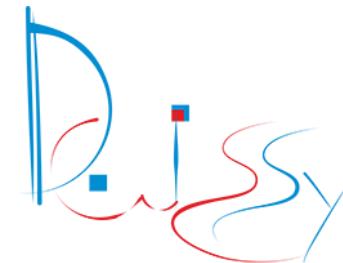


UMI-Sci-Ed

Exploiting **Ubiquitous, Mobile Computing**
& **IoT** to promote **Science Education**



Theodor Panagiotakopoulos, MSc, PhD
Achilles Kameas, Professor
DAISSy Research Group, Hellenic Open University



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What is UMI-Sci-Ed about?

- U** – Ubiquitous computing
- M** – Mobile computing
- I** – Internet of Things

...technologies that are changing our lives...



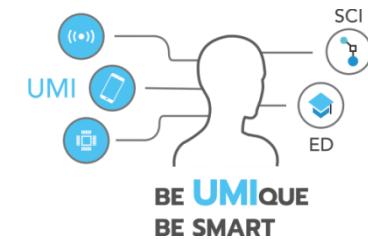
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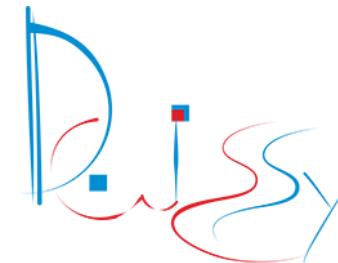




Objectives

To develop an integrated, collective, experiential and open digital educational environment for teachers and students that:

- allows students understand, use, develop **UMI applications**
- improves **digital** and **UMI skills** of teachers
- **stimulates** students to **envision** a future **career** in UMI technologies
- **enables** a societal **reform** towards responsible research and innovation



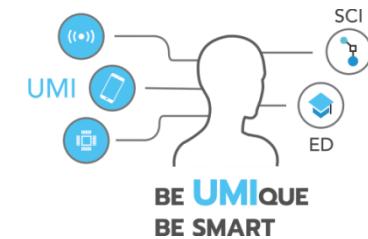
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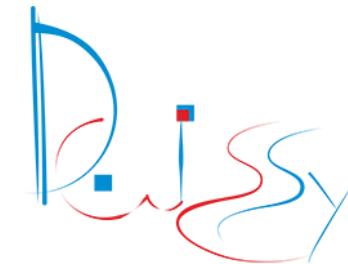
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Impact – short/medium term

- First-of-a-kind techniques for **STEM education**
 - ✓ UMI toolkits
 - ✓ Software
 - ✓ Communities of Practice (CoPs)
 - ✓ Educational material
- Broader/integrated infrastructure to develop **UMI applications in authentic school settings**
- UMI umbrella organization within **ALL DIGITAL**
- **Realistic view** of UMI technologies



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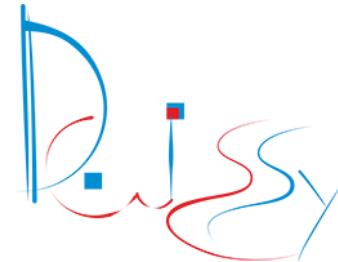
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Impact – long term

- **Measurable** teaching and learning **benefits**
- **Collaboratively** developed innovation projects
- Linking project actions to accessible **industry** stakeholders
- Definition of **training guidelines**, development of **educational material** and adherence to **learning standards**



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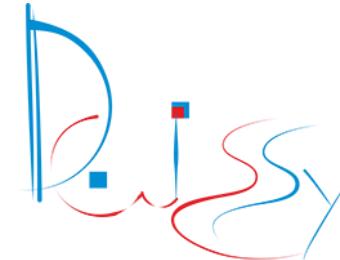


Lessons learned



Things that we would keep the same:

- **Selection** procedure of trainees
- Extended analysis of **physical worlds' issues** driving UMI applications development
- Revision **word game**
- **Detailed** educational scenarios



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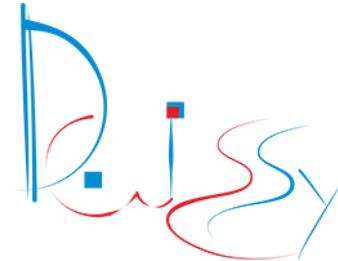


Lessons learned



Things that we would change:

- Integration of and intermediate step to **train the trainers**
- Amount and content of **questionnaires** during trainings
- Trigger and give more time to students more to interact with the **platform**
- Engage more **industrial** stakeholders



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How can participants benefit?

