



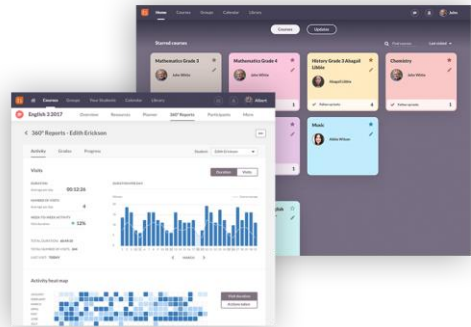
Pedagogical Workshop 1

Introduction



Tuija Arola
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its Learning



dynabook

AR100 Viewer Small Kit *
PA5293E-1VEW

Kaapelikiinnike*
PA5320U-1CLP



USB Type-C -kaapeli*
PA5297U-1GTC

DE-100-vyötärökotelo*
PA5294U-1GHL




TENSTAR
simulation



3D
BEAR

The topics of today's workshop

- Definition of the core concepts
 - Teacher's skills and role in e-learning environment
 - Review of some learning methods
 - Introduction of the design process
- 

Learning objectives of this workshop



Understand

Understand the concept of digital pedagogy.



Define

Define the need, possibilities and benefits of using digital pedagogy.



Recognize

Recognize some of the imperatives that drive change in educational practices.

Learning Spectrum

Face to face	Instruction happens in a physical setting e.g. in a class room. Technology may be used to complement in-person teaching.
Blended	Instruction mainly happens face-to-face in a class room, while technology is used to deliver learning materials, goals, assignments and assessments. EdTech is used to augment the face-to-face framework.
Hybrid	Instruction happens both online and face-to-face in the lecture hall. This can include staggered learning, or cohort learning where one group of students is on campus while the other is online. Online learning can be both synchronous or asynchronous.
Remote/Online	When the classroom shifts online with more than 90 % of teaching and learning activities taking place on a digital medium. Face-to-face interaction (if any) is limited.
Flexible	Nearly all teaching and learning happens online. Additionally, students have the flexibility of determining how, what, where and when they learn. There is a higher degree of engagement because students learn at their own pace and in their own time.



A top-down view of a desk with various school supplies. In the top left, a white tablet is partially visible. Below it, two pencils (one yellow and black, one black and yellow) are on a white notebook. A wooden ruler is placed vertically on the left. A yellow pen lies horizontally in the center. In the bottom left, a black pencil case is open, showing several colorful pens (red, yellow, green, blue) and a pair of white scissors. A white object, possibly a stapler or hole punch, is also visible in the bottom left corner.

Digital Technology = Digital Pedagogy?

- is not about using digital technologies for teaching
- the tools should be approached from a critical pedagogical perspective
- digital tools should be used thoughtfully
- attention should be paid to the impact/benefits of digital tools on learning

Learning environment

- Refers to the physical, digital, virtual and socio-psychological dimensions of the surroundings in which we operate as learners.
- Learning environment **is** the dynamic and continuously ongoing *relationship* between humans and their surroundings.

Niclas Sandström 2021

<https://lehti.yliopistopedagogiikka.fi/2021/06/04/from-needs-to-deeds/>





Learning Management System LMS

- Not just a stock of documents/data
- Based on defined learning objectives
- Promotes on collaboration
- Supports inclusion and participation

FROM TEACHER CENTERED TO STUDENT CENTERED PEDAGOGY AND LEARNING METHODS

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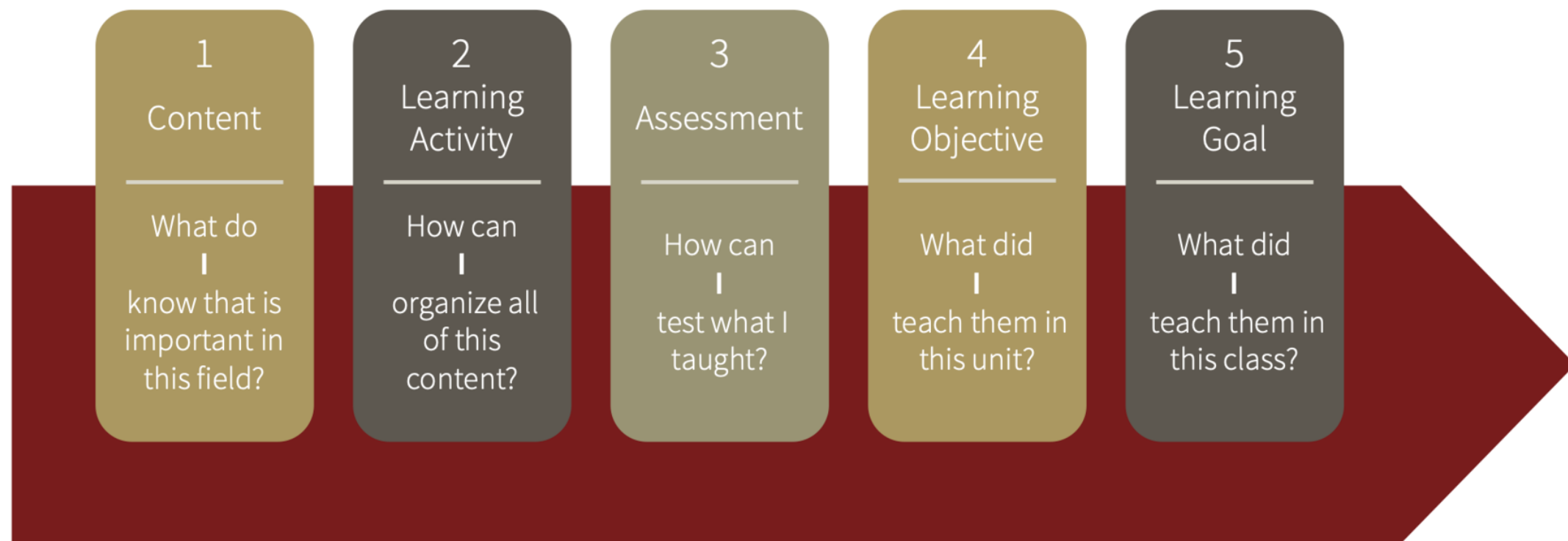
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Kouvola Vocational Institution Ltd.
Eduko



CONCEPTIONS OF LEARNING

Learner	Conception of oneself as a learner Conceptions of fellow learners Conceptions of learning
Subject of learning	Conceptions of knowledge Conceptions of the subject/content to be learned
Instructor of the learning process	Conceptions of oneself as a teacher Conceptions of teaching/facilitating the learning process

