

DE CE AVEM NEVOIE DE EDUPUNK?

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Abstract

Jim Groom a folosit pe blogul său un nou termen numit EduPunk, exprimându-și astfel furia față de platformele rigide și comerciale. El a lansat următoarea idee: “dacă luăm experimentele bazate pe imaginația altora și le împachetăm ca pe un produs care poate fi cumpărat” de fapt ignorăm munca de calitate depusă de profesori. Stephen Downes i-a adăugat trei fațete, îmbunătățind astfel definiția și propulsând termenul care a făcut carieră în edublogosferă.

Într-un domeniu educational în dezvoltare și care folosește de puțin timp aplicații Web 2.0 pentru predare-învățare, termenul EduPunk merită mai multă atenție. Dacă luăm în considerare faptul că învățarea a fost mereu un proces social prin excelență, EduPunk trebuie văzut ca o modalitate importantă și valoroasă de educare. EduPunk ajută la implementarea unor noi abordări didactice și astfel la îmbunătățirea viitorului predării și învățării.

Ca o consecință a acestor gânduri, la Universitatea Tehnologică din Graz (UT Graz) s-a implementat un nou concept. Strategia prezentată permite combinarea metodelor tradiționale de predare cu facilități oferite de e-Learning, precum și cu noi aplicații Web 2.0.

Obiectiv: Să prezentăm un concept prin care universitățile pot integra World Wide Web-ul, și mai ales diferite aplicații Web 2.0, într-un sistem de Management al Învățării, care poate fi folosit în mod curent și care le permite profesorilor să devină “EduPunks”.

Implementarea: Sistemul de management al Învățării a fost extins și adaptat nevoilor specifice.

Concluzie: EduPunk- strategie eficientă pentru învățarea asistată de tehnologie.

Cuvinte cheie: e-Learning, învățământ superior, m-Learning, e-Learning 2.0, EduPunk, cloud computing, învățarea asistată de tehnologie.

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*"It's not about matching traditional models
with existing tools anymore;
It's about developing a brand-new pedagogical model
and implementing the Next generation Web environment upon it."*

Antonio Fumero about eLearning 2.0 (2006)

INTRODUCTION

Research on new media in education is a broad area with a long tradition. It can be pointed out that emerging technologies are entering the educational field quickly and often find application well beyond their original intention (Holzinger et al, 2006). Looking back a couple of years Web 2.0 (O'Reilly, 2005) changed the way in which we deal with the Web enormously. The Read/Write Web allows nearly everyone with internet-connection to contribute, to share and to write online. Instead of consuming static web pages users are able to participate without any programming knowledge. A lot of social communities sprang up like mushrooms and grow fast by the use of network connections (Castells, 2006) and by sharing a lot of different Internet resources.

In 2005 Stephen Downes (Downes, 2005) named the use of Web 2.0 applications for teaching and learning purposes for the first time e-Learning 2.0. The ability to use Weblogs (Luca & McLoughlin, 2005), Wikis (Augar et al, 2004) as well as Podcasts (Evan, 2007) is an important step not only for educational researchers of today.

Only few years ago e-Learning and Blended Learning have been buzz words of the New Economy-Society describing internet support for teaching and learning purposes (Ebner, 2007). The expression A³ (anytime, anywhere and anybody) seemed to be a synonym for the growing e-Learning movement, by pointing out interaction as a deep social element (Preece et al, 2002). Several Learning-Management Systems (LMS) as Blackboard²⁵, WebCT (commercial) or Moodle (open source) tried to collect the teachers' and learners' needs and provide closed systems by supporting online education. (Maurer & Scerbakov, 1996). In general LMS of today can be seen as an accumulation of different tools and applications to optimize e-Learning for different institutions, different teaching fields and of course also different didactical approaches. It is easy to imagine that this kind of finding the lowest common denominator or fit-to-all approach is not satisfying to innovative and experimenting lecturers. Bearing the huge amount of dispersing educational settings in mind developers of LMS always had to decide between the requirements of the mass and the special needs of cutting-edge teachers. Implementing quickly diverging and changing Web 2.0 possibilities to a LMS turns this ambition into a nearly endless task.

In May 25 2008 Jim Groom coined in his Weblog a new term called EduPunk²⁶. First he expressed his anger about rigid and commercial learning platforms: "... but that survival (of a LMS) is not necessarily dependent on a technology or an innovation, rather it is a means of taking the imaginative experimentation of others and wrapping them up as a product that can be bought and sold like a pair of shoes". He complained about that so called new Web 2.0 technologies within such systems will never reach the social enrichment; because not the technologies themselves make the education valuable. According to Jim Groom EduPunk is the "necessity for a communal vision of EdTech to fight capital's will to power at the expense of community". Stephen Downes²⁷, who used the term e-Learning 2.0 for the first time, expanded the definition with three facets (Rowell, 2008):

1. As a reaction against the commercialization of learning
2. To symbolize the do-it-yourself aspect of educational technology

²⁵ <http://www.blackboard.com/us/index.bbb> (last visited: August 2008)

²⁶ <http://bavatusdays.com/the-glass-bees/> (last visited: August 2008)

²⁷ "Introducing EduPunk" <http://www.downes.ca/cgi-bin/page.cgi?post=44760> (last visited: August 2008)

3. Thinking for yourself instead of being told what to think and learning for yourself instead of being told what to learn

So Stephen Downes addresses elements of the anti-authoritarian education of the 60ies to be interpreted by the modern digital world of present time. Gualtieri compared EduPunk with a kind of chaos and necessity in case of low budget. She asked whether chaos “will ensue if all instructors do that?” (Gualtiere, 2008).

On the one side there are educational institutions providing restricted and appropriate systems for their mission to educate, on the other side there are lecturers that like to teach in different and not supported ways. In the near future upcoming technologies even may intensify and broaden this gap. Increasing mobility, a huge amount of mobile devices with access to teaching and learning processes as well as cloud computing are trends strengthening the philosophy of distributed learning and “EduPunking”.

Research in the area of technology enhanced learning concentrates on the improvement of learning per se by using appropriate tools, especially by engaging learners and supporting different ways of communication. This leads to the following questions:

- Are all researchers and innovative lecturers EduPunks?
- Do we need EduPunk to enhance our education?

This paper argues that EduPunk is a necessity for future learning. Furthermore a university wide concept is presented that helps to overcome the problem of a restricted system versus the free space of WorldWideWeb.

EDUPUNK AND LEARNING

First it must be pointed out that the Internet or computers at all cannot improve the act of learning of the individual per se. By accepting learning as a basic cognitive process, that has to be done active by the learners themselves (Wilson et al. 1974) (Hall, 1988), it is obvious that the famous Nuremberg funnel does and will never exist (Carroll, 1990). But computer-technology as well as the WorldWideWeb can help to change didactical approaches and in particular to increase motivation (Holzinger & Maurer, 1999) of learners.

The following points are essential for teaching and learning processes:

- Creativity, Fantasy, Curiosity: According to Piaget (Piaget, 1951) any learning activity designed to provoke the learner’s curiosity must provide an optimal level of informational complexity. Considering existing previous knowledge students should use their fantasy and creativity for their learning activities. These factors are of highest importance in creating intrinsically motivating environments (Ebner & Holzinger, 2007a).
- Communication and Collaboration: Education is a strongly social process characterized by interaction between people - teachers interacting with learners and learners interacting with other learners (Lee Price & Lapham, 2003). Learning as a social process proceeds through conversations and discussions – simply by communicating thoughts and findings.
- Active participation: Another crucial factor for successful learning is motivating learners through authentic tasks. The famous expression “Learning By Doing” (Dewey, 1916) describes the fact that positive effects on learning will occur if students are playing an active part.

If a lecturer likes to improve learning outcomes he/she will help to realize a didactical concept that bases on creativity, collaboration and engagement. Because of their open nature Web 2.0 applications are suitable for different scenarios and tasks. The use of different appropriate tools is highly valuable for innovative and engaging learning processes. Due to the facts that mostly very innovative and hyping applications are not offered by commercial systems just in time and buying additional plug-ins is exploding the existing budget, EduPunking seems to become a necessity.

For different reasons like those named above innovative didactical approaches often have gone a “quick and dirty” way to bring creativity, collaboration and engagement to the lecture room. In this sense “EduPunking” seems to be a very appropriate approach for different participants (teachers, students, researchers and head of institutions).

By accepting EduPunk as process that improves the learning and teaching behaviour of the whole educational institution the following questions occur:

- How can the university support EduPunking activities?
- How can these activities become a regular service for other lecturers?

UNIVERSITY WIDE CONCEPT

In this chapter a concept is presented which is currently offered at Graz University of Technology (TU Graz). The concept aims to combine traditional teaching and e-Learning 2.0 as well as EduPunk activities. E-Learning 2.0 activities differ from EduPunk ones by being regularly offered by university wide platforms instead of only being online available hosted by different providers (mostly for free).

Fig. 1 gives an overview about the implemented concept. The four colored rectangles are representing four independent and different online systems:

- Blue – Administration system: All educational related administrative information, tasks and queries are covered by this system called TUGonline. All members of TU Graz and lectures being offered at TU Graz including their corresponding ECTS points are represented within the system as well as study plans with individual calendars. Furthermore students are able to book the course in order to get time and place scheduling automatically within their time-tables. In the end course-certificates for print are also available. With other words for people and lecture administration (time, place, grade) the TUGonline system is in use – for the lecturer’s content and further e-Learning facilities other systems are responsible.
- Grey – Learning Management System: The so called TU Graz TeachCenter (TUGTC) basing on the WBT-Master system serves as official LMS of TU Graz to support lecturers and students with main online facilities. The core system (WBT-Master) has been developed at the Institute of Information Systems and Computer Media (IICM) (Helic et al, 2004). Upon many several very individual applications all common and well known features (document store, communication facilities, online examination, ...) similar to other LMS for sure are provided to establish e-Learning activities at TU Graz.
- Pink – Blogosphere: Since October 2006 the TU Graz LearnLand (TUGLL) (Ebner & Taraghi, 2008) is in operation at TU Graz. It offers a Weblog to each member of the TU Graz (staff members, lecturers and students) as well as group blogs. TUGLL bases on the open software ELGG²⁸ and is comparable with the blogosphere blogger.com. But it is more learner-centered with a strong focus on learning within communities (Ebner et al, 2007a).
- Green – Digital Asset Management: This system will work as an archive and store documents as well as all kind of media files for years. Students in the same way as teachers access all files belonging to a lecture on demand. This system is planned but not working yet.
- These four different systems are connected via LDAP, which results in a single-sign on usability from the user’s point of view. With other words learners and lecturers even do not recognize that different systems are working in the background.

²⁸ <http://elgg.org> (last visited: August 2008)

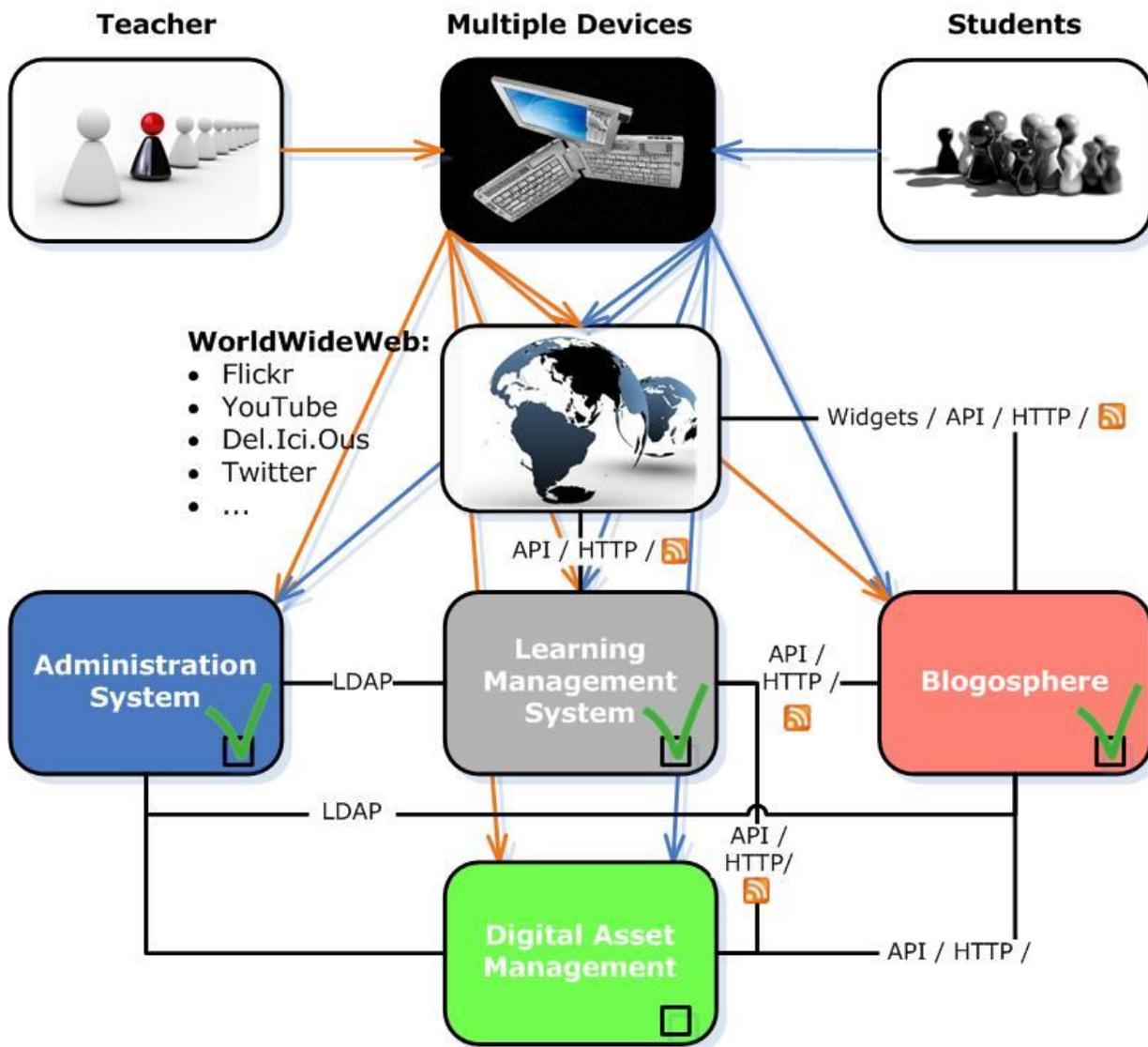


Fig. 1 TU Graz Online Concept

The orange and blue arrows display access possibilities for each provided system. It simply doesn't matter which entry point is chosen. Furthermore currently research work is dealing with access for different devices to include also mobile access.

However the TU Graz Online Concept is a very enclosed area. Usually access is only provided for members of the TU Graz. Due to this fact the main question to be addressed is: How can resources of the WorldWideWeb are brought to the lecture room? The aim is to enable teaching activities even if they not regular supported services.

Fig.1. displays the connection between TU Graz and the WorldWideWeb in the course of e-Learning. By using defined "Application programming interfaces" (APIs), Really-Simple-Syndication (RSS) feeds or simple HTTP-protocols the exchange between different applications is made possible. The main idea of this concept is to enable teachers to use different applications in respect to their didactical concept. They should be given the freedom to choose opportunities that fits best to their individual pedagogical power. With the help of provided Web interfaces it has become possible to integrate hosted services within a standardized LMS of a university. So this concept combines the advantages of a protected learning environment (learning community) with the great resources and potential of Web 2.0 achievements.

DISCUSSION

The following chapter summarizes the strength and weakness of the TU Graz Online Concept:

- Bringing the WorldWideWeb to the lecturing room: The TU Graz Online Concept aims to integrate the WorldWideWeb into its didactical strategy as good as possible. A special feature of the TUGTC called “Web Services” allows teachers as well as students to include HTML-Code provided by different Web application. Fig. 2 shows the main viewer of the TUGTC and a popup within a slideshow provided via SlideShare²⁹. From the learner’s view it doesn’t make any difference whether the original file is hosted from the TUGTC-server or an external provider. It is imaginable that in this way nearly all Web 2.0 applications can be implemented into TUGTC for learning and teaching processes. Furthermore there are RSS feeds implemented on the bottom right corner of the TUGTC surface (see Fig. 2); e.g. listed Weblogs become easily traceable in this way.
- External hosting as security problem: A weakness of this strategy seems to be that there are services not being hosted by TU Graz servers. So there is no security guarantee given neither in case of breakdowns or if data gets lost. Data security problems may occur because of different national laws. Arguing against EduPunking and the use of different

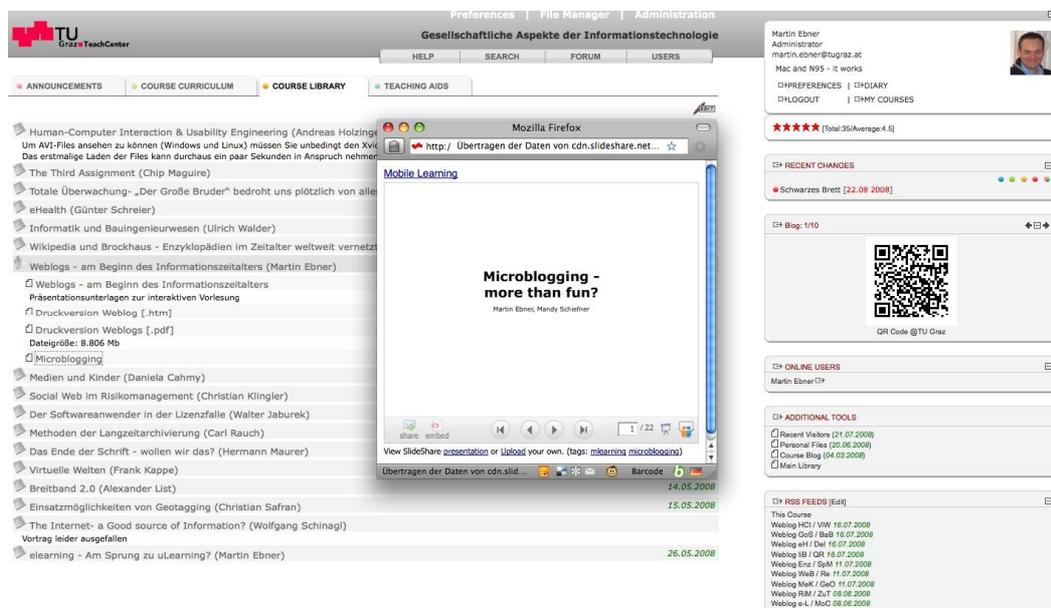


Fig. 2 Use of Web Services and RSS within TUGTC

Web 2.0 applications mean that in the worst case there is no guarantee for stability, reliability and security of data. Due to this fact used applications should be chosen by criteria that are educationally justifiable and not from too high risk. Lecturers have to be aware of it to react in an appropriate way.

- Connection over place and time: Web 2.0 applications are available anytime and anywhere. