# Continuing the Transition into the *Age of Video*

**Eduhub Days, University of Bern, January 29th, 2020, 10.30-11.15**

**Zac.Woolfitt@Inholland.nl**
Research Fellow
Teaching, Learning & Technology Research Group
Inholland University of Applied Sciences

eduhub.ch

inholland
university of
applied sciences

# Thank you

# Background

England

USA – Canada

Netherlands

Tourism

Inholland University of Applied Sciences

To experience, practice and reflect on all forms of 'Video Teaching'

2003        Lecturer
2010        Web Lecture
2014  -    Catching the Wave of Video Teaching

# Research

Video

Mobile Learning

Feedback

Pioneer

# Slides

Full slides with references on Slide Share

Photos and links from own archive

No video

# Continuing the Transition

Into the *Age of Video*

Around the Knowledges of Education

Through the Looking Glass

Continuing the Transition

# How did you learn when you were 10?
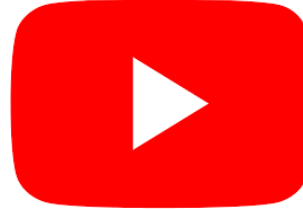
9

# Into
the *Age of Video*
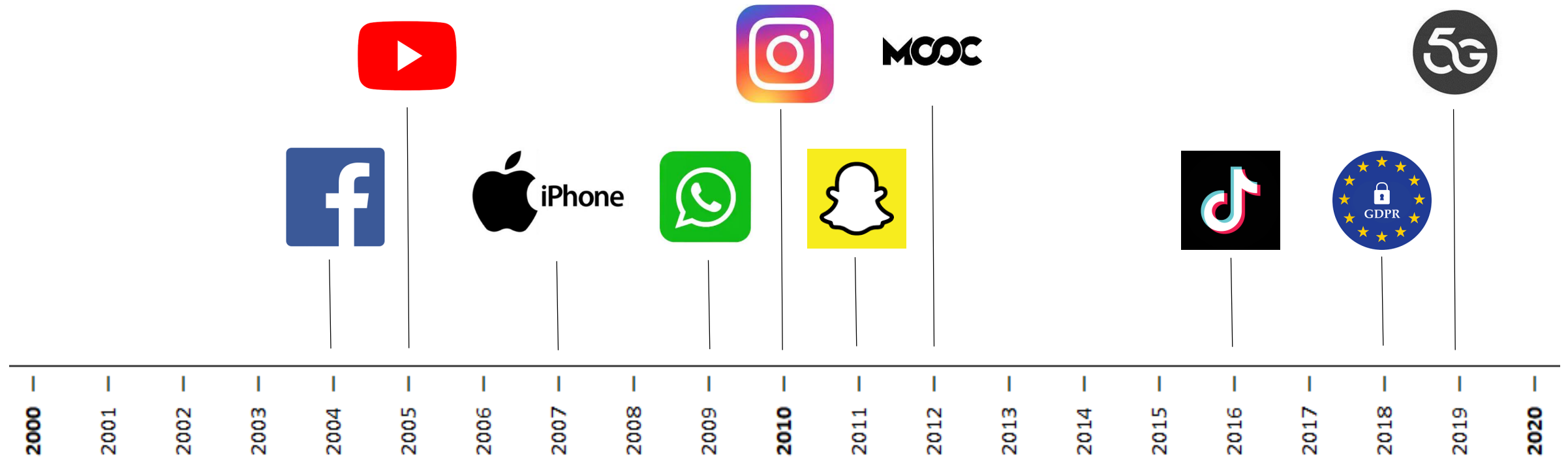
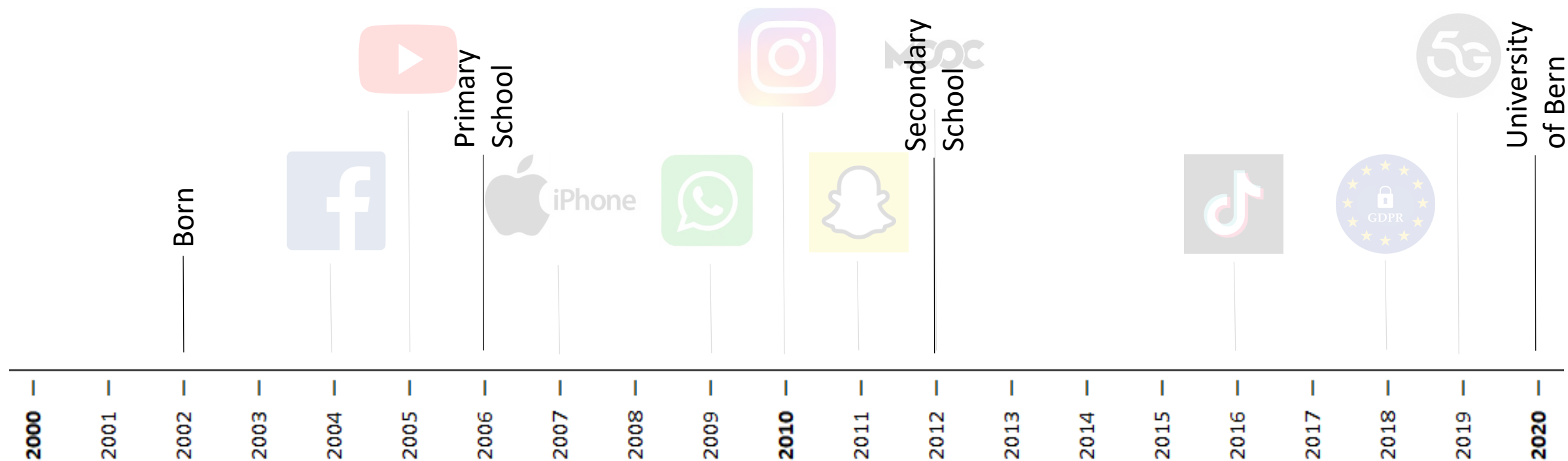# Your First Video Appearance

The *Age of Video*

Timeline: 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

# The *Age of Video*

# 18 Year-Old Student



Born · Primary School · iPhone · Secondary School · University of Bern

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

## Universities (UNIs)

EPFL – SWISS FEDERAL INSTITUTE OF TECHNOLOGY
MORE

ETH ZURICH – SWISS FEDERAL INSTITUTE OF TECHNOLOGY
MORE

UNIVERSITÀ DELLA SVIZZERA ITALIANA
MORE

UNIVERSITY OF BASEL
MORE

UNIVERSITY OF BERN
MORE

UNIVERSITY OF FRIBOURG
MORE

UNIVERSITY OF GENEVA
MORE

UNIVERSITY OF LAUSANNE
MORE

UNIVERSITY OF LUCERNE
MORE

UNIVERSITY OF NEUCHATEL
MORE

UNIVERSITY OF ST.GALLEN (HSG)
MORE

UNIVERSITY OF ZURICH
MORE

## Universities of Applied Sciences and Arts (UASAs)

BERN UNIVERSITY OF APPLIED SCIENCES
MORE

FHNW UNIVERSITY OF APPLIED SCIENCES AND ARTS NORTHWESTERN SWITZERLAND
MORE

FHO UNIVERSITY OF APPLIED SCIENCES OF EASTERN SWITZERLAND
MORE

HES-SO UNIVERSITY OF APPLIED SCIENCES AND ARTS WESTERN SWITZERLAND
MORE

KALAIDOS UNIVERSITY OF APPLIED SCIENCES
MORE

LUCERNE UNIVERSITY OF APPLIED SCIENCES AND ARTS
MORE

UNIVERSITY OF APPLIED SCIENCES AND ARTS OF SOUTHERN SWITZERLAND (SUPSI)
MORE

UNIVERSITY OF APPLIED SCIENCES OF THE GRISONS
MORE

ZURICH UNIVERSITY OF APPLIED SCIENCES AND ARTS
MORE

## Universities of Teacher Education (UTEs)

BERNE UNIVERSITY OF TEACHER EDUCATION
MORE

DEPARTMENT OF EDUCATION AND LEARNING SUPSI
MORE

FHNW SCHOOL OF EDUCATION
MORE

ST.GALLEN UNIVERSITY OF TEACHER EDUCATION

SCHWYZ UNIVERSITY OF TEACHER EDUCATION
MORE

SWISS FEDERAL INSTITUTE FOR VOCATIONAL EDUCATION AND TRAINING
MORE

SWISS FEDERAL INSTITUTE OF SPORT MAGGLINGEN SFISM
MORE

TEACHER TRAINING UNIVERSITY SCHAFFHAUSEN
MORE

THURGAU UNIVERSITY OF TEACHER EDUCATION
MORE

UNIVERSITY OF APPLIED SCIENCES OF SPECIAL NEEDS EDUCATION
MORE

UNIVERSITY OF FRIBOURG, INSTITUTE OF TEACHER EDUCATION
MORE

UNIVERSITY OF GENEVA, INSTITUTE OF TEACHER EDUCATION

UNIVERSITY OF TEACHER EDUCATION FRIBOURG
MORE

UNIVERSITY OF TEACHER EDUCATION HEP-BEJUNE
MORE

UNIVERSITY OF TEACHER EDUCATION IN THE CANTON OF VALAIS
MORE

UNIVERSITY OF TEACHER EDUCATION LUCERNE
MORE

UNIVERSITY OF TEACHER EDUCATION OF GRISONS
MORE

UNIVERSITY OF TEACHER EDUCATION ZUG
MORE

UNIVERSITY OF TEACHER EDUCATION, STATE OF VAUD
MORE

ZURICH UNIVERSITY OF TEACHER EDUCATION
MORE

## University Institutions Supported by the Federal Government

SWISS DISTANCE UNIVERSITY INSTITUTE
MORE

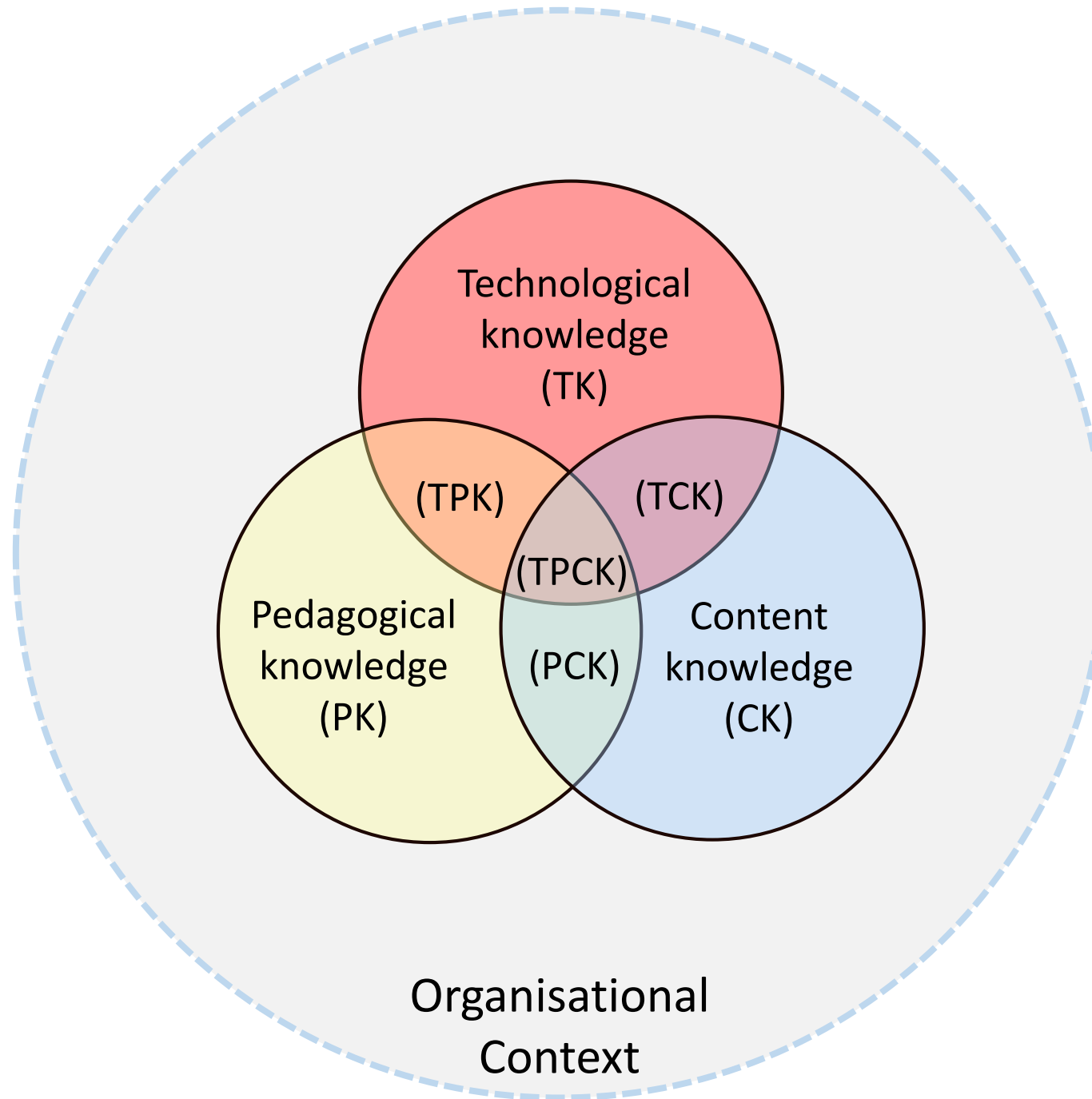THE GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES
MORE

# Around
# the Knowledges of Education

# TPACK



External Environment

Technological knowledge (TK)

(TPK)

(TCK)

(TPCK)

Pedagogical knowledge (PK)

(PCK)

Content knowledge (CK)

Organisational Context

Koehler & Mishra (2009)

External
Environment

Volatile

Uncertain

Complex

Ambiguous

DESTEP

(Amnesty International, 2019, Rosling, Rosling, & Rosling Rönnlund, 2018, Zuboff, 2019,

External Environment

Strategy
Learning Spaces
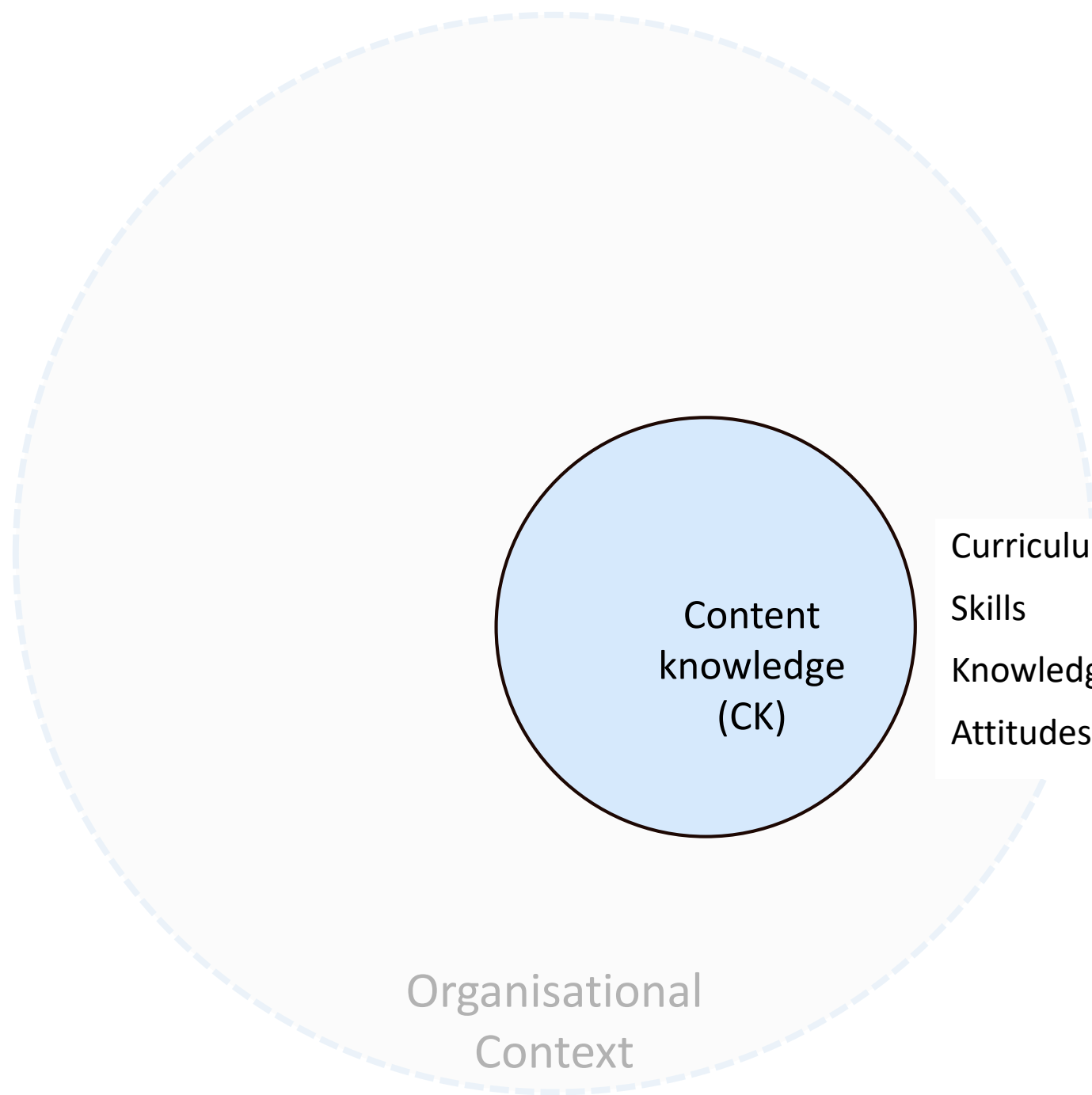Organisational Culture
Mental Models
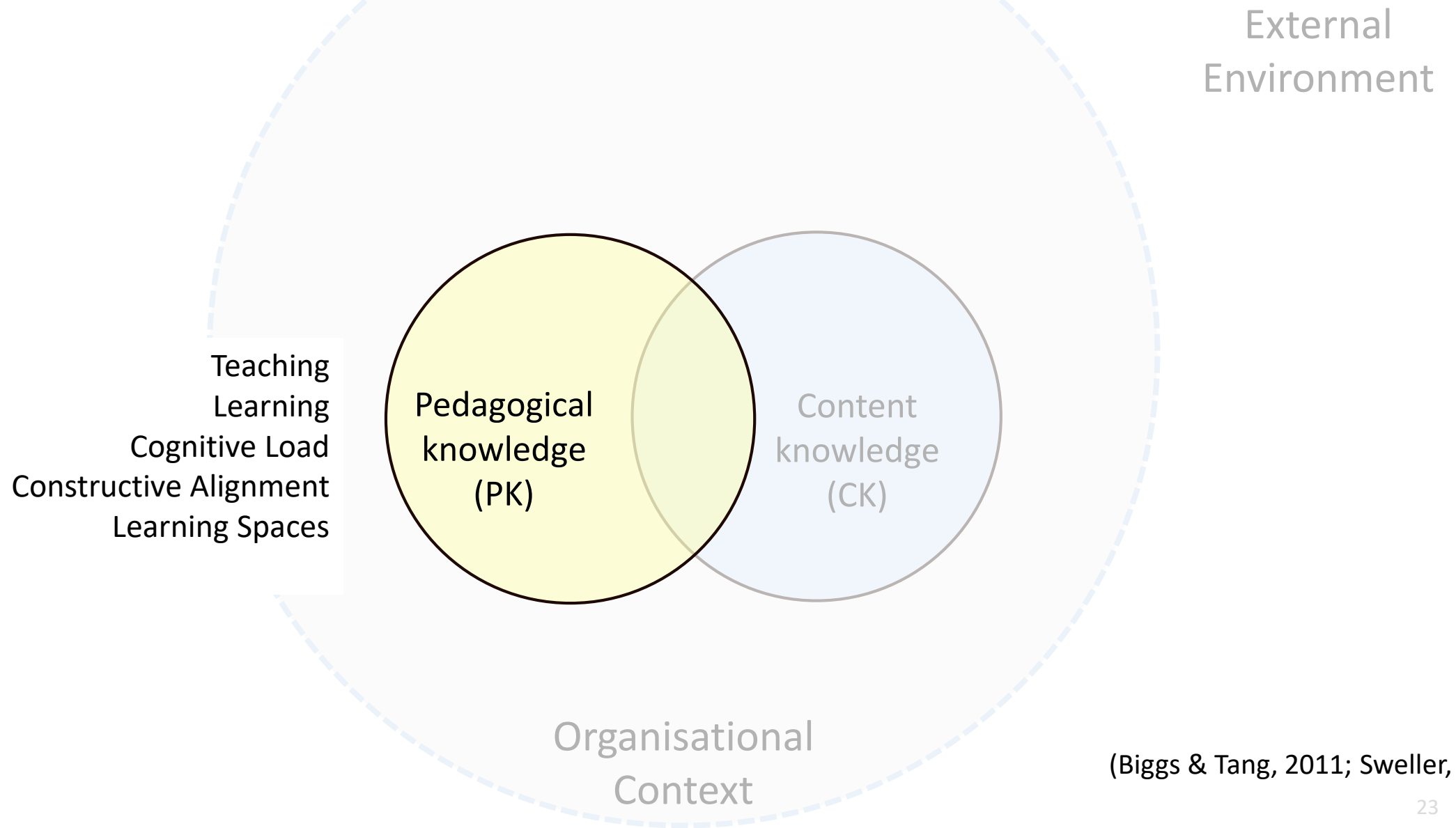Partnerships
Students

Organisational
Context

UNIVERSITY OF
BERN

External
Environment

Content
knowledge
(CK)

Curriculum

Skills

Knowledge

Attitudes

Organisational
Context

Skillscape MIT Deep Dive
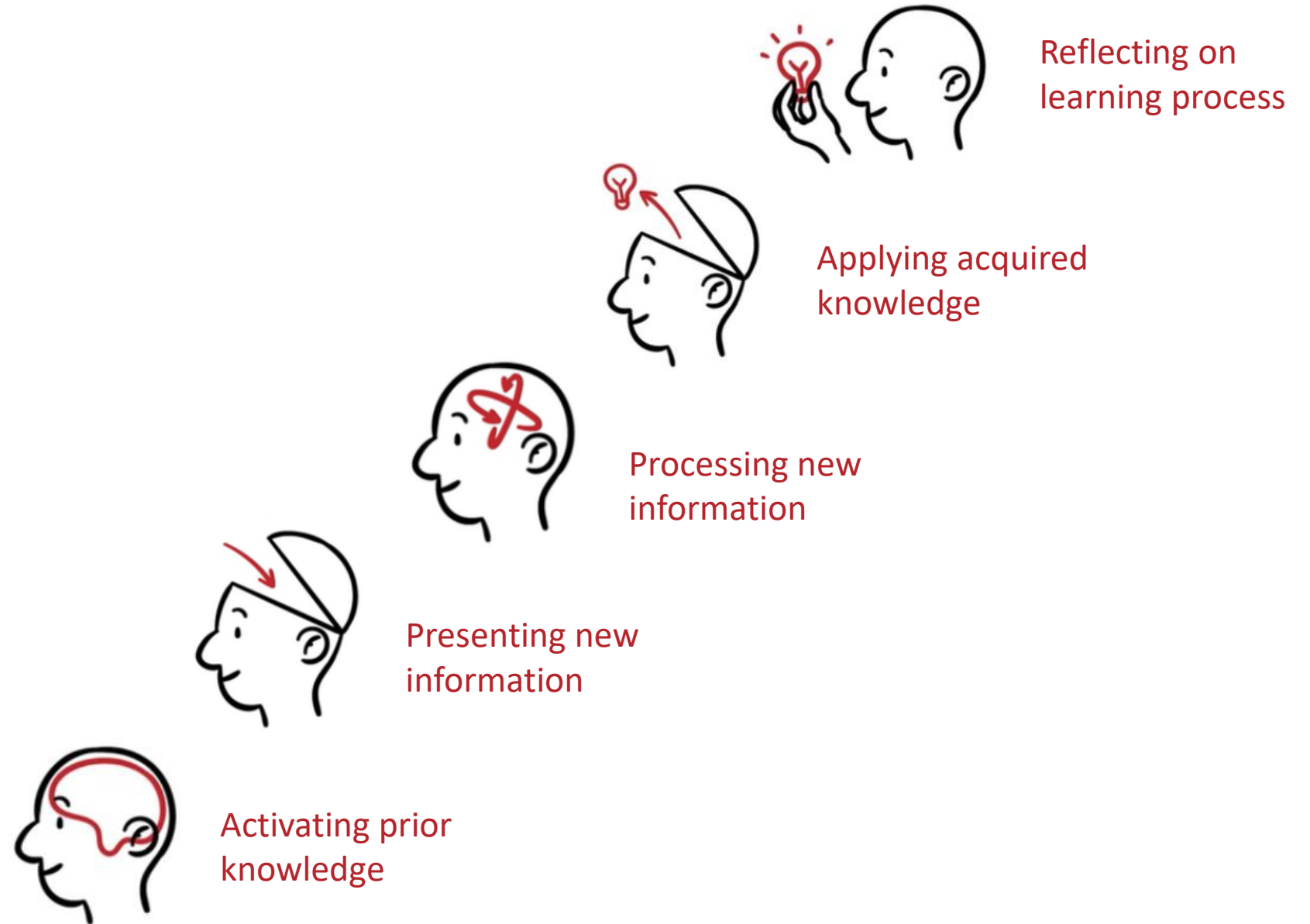
22

External Environment

Teaching
Learning
Cognitive Load
Constructive Alignment
Learning Spaces

Pedagogical knowledge (PK)

Content knowledge (CK)

Organisational Context

(Biggs & Tang, 2011; Sweller, 1994)

# Learning

Reflecting on learning process

Applying acquired knowledge

Processing new information

Presenting new information

Activating prior knowledge

Effective use of learning with video – animation

# Learning Spaces

External Environment

Teaching
Learning
Learning Spaces
Cognitive Load
Alignment

Pedagogical knowledge (PK)

Content knowledge (CK)