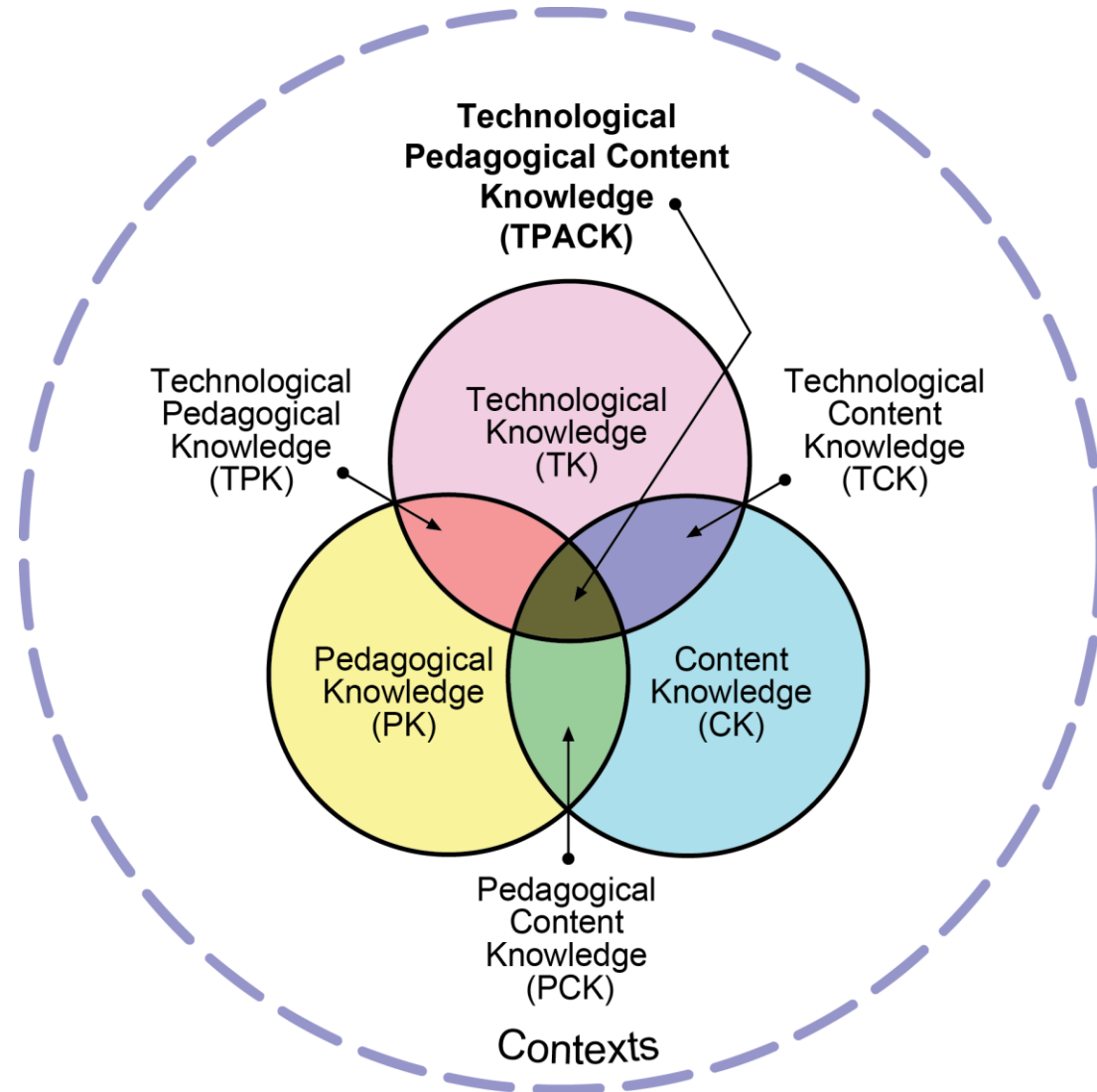
Teacher-centered course design



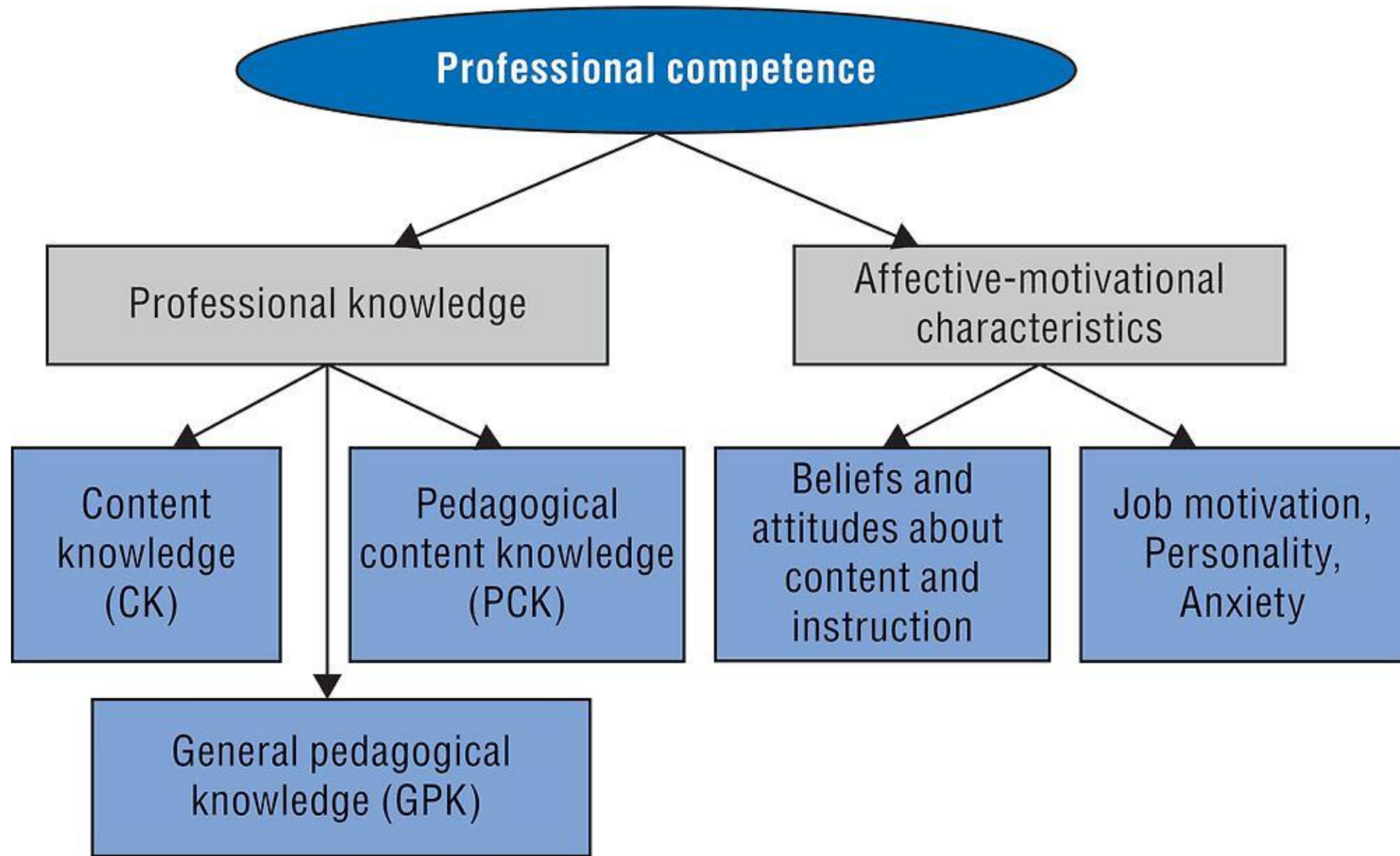
PEDAGOGY

- The science of teaching. (Oxford English Dictionary)
- Pedagogy is interaction between teachers, students, the learning environment and the world outside. (Alexander 2009)
- Relationship between methods and the cultural, institutional, and historical contexts in which the methods are used. (Hall, Murphy & Soler (Eds.) 2008)
- Study of methods and activities of teaching. The term generally refers to strategies of instruction, or a style of instruction.
- Pedagogy encompasses the performance of teaching together with the theories, beliefs, policies and controversies that shape it. (Alexander 2000)

Technological Pedagogical Content Knowledge



Mishra, P. & Koehler, M. (2006).
Technological Pedagogical
Content Knowledge: A Framework
for Teacher Knowledge.



7 ESSENTIAL SKILLS OF THE TEACHER OF THE FUTURE

- **eTeacher** - The future of education will involve technology.
- **Paperless Edtech Chameleon** - Being able to adjust to edtech apps, tools and innovations.
- **Formative** - The future teacher will get rid of the grade system and focus more on formative assessments and a real feedback culture.
- **Innovative** - Eager students expect innovating learning experiences.
- **Suspicious** - Being an eTeacher doesn't mean you have to embrace every edtech tool or app on your way.
- **Collaborative** - Technology makes it easier to collaborate with your colleagues to share experience and ideas.
- **Interactive** - Interactive lessons can help keep the student's attention a bit longer.

Expertise and professional identity of university teachers

Transition in the teacher agency to include technology in teaching situations increased the feeling of **uncertainty**. Based on the results the increasing use of digital teaching technology has a significant impact on the teachers' **experiences of their own expertise**.

