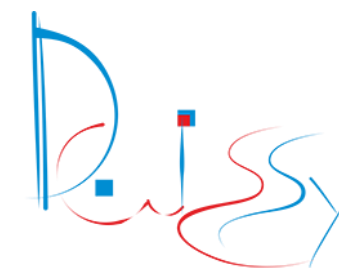


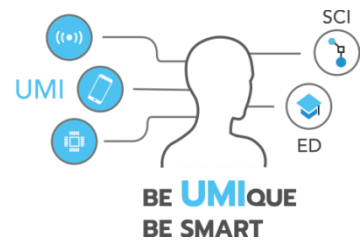
UMI-Sci-Ed

Exploiting Ubiquitous, Mobile Computing & IoT to promote Science Education



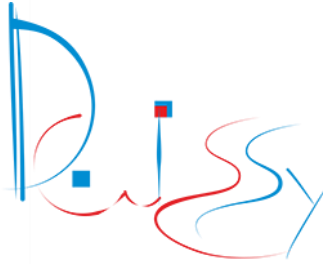
Theodor Panagiotakopoulos, MSc, PhD
Achilles Kameas, Professor
DAISy Research Group, Hellenic Open University

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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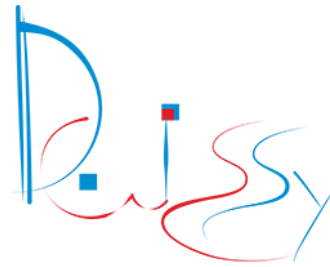
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Objectives



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

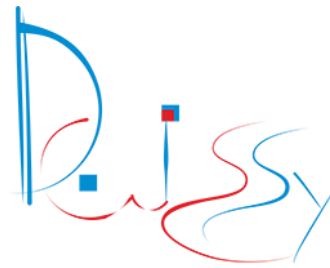
- allows students understand, use, develop **UMI applications**
- improves **digital** and **UMI skills** of teachers
- **stimulates** students to **envision** a future **career** in UMI technologies
- **enables** a societal **reform** towards responsible research and innovation



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

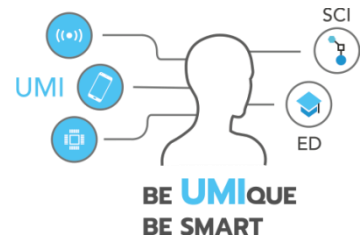


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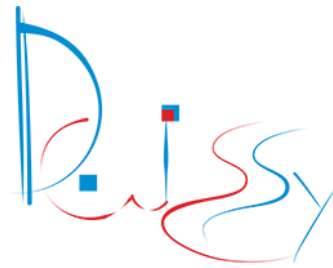
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Impact – long term



- **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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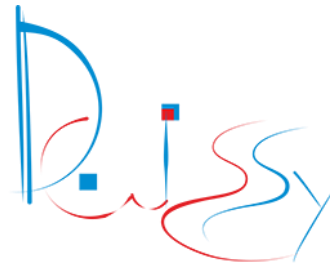
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Lessons learned