Organisational Context
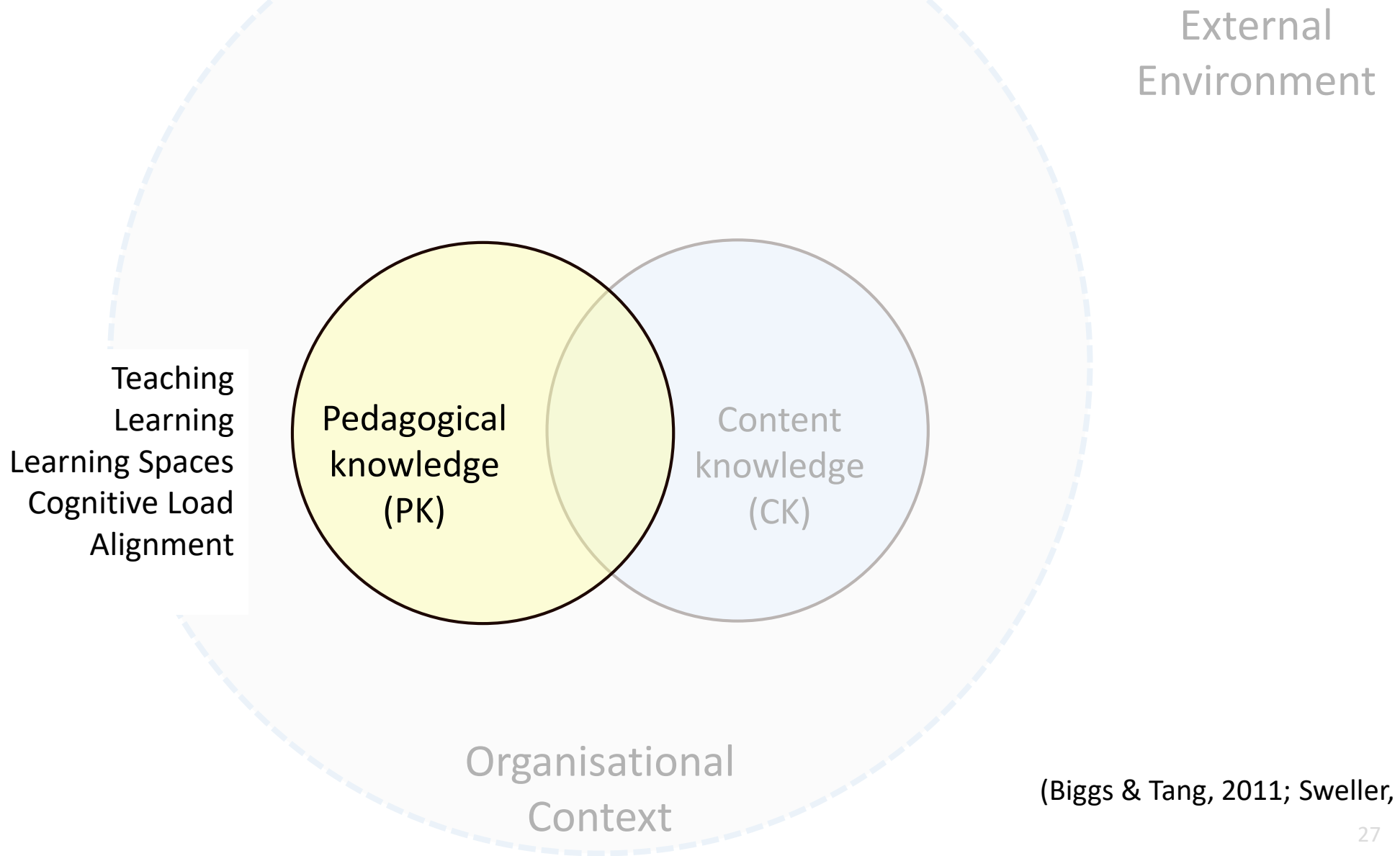
(Biggs & Tang, 2011; Sweller, 1994)
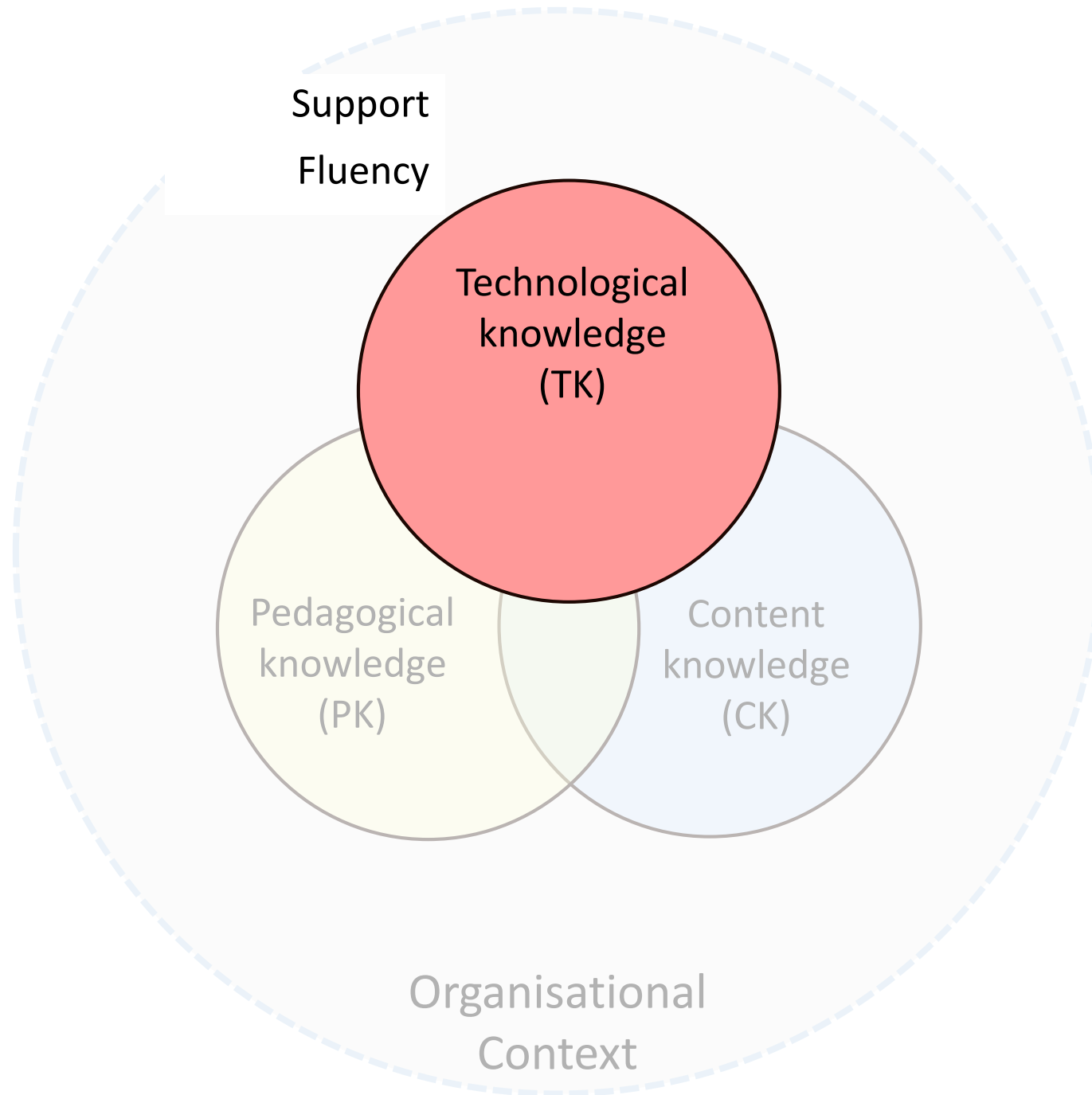
# How many video cameras?

External Environment

Technological knowledge (TK)

(TPK)

(TCK)

(TPCK)

Pedagogical knowledge (PK)

(PCK)

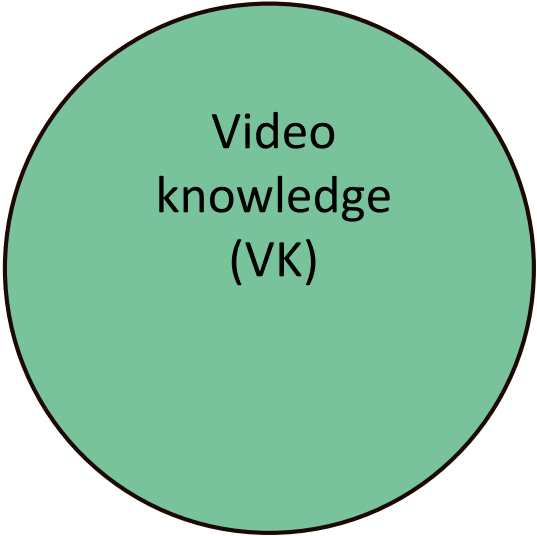Content knowledge (CK)
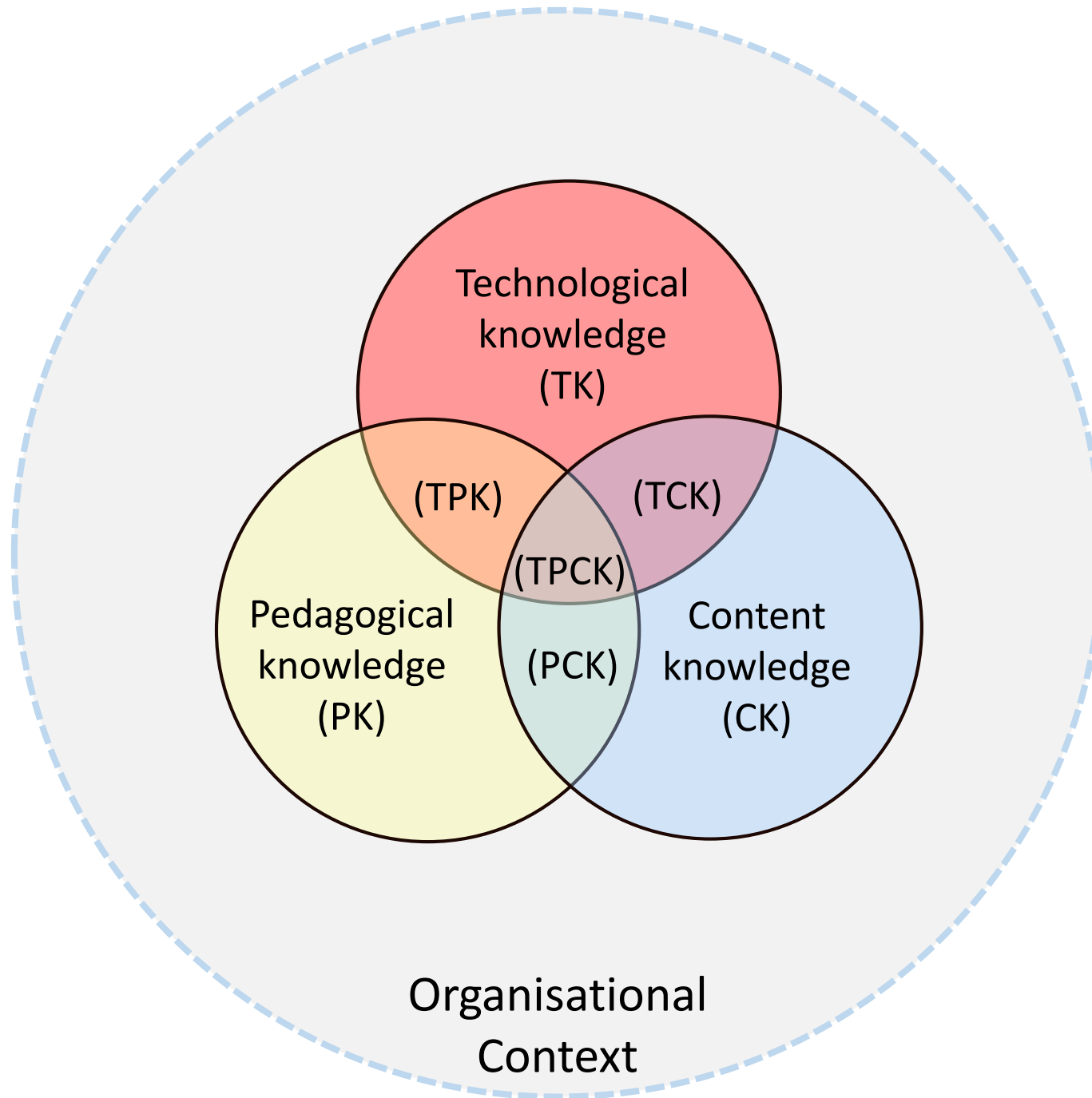
Organisational Context

Koehler & Mishra (2009)

# Through the Looking Glass

Video knowledge (VK)

VPACK

External Environment

Video knowledge (VK)

(VPK)

(VCK)

(VPCK)

Pedagogical knowledge (PK)

(PCK)

Content knowledge (CK)

