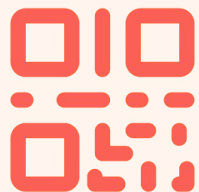


Technology Enhanced Learning

20-JUN-2023

slido



Join at slido.com
#2153335

- ① Click **Present with Slido** or install our [Chrome extension](#) to display joining instructions for participants while presenting.

slido



In a few keywords describe what you believe are the most important areas of learning that are being changed by technology.

① Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.

Contents for this segment of the day

- Learning, teaching, technology in the context of this session
- Digitally modified learning / teaching process
- Platforms & tools for each stage of the learning / teaching process
- Typical configurations
- Conclusion



slido

In a few keywords describe which technologies are having the greatest impact on learning.

- ① Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.



Learning, teaching, technology

“To learn is to form an internal model of the external world”

Stanislas Dehaene

The Slido logo is the word "slido" in a lowercase, green, sans-serif font.

Can there be learning without teaching?

① Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.

“I cannot teach anybody anything;
I can only make them think.”

Socrates

Technology

“the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment.”

source: Encyclopedia Britannica

<https://www.britannica.com/technology/technology>

τέχνη
(*tékhnē*, “art”, craft)

λογία
(-logía, “study”)

τεχνολογία
(*tekhnologiā*,
systematic
treatment of words)

→ technology
(*modern meaning
after XVIIIth century*)

Source: Wiktionary

Philosophical anthropology

Pedagogy

Curriculum theory

Cognitive psychology

Instructional theory

Neuroscience

**Science behind
technology for
learning**

Educational anthropology

Educational technology

Sociology of education

ICT: LMS, EMIS

Educational Management

Information theory

Organizational Learning

Human Centered Design

Systems Science

About this session

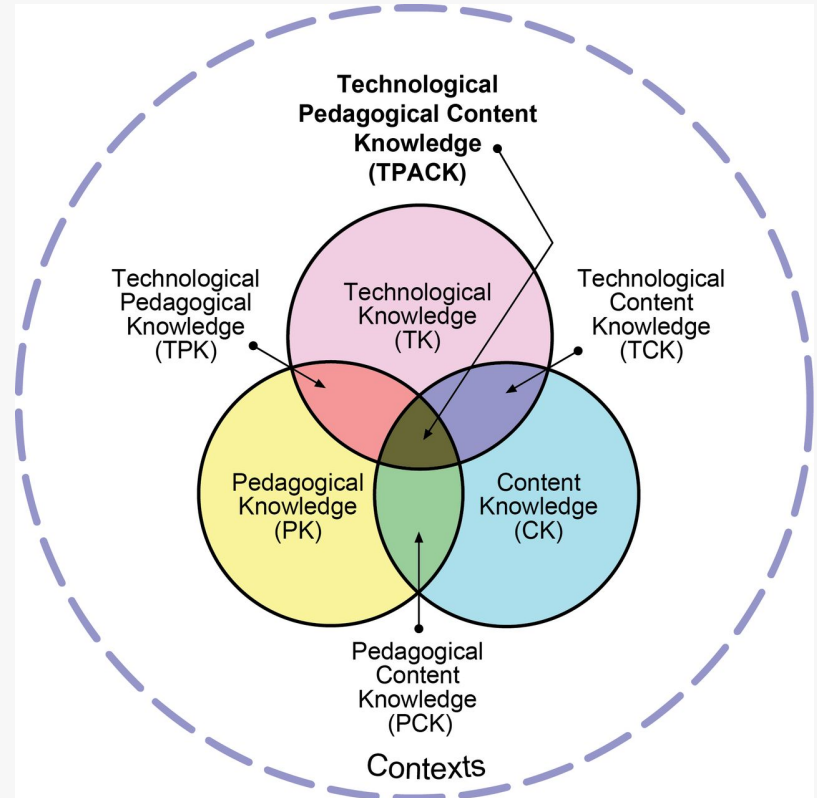
- Focus on how digital technologies can be used to enhance learning
- Considering the couple learning / teaching in different contexts (basic education, academic, technical, professional training... etc.)
- Structuring the session around
 - ≡ A couple of frameworks used as maps to guide & structure our thinking
 - ≡ Cases showing the promise and perils of digital technology for learning
 - ≡ Practical aspects of using digital technology in different stages of the learning / teaching process based on personal experiences
 - ≡ Examples of tools and platforms to illustrate possible ways to enhance learning
 - ≡ Providing possible standard configurations of tech for different learning / teaching situations

Frameworks for technology integration

TPACK (Punya Mishra and Matthew J. Koehler)

Effective technology integration in teaching requires an understanding of the interplay between these three types of knowledge.

- **Content Knowledge (CK):** This is the teacher's knowledge about the subject matter to be learned or taught.
- **Pedagogical Knowledge (PK):** This refers to the methods and processes of teaching and learning.
- **Technological Knowledge (TK):** This is knowledge about certain ways of thinking about and working with technology, tools, and resources.



Frameworks for technology integration

SAMR (Dr. Ruben Puentedura)

Progression that adopters of educational technology often follow as they progress through teaching and learning with technology.

- **Substitution:** Technology acts as a direct tool substitute, with no functional change.
- **Augmentation:** Technology acts as a direct tool substitute, with functional improvement.
- **Modification:** Technology allows for significant task redesign.
- **Redefinition:** Technology allows for the creation of new tasks, previously inconceivable.

	Definition	Example
Enhancement	Substitution Substitution is the first step in redefining your classroom. During this phase, classroom technology acts as a direct tool substitute, but there is no functional change to the lesson.	A teacher directs students to use Google Earth to locate a place, instead of using an atlas.
	Augmentation Augmentation is the second step in digitally enhancing your classroom. In this phase, classroom technology acts as a direct tool substitute, and there is some functional improvement to the lesson.	The teacher instructs students to use Google Earth to measure the distance between two places on a map, instead of using calipers or simply estimating using the scale.
Transformation	Modification The modification step begins to transform your lesson. Modification occurs when classroom technology allows for significant redesign of the project or task in the lesson.	The class would be instructed to use Google Earth layers to research locations on a map.
	Redefinition During the redefinition phase, the ultimate goal, classroom technology allows for the creation of new tasks and projects that were previously inconceivable within a traditional lesson.	A teacher has students use Google Earth to create narrated guided tours of a location, which they can share online with other students.

Key questions worth considering

What can form the internal model?

- Playing
- Experimenting
- Reading / watching / listening
- Practicing
- Researching
- ...

How can technology enhance that work?

IRL, Remote, Hybrid?

- What can be done remotely?
- What needs presence?
- How can hybrid support learners and teachers?

**How can technology support the mode?
What tools do we need?**

Synchronous vs asynchronous

- Which segments require live / synchronous?
- Which segments can be asynchronous / self-paced?

What tools are needed? How should they be managed?

Internal, external, collaborative

- What individual internal aspects to achieve? (Bloom)
- How do we see as individual external?
- What collective aspects to address?
- How does collaboration support learners?

What tools?

2

Digitally Modified Learning / Teaching Process



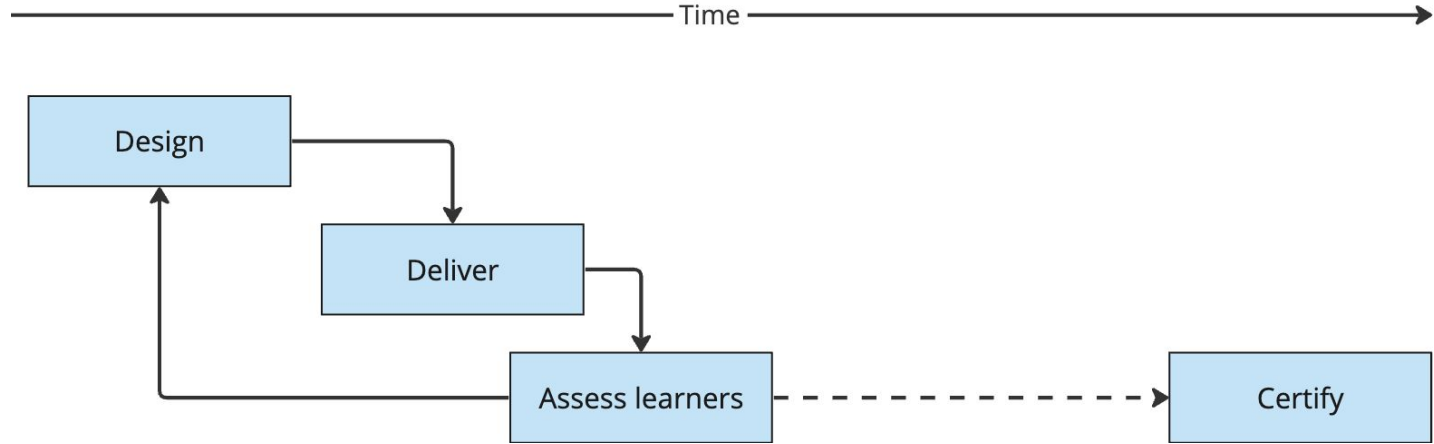
slido

What is your "stinky fish" in applying technology to learning?

① Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.



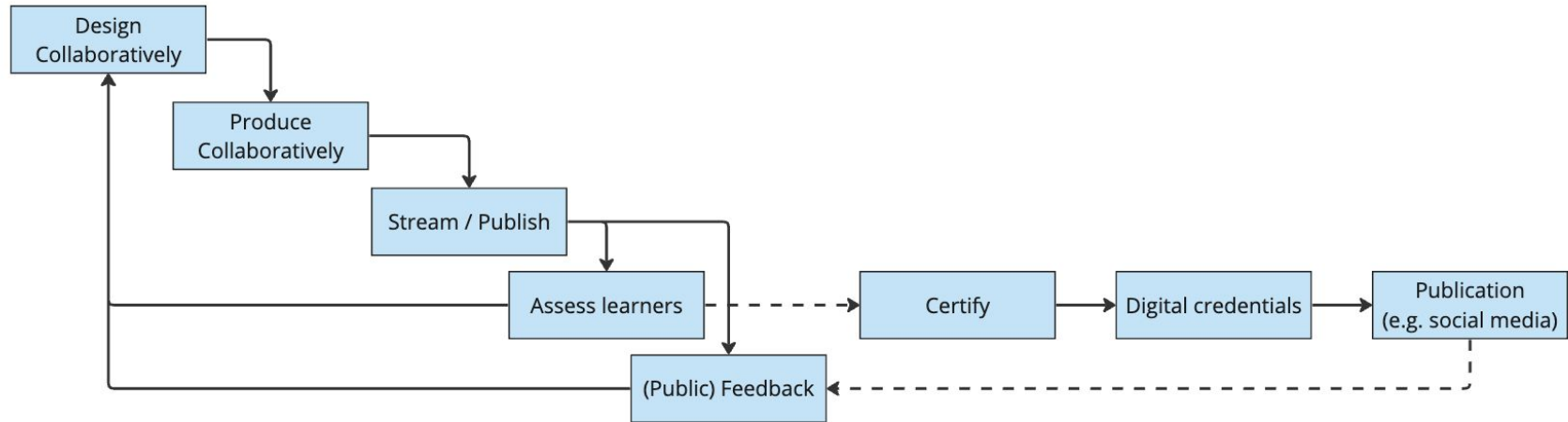
Traditional Learning / Teaching In Person





