



Teacher Innovation Laboratory - Adoption of Digital innovation through co-design



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iHub4Schools

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Introduction of Teacher Innovation Laboratory



AIMS

The aim of the Teacher Innovation Laboratory is to support teachers' adoption and scaling of the educational innovation in classroom settings in school-university partnership.



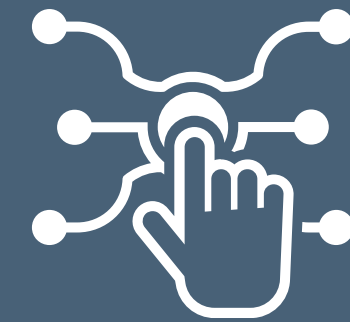
DESCRIPTION

Through a 3-12 month long program, teachers will co-create innovative lesson designs together with researchers, pilot these, monitor the process and reflect on the experience.



CONTEXT

Monthly contact day of the training is about co-creation by focusing on aspects of digital innovation, didactics, educational psychology and inquiry. Between the contact days teachers pilot the lesson design with their students.



REQUIREMENTS

Teachers need to have a laptop or tablet for co-design sessions.



Structure of the Teacher Innovation Laboratory



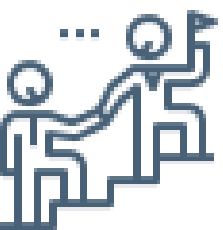
A. Introduction workshop (6h)

- a. Introduction to the digitally innovative method with the focus on integrating novel technologies and pedagogical approach (e.g. Digital Learning Resources enhancing students' engagement, Educational Robots for Motivation in Math; Outdoor learning technologies for conceptual understanding in science)
- b. Introduction to the theoretical underpinnings of students' learning processes



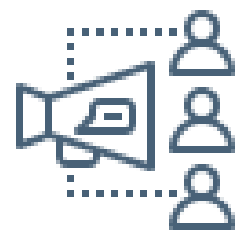
B. Development actions (3-12 months)

- a. Co-design of the lesson designs
- b. Iterative piloting, monitoring of the lesson designs in own practice
- c. Reflection about own experience



C. Reflection seminars (1x month, 6 h)

- a. Co-design sessions between teachers, researchers and university didactics to create lesson designs based on the didactic, psychological and technical underpinnings
- b. Collective reflection based on the individual piloting experience together with other teachers and university researchers

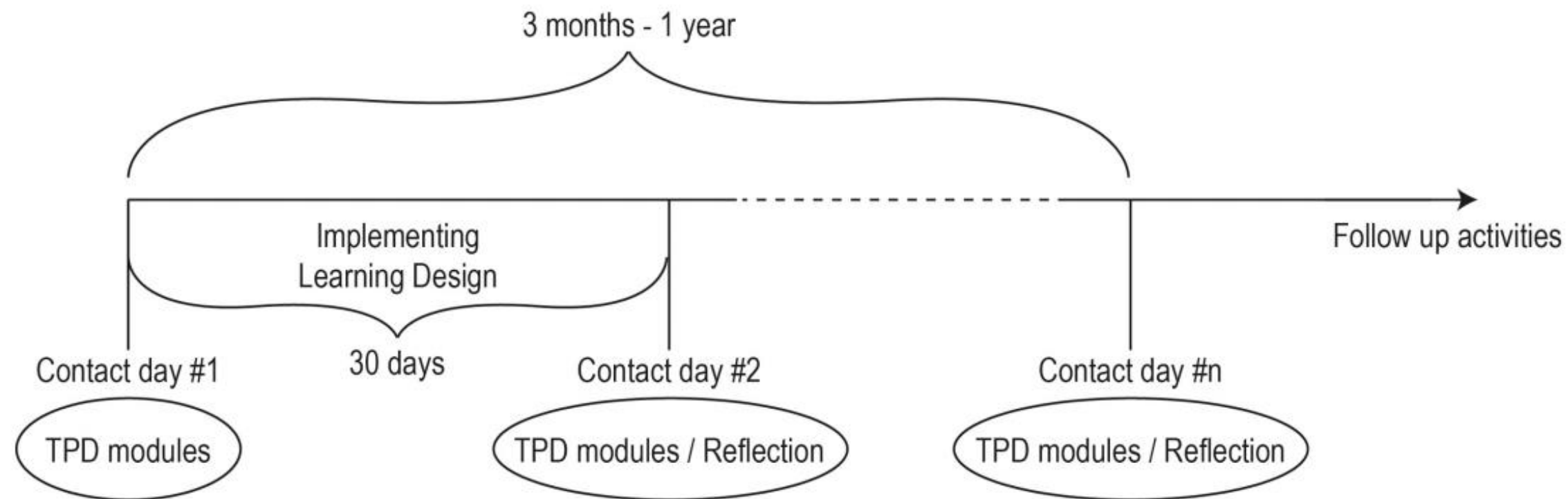


D. Final event

- a. Presentation of the final lesson designs



A. Brief introduction: Teacher Innovation Laboratory



The program is divided into contact days and intermittent implementation cycles.

During the implementation cycles, teachers are encouraged to pilot their designs, conduct inquiry activities and reflect on the experience.

Depending on the TIL format, teachers are suggested to pilot each month 1-2 lessons based on co-created lesson designs, monitor the process, gather evidence about what happened in the classroom and to analyze the data to understand the effectiveness of the implementation.



B. Co-designed Lesson designs



Teachers co-design learning design based on the pedagogical framework of innovative learning scenarios: Flipped Classroom, Project-based learning, Task-based learning, Gamified learning.

Teachers co-design digital tasks with online authoring tools to foster the development of students higher-order thinking skills and conceptual understanding

Teachers collect process-oriented data from the students after piloting lesson designs and tasks to understand the effect of the designs to students' learning

Questions Asked: 5

Your Partner: [Redacted]

YOUR PARTNER ASKED
kas nullpunktid on positiivsed

YOU CHOSE
No

YOUR PARTNER ELIMINATED
[X]

YOUR PARTNER ASKED
Kas parabool on sümmeetriline y telje suhtes

YOU CHOSE
Yes

YOUR PARTNER ELIMINATED
[X]

YOUR PARTNER ASKED
Kas haripunkti ordinaat on positiivne

yes no

[I don't know](#)

Answer your partner's question about your parabola.

Matemaatilise induksiooni meetod

No.	Name	Mastery level	Total score	Q1	Q2	Q3	Time taken	A
	Class	●	5/8	1/1	1/1	3/6	10m	
1.	Student 1	●	8/8	1/1	1/1	6/6	12m	1
2.	Student 12	●	8/8	1/1	1/1	6/6	10m	1
3.	Student 7	●	6/8	1/1	1/1	4/6	11m	2
4.	Student 9	●	6/8	1/1	1/1	4/6	9m	1
5.	Student 10	●	6/8	1/1	1/1	4/6	8m	2

Notifications

- More than half the class answered Q3 incorrectly.
- Student 4 made many rapid and incorrect attempts at more than half the tasks - they might be guessing at answers.

