**Project concept**

**The context**

Contemporary research on theories of learning and instructional design converges towards active learning as the pivotal principle. The learning process and its outcomes are to be put in learner's (student's, pupil's) hands. The role of the teacher is to guide, consult, inspire, challenge.

While the theory is not new, its adoption and redefinition of teaching practices are a slow process. Unidirectional lectures still dominate the educational practice.

There are two reasons for that: teachers do not know how to facilitate a true bidirectional communication - „interactivity“ - in the classroom. The second reason is that they are lacking appropriate tools to do it and knowledge to leverage the tool.

Existing, computer based, tools for knowledge assessment do not have required properties. A subset of audience response systems are much closer but can neither satisfy the core of the needs.

**The need**

This project proposal tries to satisfy two needs in order to enable more interactivity in various teaching and learning settings.

The first one is an appropriate ICT tool to facilitate interactivity in lecture and other educational activities.

The second one are case examples of application of the tool in various subjects and teaching settings.

**Deliverables**

There will be four deliverables: AudIT – Audience Interaction Tool, interactivity guidelines for social science subjects, interactivity guidelines for natural sciences and interactivity guidelines for IT courses.

1. **Deliverable – the AudIT tool**

A dedicated, tailored audience response tool (AudIT – Audience Interaction Tool) will be developed. It will have the following characteristics:

1. Teacher needs to be able to perform test/quiz/formative assessment from/in any location, from any device including somebody-else's device, public devices etc.
2. Students need to be able to answer/participate test/quiz/formative assessment from/in any location, from any device including somebody-else's device, public devices etc.
3. Test need to be able to be launched ad-hoc
4. Conducting and responding to test should be possible regardless where teacher and students are: in the same room, outside together, spread over the Internet, speaker in TV/YouTube, students at home/elsewhere.
5. Responding should be possible anonymously or named or both at the same time where student decides whether her answer will be anonymous or not.
6. Question types: multiple choice and text. Teacher decides on the number of possible multiple choice answers. Students can use textual response both to answer open ended questions as well as to ask their questions to the teacher.
7. Asking questions by students should be possible any time during session and any number of questions.
8. The tools should not require questions to be placed within the tool. Rather, questions should be possible to be displayed in any other tool, on the blackboard, orally or any other way.
9. All students’ actions in responding should be recorded and with the timestamp and available in the form of a spreadsheet.
10. In order to foster student’s activity and creativity, there should be a mechanism to grade only unique answers. And to provide real-time feedback on total number of solutions provided b students and the number of unique ones.
11. It should be possible to redirect students’ textual answers into arbitrary application in order to facilitate different interpretations and on-the-fly analysis of students’ inputs.
12. **Deliverable – Interactivity guidelines for social science subjects**

For each of typical social science subjects like languages, history, art and art history, psychology, sociology, philosophy etc. an interactivity guideline with examples and self-assessment will be developed.

The guidelines will be in the form of multimodal, interactive, online, self-study material.

1. **Deliverable – Interactivity guidelines for natural sciences**

For each of typical natural science subjects like mathematics, physics, chemistry, biology, geography etc. an interactivity guideline with examples and self-assessment will be developed.

The guidelines will be in the form of multimodal, interactive, online, self-study material.

1. **Deliverable – Interactivity guidelines for IT courses**

An interactivity guideline with examples and self-assessment will be developed for information technology courses including object oriented programming.

The guidelines will be in the form of multimodal, interactive, online, self-study material.

**Expected outcome**

It is expected that teachers Europe wide and worldwide will be able to use deliverables of this project in order to improve their capacity to improve interactivity of their lectures.

It is also expected that teachers will maintain and mutually enrich the repository of class interactivity strategies.

**Partners and their roles**

Aquilonis will manage the project and take care of dissemination. It will also establish on-line collaboration space, as well as structure, install, configure and maintain e-learning infrastructure which will host Guidelines. It will train authors of guide how to use the AudIT tool.

FER will develop AudIT tool and train teachers in partner organizations both to use the tool, as well as to increase interactivity of lectures in general and using AudIT in particular.

SES-MB will coordinate and be responsible for development of interactivity guidelines for social science subjects. For each of social science subjects common in EU there will be examples and principles of interactivity in activities typical for that subject. There will be also examples and principles of use of AudIT and other technologies in teaching and fostering interactivity.

ZAMS coordinate and be responsible for development of interactivity guidelines for natural science subjects. For each of social science subjects common in EU there will be examples and principles of interactivity in activities typical for that subject. There will be also examples and principles of use of AudIT and other technologies in teaching and fostering interactivity.

KHK will coordinate and be responsible for development of interactivity guidelines for information technology courses including object oriented programing. For each of IT courses common in EU there will be examples and principles of interactivity in activities typical for that subject. There will be also examples and principles of use of AudIT and other technologies in teaching and fostering interactivity.