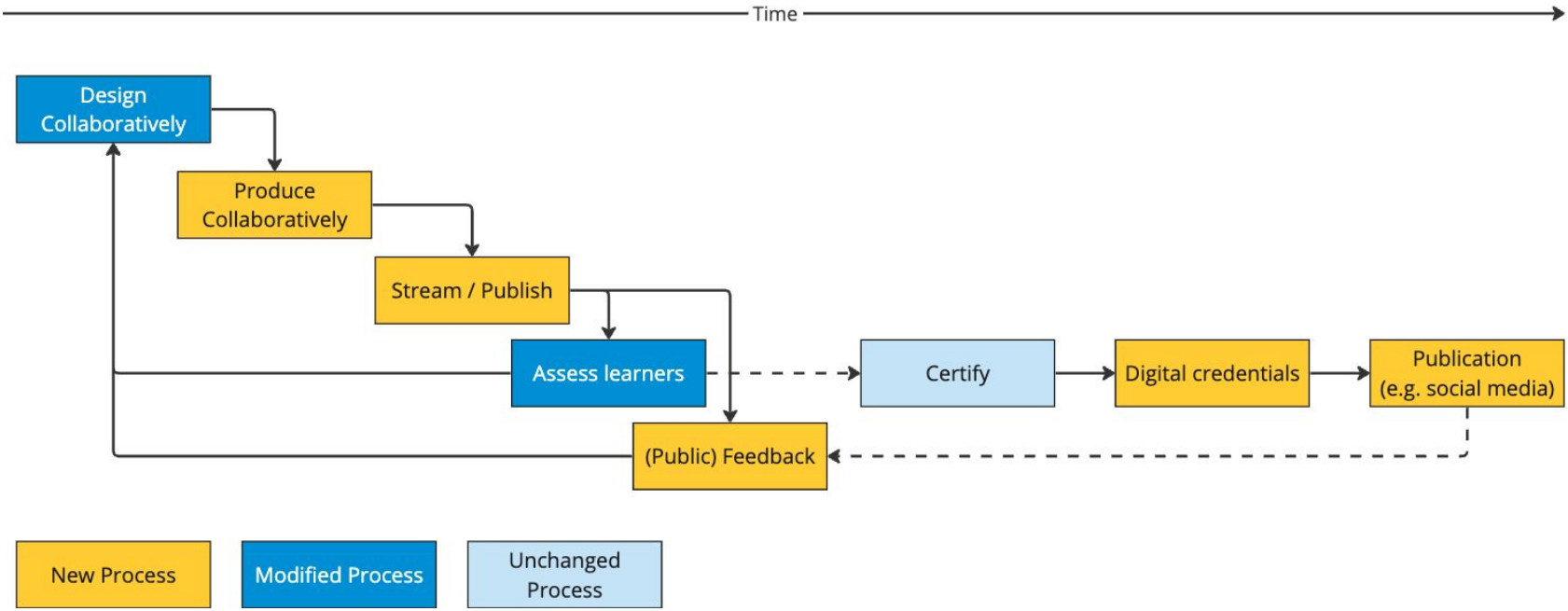
Digitally Modified Learning / Teaching

Time →

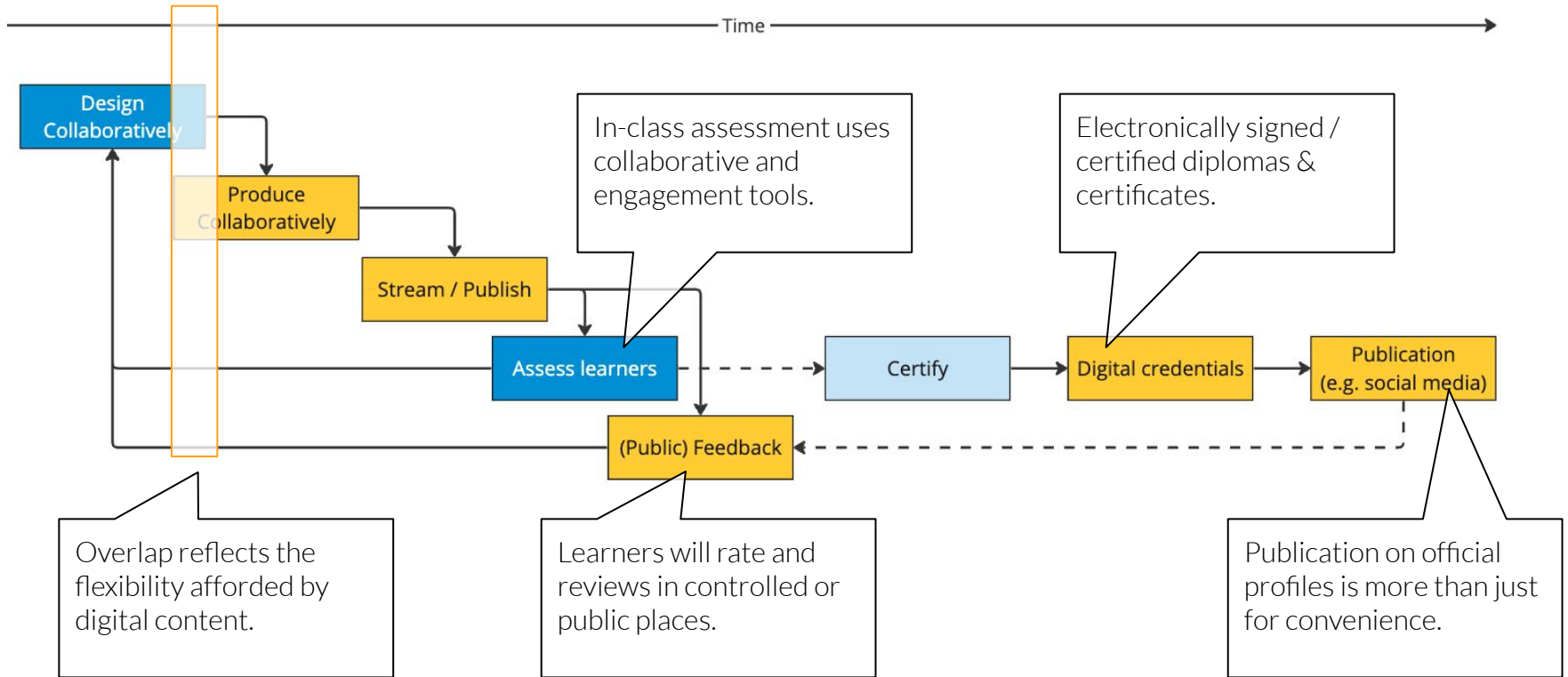


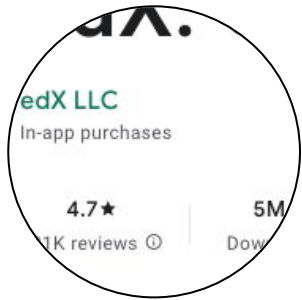


Digitally Modified Learning / Teaching



Digitally Modified Learning / Teaching

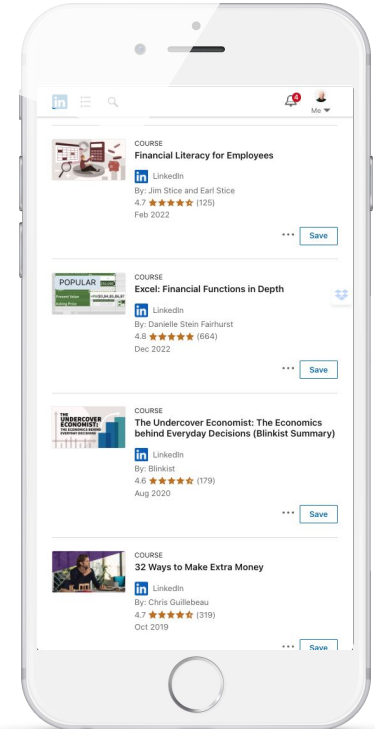
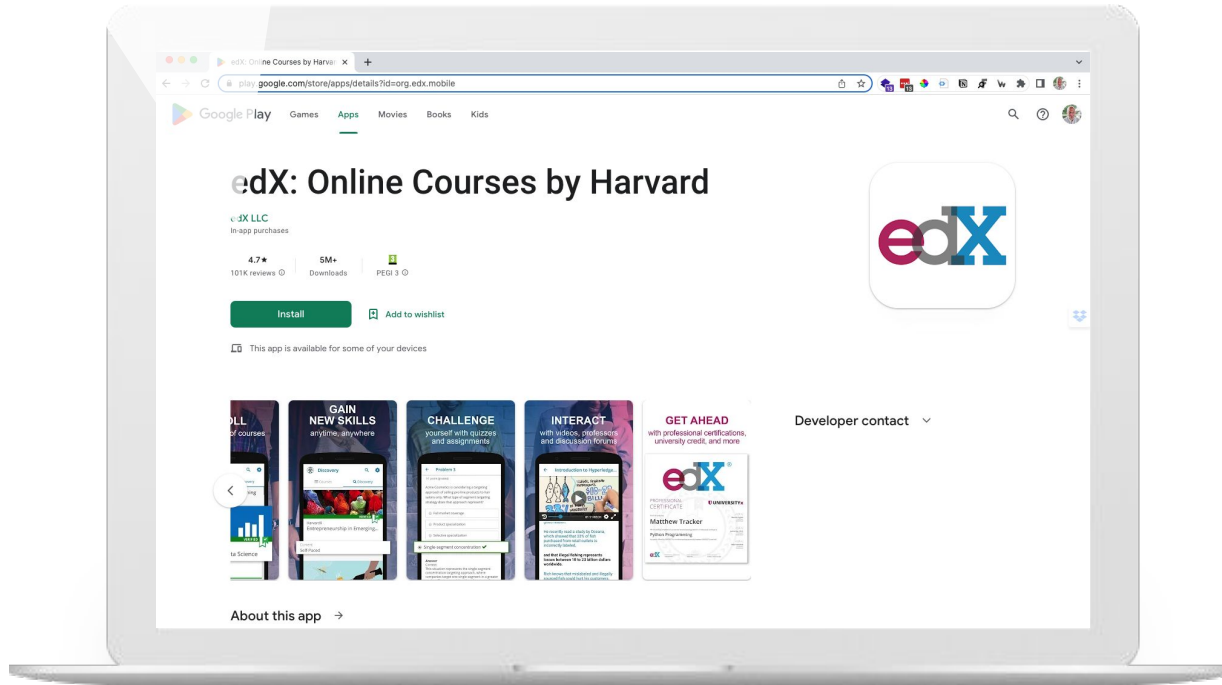




Financial Literacy for Employees

LinkedIn · By: Jim Stice and Earl Stice · Feb 2022

4.7 ★★★★★ (125) · 7,929 learners



Digital credentials & embedding in LinkedIn profile

Licenses & certifications

coursera **Data Visualization with Tableau Specialization**
 Coursera
 Issued May 2017
 Credential ID QV47UDLQJ4GJ

Show credential ↗

coursera Explore ▾ What do you want to le 🔍



Data Visualization with Tableau

University of California, Davis

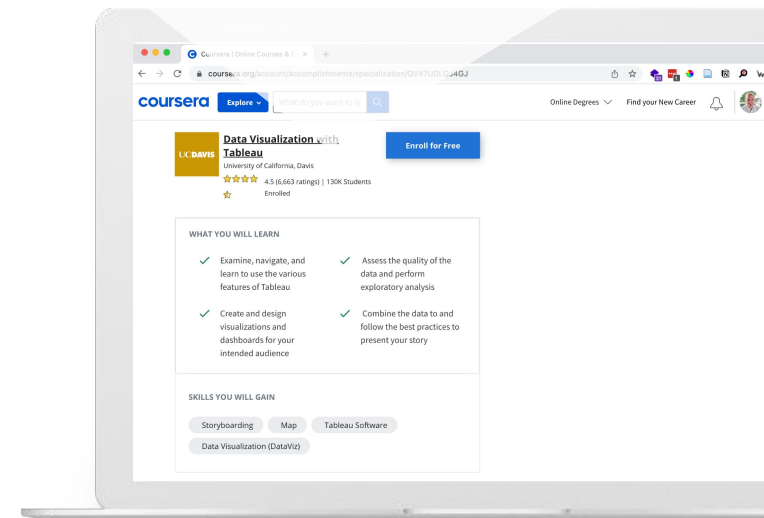
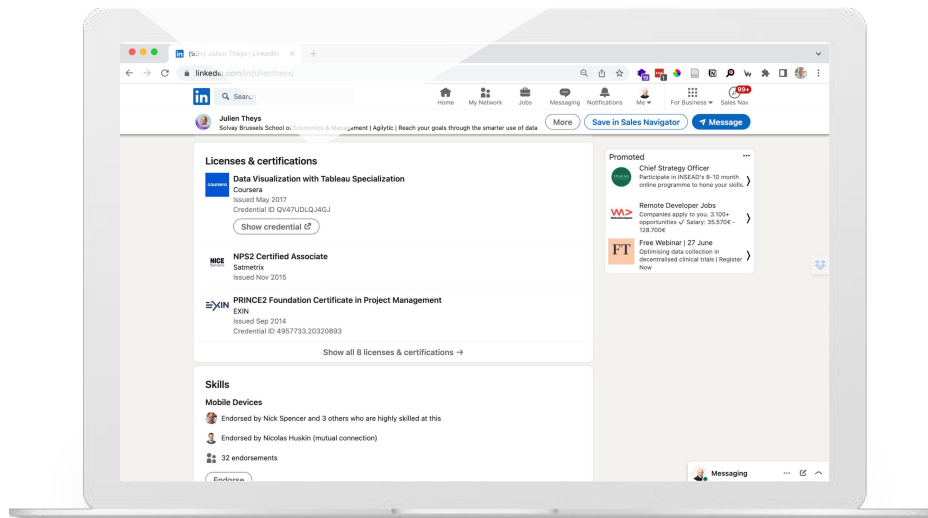


4.5 (6,663 ratings) | 130K Students



Enrolled

Enroll for Free



“We now accept the fact that learning is a lifelong process of keeping abreast of change. And the most pressing task is to teach people how to learn.”

Peter Drucker

The Learner's Angle: More Options, Easier Access, Personalized Curriculum

- Triggers
 - ≡ Internal drivers
 - ≡ External impulses & inspirations, e.g. webinars & samples of courses
 - Investigation
 - ≡ Online search & comparison
 - ≡ Ratings & Reviews
 - ≡ Research on alumni
 - ≡ Information request
 - Decision / Commitment
 - ≡ Speed & quality of interaction
 - ≡ Application experience
 - ≡ Return on investment
 - Experience
 - ≡ Learning Management System
 - ≡ Digital content
 - Loyalty
- Learning options
 - ≡ Traditional Courses
 - ≡ Digitally Enhanced Traditional Courses
 - ≡ Peer Guided & Self Directed Learning (e.g. Ecole 42)
 - ≡ Online Courses in Traditional Distance Education Form (e.g. OU)
 - ≡ MOOCs
 - ≡ Professional training courses (e.g. LinkedIn Learning)
 - ≡ P2P learning
 - ≡ Immersive learning
 - ≡ AI tutoring
 - ≡ ...

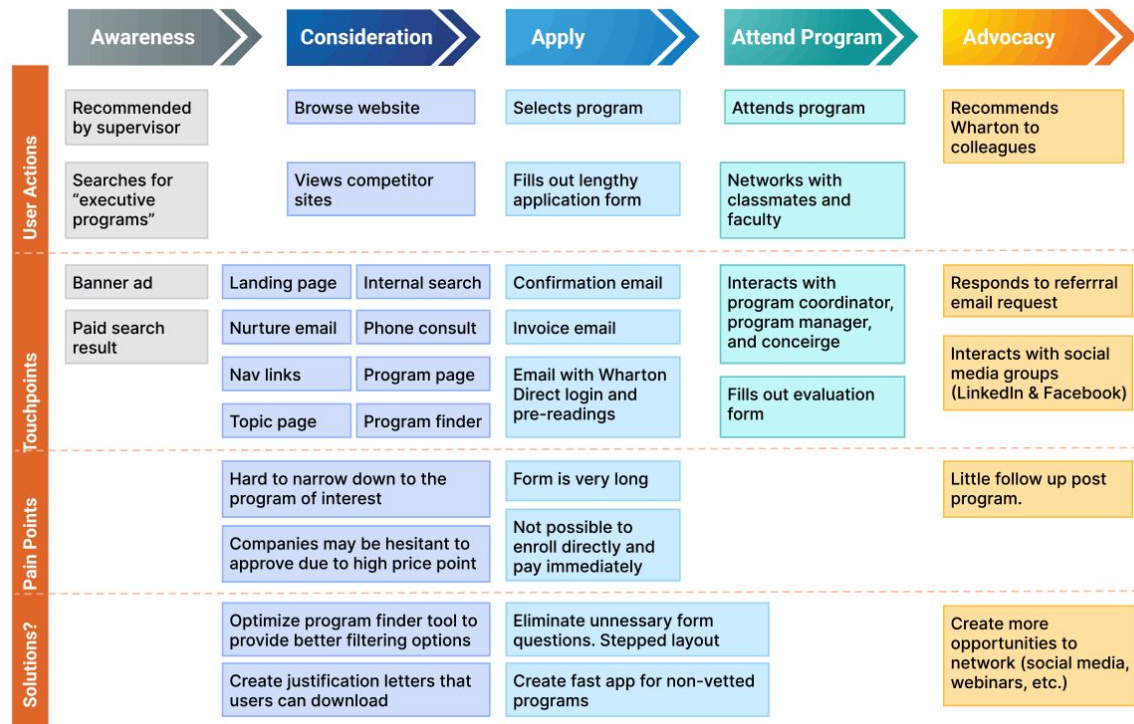
Customer Decision Journey (ExEd)

- Case of open enrollment decision journey for Wharton executive Education
- Based on personas
- Content published is the low fidelity version for public consumption

Wharton Executive Education Customer Journey Map

Persona: Joyce, Open Enrollment Shopper

Scenario: Looking to attend a program to enhance skills and keep abreast of current trends.



