

CEITER Educational Living Labs

1. The Robomath EDUlab

Tallinn University, in the framework of doctoral thesis of Janika Leoste, supports from the autumn of 2017 to the spring of 2020 math teachers of the grades 3 and 6 to conduct robot supported math lessons. Using robots in visualizing math concepts helps students to focus their attention on learning and cultivates their interest towards learning and understanding of the subject.

Regular teachers and educational technologists were involved with the creation of lesson design and study materials since the beginning of the study. The pilot study that was conducted in the spring of 2017 provided both encouragement and necessary know-how for further development of the design. During the school year of 2018/2019 more than 2000 students in 15% of Estonian schools are involved in the study. It is intended to make the method available to more than 30% of Estonian schools in the school year of 2019/2020.

Kairi Mustjatse, a math teacher in Martna Basic School, says that visualizing math through a robot makes math more practical and therefore more meaningful for a student.

Tallinn University provides teachers with training, teaching materials, support in creation of a learning community and evidence-based results about the implementation success of the method.

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2. The Smart School House EDUlab

Tallinn University, in the framework of doctoral thesis of Marge Kusmin, provides know-how about implementation of sensor sets for turning a school house into a smart one for 19 schools. Using these sets in teaching and learning generates students' interest towards technology, related knowledge and solving real life problems, making thus learning STEAM subjects more innovative and down-to-earth. Teachers encourage students to find solutions for real life problems and to create interactive lesson materials through practice. Workshops for exchanging experience about supporting students in inquiry based learning take place twice a year in order to ensure fulfilling learning goals and the quality of teaching materials.

A graduate student of Valga Gymnasium says that trusting students and the responsibility that accompanies inquiry based learning will increase learning motivation: "If at least one subject a day uses inquiry based learning methods then it will provide enough motivation for going cheerfully to school. This makes the day shine!"

Tallinn University assists schools in creating learning scenarios and helps to promote the "Smart School House" community.

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3. Outdoor Learning EDUlab

The mobile outdoors learning research group of Tallinn University develops from the spring of 2017 to the end of 2020 in cooperation with 6 schools mobile outdoor learning scenarios that integrate different subjects and uses a complete solution of sensors, robotic devices and mobile apps for learning natural sciences.

Solving real life problems in an authentic outdoors environment supports getting more comprehensive understanding of the subject, increasing therefore learning motivation. In addition to creating learning scenarios, these are also tested with students in a real life context in order to form an evidence based evaluation about their usability.

A student of the 8th grade of Rahumäe Basic School: Everything was perfect and I would certainly like to take part in such activities again!

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4. The Digimath EDUlab

As a follow up activity for a project of Estonian Ministry of Education and Science, Tallinn University, in cooperation with teachers, is working out innovative lesson scenarios for using digital learning materials of secondary education in order to support changed teaching methods. Using lesson scenarios changes the roles of teachers and students in learning situations, supports collaborative learning, and is generally engaging and meaningful for students.

The lector of mathematics didactics, Jüri Kurvits, says that the interactive learning material of DigiÕppeVaramu (Digital Math Recourses) makes it possible to change the lesson of talking teacher into the lesson of active students.

In cooperation with teachers Tallinn University is working out the lesson plans and instructions for integrating the digital learning materials of mathematics into teaching process and for studying the application of the process.

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Digiõppevaramu matemaatika materjalid

Haridustase
Keskharidus

Valdkond
Matemaatika

Kogumik sisaldab Digiõppevaramu laia ja kitsa matemaatika õppematerjale, samuti on esitatud kutsehariduse matemaatika ülesannetekogud.

Laia matemaatika materjalid sisaldavad 14 kohustusliku kursuse ja 7 valikkursuse digikogumikke.

Kitsa matemaatika materjalid koosnevad 8 kohustusliku kursuse digikogumikest.




Lisaks nendele sisaldab kogumik kutsehariduse viie valdkonna ülesandekogumikke: Põllumajandus, Metsandus, Puidutehnoloogia, Mehaanika ja metallitöötlus ning Ehitus.

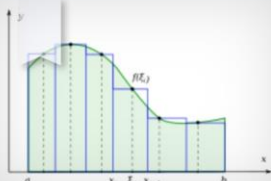
*Õppematerjal on esitatud retsenseerimiseks aineühendusele.

Võtmesõnad:

H5P
TLÜ
digiõppevaramu
gümnaasiumi kitsas matemaatika

gümnaasiumi lai matemaatika
kutseharidus



Lisaja: **Jüri Kurvits**

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Lisatud: **29.09.2018**

Vanus: **Gümnaasium**

Litsentsi tüüp: 