Organisational Context
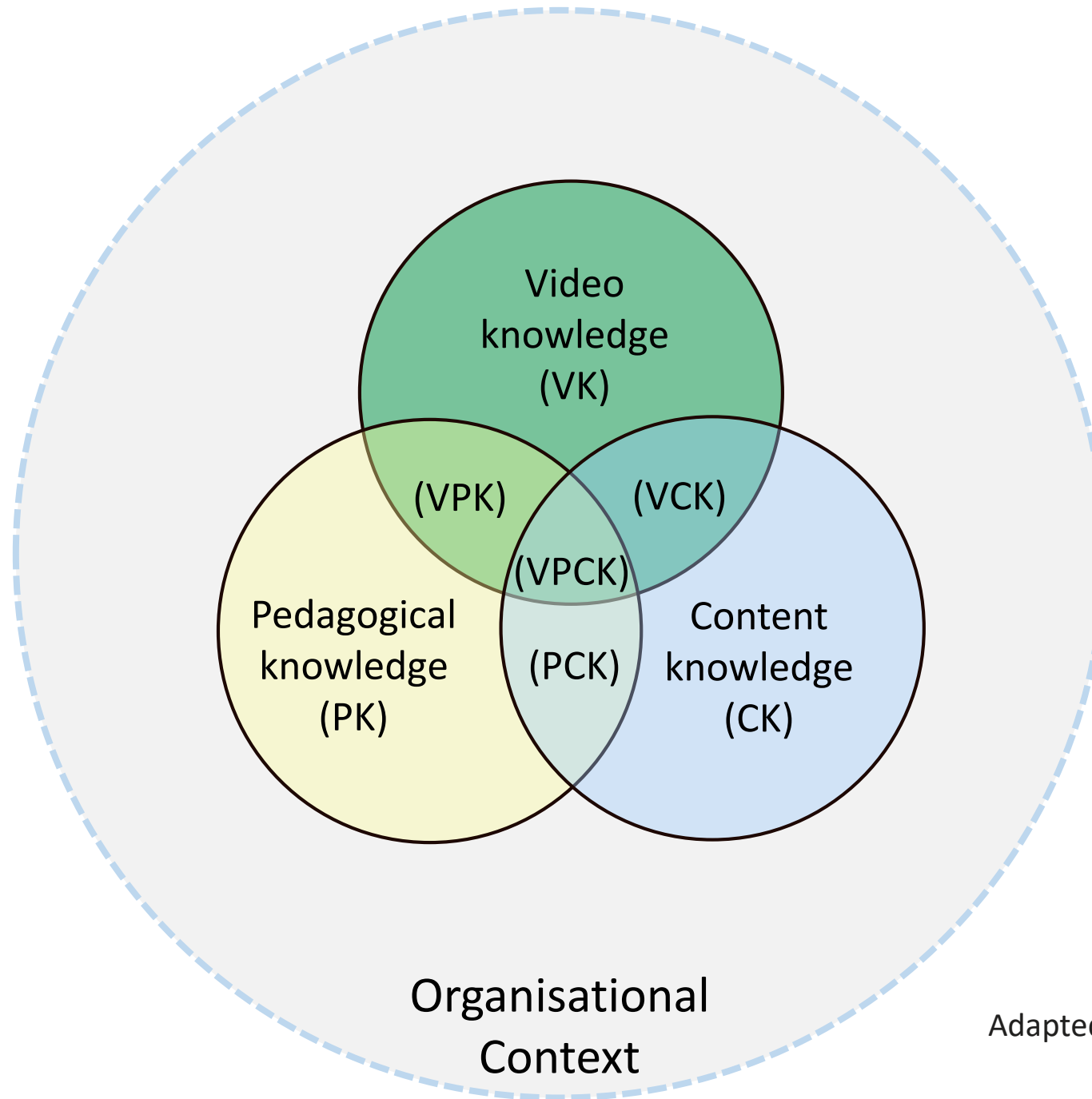
Adapted from Koehler & Mishra (2009)

35

# First Educational Video



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

# My First Step



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 **2010** 2011 2012 2013 2014 2015 2016 2017 2018 2019 **2020**

# Diffusion



2.5%
Innovators

Early
Adopters
13.5%

Early Majority
34%

Late Majority
34%

Laggards
16%
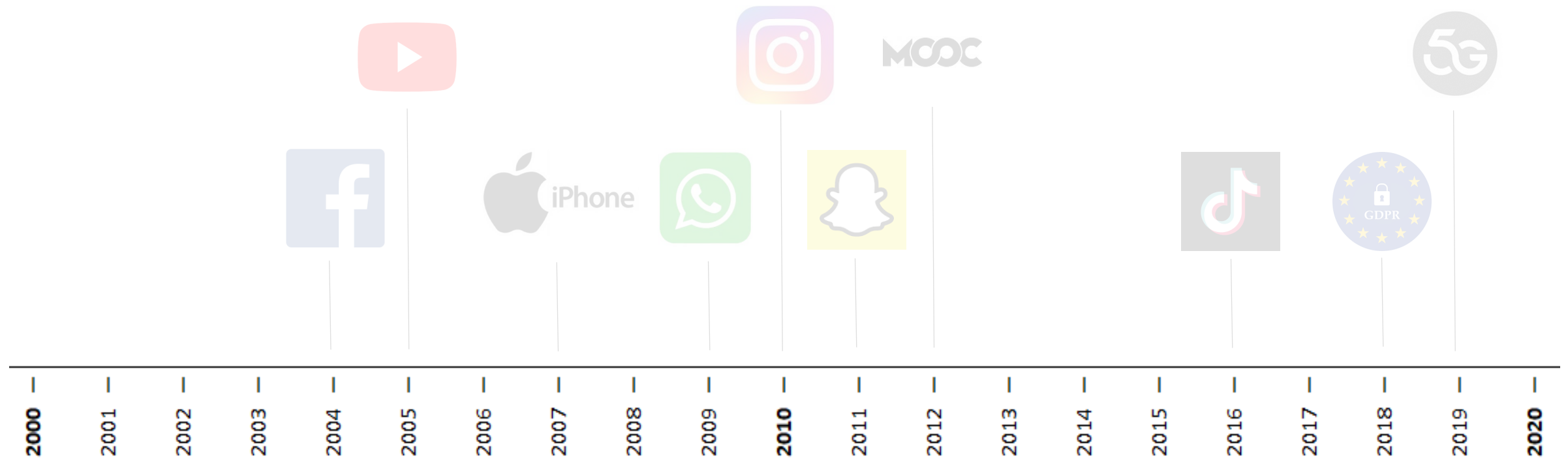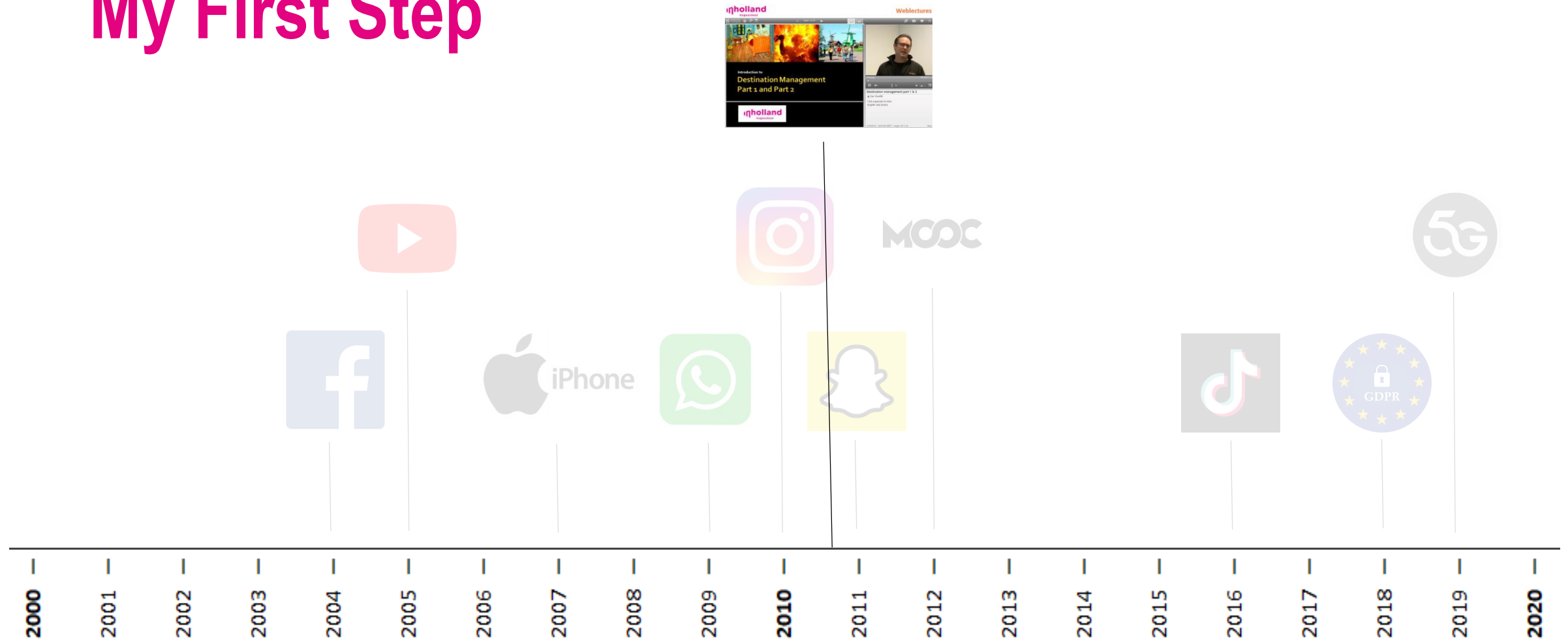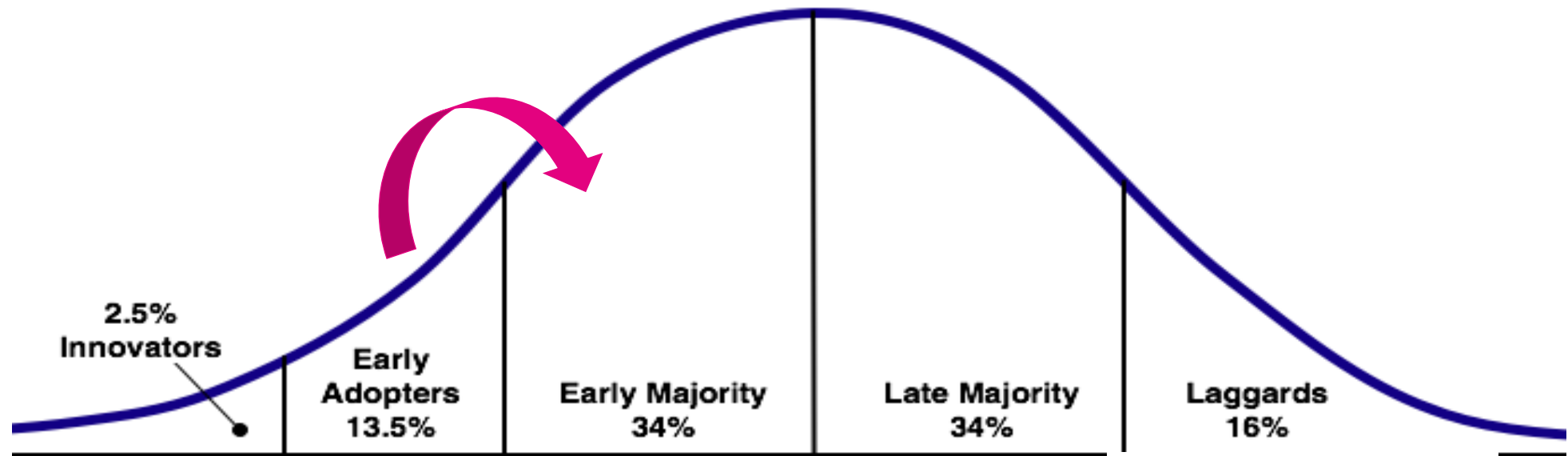
(Rogers, 2003)