Conversational AI as language tutor



I am learning German and I need your help to generate questions to aid my learning. Generate a grammatically-correct everyday-use sentence in German with a random word replaced by the symbols ***** and provide a list of 4 choices - only one of which can be the correct answer and the remaining 3 are random invalid answers - for me to choose, upon which there are 2 outcomes: 1) my choice is correct and you move on to a new sentence as defined by the initial prompt; 2) my choice is wrong and you eliminate the wrong choice from your list and ask me to choose again, upon which there are 2 more outcomes: a) my choice is correct and you move on to a new sentence; b) my choice is wrong and you disclose the correct answer and explain the meaning of the correct choice, upon which you now move on to a new sentence, regardless of my further response.



Sure, I can help with that. Let's start with the first sentence.



Sentence: "Ich gehe jeden Tag ***** die Schule."

Choices:

1. durch
2. über
3. unter
4. neben

Please choose the correct word to fill in the blank.

Source: discussion on Reddit - [link](#).

Conversational AI as language tutor



Let's practice Italian.



In addition to being ChatGPT, you are Roberto, an Italian from Como. You want to have a conversation and learn more about me.

When I respond in Italian, first answer as ChatGPT (preface your answer with [ChatGPT]) and rewrite what I said to make sure it is both grammatically correct and natural sounding. Explain why you made each correction in English using bullet points. Then answer as Roberto (preface your answer with [Roberto]) and continue the conversation.

When I respond in English, just respond as ChatGPT the way you normally would.

Ask your first question as Roberto.



[Roberto] Ciao! Mi chiamo Roberto e sono di Como. Sono qui per imparare di più su di te. Come ti chiami? E da dove vieni?



↻ Regenerate response

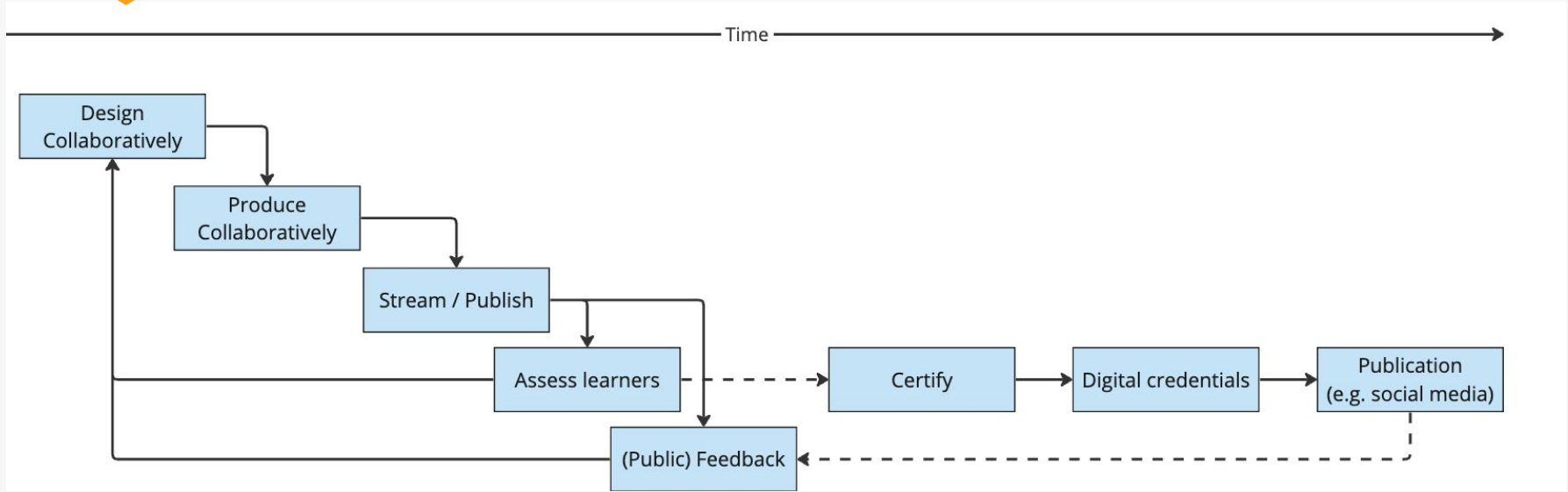


3

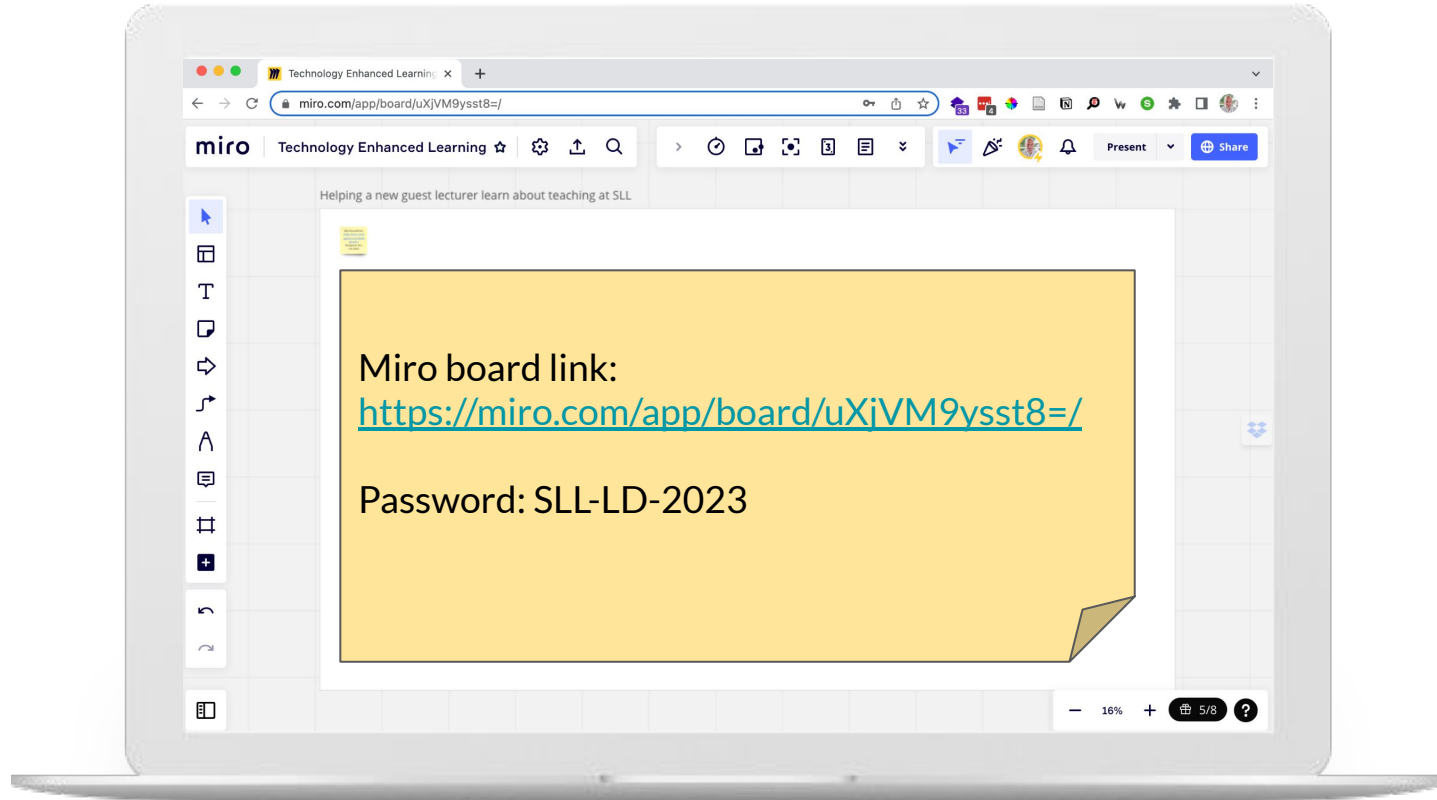
Platforms & Tools for Each Stage of the Learning / Teaching Process



Design

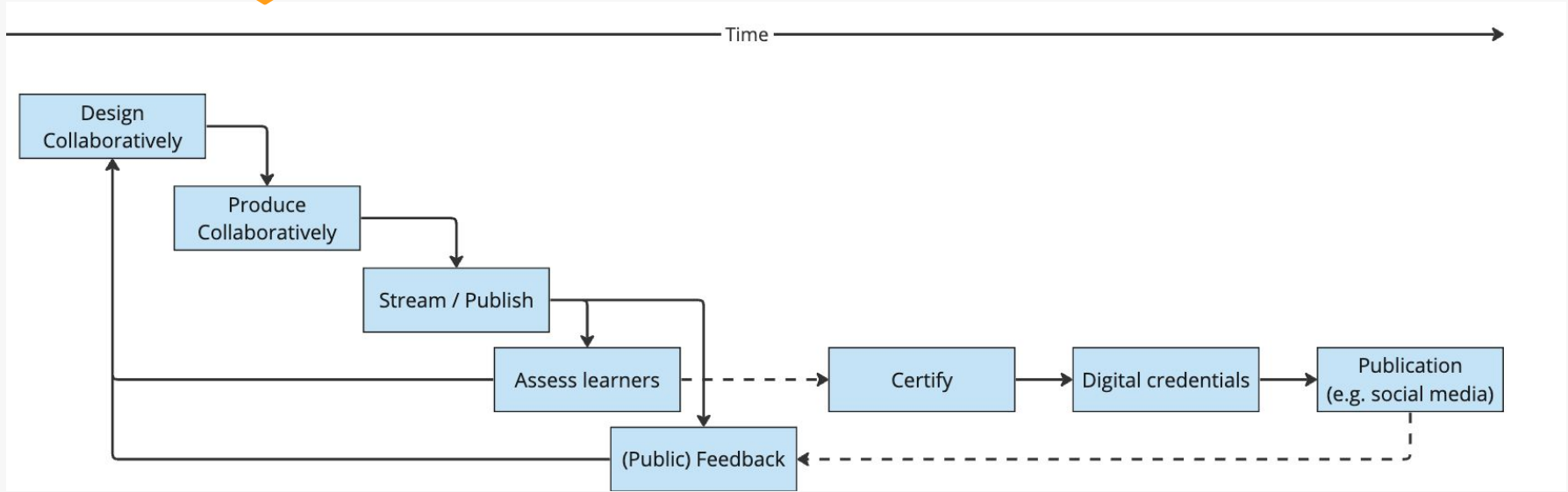


Collaborative design

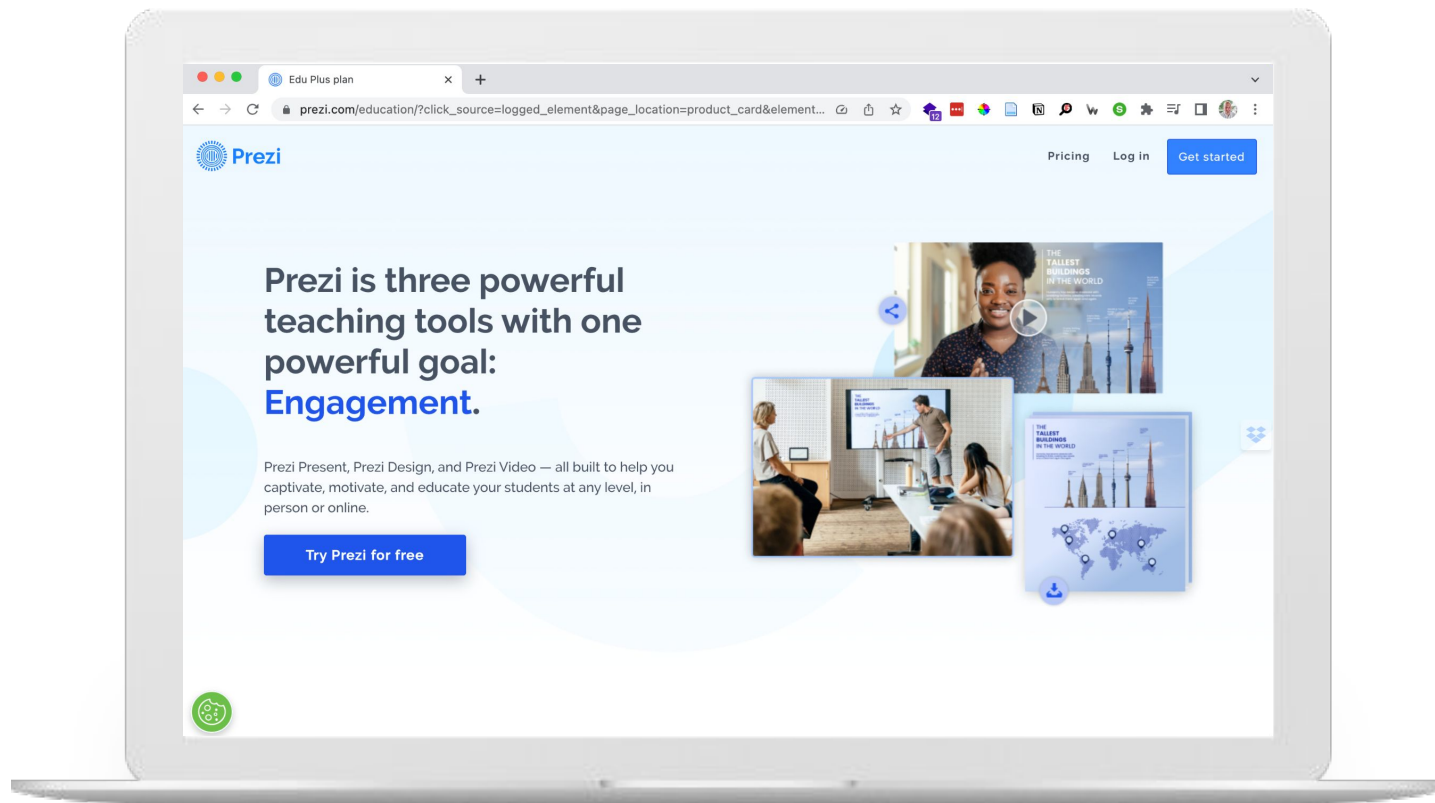




Produce

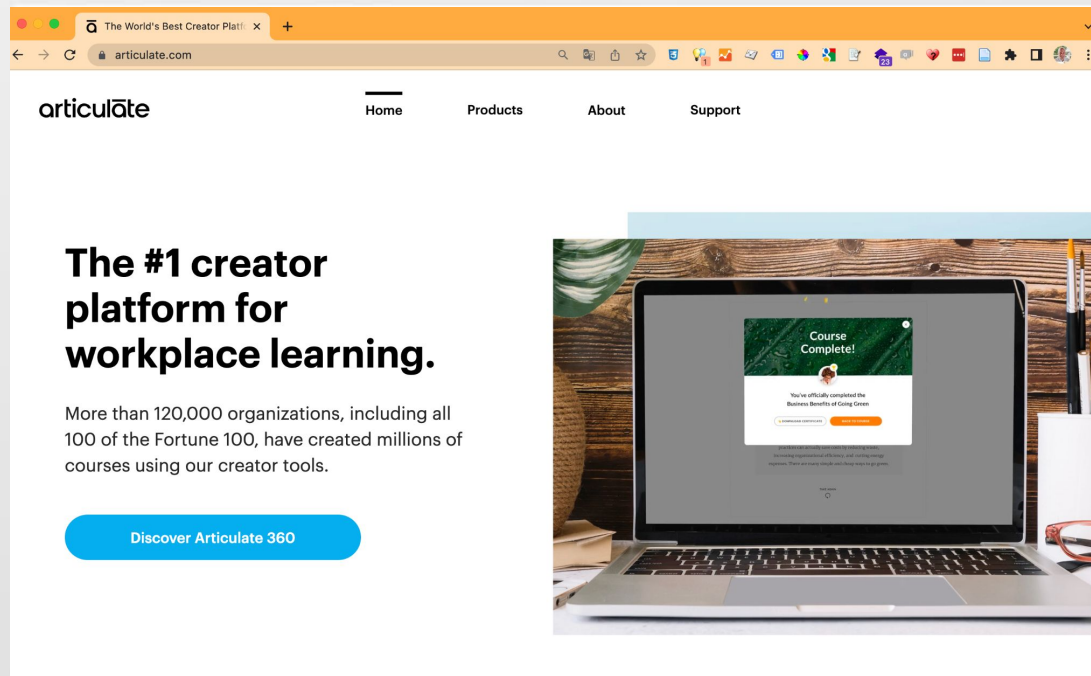


Prezi for educational purposes

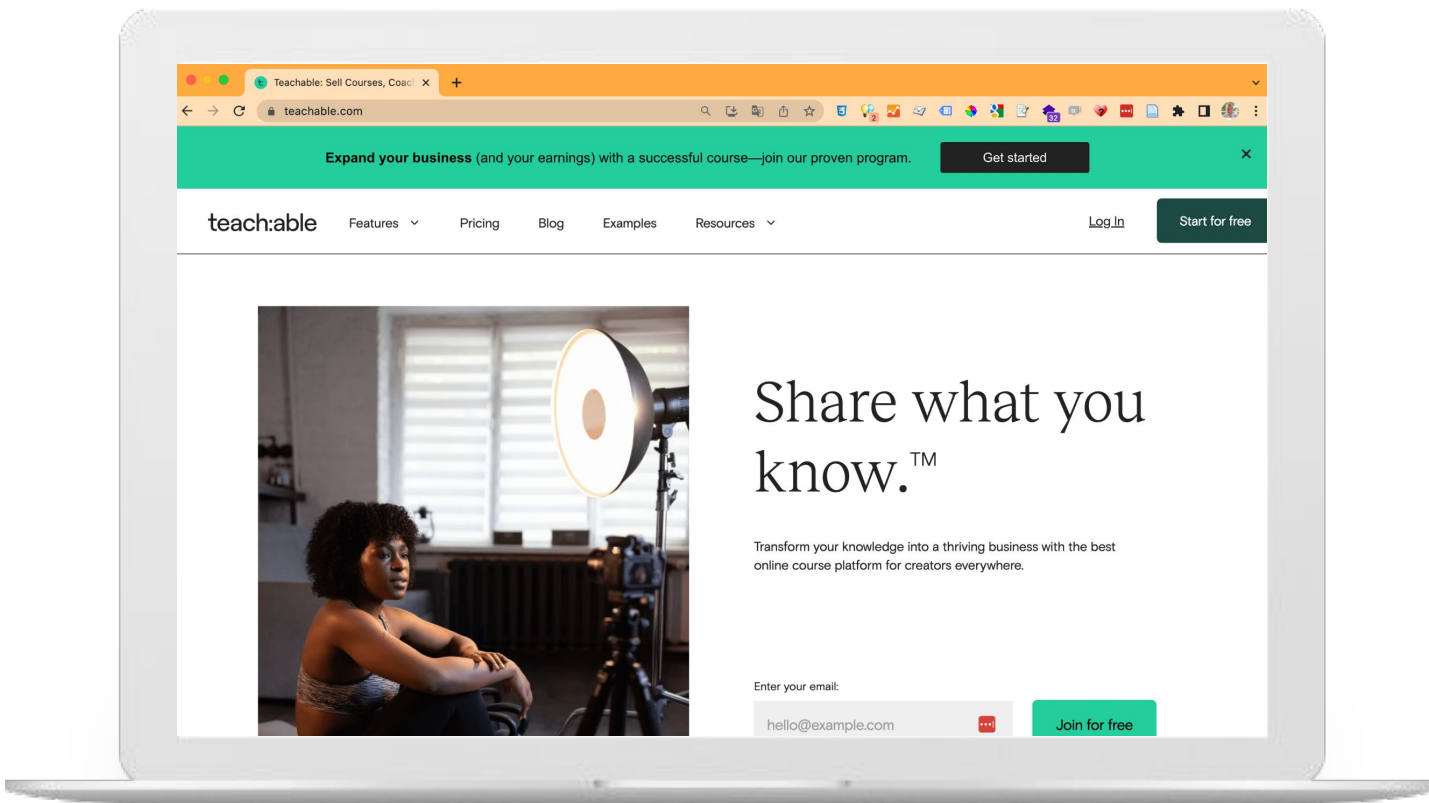




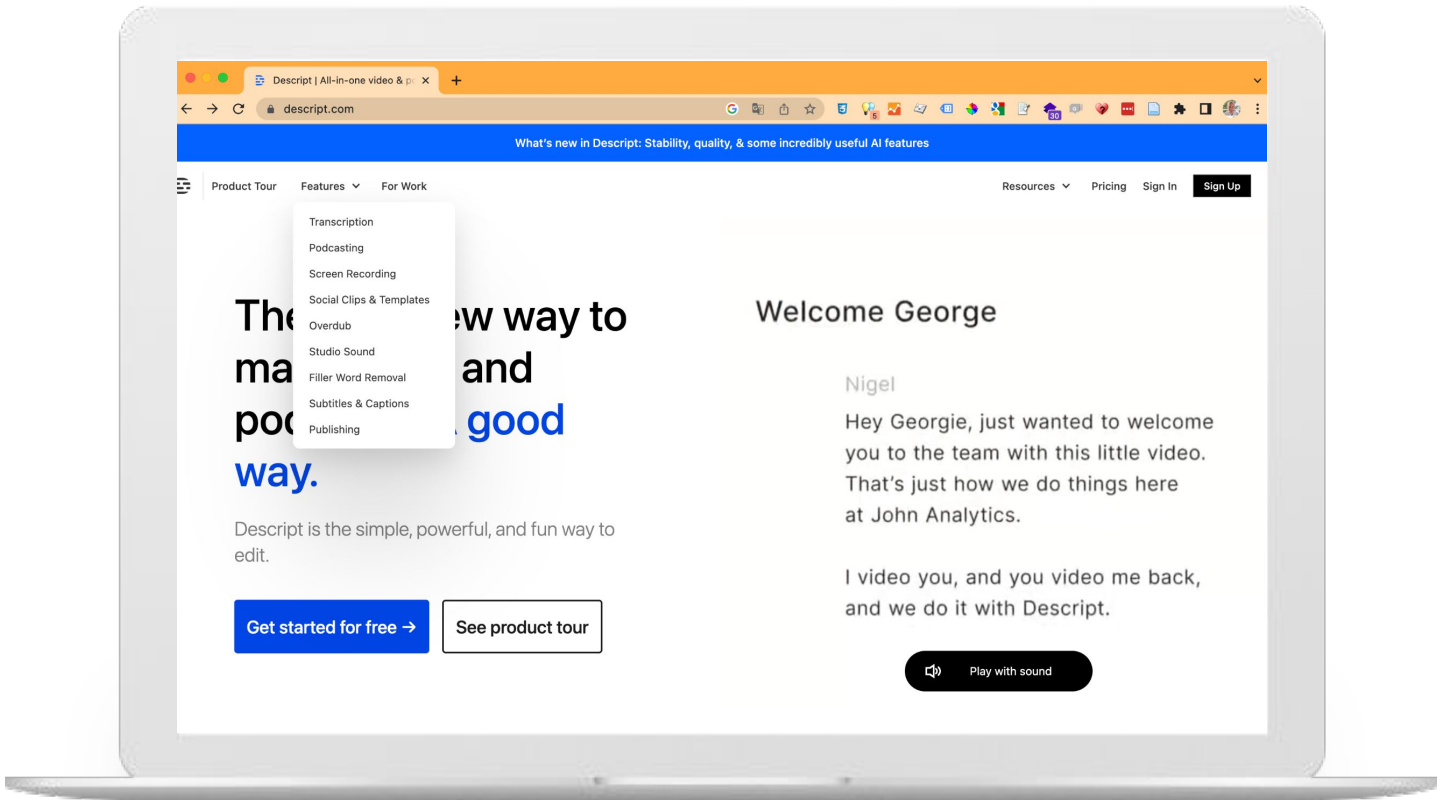
Articulate



Teachable

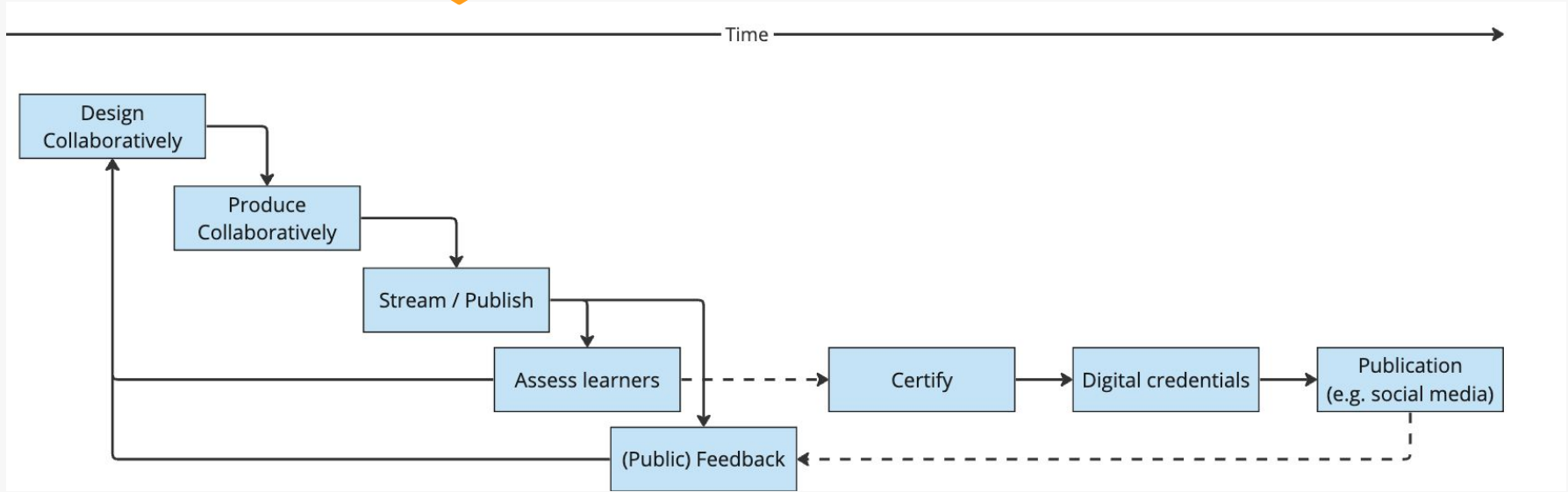


Descript: production + publishing





Stream / Publish



Zoom: streaming + recording

zoom

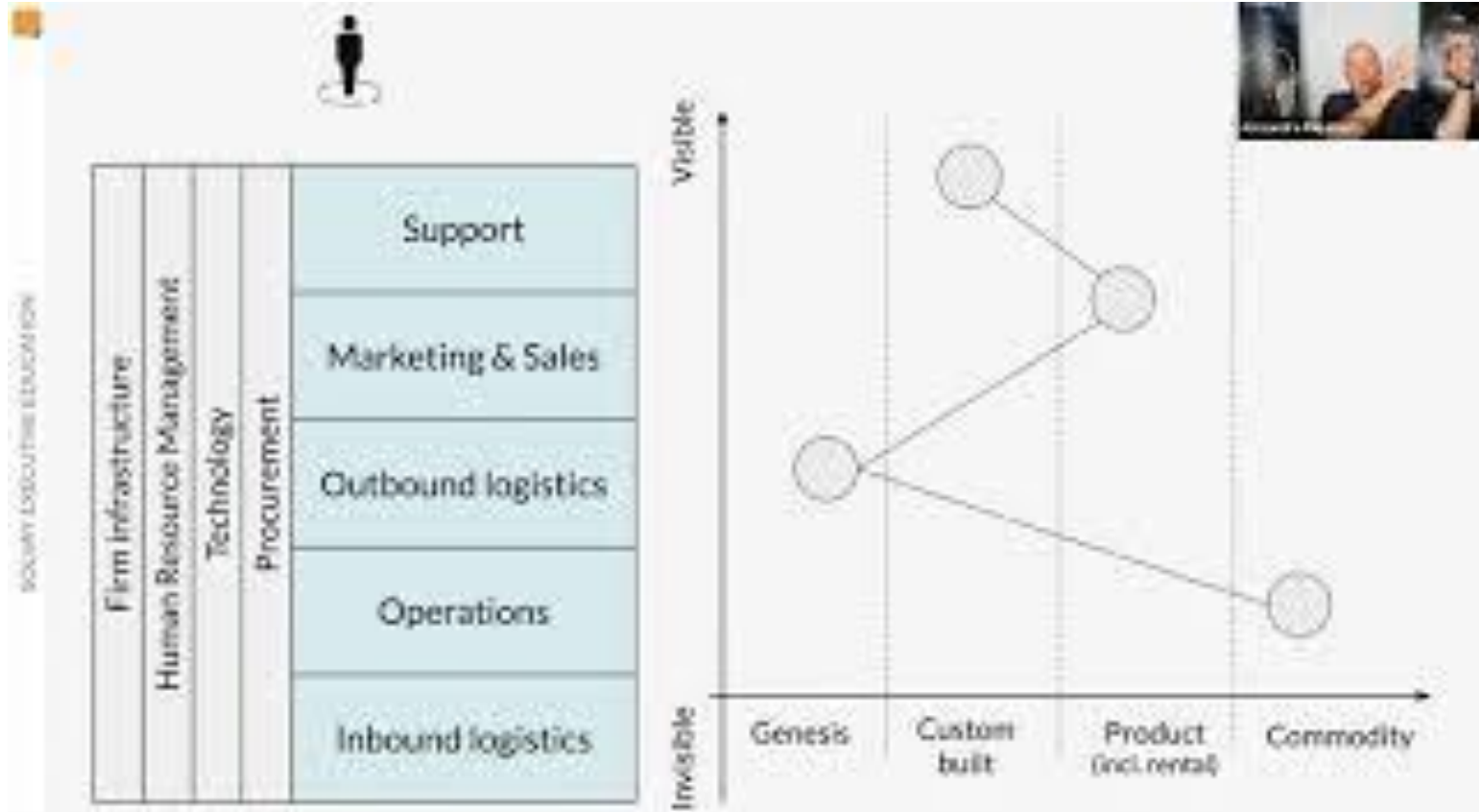
MEETINGS

VS

WEBINAR



Class extension with video hosted on YouTube



Making the video accessible but not indexed

The screenshot shows the YouTube Studio interface for editing a video. The main area is titled "Video details" and contains several sections:

- Title (required):** A text input field with a redacted title.
- Description:** A text input field with the placeholder text "Tell viewers about your video (type @ to mention a channel)".
- Thumbnail:** A section for selecting or uploading a thumbnail image. It shows a "Upload thumbnail" button and a preview of the video thumbnail.