C. Reflection seminar(s)

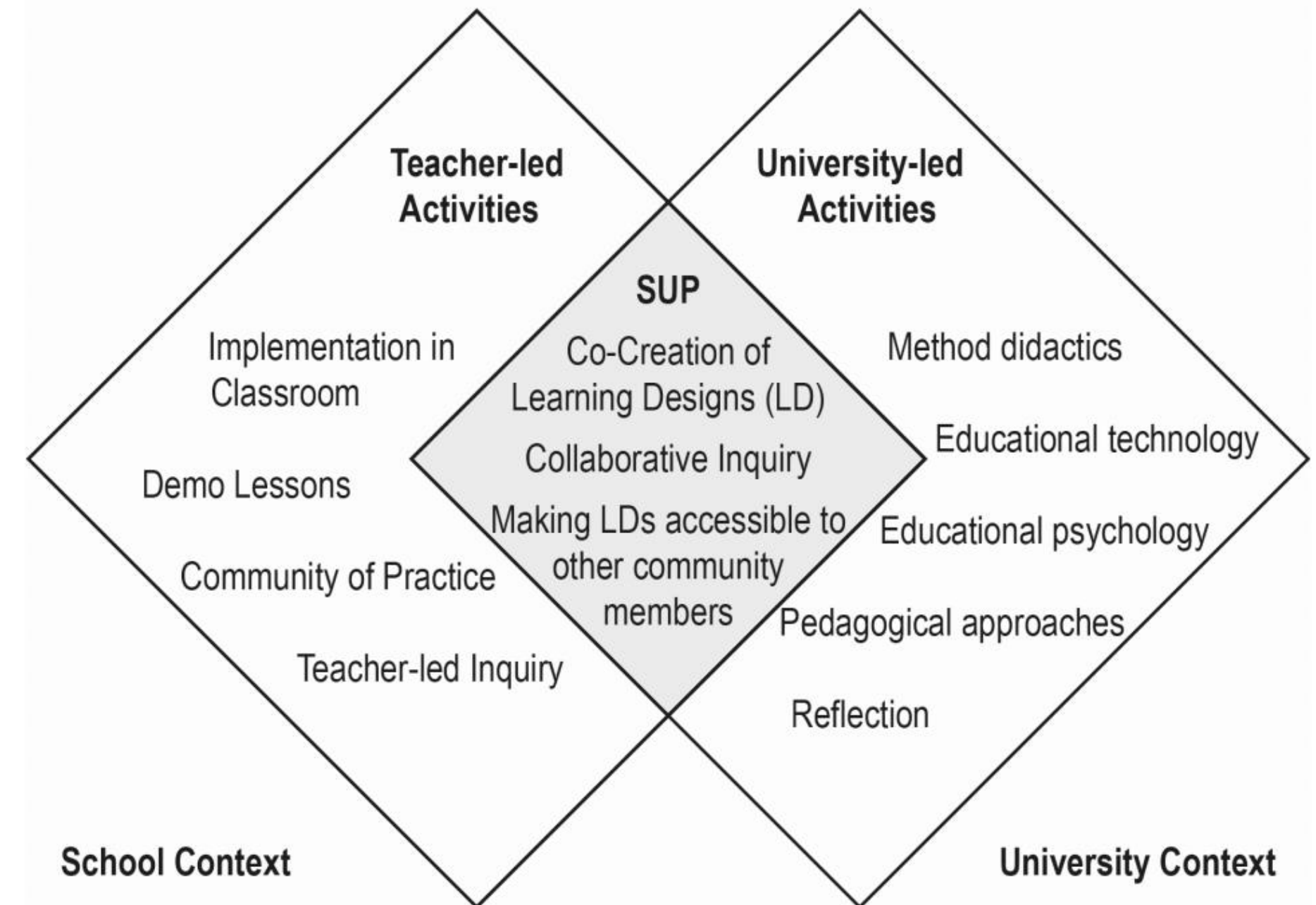


In each seminar the following topics will be covered by the university researchers

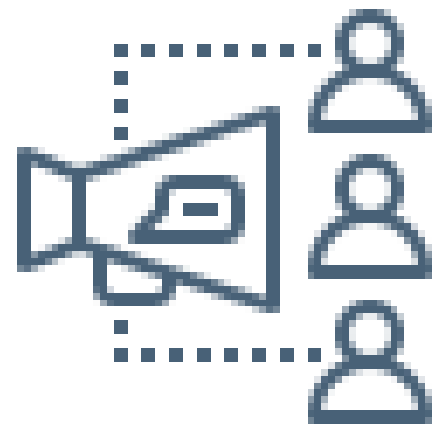
- * Didactical innovation: integration of pedagogical, content and technological knowledge
- * Teacher inquiry: how to understand the effect of innovation on my students

Joint co-design session will follow to each seminar

Teacher's Innovation Laboratory (TIL) Modules



D. Final event



Teachers

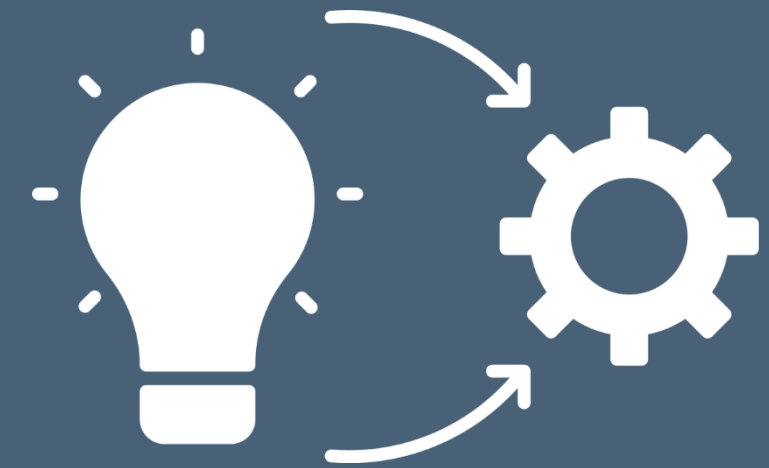
- share their final lesson designs piloted with their students to demonstrate their understanding of the appropriated technology-enhanced method
- share their experience to collect students data during the piloting process and learn from evidence-informed teaching practice





Recommendations

Ideas and guidelines



Teacher Innovation Laboratory training program can be organized as a remote session where co-design sessions and joint seminars are both organised online.