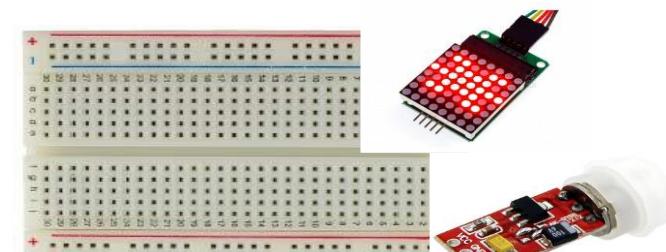
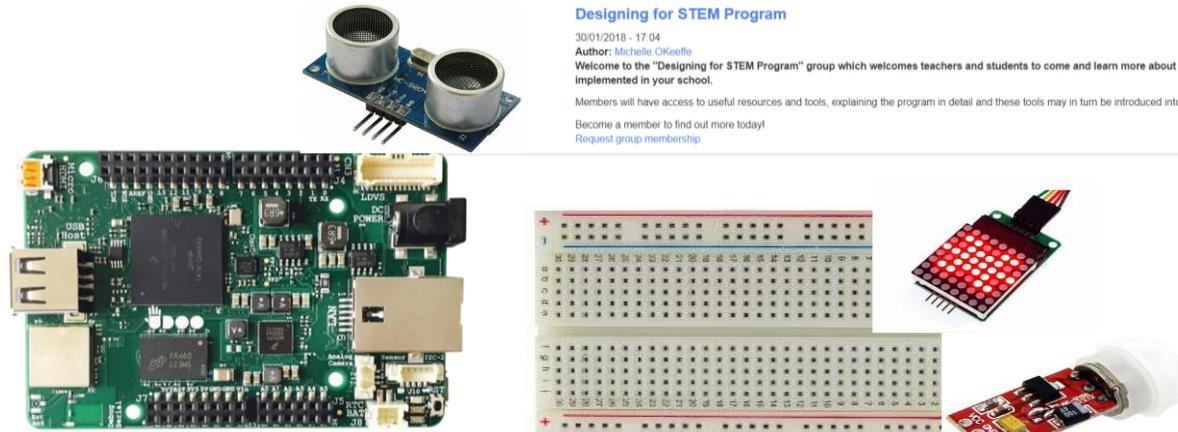
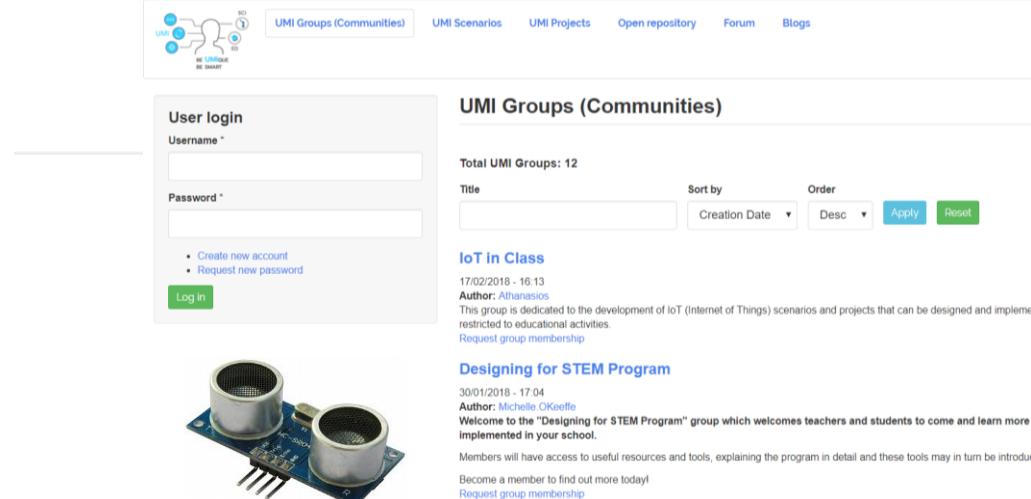
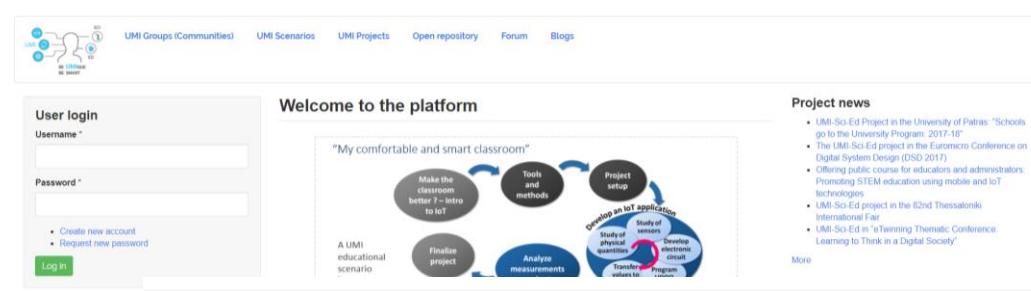
- Online **networking** platform
- Innovative pedagogical methods based on **Communities of Practice** (CoPs)