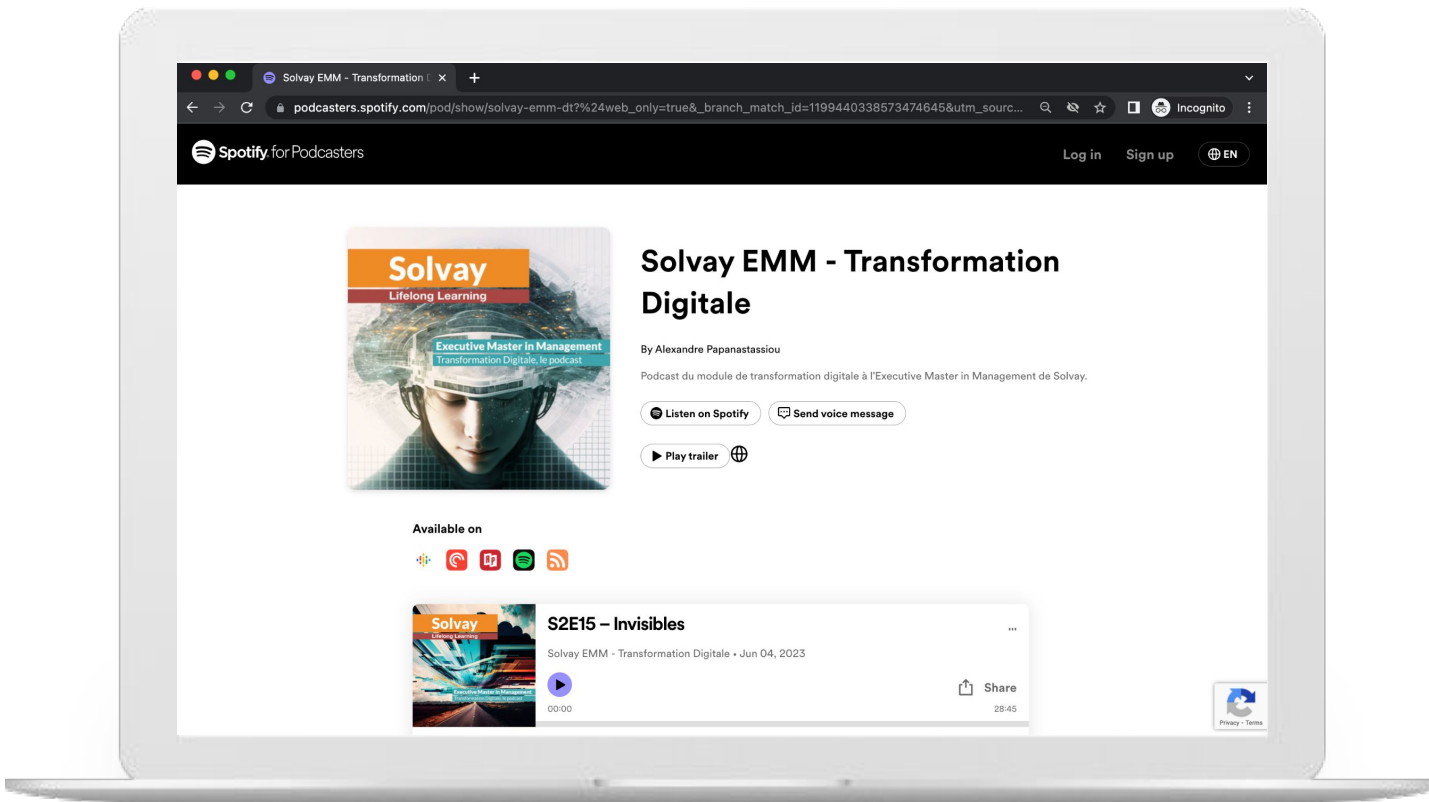
On the right side, there is a "Privacy" dropdown menu with the following options:

- Save or publish
- Private
- Unlisted
- Public
- Set as instant Premieres

Below the "Save or publish" section, there is a "Schedule" option with a radio button.

At the bottom right, there is a "Restrictions" button and a "DONE" button.

Podcasting as add-on to a course





INTERNAL LOGGING ACTIVITY CAPS

Augmented reality helmets for in-field work

65% COMPLETE

WORK REPORTING
45/75 LODGED

Meta's Vision

Using virtual reality as part of the teaching / learning process to enable learners to access the closest thing to rare situations.

Low cost per iteration, immersive learning, low impact of errors.



REUTERS



slido

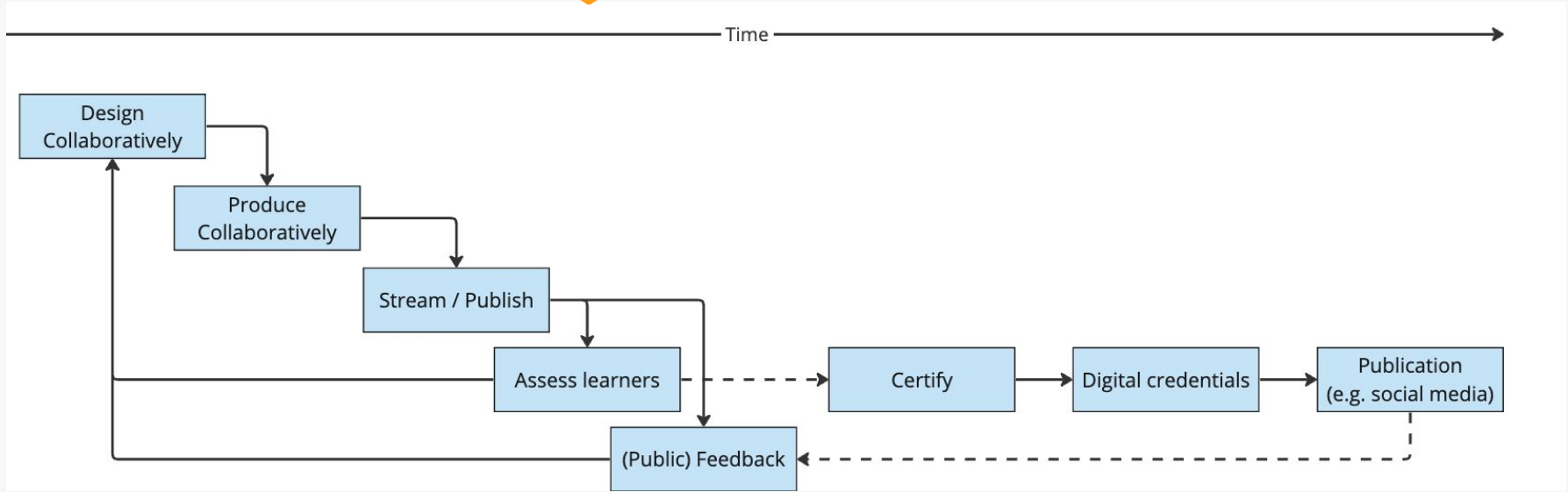


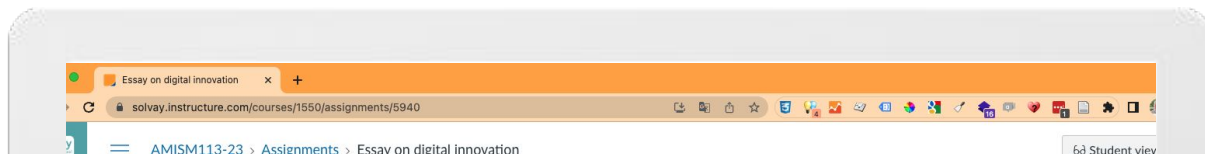
How would you feel about teaching in virtual reality (e.g. Metaverse)?

① Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.



Assess

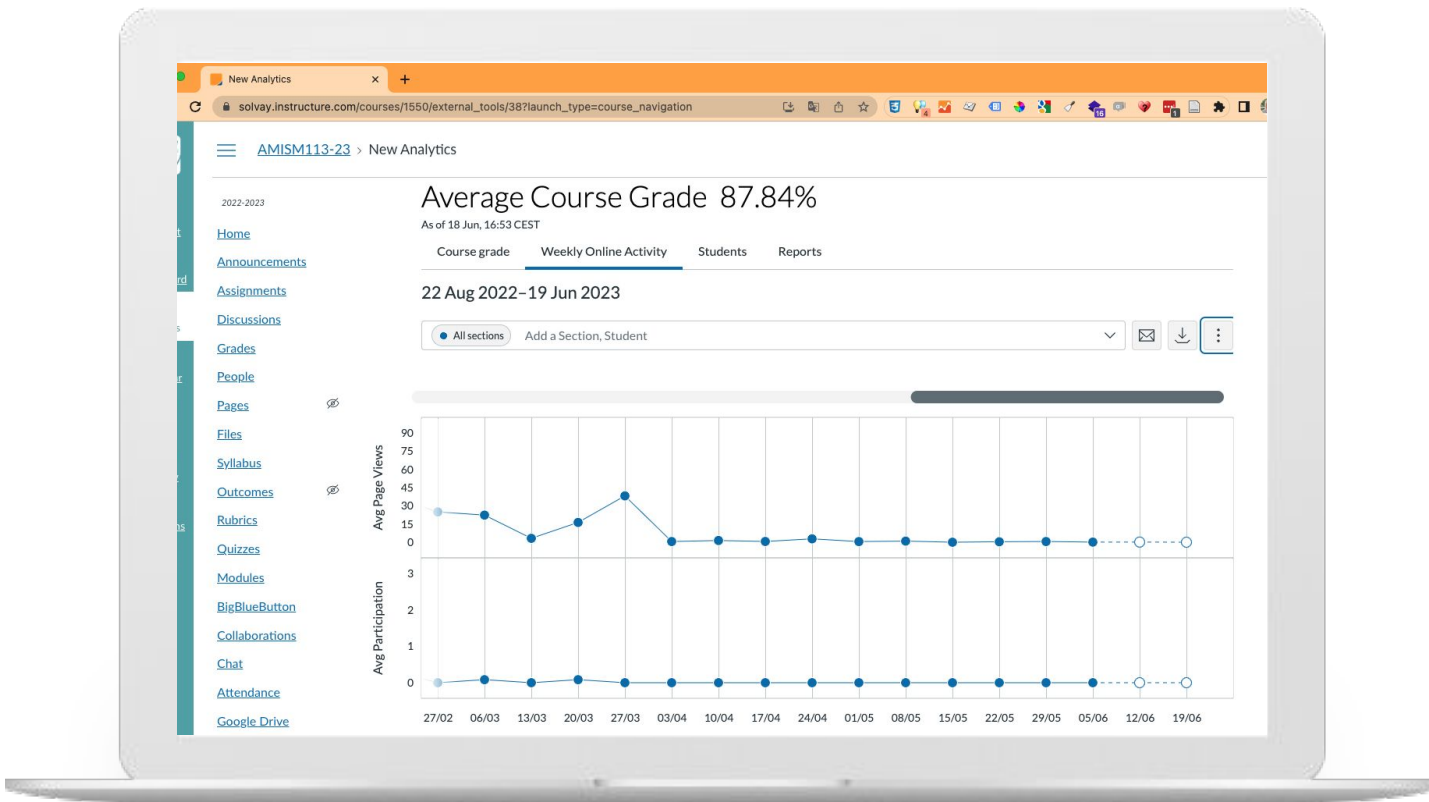









You are to deliver:

1. a version of the main essay produced with the help of ChatGPT (700 words)
2. a research-based version produced by yourself, either independently or as an iteration of the content given by ChatGPT. You should mention sources using proper academic citation style. In addition to outside sources, you should also include any primary research you have conducted, such as interviews with industry experts or case studies of companies. (700 words)
3. in the form of a separate essay of 400 to 500 words:
 - an analysis of the quality of content produced with ChatGPT
 - your conclusion on risks and opportunities stemming from the use of generative AI for this kind of academic work





-  Dashboard
-  Online Plagiarism
-  Side By Side Difference
-  Bulk Comparison
-  Settings

Activated
Registered To Professional
✓ 7.0.0

[< Back](#)


Report

Content similarity detailed highlighted report.



1
A student is primarily an person. enrolled in a school. or
other educational. institution who attend classes in a
course to attain the appropriate. level of mastery. of an
subject under 3 guidance of an instructor and who
devotes time. outside class to do whatever. activities
the instructor assigns that are necessary either for class
preparation or 2 submit evidence of progress towards
that mastery. In the broader sense, a student is anyone
who applies themselves to the intensive intellectual
engagement with few matters necessary to master it as
parts of some practical affair in which such mastery are
basic or decisive.

Similarities



Overall Similarity
93%

Date : Aug 11, 2020

Words : 102

Sources : 3

1	http://en.wikipedia.org INTERNET	36%
2	http://en.wikipedia.org INTERNET	32%
3	http://en.wikipedia.org INTERNET	25%

Computer Science & Information Technology (CS & IT)

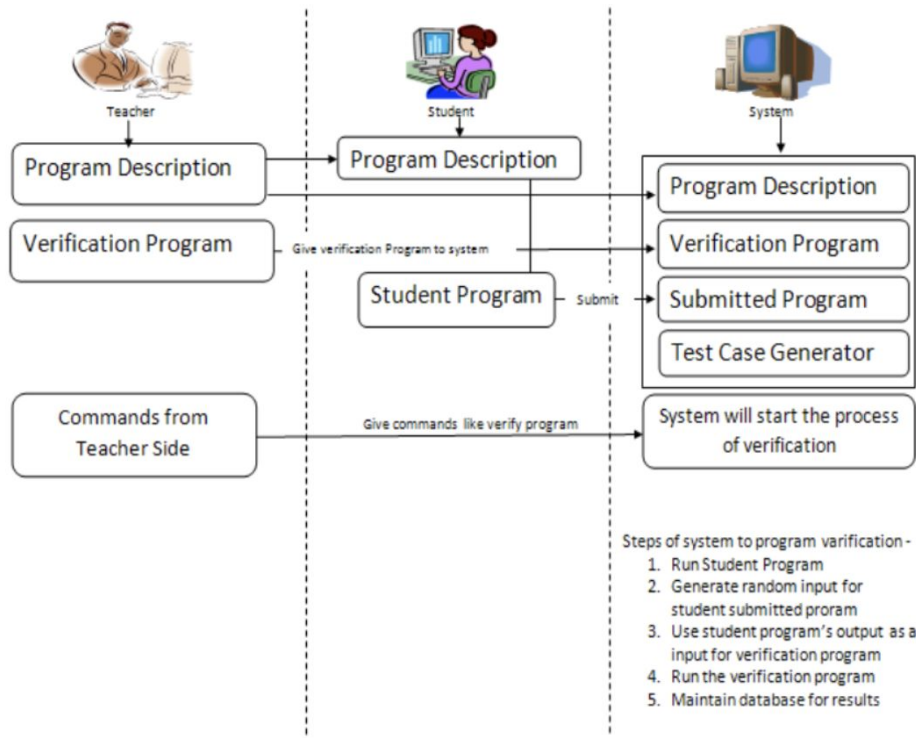
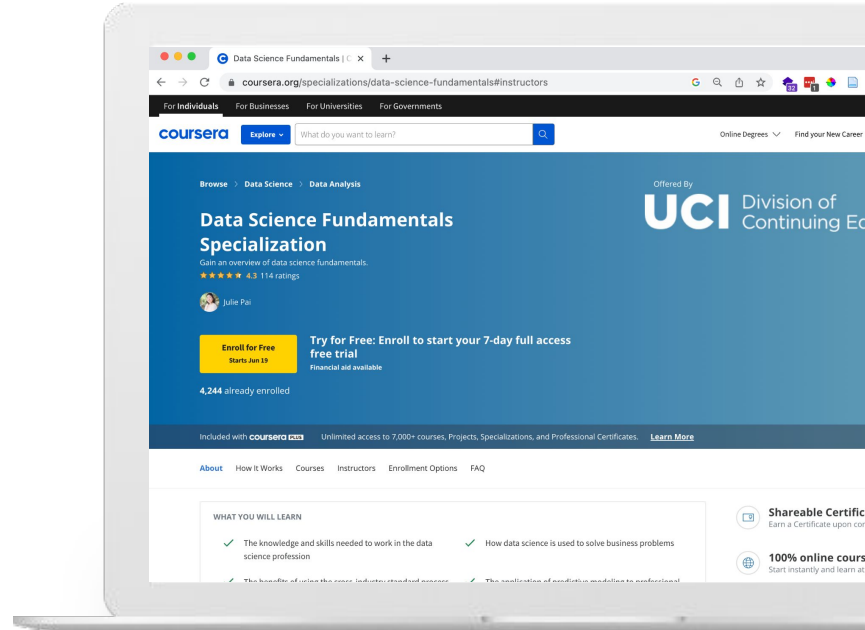
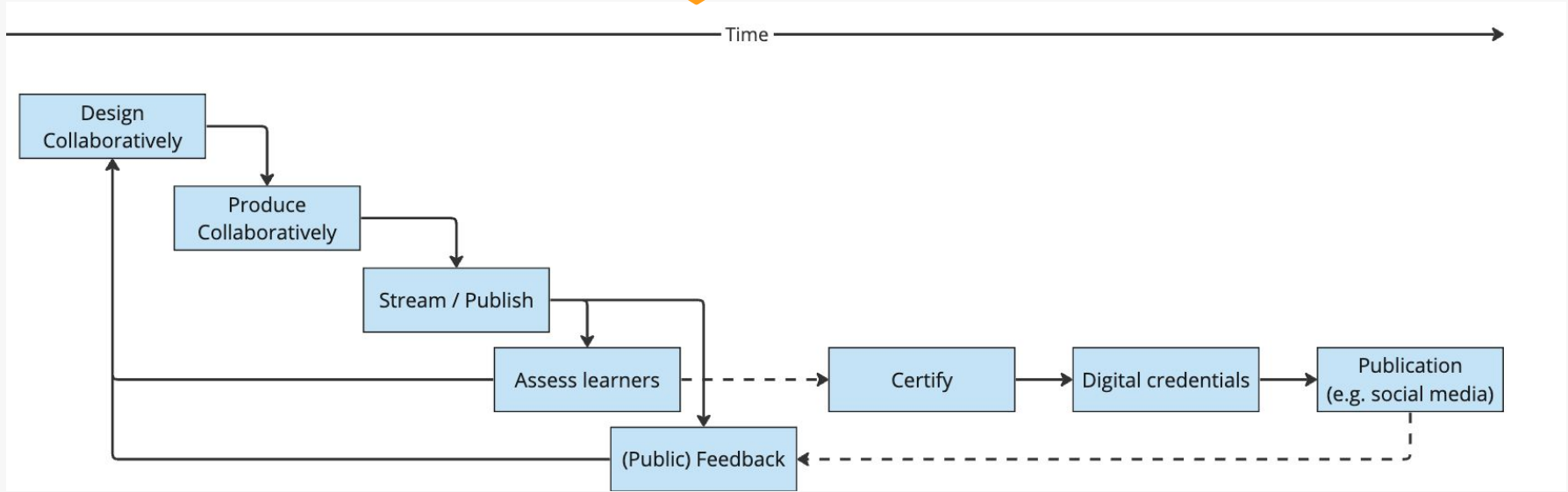


Figure 5. Proposed Assignment Assessment System



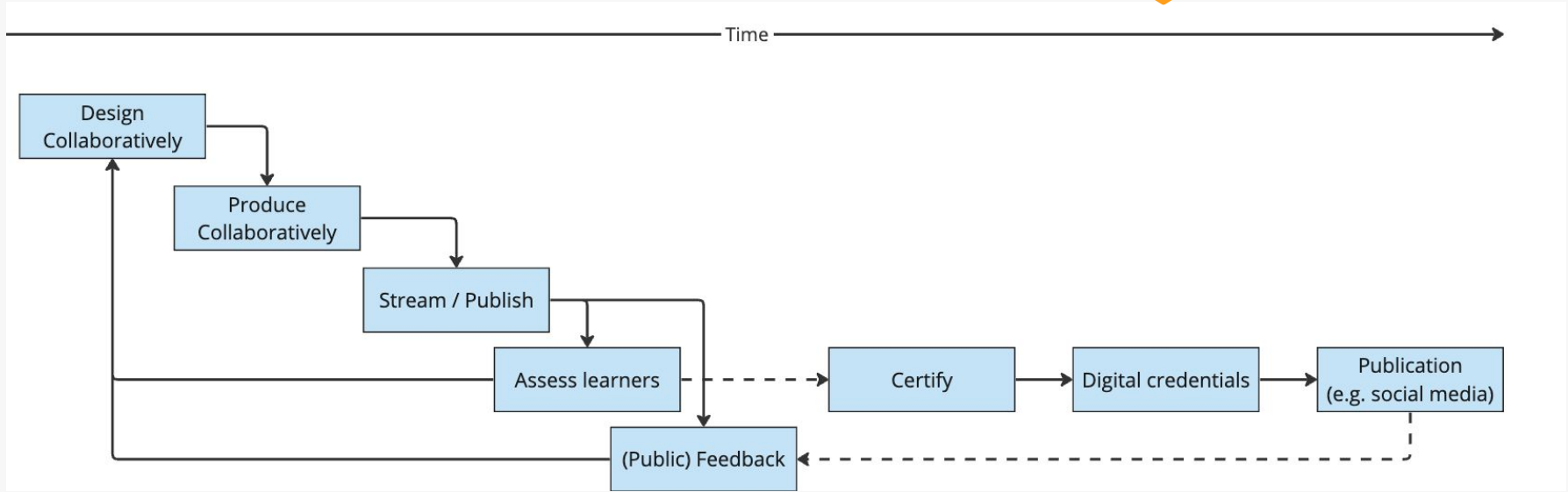


Feedback

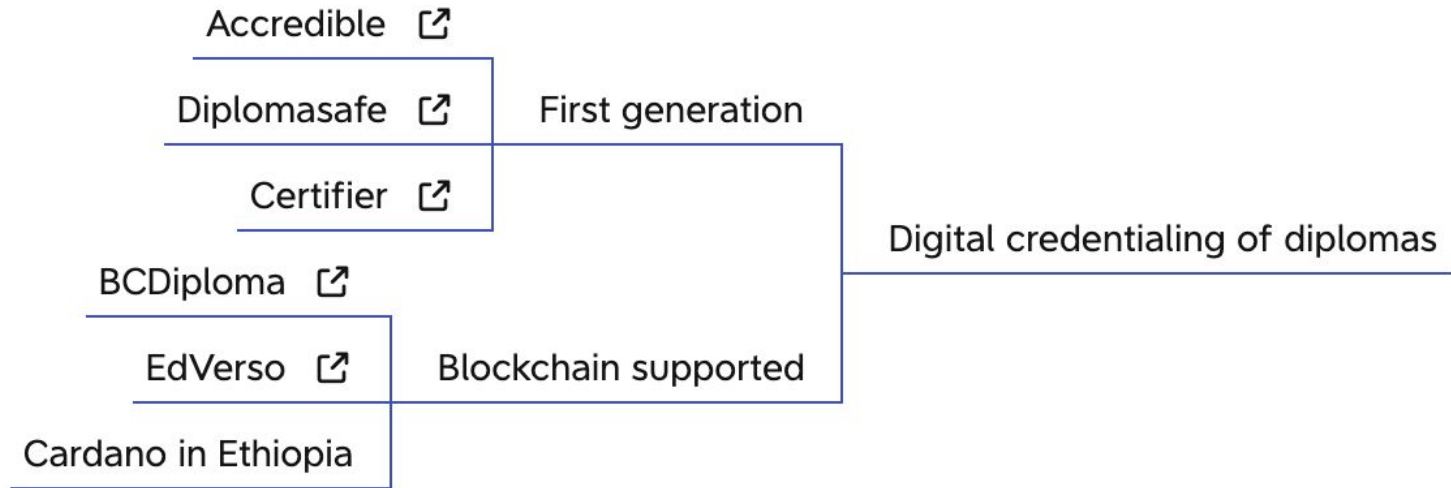




Digital cred.



Digital credentialing of diplomas





Typical configurations

Interactive Class In Person

Slideware

+

**Engagement
Tool**

- GSides
- Keynote
- Powerpoint
- ...

- Slido
- Wooclap
- ...

Interactive Class In Person (option 2)

**Mindmapping
in pres mode**

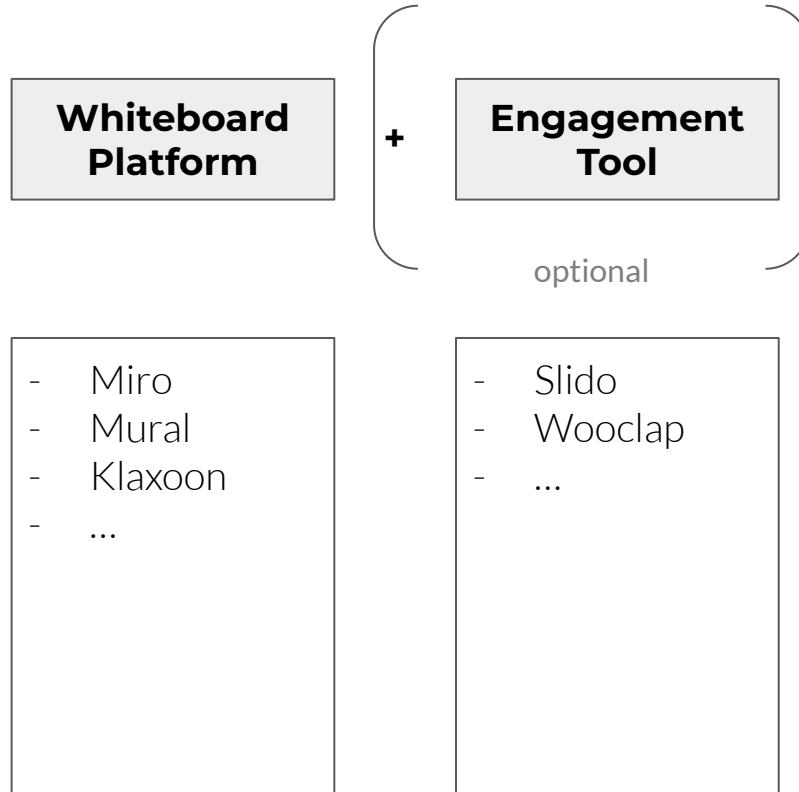
+

**Engagement
Tool**

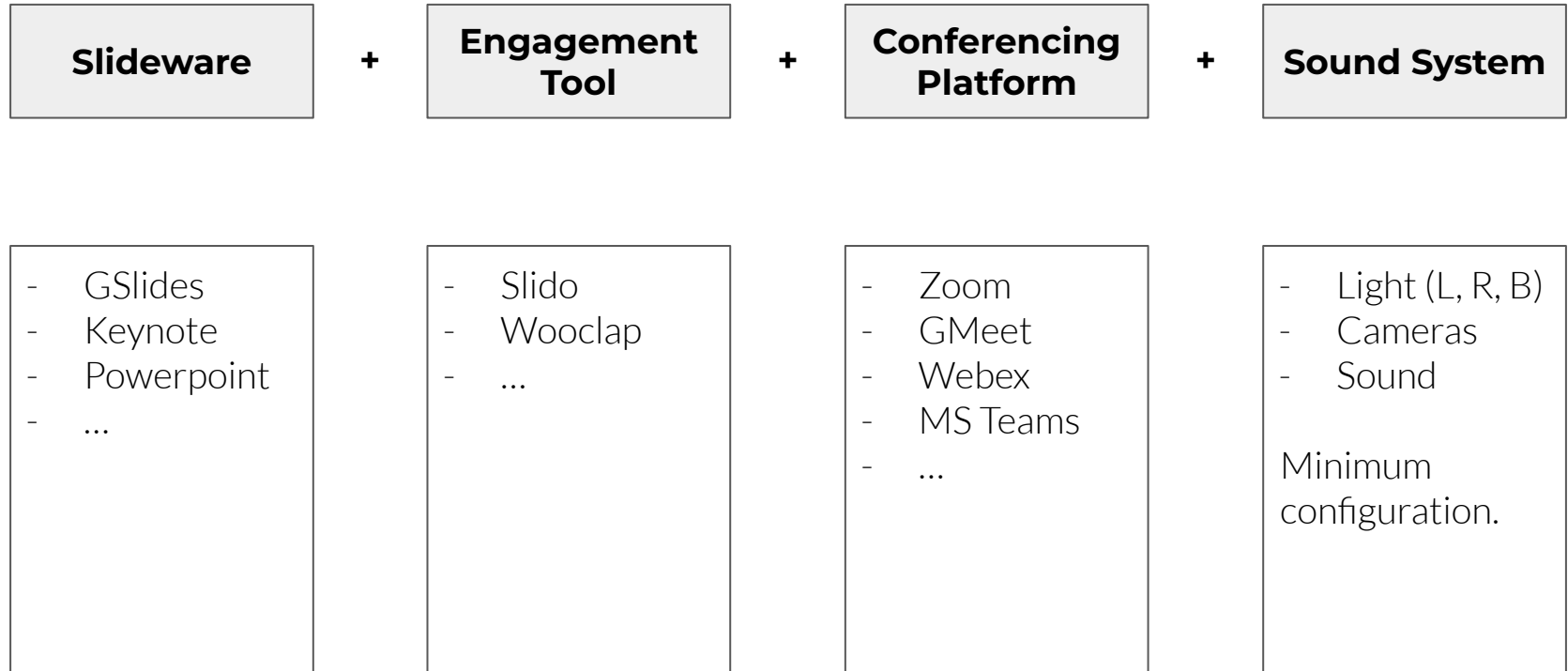
- Xmind
- Free Mind
- Mindmeister
- ...

- Slido
- Wooclap
- ...

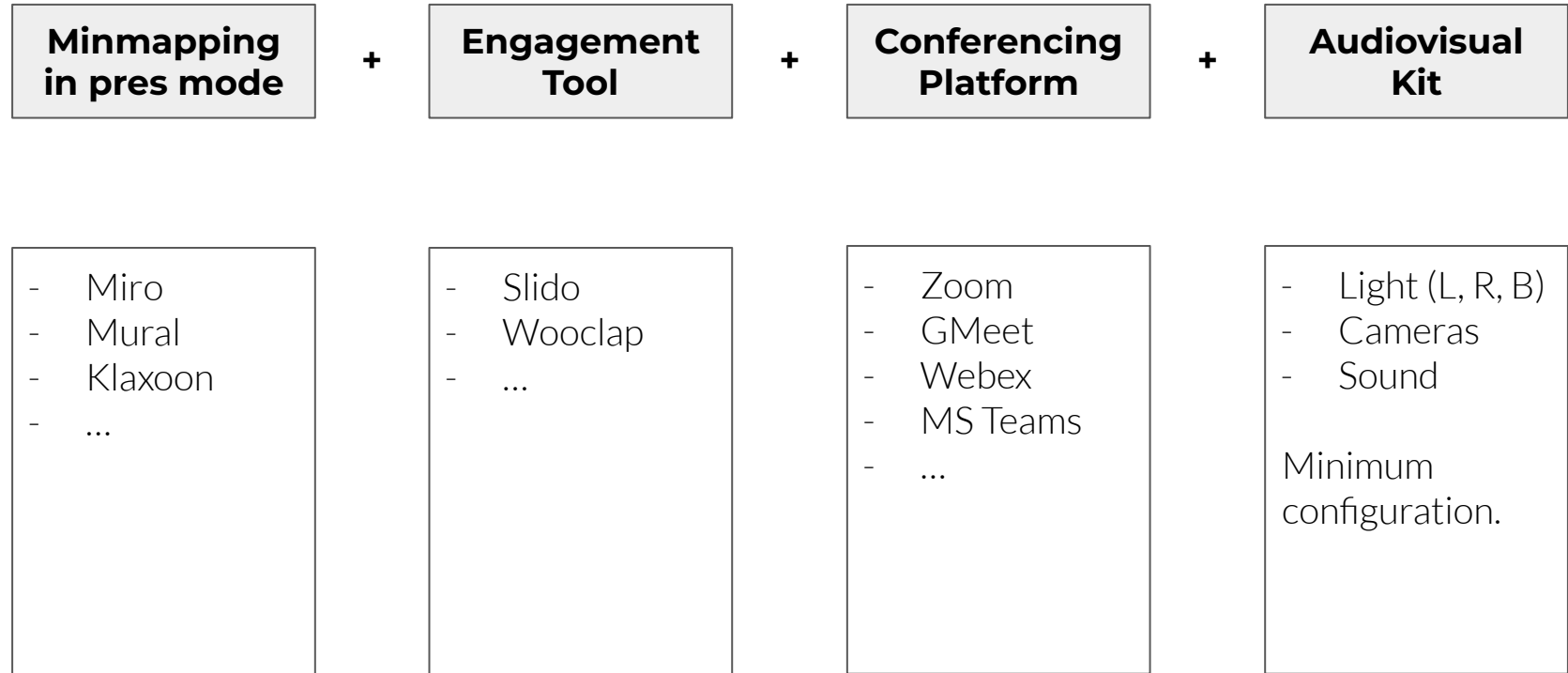
Interactive Class In Person (option 3)



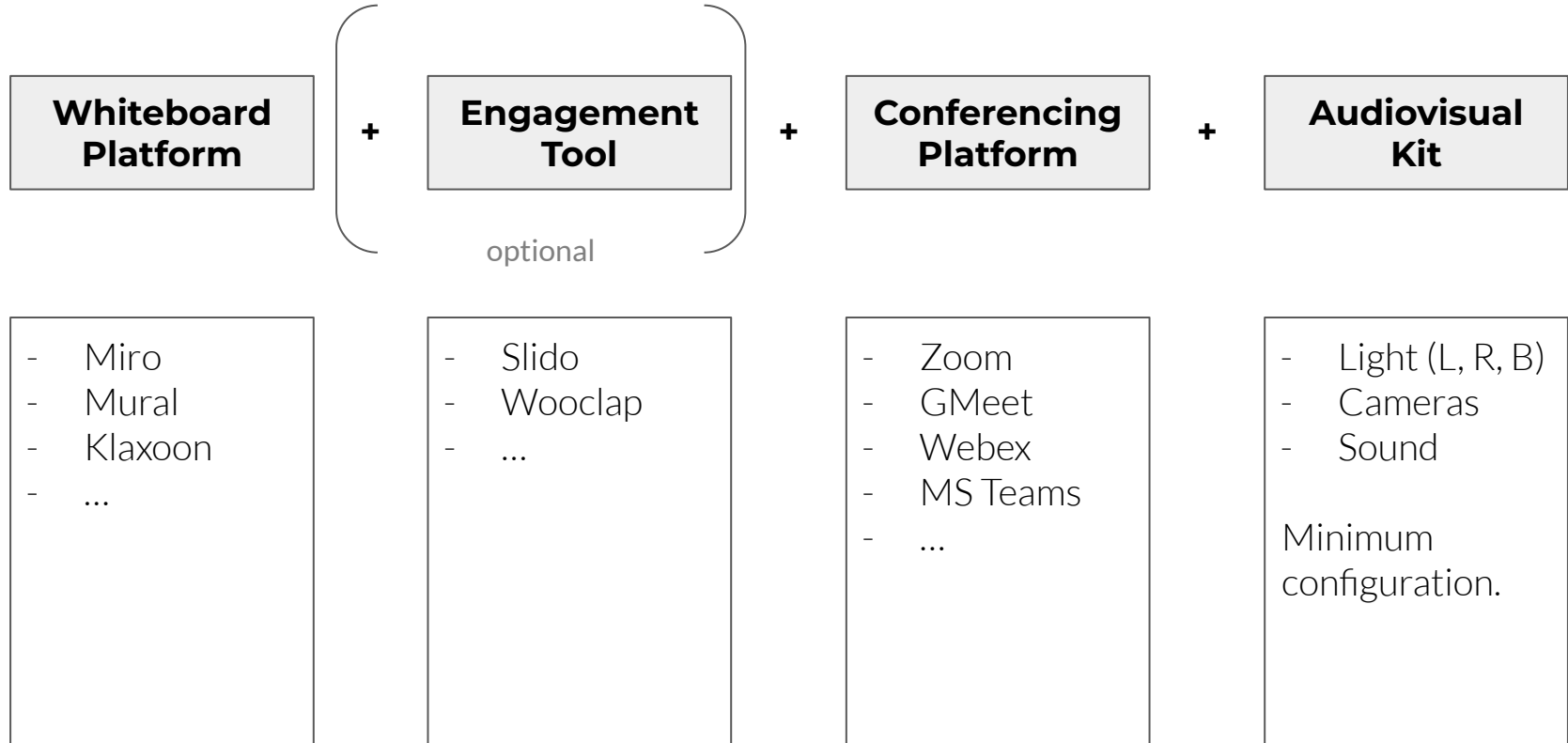
Recorded Interactive Class in Person



Recorded Interactive Class in Person (option 2)



Recorded Interactive Class in Person (option 3)



Interactive Class Online

Slideware

+

**Engagement
Tool**

+

**Conferencing
Platform**

+

Sound & Light

- GSides
- Keynote
- Powerpoint
- ...