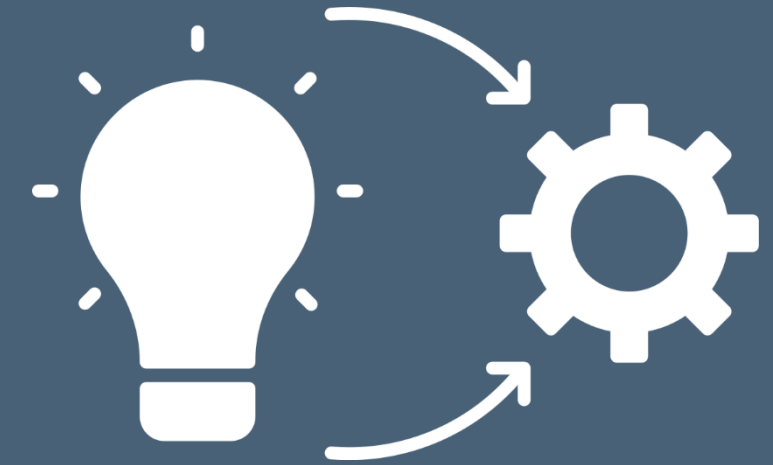
Teacher Innovation Laboratory training program could be for individual teachers, but also for teacher teams from one school





Recommendations

Preceding and following actions



Before the workshop: Discussions with the management team to understand the need for such digital innovation in school level. When possible, teacher teams could be established



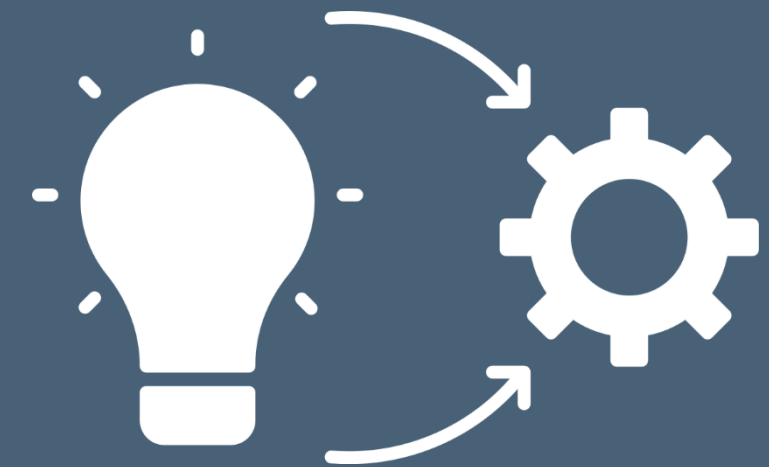
After the workshop: Inform school leaders about the results of the training for sustaining and scaling up the training experience and co-created learning designs





Recommendations

Experiences from implementations



Research have shown the importance of social, contextualized and artefact-mediated processes for teachers' professional learning and adoption of digital innovation

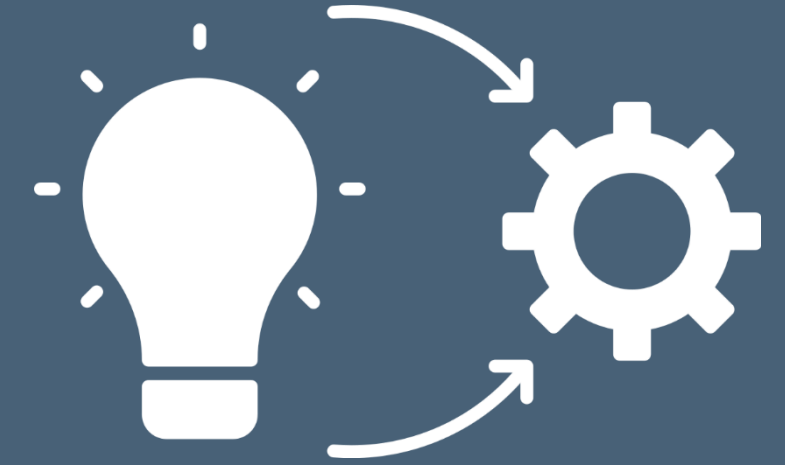


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Recommendations

Examples and additional information



Click to find examples and additional information:

- EDULAB project website: <https://edulabs.ee/english/>



- Support material for using various methods during the process in separate presentations on: <https://www.ihub4schools.eu/mentoring-model/>
- Presentation of the iHub4Schools Mentoring Model