# Catching the Wave

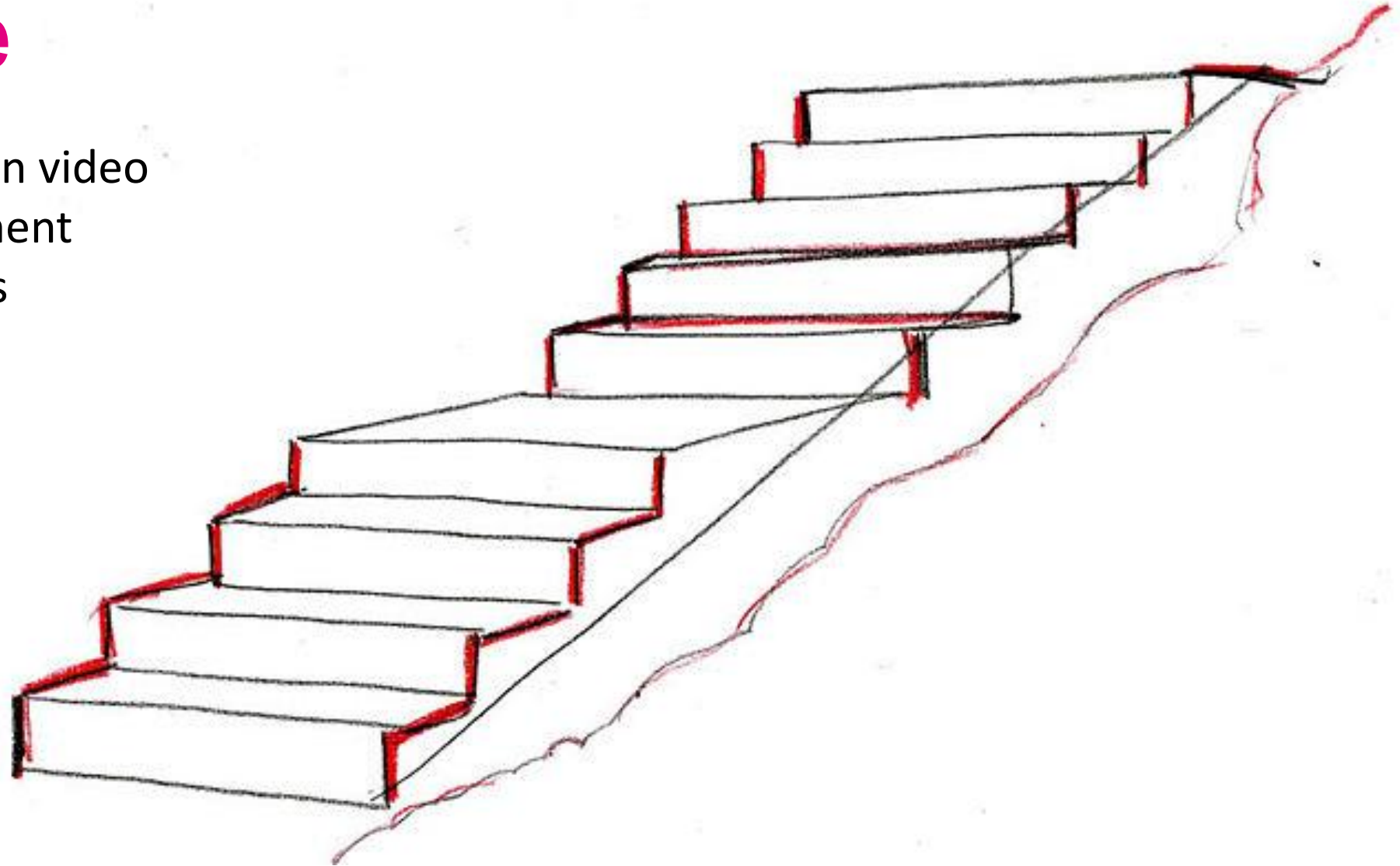## Catching the wave of video teaching

*Supporting lecturers in the tourism team Inholland Diemen in developing video teaching skills*
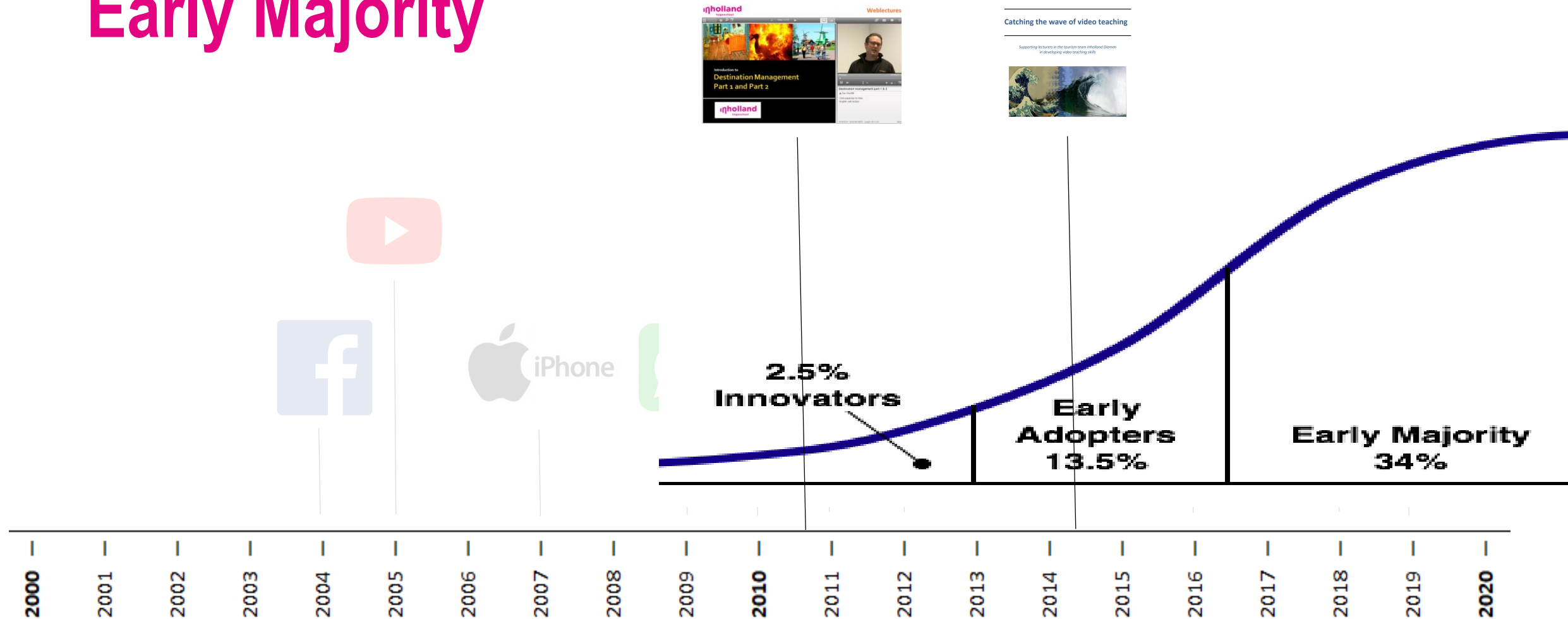
(Woolfitt, 2014)

# Resistance

I don't look good on video
Don't have equipment
Boring for students
Don't have time
Loose my job
Not needed
Not for me
Can't do it
Afraid...

# Early Majority



2.5% Innovators

Early Adopters 13.5%

Early Majority 34%

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Have we caught the wave?  (2017)

# Video Pedagogy



Video knowledge

(VPK)

Pedagogical knowledge
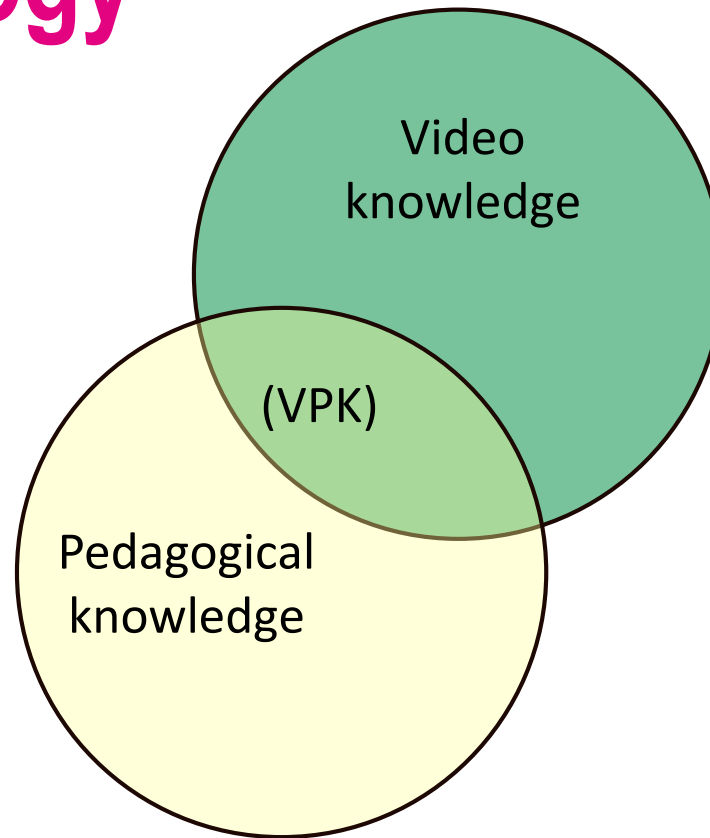
# 'Video Teaching'

Teaching via video

Teacher has active role

Recorded

Audible and Visible

Screen part of didactic process
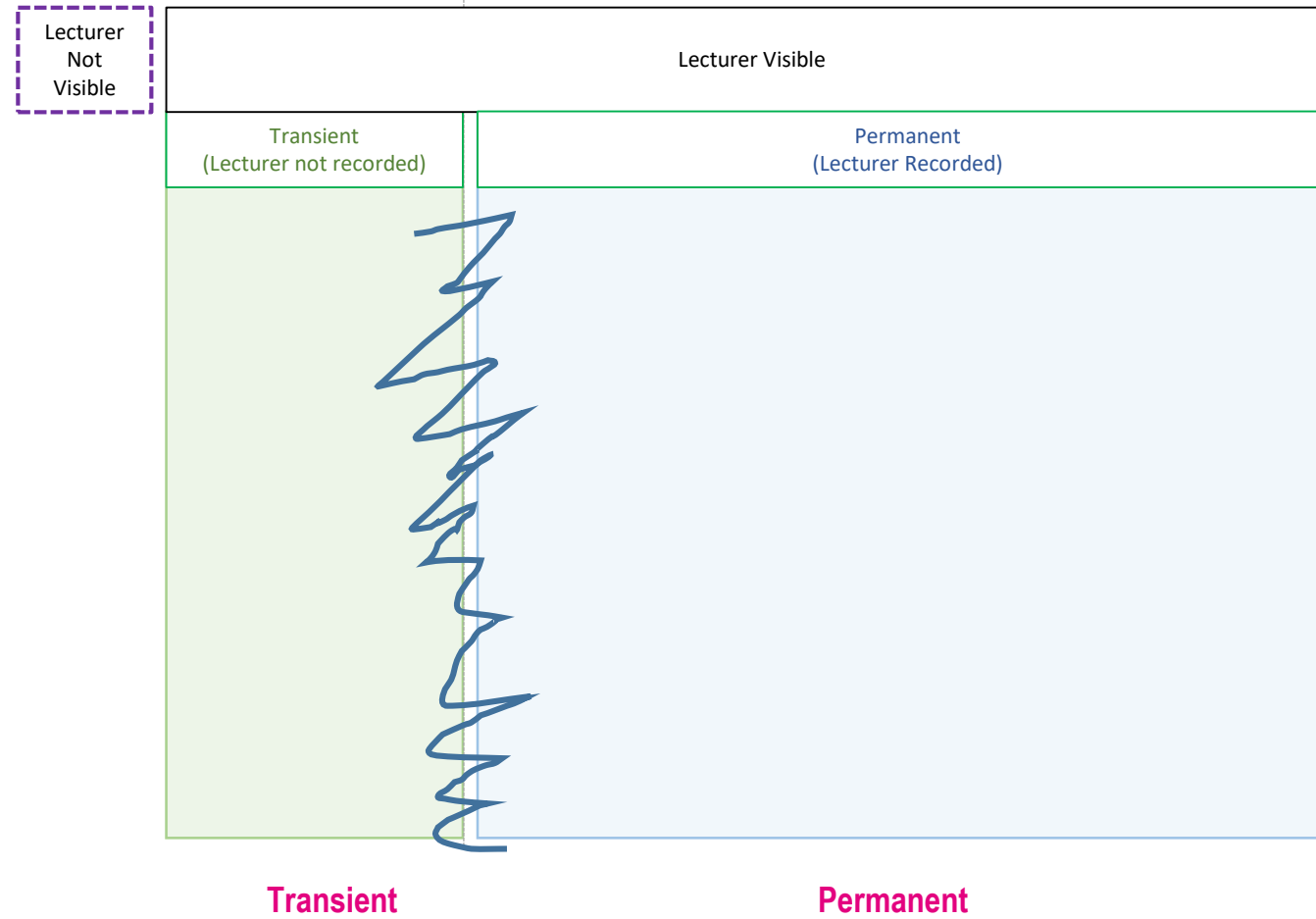
(Bates, 2015)

# 3d→2d

Many things change when we teach with, and through, video

# The Transition in Teaching – transient/ephemeral to digitalized/permanent



Adapted from Woolfitt (2014)

# Video changes everything

# Video Because

Push – technology availability

Pull – needs of students, faculty, organisation

External
Environment

Video
knowledge
(VK)

Organisational
Context

# Vision

Policies

We do it for you, together, you do it

Studios



© Z. Woolfitt

# Multi-Facted

Formats

Affordances

Functions

'outstandingly capable'

Opportunities

Video
knowledge
(VK)
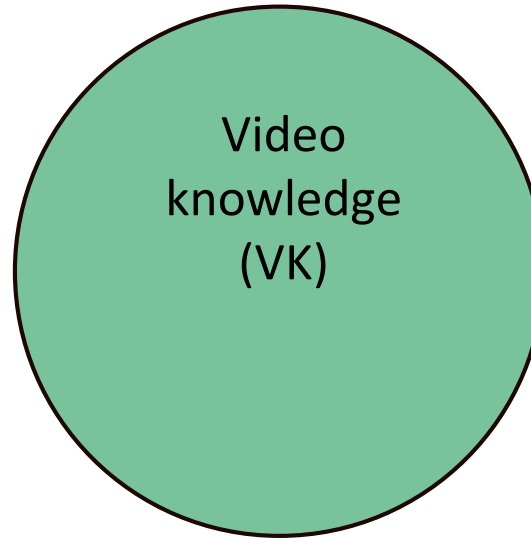
(Koumi, J., 2015)

