Different Society, Different Learning Environments Beyond The Traditional Classroom

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Abstract

A modern society which is connected via new technologies and media require new skills from our students to fully participate in the society and creating a new learning environment which is dynamic and motivating strenghens the creativity and problem solving skills as well as the communication skills that need to address different levels of interaction. The following paper shows the differences between a traditional classroom and the requirements for a new learning environment and tries to offer pedagogical solutions not by drawing limits but providing opportunities for both teachers and students. The lessons we have learned over the last ten years when it comes to the integration of e-learning strategies in school can be translated to the creation of a modern learning environment respecting the challenges that lie ahead. The term learning environment seems to be more adequate since the physical classroom has natural limits. The integration of ICT combined with modern pedogogies require a different setting and this paper aims to present one possible way to achieve that.

Dynamic Society vs. Static Classrooms

Nowadys, one can get as much information from the sunday newspaper as a human being, 200 years ago, received within a year. Zapping through all your television channels provides you with the amount of information that single human being, two hundred years ago, got in one year. Finally, if you open your internet browser, you are able to access as much information as mankind gathered from the first day a human being walked the face of the earth until the invention of the computer. Those numbers are well known and the educational system of any society needs to prepare their children to navigate through this amount of information.

Furthermore, with the arriving of the new media, an additional but not separate environment has been created. Everything we now know as the internet, the web or simply the network represents an additional ecosystem where we are able to access information in a networked fashion, bearing in mind that the real world and the virtual environment are interwoven. Looking at the contrasts of teaching every day, this can be observed by having static content in textbooks and dynamic content students look up on their notebooks, tablets or smartphones, which adds tension to the class with the

teacher constantly under observation by the students and - if the tell their parents - by other stakeholders as well.

Defining dynamic, I would simply suggest to reduce this complex term to real time access to valuable data. Wanting to prepare our children for a complex society with multiple communication and information levels, static settings, content or environment, seem hardly to be the right way. As far as the content is concerned, one can ovserve that the addition of e-learning activites are adding value to traditional lessons and increase the level of transparency and interaction, making the school experience better and raising the quality. Bearing in mind that this is a long term goal and the process is still at the beginning, we need to think about the appropriate classroom setting to enable the best teaching and learning experience we can offer. The addition of dynamic content done by a lot of teacher is often limited by environmental factors in the classroom setting. Introducing a student-centred pedagogy in a room originally designed around the teacher-centred approach to teaching, logically presents limitations in exploiting new activities to the fullest. Those activities are often driven by the use of new technology but in the end, using those technologies should be like using a pen. At this point, one has to raise the question if new technology as well as new pedagogical approaches, that are a result of adapting to technology, are used in the best way possible in the classroom and if obstacles there really prevent our students from preparing to the world they are going to live in. Aspiring for young independent human beings that are able to extract the information they need and separate valuable information from junk, I would like to close the opening chapter with a few questions regarding traditional school settings:

1. What about self independence?

2. What about maturity?

3. What about creativity?

4. What about the navigation skills in the newtorked society?

Are those factors being addressed in the current classroom setting and in school general? Can these thing be taught in the traditional school environment. More and more teacher seem to think differently and a pan-European effort[1] has the ambitious goal to lead the innovation in that field.[2]

A Dynamic Set Up

Designing a learning environment that is fully adapted to the 21st century is not about reinventing the wheel all over again. Having seen increadible process and effort over the last ten years in the field of e-learning and adding ICT to the classroom interaction, it is really about taking it to the next step and looking beyond physical boundaries that almost restricted innovation in a physical way. Often, the pedagogical approach hits its boundaries due to the physical environment and that is the

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[1] http://itec.eun.org 06.10.2012

[2] http://fcl.eun.org 06.10.2012

way iTEC (Innovative Technologies for an Engaging Classroom)[3] is set up. This European project aims for the design of the future classroom, not physically but pedagogically by anticipating a modern student-teacher and student-student interaction and then looking for what comes in handy to promote that. Ensuring that approach, there are no physical restrictions in the making that prevent an ideal pedagogy to be implemented because the teacher would not feel comfortable or supported by his/her environment.

A simple yet ambitious suggestion of what the future classroom could look like can be found in the Future Classroom Lab (FCL)[4] of the European Schoolnet[5] in Brussels. Divided in six zones, it offers the teacher and the students a more interactive way of learning with ICT helping and accessing to the real world in a virtual way by adding current content to the classroom interaction.

The first zone is called **interact**, where you can find a more traditional classroom setting, but smaller. The teacher is given the opportunity to start a topic here by explaining fundamentals or simply by teaching content in a more traditional way.

The second zone is called **present**. It looks like a small amphitheater with an interactive whiteboard to present. This zone could be used by students to either present their findings to another group of students or look at content together with peers to have a starting point for the research.

The third zone, **investigate**, is addressed to a more practical approach to research. Depending on the subject taught, it can be used in different ways to perform actual experiments. This is where a good infrastructure is needed the most to engage young students with real tasks.

The **create** zone, which is the forth one, normally is used by students to prepare their results in an interesting way by either making a video, a presentation or a portfolio, which then can be presented to the other students.

