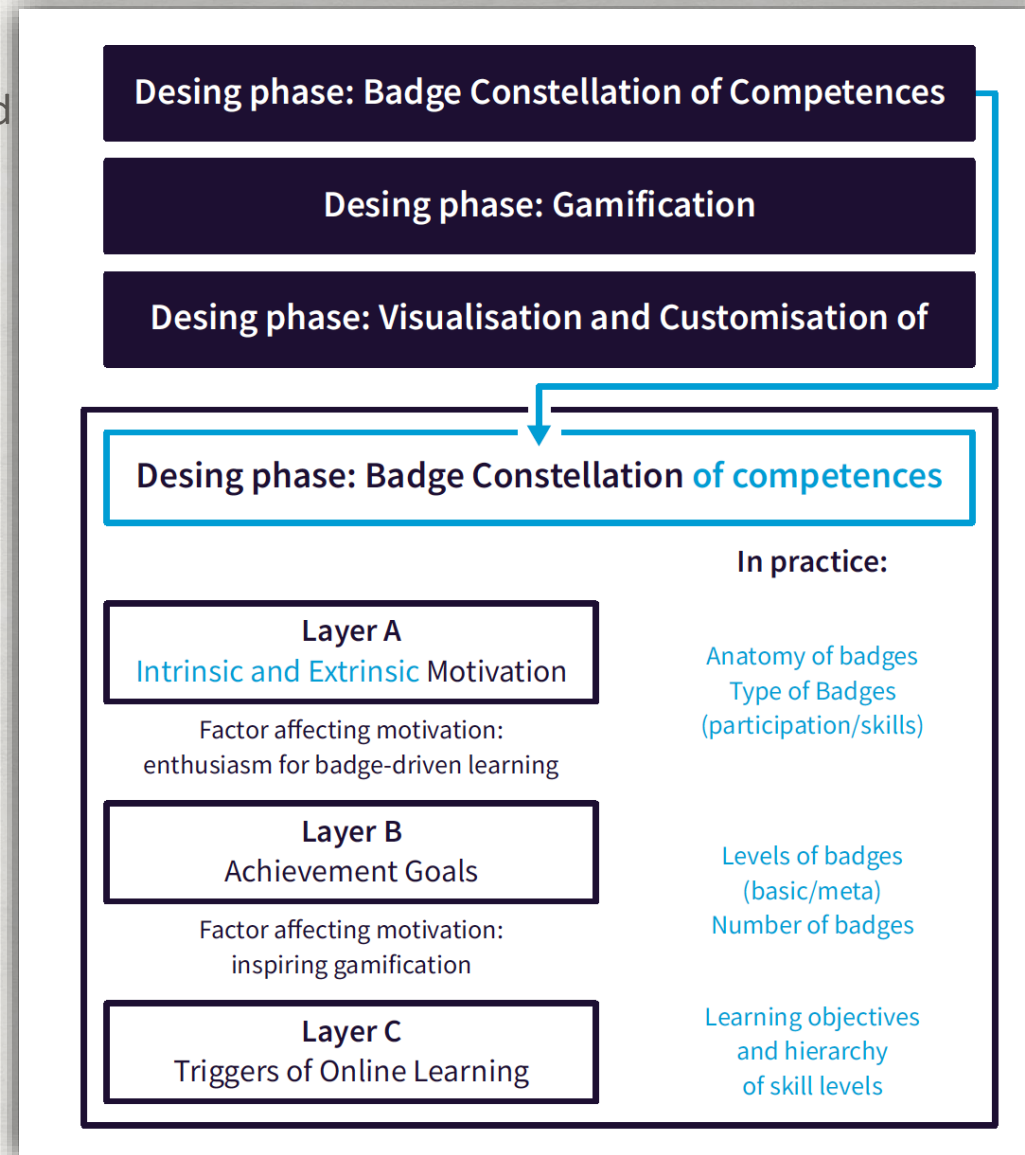
# Competence-based Approach to Motivation, Gamification and Triggers of Digital Open Badge-Driven Learning



“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).



