REAL-TIME INTERACTIVITY IN AUDITORIUMS

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Abstract: Nowadays people are surrounded always by an interesting virtual world using their smart phones, tablets and laptops. The students all the time communicate using their devices with Skype, Facebook or Messenger and search information on the net. Therefore it is not so easy—sometimes looks impossible - to involve students into an old fashioned learning process where their role is just to sit and listen to the lecturer. We have to try to meet their needs by giving interactivity to the lectures with IT tools.

Introduction

Figure 1: Devices

Today the university drop-out is quite high. Everybody searches the reasons and try to find adequate solutions for this problem.

„The Net Generation Has Arrived... Are you ready for it?

To be honest we all notice that a lot of them do not pay attention to the teacher contrary they check their smart phones very frequently disturbing themselves to understand the deeper contexts.

Motivation

Motivation is the driver of guidance, control and persistence in human behavior. If we are not motivated it is not easy even to start to learn or to work and to work long and hard without motivation is almost impossible.

Therefore we have to increase motivation to achieve better results.

Some of the elements of motivation:

- the family expectations
- the personal interesting, goals
- the usefulness and the importance of the given knowledge,
- freedom to personalize learning content, the ability to share their ideas with the others and be an active participant of the learning content
- the teacher's personality, humour, enthusiasm towards the subject, the variability of used methods
- A positive,recipient,supporting environment (the teacher's role is important)
- Usage of IT tools

We are not able to affect the family expectations or the personal interesting but **we may form a more adequate environment, to approach to the needs of students** and use a bigger variety in our methods

Interactivity

Features	In the school	At home
Freedom in learning	Given time, given place, givenschedule	From where-ever, whenever, whatever they want
Usage of own devices	Forbidden to use	They are around them all the time
IT technology	Not the latest	Most modern devices
Communication type	Classical, personal communication	Half in the virtual world – personally or through ne
Sharing knowledge	The teacher and only one answering student at a time	Anybody who has idea or a question anytime, immediately through social network
Communication direction	Usually one-way (from teacher to	Two-way (parallel)

Table 1: Difference between the students home and school environments

Already in the sixties E. Dale stated that active learning methods lead to better results.

while we know that a classical lecture is a passive method.

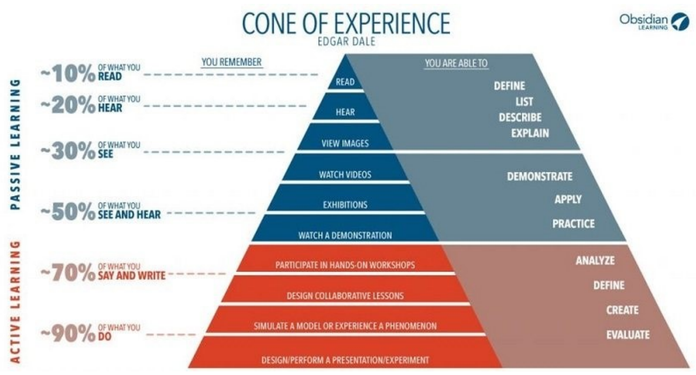

Figure 2. Cone of experience

The question is how can we activate and motivate better several hundresd of students in an auditorium?

Classroom Response Systems

A CRS is able to make a real-time communication possibility between the lecturer and the audience even in an auditorium without any built in devices if we use a BYOD (Bring Your Own Device) solution.

Figure 3: Auditorium and devices used in a BYOD system

Such tools are used from elementary schools from universities on different points of the world.

Smart Mobile Phone penetration

Almost everybody has got a smart phone according to an uptodate survey (https://forms.gle/ZqZ7cxnbDs1ASeJ57) at ELTE INformatics Faculty; therefore there is no contra indicator to use a CRS.

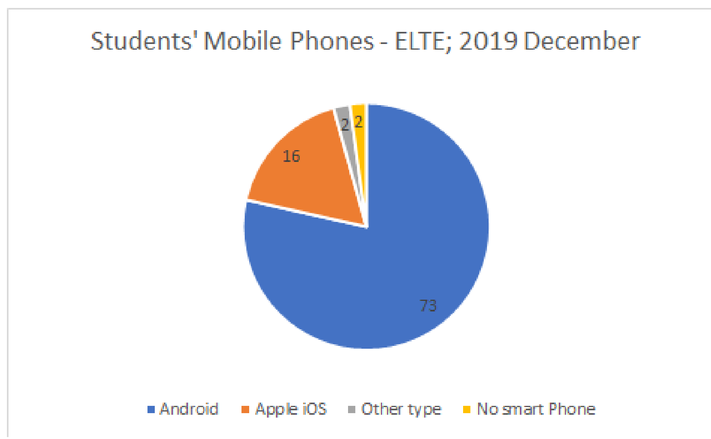

Figure 4: Students smart mobile phone types

Acceptance of a CRS

We asked whether they used a CRS and what are their

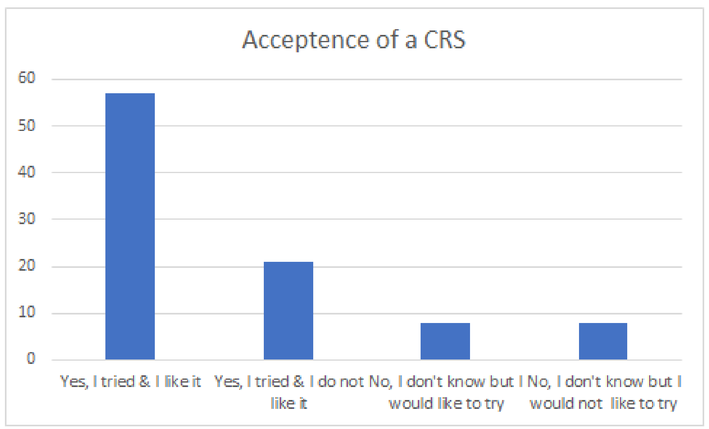

Figure 5: Students opinion about the usage of a CRS

opinion about it. (Altogether 94 answers arrived) It is clearly seen that most of them accept the idea of a CRS.

ELection in action

http://election.inf.elte.hu

There are a lot of CRS systems in the market, but neither of them are absolutly good for us. Usually the free applications have a lot of restrictments—that is one of the reasons we implemented an own. Due to our plans we want to stream the lecture and/or the ppt-s in real-time. Moreover we wanted the university ready-made authentication process.—without it the administration needs a lot of work from the teachers. After all it is a web-based BYOD system –we need only a browser) -which is able to offer a real-time bidirectional communication between the professor and the students.

Each of the participants may send questions and answers.

Figure 6: Work-flow started by the teacher(send question, answers, teacher's graph)

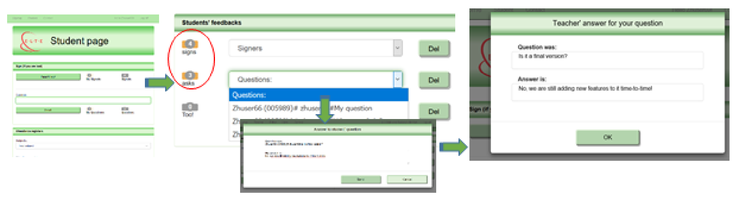

Figure 7: Work-flow started by the student (send question, appear on teacher' device, personal answer)

Summary

The benefits of a CRS are:

- Students may use their devices, the personal environment is what they used to
- There is a bidirectional communication possibility for everybody, it means interactivity
- The students may share their ideas with the lecturer and the others
- It may form a lecture to a more active learning process, involving the students into the decisions

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