# Augment

Accessible

Meta Tags

Speech Recognition

Full-text search

Annotate

H5P

Video knowledge (VK)
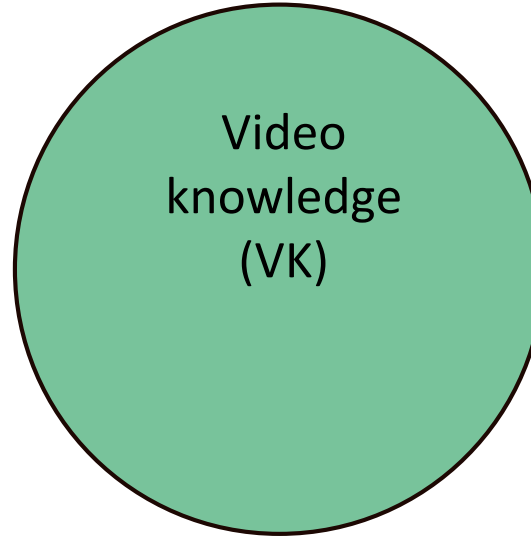
# Typologies

Ongoing challenge

Definitions fluid

Terminology evolving



(Hansch et al., 2015; Sistermans, 2017)
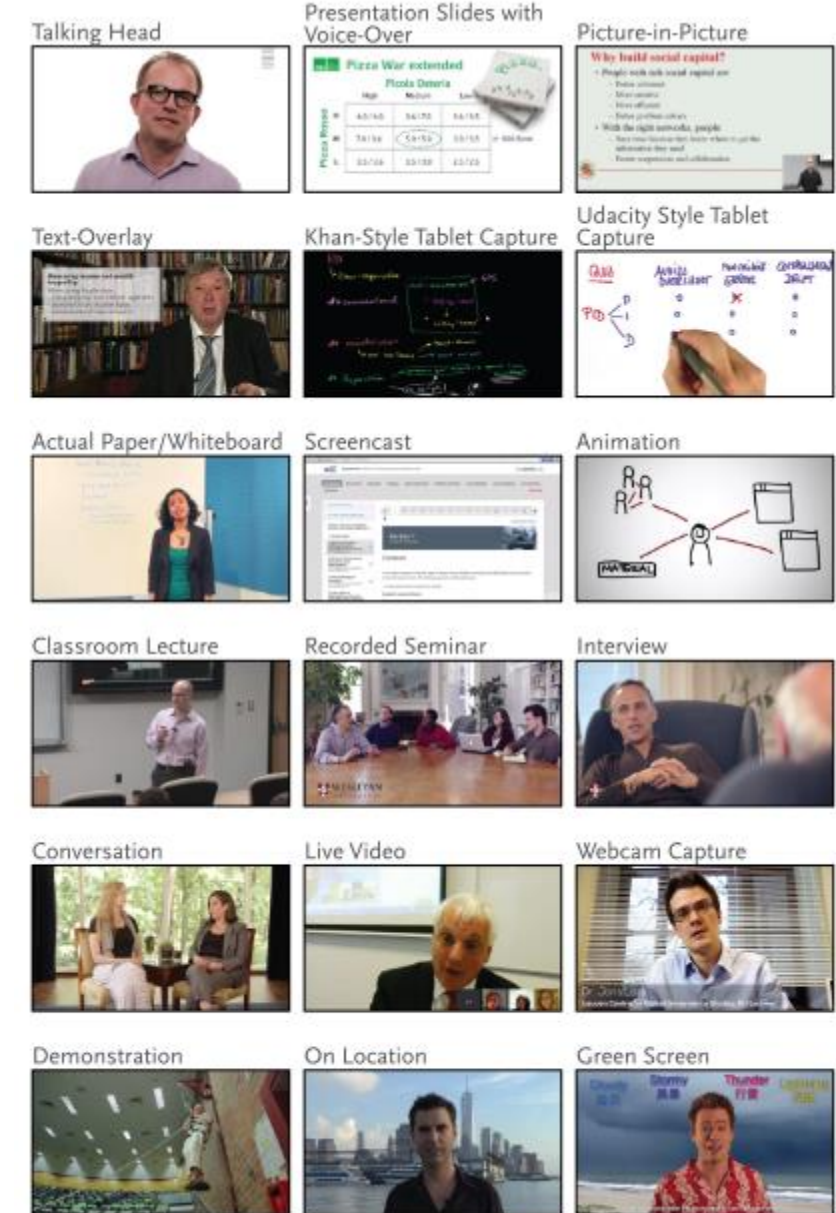
# Made by, made for..?

|  | Made for teachers | Made for students |
|---|---|---|
| **Made by teachers** | Made by teachers for teachers | Made by teachers for students |
| **Made by students** | Made by students for teachers | Made by students for students |

(based on presentation from Karsten Wolf)

# Formats

 **Video Clip**

 **Screencast**

 **Live Lecture Capture**

 **Web Lecture**

 **Student Generated**

Enhancing Learning with Video

# Video Clip

Explanation

How to

News



Black Balls

# Screencast

A digital movie of your screen

Presenter visible or not

Formative feedback

Mutliple use or throw-away

(Udell, 2004, Marriot & Keong Teoh, 2012, Desouky Ali, 2016, Killingback et al., 2019)

# Live Lecture Capture

Live recording

Interaction

Adjusted Teaching

Attendance

Accessibility

(Bos, 2016, Reflections on Live Lecture Capture)
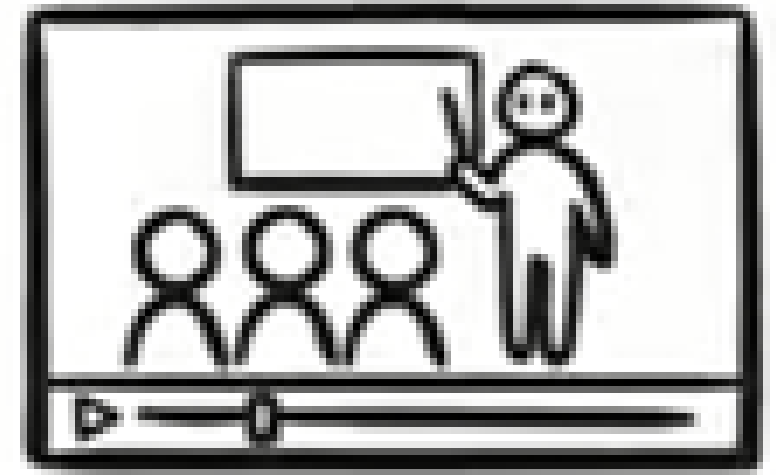
# Web Lecture

Linear

Student Control

Searchable

Interactive layers

24/7

# Student Perception (N=95)



Chart categories (left to right):
- Using web lectures on the course is a good idea
- ...g the web lectures helped me study to pass the knowledge exam
- Watching the web lectures made studying easier
- I like using web lectures to study
- I found it easy to navigate through the web lectures (e.g. pause,...
- Watching the web lectures improved my study results
- I used the web lectures to help me study more quickly
- The web lectures were the right length (minutes)
- Watching the web lectures increased my productivity
- Watching web suits my preferred learning style
- Web lectures clarified questions I had about the course
- I felt personally addressed by the lecturer in Web lectures.
- I prepared my specific web lectures in advance
- The web lectures made me more involved in the course
- The web lectures motivated me on the course
- Watching the web lectures helped me pass Case exam
- Watching the web lectures helped me pass the project
- It was helpful to discuss web lectures in class with others
- I found the web lectures boring

Legend: ■ Disagree strongly  ■ Disagree  ■ Disagree somewhat  ■ neutral  ■ agree somewhat  ■ agree  ■ agree strongly

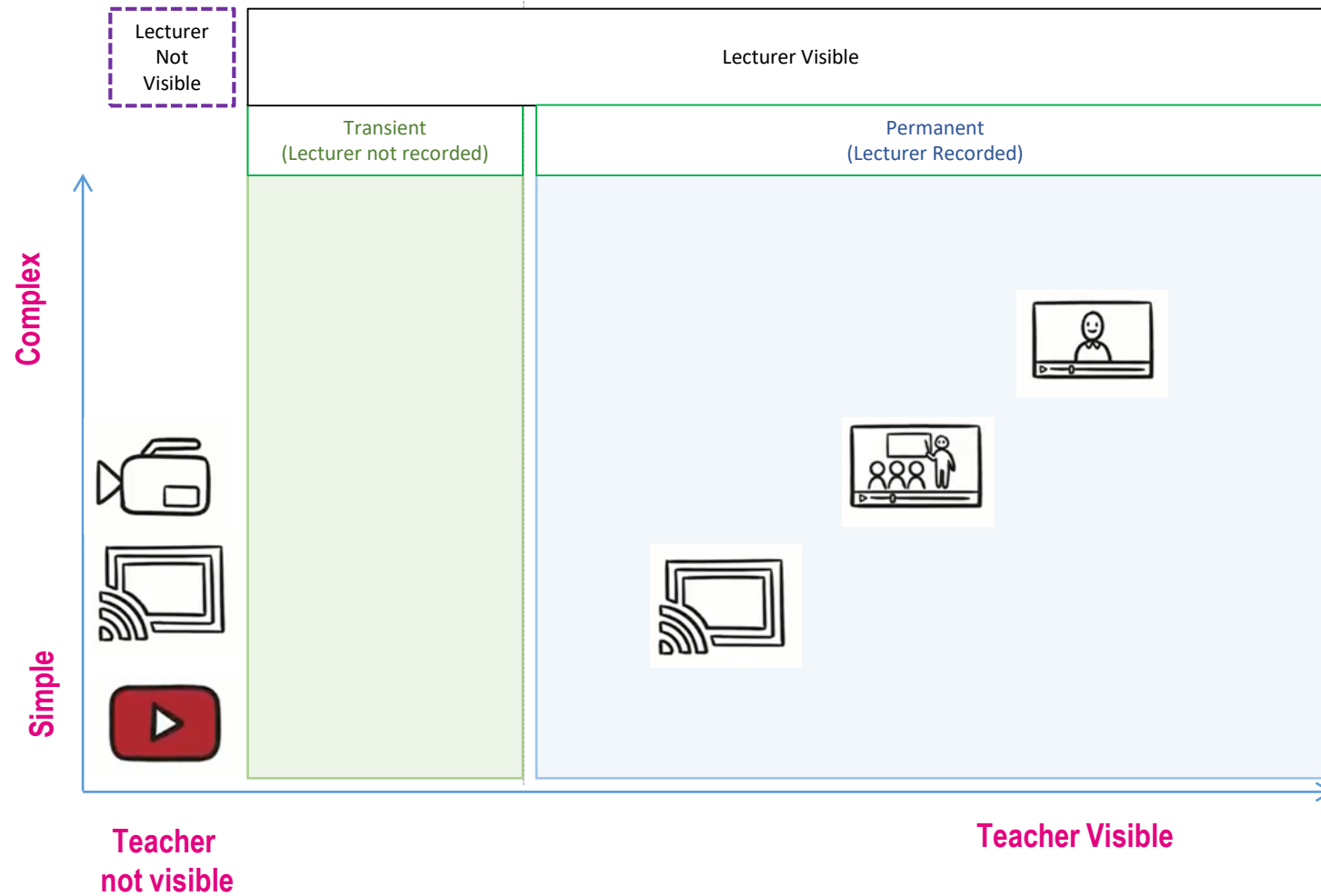(Kirschner & van Merriënboer, 2013)