Often the fith zone, **exchange**, is taken as a starting point for any inquiry-based learning situation by doing a brainstorming and graphically make use of an interactive whiteboard or an interactive table. This is where the interactive dimension of any interactive whiteboard is really used to the fullest making sure that every student has an opportunity to participate in the brainstorming or working process.

What is called **develop**, represents the sixth zone in the future classroom. This is a much more relaxed environment for intimacy for students is offered and a traditional homework could be done.

The first thing we can learn from that set up is, that the future classroom is not going to be one single room or zone where students interact with one another and with the teacher. The learning zones presented are not necessarily put together in one single room but there can be different environments in one school. By adapting the school in that fashion, we do not have to radically redesign the classroom and costs are saved. It is important to mention that ICT is used in most of

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[3] http://itec.eun.org 06.10.2012

[4] http://fcl.eun.org 06.10.2012

[5] http://eun.org 09.10.2012

the learning areas but those areas do not seem to be set up around those technologies. Far more important is the pedagogical integration and interaction and the ICT used there is another way to support that. At the end of the day the most important thing is the seemless integration and combination of ICT and useful pedagogical approaches that address the modern times and prepare our students for the future and the dynamic society that they are going to live in.

The conventional approach to adding ICT in education was throwing in new technology and let the teacher deal with it and figure out the best way to use it. Consequently over the last ten years the implementation of ICT in education was reserved to very innovative teachers and not the majority of teaching professionals. However, in those last ten years we were able to learn a lot from the minority of very innovative teachers and those learning processes resulted in the creation of the future classroom. The bottom line is that first there needs to be a pedagocial concept, respective training and selection of the teachers and then the addition of ICT in the daily teaching practice.

Looking all over Europe, there are a few examples of a successful redesign of pedagogcial approaches and an integrated use of ICT in school. One outstanding example that one can look at is the Hellerup[6] School in Copenhagen, Denmark. The physical concept of what a traditional classroom was like was radically redesigned, which was not a very difficult task since that particular school was built from the grounds up. There are not any classes in the whole school building, just different areas or zones that according to the lesson and the tasks a teacher would take his/her students to. The whole concept is an open space concept and at the same time it still is not loud, very harmonious and very productive. There is a school library for research, creative corners for developing and thinking, special environments for collaboration, IT workstations, science areas for natural science lessons, private spaces for individual work and enough opportunities to express the creativity. Illustrating what an inspiring environment can do, the teachers themselves asked the principal to get rid of the text books and develop their own materials to fully exploit the opportunities of this new environment. At the end of the day those materials are shared on a school platform for other students or teachers to use them or get inspired by. What is even more suprising than the whole set up is its objective results. Starting in seventh grade, there are national exams at the end of the school year which offer a very good comparision between different school types and the students from Hellerup School are not doing worse on the content but exceed their peers when it comes to problem solving, independence, collaboration and creativity, which means that not only does it work content-wise but has significant benefits.

In Austria we are starting to implement the concept of the future classroom in a few different schools. The response to those efforts are very positive and show the need for change.

Lessons for the future pedagogy

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[6] http://www.hellerupskole.dk/

From the examples shown before there are a few lessons that can be translated to any school environment contributing to a consistant change in education.

First, the concept of the school autonomy cannot be emphasized enough. Giving teachers and principals enough opportunities to change and adapt to the current demands of any society, is very welcomed by all the stakeholders as soon as they see any benefits. The challenge during that process is, that results due to changes in any educational system are not shown right away.

Secondly, the student-centred approach to learning and teaching is very popular among students, giving them the sense of being active and in charge of their development but more importantly, our teachers involved in iTEC promoting a student-centred approach were surprised by the output of students during a given time, which means that the student-centred approach is going to work on most, but not all, occasions. Looking at the second lessons the third one is very logic and adds to the excitement in class. The seemless integration of real data due to ICT should be a common approach in education today.

The fourth aspect is the change of the teacher's role in that scenario. Providing a more student-centred approach and letting students develop their skills is a huge challenge for any teacher in the preparation, training and actual teaching and never was the teacher more important than in the future classroom, which directly brings us to lesson five of the process. Self made content for teaching ensures a more effective way of integrating ICT and addressing to the needs of different students in different classes. And this might come as a shock to all the conservative teachers and stakeholders in any educational system: the integration of ICT in class does not reduce but increase the interaction and collaboration between students!

Not talking about the major challenges such a process is going to bring with it would be very subjective and not constructive at all. First and foremost such processes are a question of the current and future infrastructure and volumes of investments in that area. It would be a mistake to think that changes of that magnitude would come for free and during those difficult times Europe is facing, the political consensus to increase the means for a better infrastructure is very difficult to find. However, it would be a mistake not to invest in the future of our society. The second challenge we have to face is the appropriate teacher training and further training to keep up with the recent developments. And the last challenge addresses the level of transparency in teaching and that is something that teachers in Austria seem to be afraid of. Any addition of ICT, be it interactive whiteboards, tablets, smartphones or conventional computers, add to the level of transparency of what a teacher is doing in class and that represents a problem for quite a few but to my mind, for increasing the quality of teaching, this is a necesssary way.

At last the main objective of any educational system ought to be to prepare the students for the society they are going to live in, make them responsible and reflective indivuals and sustain the level of enthusiasm every student has when first entering the school.