

EDULAB in schools –
applying new methods
in STEM education



Robomath

Robot supported math
teaching in basic school,
its influence on student
motivation and
engagement



Digimath

Novel lesson scenarios
for applying interactive
learning resources in
math classes



Smart schoolhouse

Using different smart
sensors in teaching with
the aim of raising
student interest towards
technology



Mobile outdoor learning

Subject integration in
natural science teaching
through outdoor learning
scenarios using sensors,
robotics devices and
mobile apps

EDU LAB

EDU LAB

The world is full of effective
learning methods. However,
only few of them ever make
it into practice.

Learn more:
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More than 100 schools, 300 teachers and 3000
pupils have joined EDULAB's educational
innovation co-creation projects.

The EDULAB model has been designed to enable
the development of new teacher training
programs, educational research and educational
innovation all over Estonia.

Co-creating Educational Innovations with Estonian Schools

Co-creation methods for
connecting educational
innovation and practice.

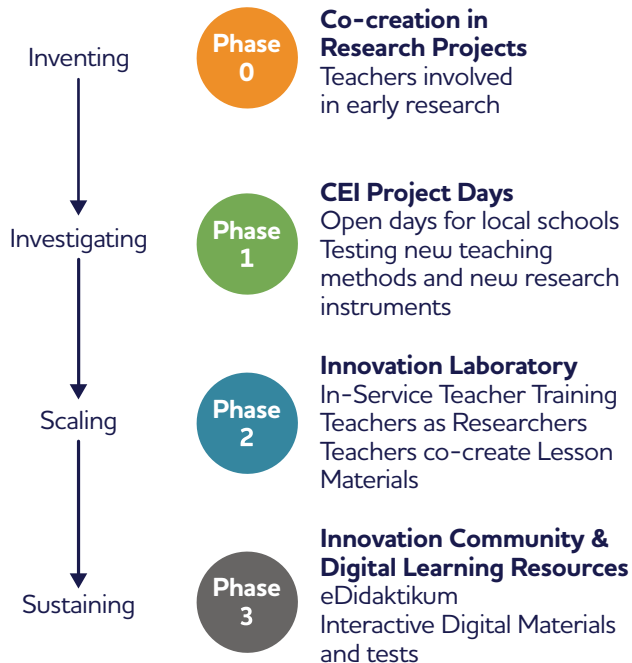
Learning analytics solutions
for observing and analyzing
learning process.



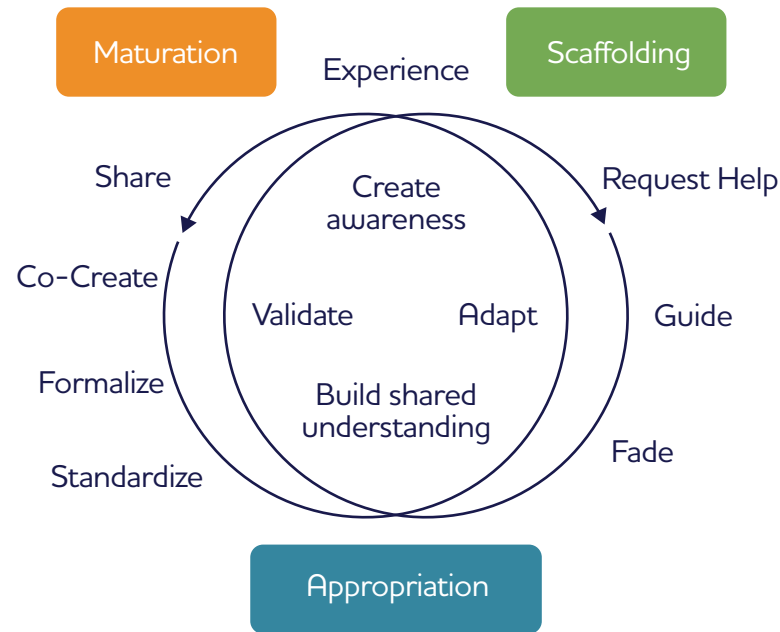
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The EDULAB method builds and strengthens co-operation between Estonian schools and universities to improve the sustainability of educational innovations in practice. This method is based on popular *Living Labs* approaches and focuses on building communities of teachers, researchers and other stakeholders. The community promotes sustainable and evidence-based educational innovation through continuous exchange of ideas, learning, co-creation and evaluating novel classroom practices.



The EDULAB method is based on the Knowledge Appropriation Model which helps to understand learning and knowledge creation processes when innovations are co-created.



The Knowledge Appropriation Model describes the three types of practices which are supported through the EDULAB method:

- 1) Knowledge maturation** describes the practices of knowledge creation, namely how an individual experience becomes shared in communities, and its further transformation into more mature knowledge. Specifically, this part describes how knowledge, for example, materials for new teaching and learning methods, is created, shared and refined.
- 2) Knowledge scaffolding** explains how professional learners are supported to apply the created knowledge in real-life settings, through formal and informal teacher training activities.
- 3) Knowledge appropriation** practices ensure successful, sustained and scaled adoption of innovation. In the process of knowledge appropriation, knowledge is arranged into general patterns and adapted to local needs.

The Learning Analytics Toolbox of EDULAB is helpful when observing and analyzing novel learning processes. It allows collection analysis and presentation of data to make it possible for researchers and teachers to evaluate the learning processes taking place in classroom and adjust the existing teaching practices.

These digital solutions for creating, managing and monitoring new teaching and learning practices offer following possibilities:

- Tools supporting action research on the classroom level
- Tools for creating and sharing digital teaching materials
- Tools for documenting and analyzing novel learning scenarios
- Tools for implementing new learning scenarios through digital learning environments, outdoor learning technologies, etc.
- Tools for testing students' general competence and subject competence

LePlanner

DinoNimi

Tracker

Observata

EduLog

Prolearning

Dashboard

sea sense
Cognitive Test Battery

Avastusmää
Mõeldud riigilastele

Üldpädevustestid

Koolikott

eDidaktikum
Õppimise ja õpetamise ruum

Digiõppevaramu