It challenges the foundations of professional identity and intensifies the on-going **identity work**, thus necessitating a renegotiation and reformulation of the university teacher's professional identity to meet the changing roles and expectations.

Huhtasalo, Blomberg & Kallio 2021

<https://lehti.yliopistopedagogiikka.fi/2021/12/14/digitaalisen-opetusteknologian-vaikutukset-opettajien-asiantuntijuuteen-ja-ammatti-identiteettiin-yliopistoissa/>

THE LEARNING METHOD SHOULD PROMOTE THE STUDENT'S



Theoretical knowledge = subject matter competence



Learning skills



Ability to use digital tools for studying and working life



Working life skills e.g. ability to negotiate and interact with others, understand basic business processes and project work as well as have a flexible and entrepreneur-like attitude



Learning and professional identity

Principles for e- pedagogy

- Ensure and guarantee frequent and regular contact between the teacher and students as well as among students.
- Develop reciprocity and cooperation among students.
- Provide students more with feedback than evaluation.
- Create positive and supportive learning environment.
- Respect the diverse talents and learning styles in creating the learning activities and materials.
- Provide students with clear expectations from the beginning of the course.
- Provide students and teachers with appropriate training for e-learning.

(Simuth & Sarmany-Schuller 20212)



PROBLEM-BASED LEARNING

- Complex real-world problems are used to promote students' learning of concepts and principles instead of offering direct presentation of facts.
- Promotes the development of critical thinking skills, reasoning and problem-solving abilities.
- Can also provide opportunities for working in groups, and finding and evaluating research materials.
- Promotes continuous learning.



PHENOMENON- BASED LEARNING

Five dimensions of a phenomenon-based approach to education

- holisticity
- authenticity
- contextuality
- problem-based inquiry
- and open-ended learning processes.