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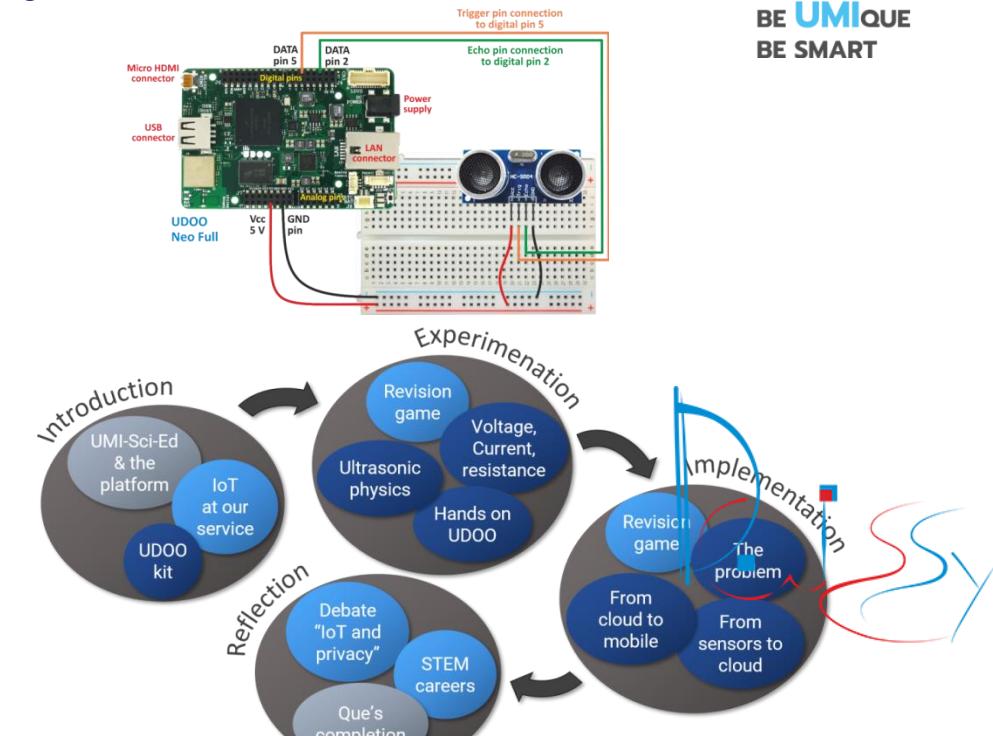
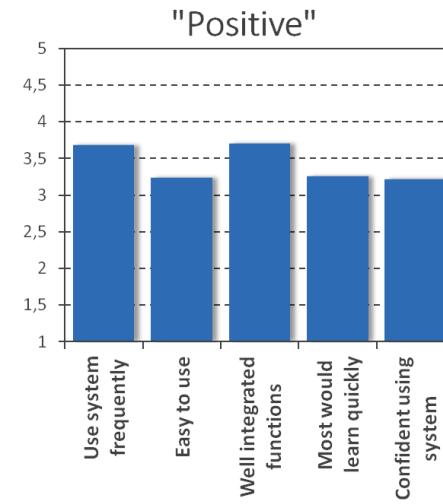


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How can participants benefit?



- **Online repository** of educational material and activities in UMI technologies
- **Educational scenarios**
- **Evaluation framework**
- **Open data**

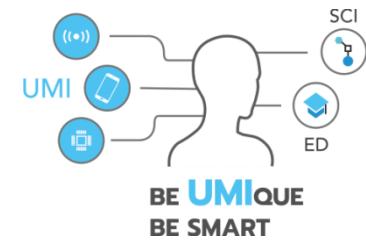


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Thank you for your attention!



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