A rustic wooden cabin with a shingled roof stands in a field of golden grass. The sky is a vibrant blue with a single, fluffy white cloud. The text 'Gamification is a convivial technology.' is overlaid on the sky. 'Gamification is a' and 'technology.' are in white, while 'convivial' is in red. The text has a slight drop shadow.

Gamification is a  
convivial technology.

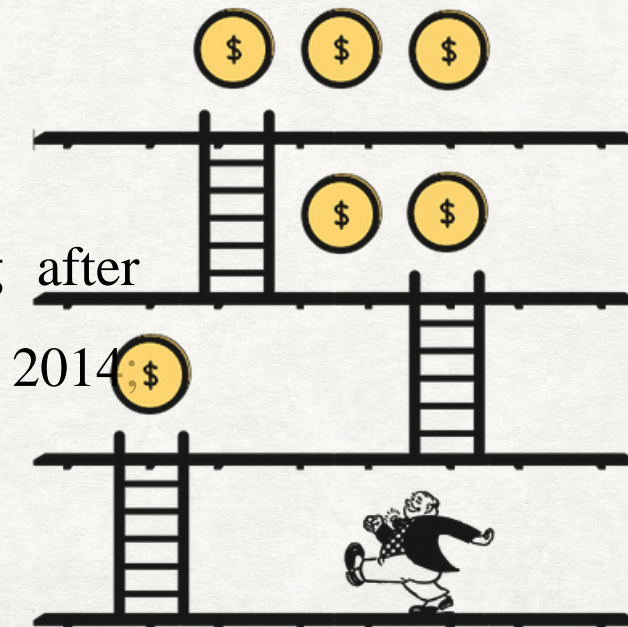
# Badges explain

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)~~ 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).
- ~~Triggers allow students to continue studying~~ completing the initial task (Dichev et al., 2014)
- 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).



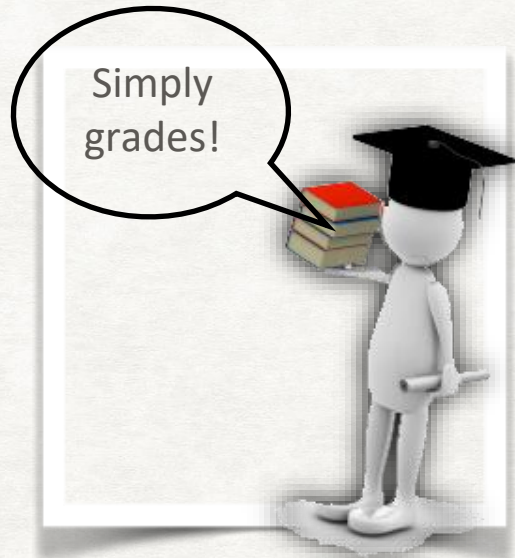
Brauer, 2018

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

## Profiling Badge Earners

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



Assignment Doer

Badge Enthusiastic



Team Builder



Team Player



“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.linkedin.com/in/sannabrauer>

[https://www.researchgate.net/profile/Sanna\\_Brauer](https://www.researchgate.net/profile/Sanna_Brauer)

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**COMPLEAP**

# WHAT HAPPENS NEXT

## Webinars:

Wednesday December 5th at 9:30-10:30

- Compleap prototype session

Wednesday December 19<sup>th</sup> at 9:30-10:30

- Agile prototype development

## Midterm review seminar next week:

December 4th 2018 in Helsinki

- live stream available

# More updates about Compleap?

**1) Blog about open badges:**

**<https://www.compleap.eu/open-badges/>**

**2) SeOppi –Magazine 2/2018 “Encouraging Competence Leaps**

**<https://www.slideshare.net/eOppimiskeskus/seoppi-22018>**

# STAY IN TOUCH

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<https://wiki.eduuni.fi/display/csccompleap/Reference+Group+Webinars+and+Workshops>

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