PHENOBL LESSON - AN EYE TO THE FUTURE

- Teachers and students need to negotiate a phenomenon for analysis.
- Once a phenomenon is identified, educators should employ problem-based and inquiry-based pedagogies to conduct their investigations.
- It may be beneficial for teachers with different subject-specific expertise to come together to help promote a cross-curricular focus during investigations.
- It acknowledges that challenges of tomorrow will be addressed by multidisciplinary teams working together on complex problems like sustainability, urbanisation and the rise of artificial intelligence.

FLIPPED CLASSROOM

- ❖ Focuses on developing student understanding using various collaborative activities rather than via lectures.
- ❖ Theoretical knowledge is gained individually e.g. using e-learning at home.
- ❖ Face-to-face learning concentrates on exercises and projects in collaboration with their peers or instructor.
- ❖ The objective is to ensure that students have a deeper learning experience when instructors guide them through the material.
- ❖ Higher-order thinking skills are emphasized as well as application skills, rather than just comprehension.
- ❖ The benefits of this model include giving students more control over their education, promoting student-centered learning and collaboration and offering access to lessons at home.
- ❖ Drawbacks of this model include the creation of a digital divide, reliance on student preparation and trust and increased time spent in front of screens versus people or places.

The Flipped Classroom

DURING



Students practice applying key concepts with feedback

IN CLASS

GOAL

GOAL

GOAL

Students prepare to participate in class activities

BEFORE



AFTER

Students check their understanding and extend their learning



OUT OF CLASS

The design process

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PhD., Development Director

eduko
Kouvola Ammattiopisto



Self-regulated learning skills are needed in working life now and in the future. As the highest level of educational systems, university studies prepare students for autonomous and very demanding expert tasks, where learning-to-learn and metacognitive thinking skills are needed.

(Virtanen 2020)



Bloom's Taxonomy

create

Produce new or original work

Design, assemble, construct, conjecture, develop, formulate, author, investigate

evaluate

Justify a stand or decision

appraise, argue, defend, judge, select, support, value, critique, weigh

analyze

Draw connections among ideas

differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

apply

Use information in new situations

execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

understand

Explain ideas or concepts

classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

remember

Recall facts and basic concepts

define, duplicate, list, memorize, repeat, state



01

KNOWLEDGE:

Define,
Identify,
Describe,
Recognize,
Tell,
Explain,
Recite,
Memorize,
Illustrate,
Quote

02

UNDERSTAND:

Summarize,
Interpret,
Classify,
Compare,
Contrast,
Infer,
Relate,
Extract,
Paraphrase,
Cite

03

APPLY:

Solve,
Change,
Relate,
Complete,
Use,
Sketch,
Teach,
Articulate,
Discover,
Transfer

04

ANALYZE:

Contrast,
Connect,
Relate,
Devise,
Correlate,
Illustrate,
Distill,
Conclude,
Categorize,
Take Apart

05

EVALUATE:

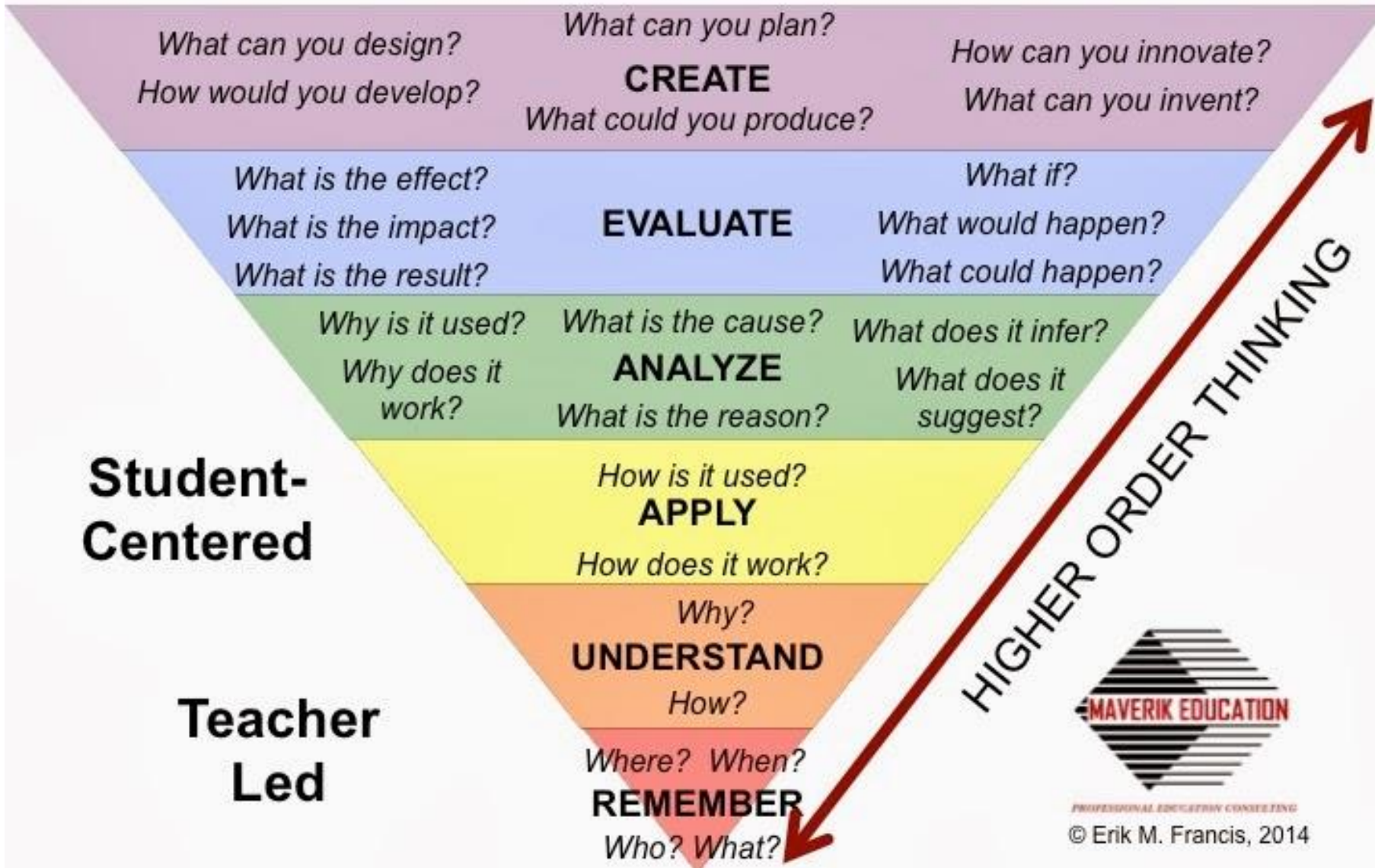
Criticize,
Reframe,
Judge,
Defend,
Appraise,
Value,
Prioritize,
Plan,
Grade,
Reframe

06

CREATE:

Design,
Modify,
Role-Play,
Develop,
Rewrite,
Pivot,
Modify,
Collaborate,
Invent,
Write

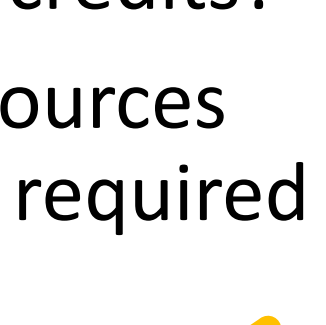
Higher Order Thinking (Bloom's Revised Taxonomy)



Steps

- Identify learning objectives.
- Choose the content.
- If needed, produce content.
- Define learning methods.
- Choose activities.
- Choose methods for feedback and assessment of the learning outcomes.

Key questions for course design

- What kind of knowledge and skills do you want to develop? (content knowledge, generic skills)
 - Do all the aspects (teaching methods, guidance, learning assignments, assessment) support the achievement of these goals?
 - Does the workload in the course correspond to the number of credits?
 - Do the available guidance resources match the teaching workload required by your plan?
- 

Learning assignments

When designing a learning assignment:

- . Describe clearly the purpose, objective, completion method, assessment criteria, guidance, timetable and the extent of the assignment.
- . Check that the instruction of the assignment is clear and that it guides the students' work towards reaching the learning outcomes.
- . If possible, link the assignment to real working life situations.

Interaction and activation

- Create rules of interaction.
- Avoid monologues.
- Discuss previous texts and contents.
- Ask, do not assume!
- Stick to the timetable and let the students know about absences or delays.
- Be patient; others may not read or respond to your messages immediately.
- Accept incomplete ideas from yourself and others, even if they remain visible in writing.

Tips

- Define and explicate a clear goal that everyone understands.
- To maintain the intensity of participation, discussions should have a time limit.
- Draw together ideas or agreed issues in the discussion. Assign roles for this purpose, e.g., chairperson, summarizer, group observer.
- Divide the participants into smaller groups, because discussion does not work well in very large groups.
- Use the tools to support discussion e.g., discussion board, chat.