61

# Student Generated
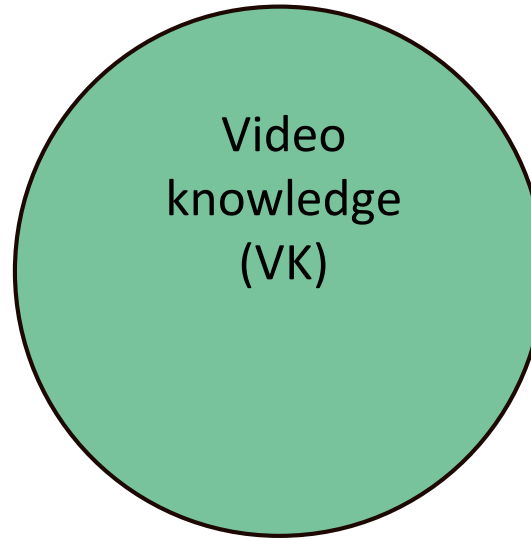
Assignment

Vlog

Reflection

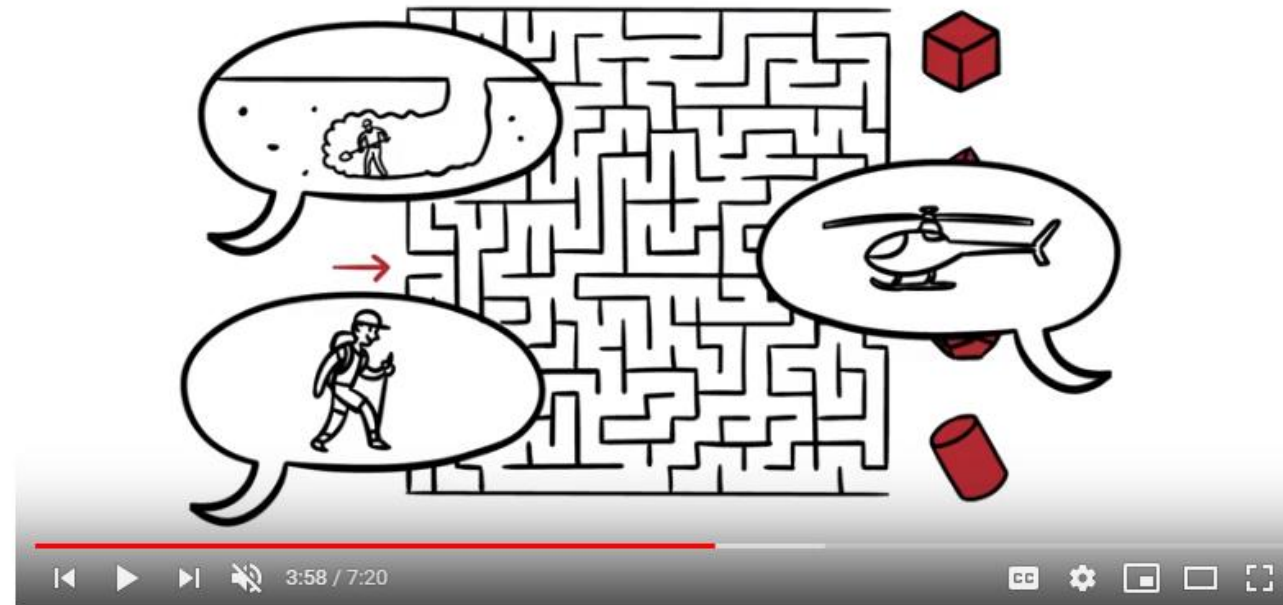Portfolio

# Video Teaching: Complexity vs. lecturer visibility
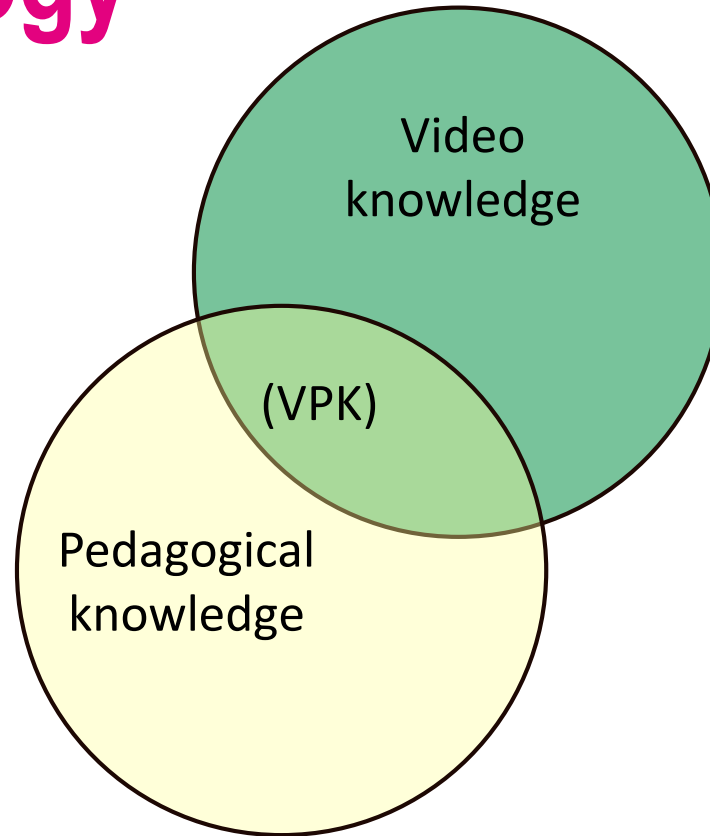
Adapted from Woolfitt (2014)

# Other Formats

Video knowledge (VK)

# Animation



Vormgeven aan effectief samenwerkend leren in het onderwijs

7 steps to turn research into an animation, Inholland Research Findings presented as Animation

# Realities

Augmented

Virtual

360



16

(Narciso, Bessa, Melo, Coelho, & Raposo, 2017; Rupp et al., 2019, Demarinis, Calligaro, eleHarr, & Mariani, 2018, Would you jump off a skyscraper?)

# Video Pedagogy



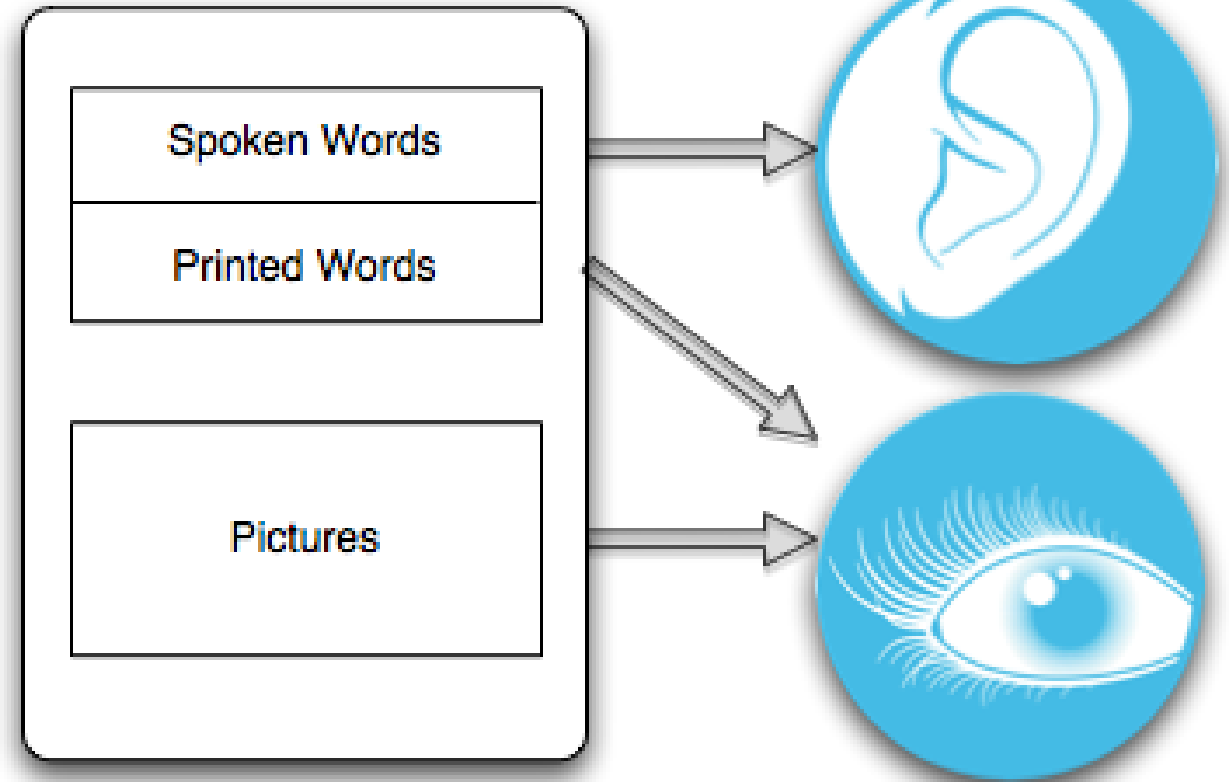Video knowledge

(VPK)

Pedagogical knowledge

# Evidence Based

The effective use of video in higher education

Zac Woolfitt
Lectoraat Teaching, Learning and Technology
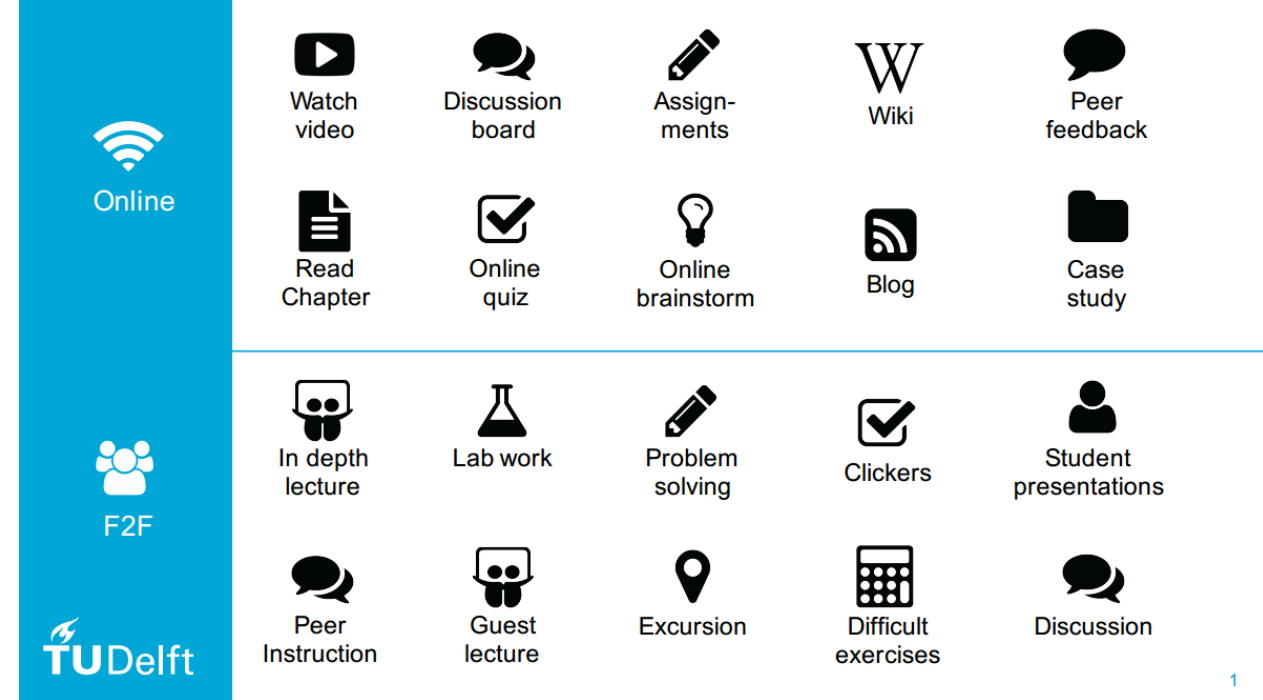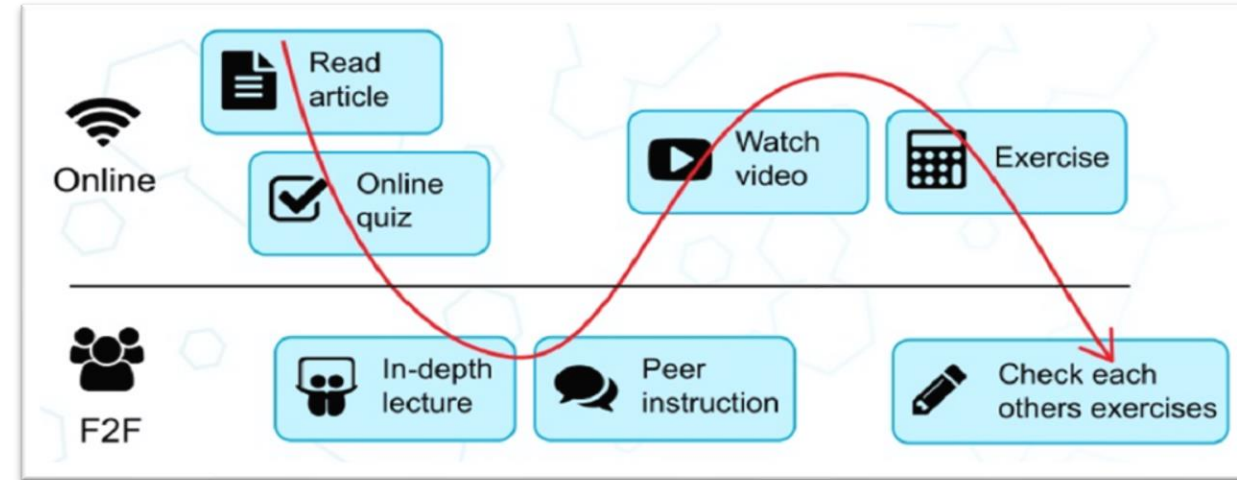Inholland University of Applied Sciences
October 2015

1

(Woolfitt, 2015, Clark, D., 2019, 15 things the research says)

# Multi-Media Theory

Audio

Visual

Spoken Words

Printed Words

Pictures

(Colvin Clark & Mayer, 2011)

# F2F vs Online



(TU Delft, 2016)

# Blending & Flipping



(TU Delft, 2016)

[European Maturity model](European Maturity model)

Sage on the stage

Guide on the side

# Online



**Blended Learning Essentials: Embedding Practice**

FREE ONLINE COURSE

This is the second part of a course for the Vocational Education and Training sector to promote effective use of blended learning.

Go to course – starts 6 Jun

View transcript     Download video: standard or HD

UNIVERSITY OF LEEDS

FREE online course
Duration: 3 weeks
4 hours pw
Certificates available

ABOUT THE COURSE

This is the second part of the Blended Learning Essentials course, which will build upon the content of the first part, covering issues such as learning from experience and tackling difficult challenges with the help of blended learning.

SHARE

# Engage

# Capture



© Z. Woolfitt

# Practice
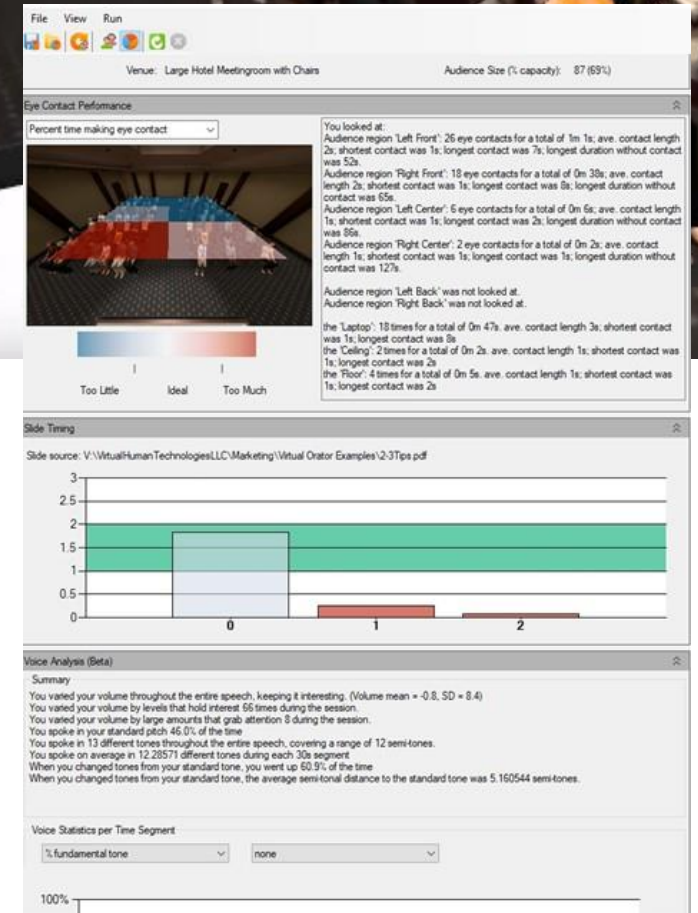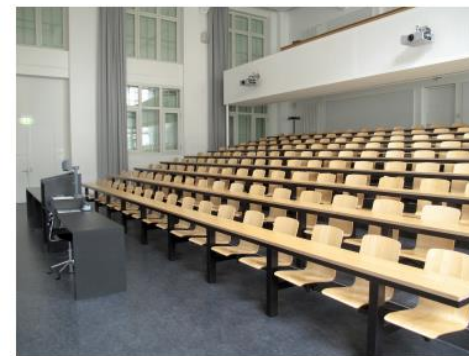
# Assessment



(Leiden, 2017)

# Virtual Presence



© Z. Woolfitt

(@FlyingLess)

# Online Synchronous

# Hybrid Classroom

(Woolfitt & Swager, 2019, Raes et al., 2020)

3d ➝ 2d ➝ 3d



World's first holographic university lecture at Imperial College Business School

The people appearing as holograms will be able to see the audience,

Holographic Presence

# Video future



(Fricke, 2018)

## Universities (UNIs)



EPFL – SWISS FEDERAL INSTITUTE OF TECHNOLOGY
MORE

ETH ZÜRICH – SWISS FEDERAL INSTITUTE OF TECHNOLOGY
MORE

UNIVERSITÀ DELLA SVIZZERA ITALIANA
MORE

UNIVERSITY OF BASEL
MORE

UNIVERSITY OF BERN
MORE

UNIVERSITY OF FRIBOURG
MORE

UNIVERSITY OF GENEVA
MORE

UNIVERSITY OF LAUSANNE
MORE

UNIVERSITY OF LUCERNE
MORE

UNIVERSITY OF NEUCHATEL
MORE

UNIVERSITY OF ST.GALLEN (HSG)
MORE

UNIVERSITY OF ZURICH
MORE

## Universities of Applied Sciences and Arts (UASAs)



BERN UNIVERSITY OF APPLIED SCIENCES
MORE

FHNW UNIVERSITY OF APPLIED SCIENCES AND ARTS NORTHWESTERN SWITZERLAND
MORE

FHO UNIVERSITY OF APPLIED SCIENCES OF EASTERN SWITZERLAND
MORE

HES-SO UNIVERSITY OF APPLIED SCIENCES AND ARTS WESTERN SWITZERLAND
MORE

KALAIDOS UNIVERSITY OF APPLIED SCIENCES
MORE

LUCERNE UNIVERSITY OF APPLIED SCIENCES AND ARTS
MORE

UNIVERSITY OF APPLIED SCIENCES AND ARTS OF SOUTHERN SWITZERLAND (SUPSI)
MORE

UNIVERSITY OF APPLIED SCIENCES OF THE GRISONS
MORE

ZURICH UNIVERSITY OF APPLIED SCIENCES AND ARTS
MORE

## Universities of Teacher Education (UTEs)



BERNE UNIVERSITY OF TEACHER EDUCATION
MORE

DEPARTMENT OF EDUCATION AND LEARNING SUPSI
MORE

FHNW SCHOOL OF EDUCATION
MORE

ST.GALLEN UNIVERSITY OF TEACHER EDUCATION

SCHWYZ UNIVERSITY OF TEACHER EDUCATION
MORE

SWISS FEDERAL INSTITUTE FOR VOCATIONAL EDUCATION AND TRAINING
MORE

SWISS FEDERAL INSTITUTE OF SPORT MAGGLINGEN SFISM

TEACHER TRAINING UNIVERSITY SCHAFFHAUSEN
MORE

THURGAU UNIVERSITY OF TEACHER EDUCATION
MORE

UNIVERSITY OF APPLIED SCIENCES OF SPECIAL NEEDS EDUCATION
MORE

UNIVERSITY OF FRIBOURG, INSTITUTE OF TEACHER EDUCATION
MORE

UNIVERSITY OF GENEVA, INSTITUTE OF TEACHER EDUCATION
MORE

UNIVERSITY OF TEACHER EDUCATION FRIBOURG
MORE

UNIVERSITY OF TEACHER EDUCATION HEP-BEJUNE
MORE

UNIVERSITY OF TEACHER EDUCATION IN THE CANTON OF VALAIS
MORE

UNIVERSITY OF TEACHER EDUCATION LUCERNE
MORE

UNIVERSITY OF TEACHER EDUCATION OF GRISONS
MORE

UNIVERSITY OF TEACHER EDUCATION ZUG
MORE

UNIVERSITY OF TEACHER EDUCATION, STATE OF VAUD
MORE

ZURICH UNIVERSITY OF TEACHER EDUCATION
MORE

## University Institutions Supported by the Federal Government



SWISS DISTANCE UNIVERSITY INSTITUTE
MORE

THE GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES
MORE

inh

# Video Smith



© Z. Woolfitt

External Environment

Video knowledge (VK)

(VPK)

(VCK)

(VPCK)

Pedagogical knowledge (PK)

(PCK)

Content knowledge (CK)

Organisational Context

# Continuing
# the Transition

# Our Agenda

Our agenda for the next few years?
Menti.Com
72 31 22

?

| 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | **2010** | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | **2020** | 2021 | 2022 | 2023 | 2024 |

**inholland**
university of
applied sciences
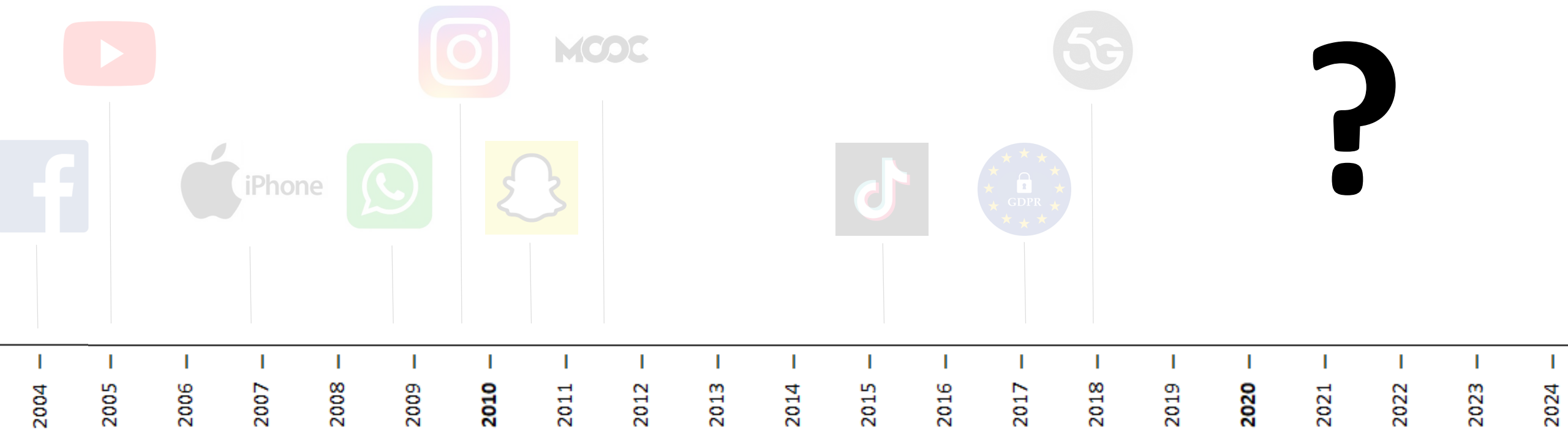
@ZCWLFTT

zac.woolfitt@Inholland.nl

++31 (0) 610 441 829

'Video Teaching' Blog
zacwoolfitt.blogspot.com

**Thank you**

**Slides**
**edu.nl/f3e46**

Media&Learning // LEUVEN // 17 – 18 June 2020

# References (1/3)

Bates, A. W. (2015). *Teaching in a digital age; Guidelines for designing teaching and learning for a digital age*. Retrieved from http://opentextbc.ca/teachinginadigitalage/

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (Fourth ed.). Maidenhead: Open University Press.

Bos, N. (2016). *Effectiveness of Blended Learning: Factors Facilitating Effective Behavior in a Blended Learning Environment*. Open University Press, Heerlen.

Carroll, L. (1871). *Through the Looking-Glass, and What Alice Found There*. London: Macmillan.

Colvin Clark, R., & Mayer, R. E. (2011). *E-learning and the science of instruction; Proven guidelines for consumers and designers of multimedia learning* (3rd ed.). San Francisco: John Wiley and Sons. Retrieved from http://formulasi.googlecode.com/files/e-Learning.pdf

Demarinis, T., Calligaro, L., Harr, C., & Mariani, J. (2018). *How VR can improve learning and training outcomes*. London. Retrieved from https://www2.deloitte.com/content/dam/insights/us/articles/4683_real-learning-virtual-world/4683_real-learning-in-a-virtual-world.pdf

Fricke, B. (2020). Artificial Intelligence, 5G and the Future Balance of Power. *Konrad-Adenauer-Stiftung e. V.*, (379).

Hansch, A., Newman, C., Hillers, L., Shildhauer, T., McConachie, K., & Schmidt, P. (2015). *Video and online learning: Critical reflections and findings from the field*. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2577882

JISC. (2012). *Learning in a digital age: Extending higher education opportunities for lifelong learning*. Retrieved from http://wwww.webarchive.org.uk/wayback/archive/20140614193513/http://www.jisc.ac.uk/media/documents/publications/programme/2012/JISCLearninginaDigitalAge.pdf

Kirschner, P. A., & van Merriënboer, J. J. G. (2013). Do learners really know best? Urban legends in education. *Educational Psychologist, 48*(3), 169–183. https://doi.org/10.1080/00461520.2013.804395

# References (2/3)

Koehler, M. J., & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, *9*(1), 60–70. https://doi.org/10.1016/j.compedu.2010.07.009

Narciso, D., Bessa, M., Melo, M., Coelho, A., & Raposo, J. V. (2017). Immersive 360◦ video user experience: impact of different variables in the sense of presence and cybersickness. *Universal Access in the Information Society*. https://doi.org/10.1007/s10209-017-0581-5

Raes, A., Vanneste, P., Pieters, M., Windey, I., Noortgate, W. Van Den, & Depaepe, F. (2020). Learning and instruction in the hybrid virtual classroom: An investigation of students' engagement and the effect of quizzes. *Computers & Education*, *143*(August 2019), 103682. https://doi.org/10.1016/j.compedu.2019.103682

Rogers, E. M. (2003). *Diffusion of Innovations* (Fifth ed.). New York: Simon & Schuster.

Rosling, H., Rosling, O., & Rosling Rönnlund, A. (2018). *Factfulness*. London, UK: Sceptre.

Rupp, M. A., Odette, K. L., Kozachuk, J., Michaelis, J. R., Smither, J. A., & Mcconnell, D. S. (2019). Investigating learning outcomes and subjective experiences in 360- degree videos. *Computers & Education*, *128*(August 2018), 256–268. https://doi.org/10.1016/j.compedu.2018.09.015

Senge, P. (2006). *The fifth discipline* (2nd ed.). London: Random House Business Books.

Sistermans, I. (2017). *Video in education in the Netherlands*. Maastricht. Retrieved from http://videum.library.maastrichtuniversity.nl/video-in-education/good-practices/

Surma, T., Sluijsmans, D., Vanhoyweghen, K., Camp, G., Muijs, D., & Kirschner, P. A. (2019). *Wijze Lessen*. Meppel: Ten Brink.

# References (3/3)

*Surveillance Giants: How the Business Model of Google and Facebook Threatens Human Rights*. (2019). Amnesty International. Retrieved from
https://www.amnesty.org/download/Documents/POL3014042019ENGLISH.PDF

Udell, J. (2004). Jonudell.net. Retrieved from http://jonudell.net/udell/2004-11-15-name-that-genre.html

Woolfitt, Z. (2014). *Catching the wave of video teaching; Supporting lecturers in the tourism team Inholland Diemen in developing video teaching skills*. Inholland University of Applied Sciences. Retrieved from
http://www.inholland.nl/onderzoek/lectoraten/elearning/inzet+video+en+weblectures/

Woolfitt, Z. (2015). *The effective use of video in higher education*. The Hague. Retrieved from https://www.inholland.nl/media/10230/the-effective-use-of-video-in-higher-education-woolfitt-october-2015.pdf%0A

Woolfitt, Z., & Swager, P. (2019). *Seven phases of transition into blended synchronous learning*. Den Haag. Retrieved from
file:///C:/Users/Zac/Downloads/Research_report_Seven_phases_of_transitiopn_into_synchronous_blended_learning.pdf

Zuboff, S. (2019). *The Age of Surveillance Capitalism*. London: Profile Books Ltd.