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

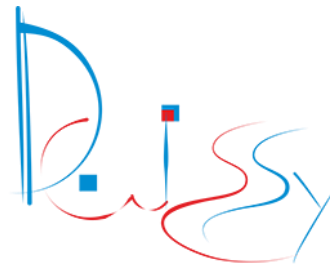


Lessons learned



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



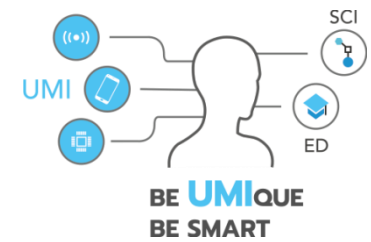
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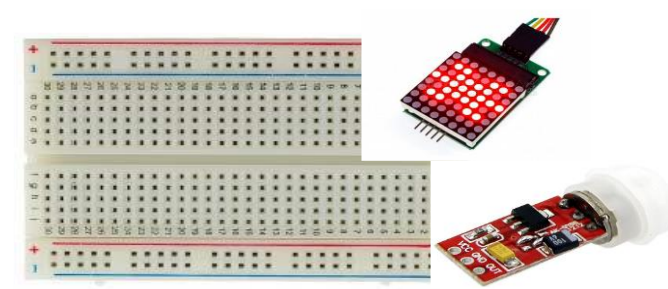
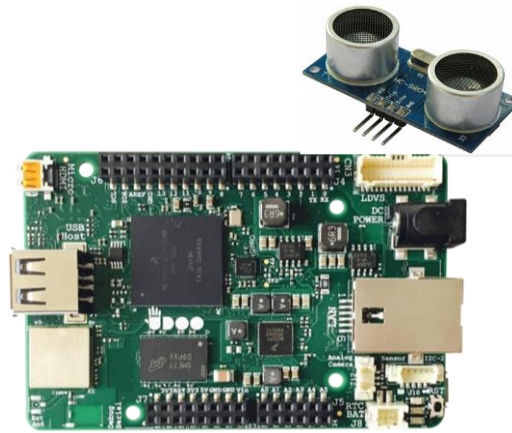
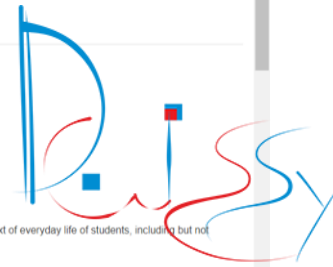
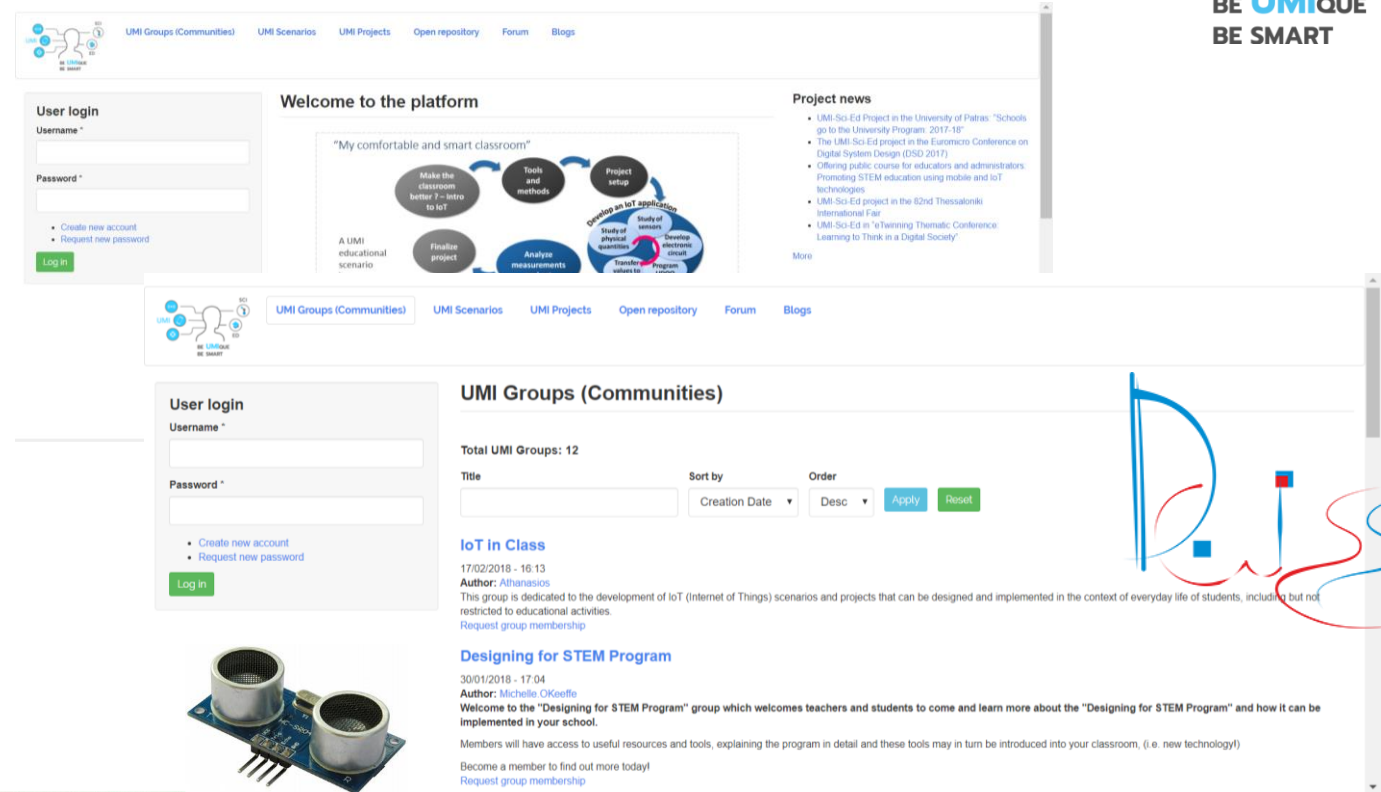