[ihub4schools.eu/](https://www.ihub4schools.eu/)



This material is part of the School mentoring model



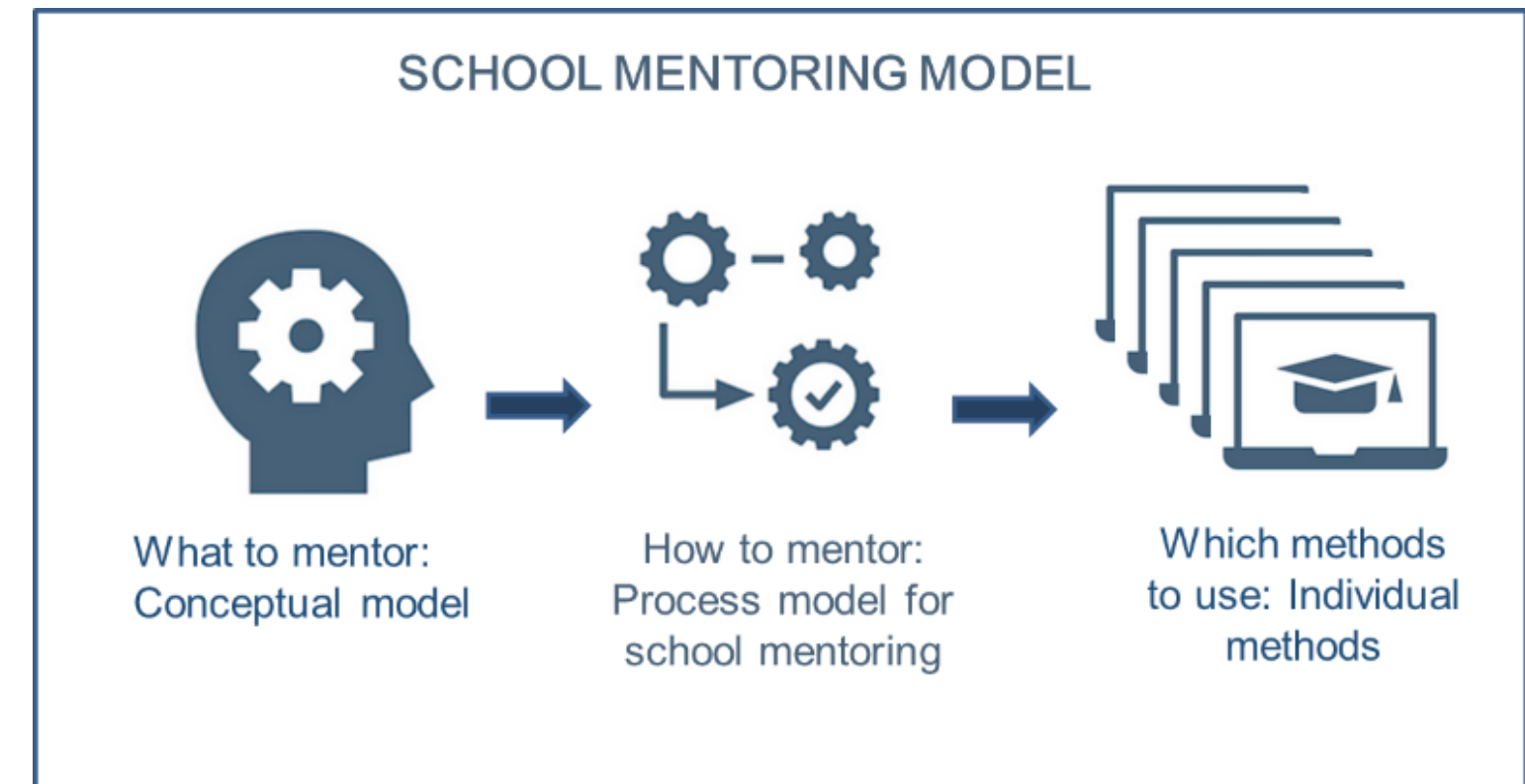
The aim of the model is to foster the adoption of digital innovation at school level.

The focus is on teachers' understanding of digital technology and practices to implement technology in a pedagogically meaningful way.

The model promotes teachers' professional learning with peers and school management to create the culture and practices for evidence-informed implementation of digital innovation.

The model is created in the iHub4Schools project (2021-2023). More information of the model:

<https://www.ihub4schools.eu/mentoring-model/>





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