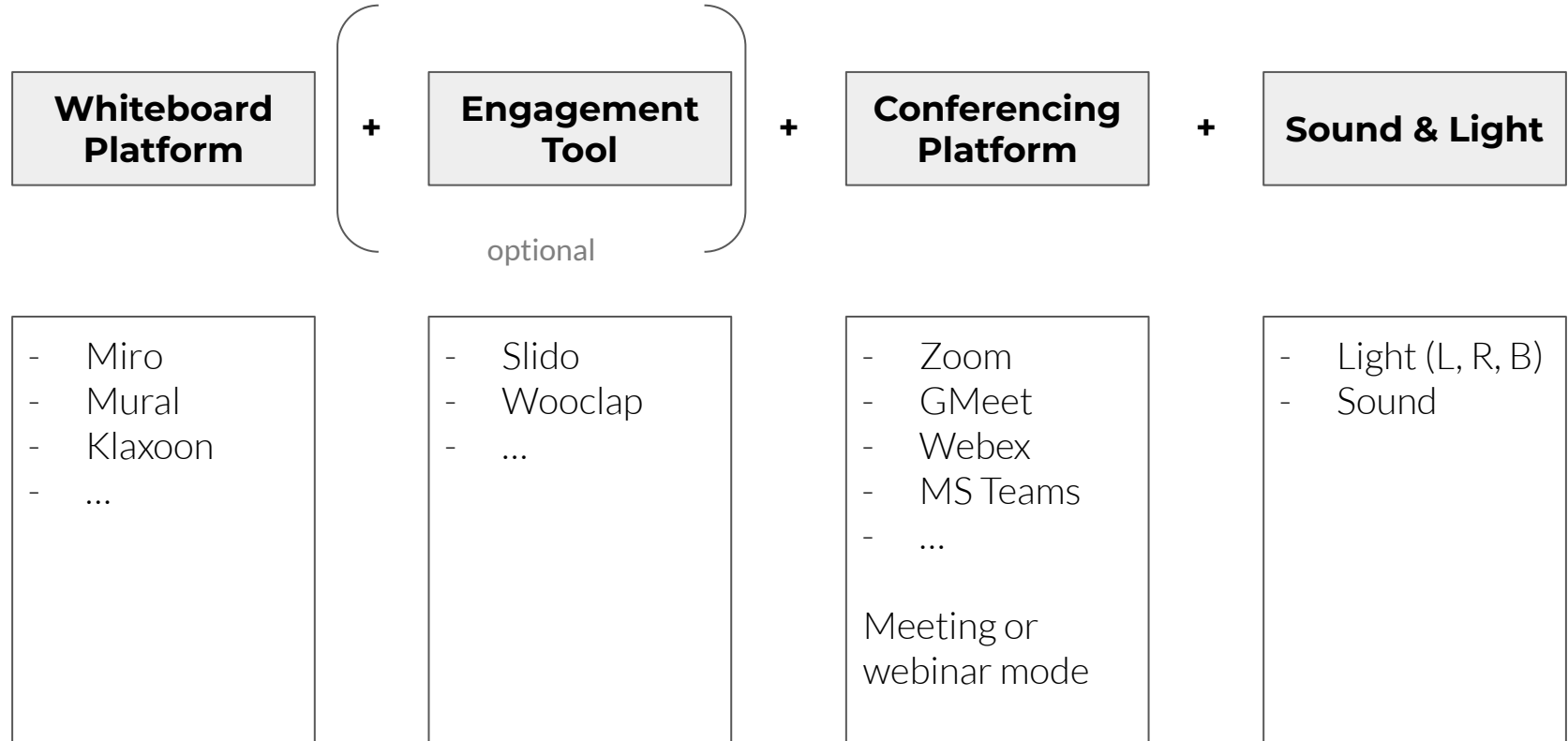
- Slido
- Wooclap
- ...

- Zoom
- GMeet
- Webex
- MS Teams
- ...

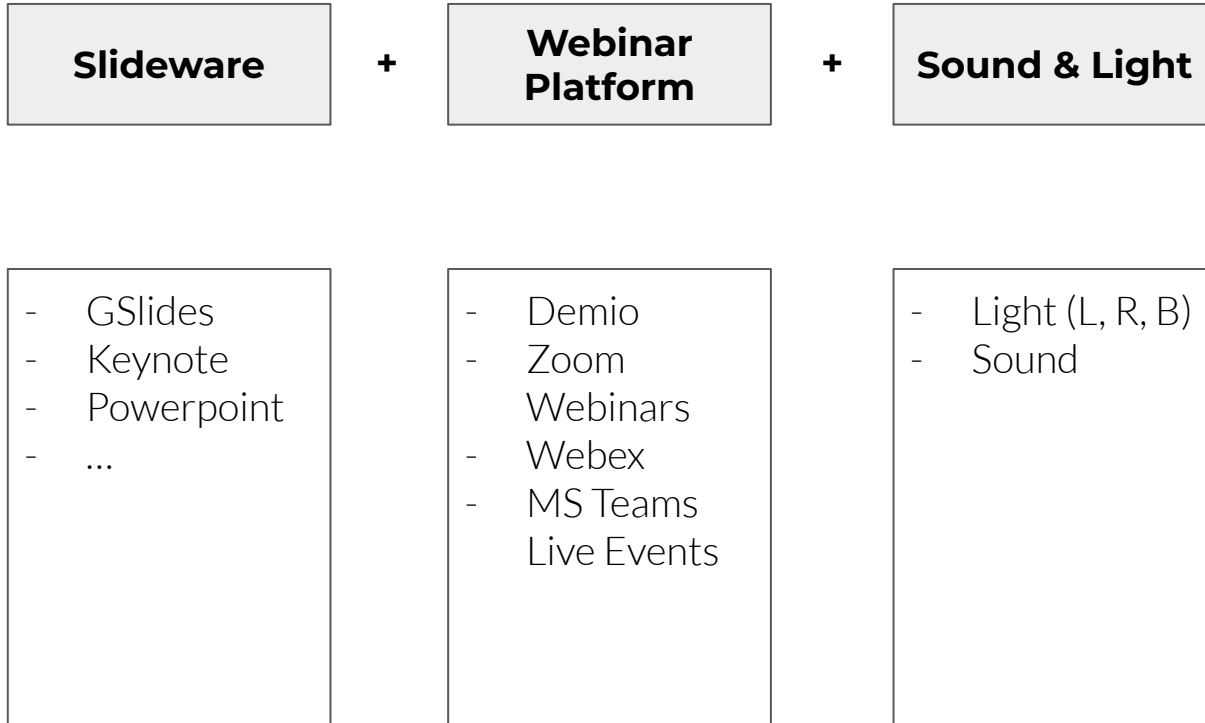
Meeting or
webinar mode

- Light (L, R, B)
- Sound

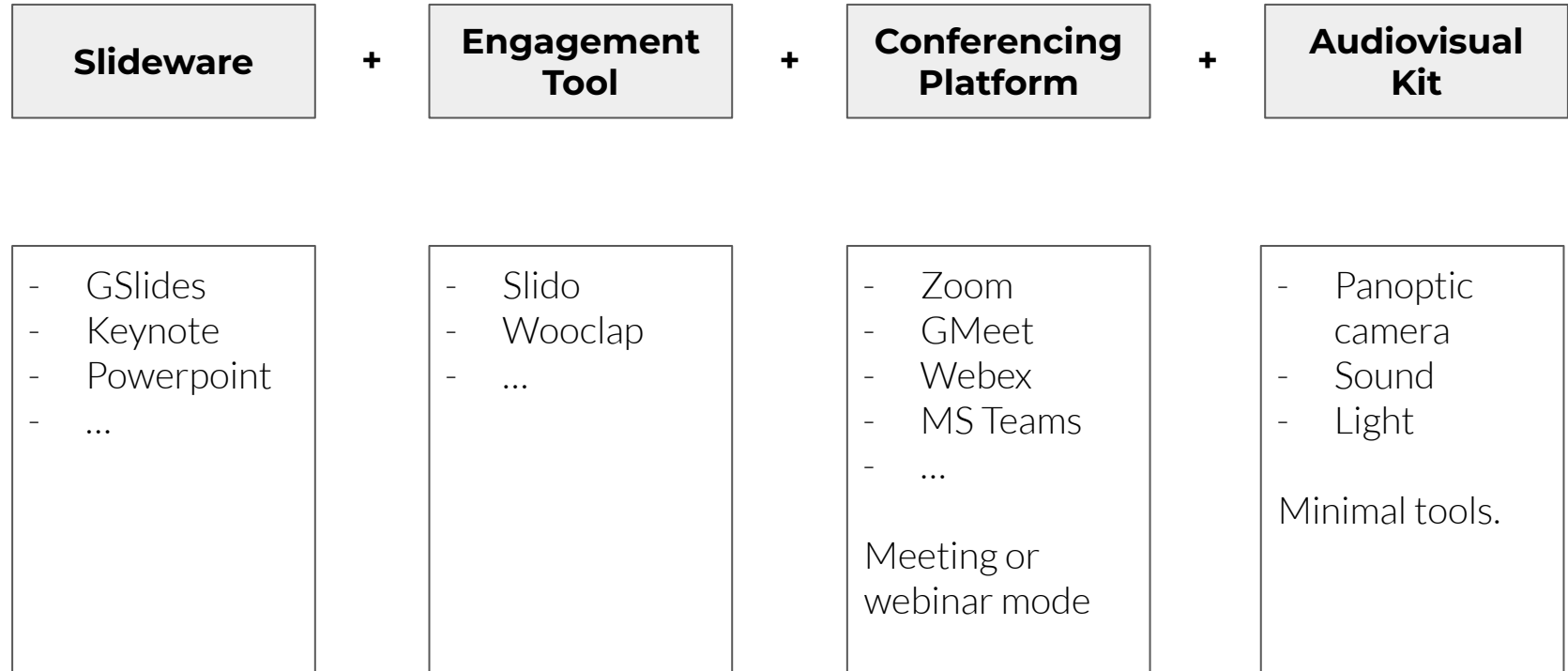
Interactive Class Online (option 2)



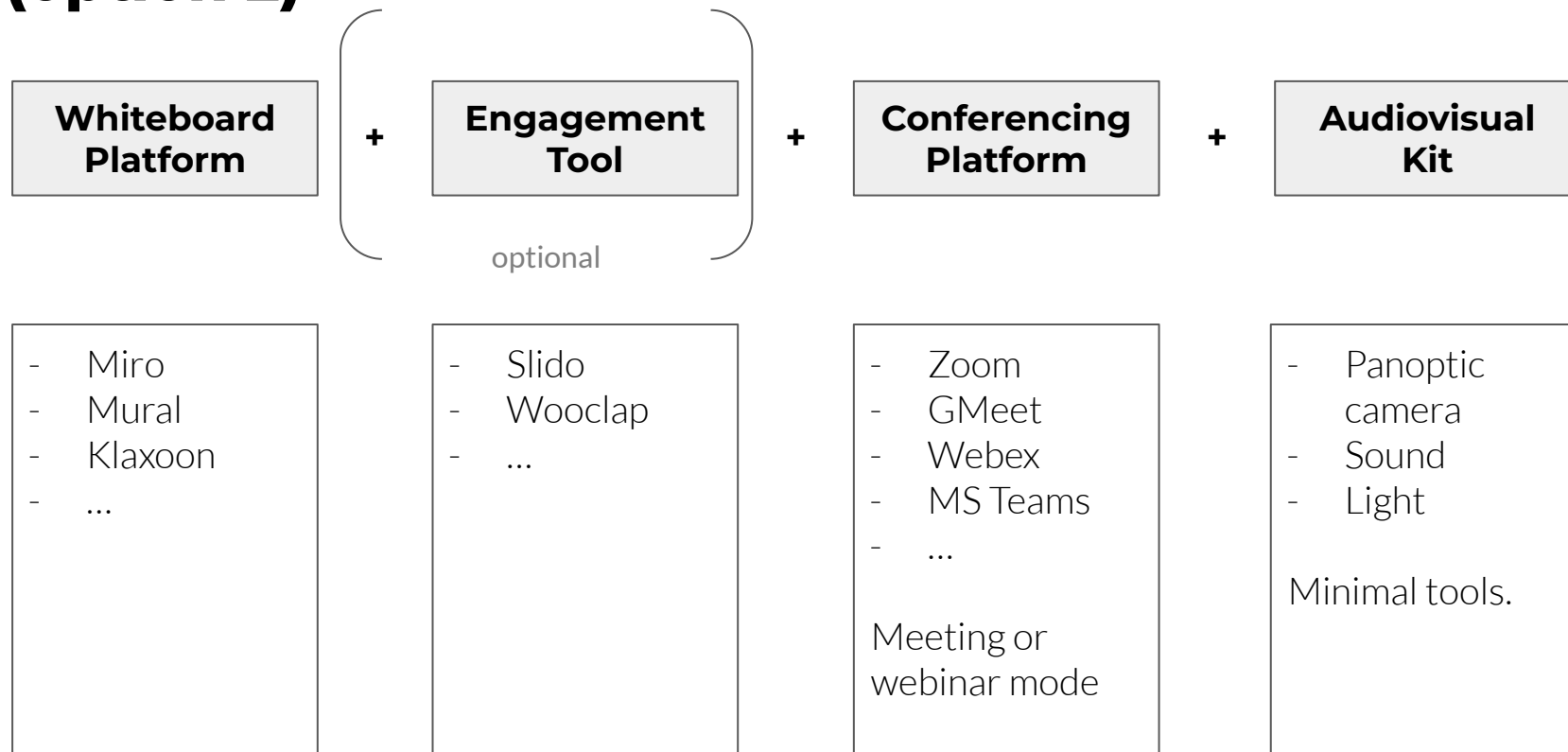
Webinar



Hybrid Class with Mixed Audience & Teachers



Hybrid Class with Mixed Audience & Teachers (option 2)





Conclusions

“I am always ready to learn
although I do not always like
being taught.”

Winston Churchill

slido



Audience Q&A Session

- ① Click **Present with Slido** or install our [Chrome extension](#) to show live Q&A while presenting.



Thank You

ULB



Solvay Lifelong Learning
BRUSSELS SCHOOL. ECONOMICS. MANAGEMENT