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How can participants benefit?



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



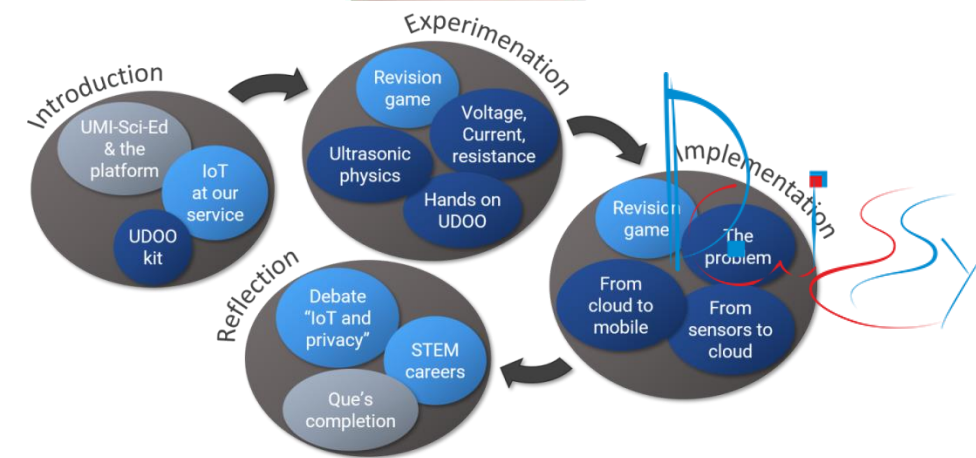
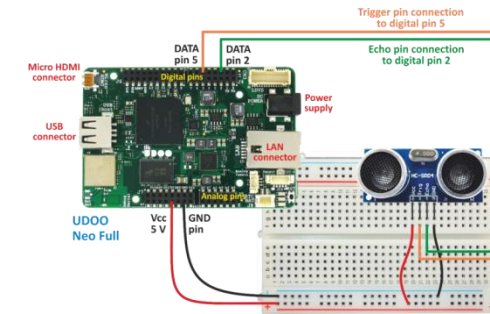
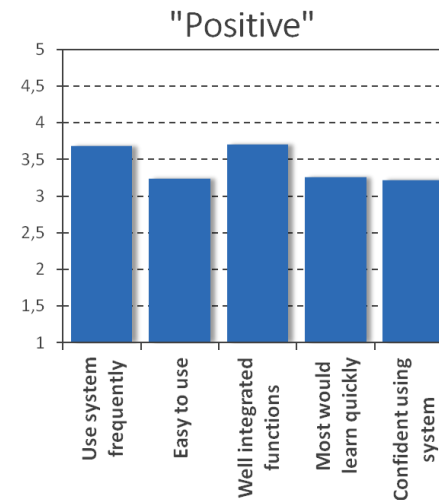
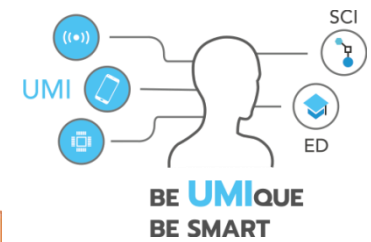
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How can participants benefit?

- **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!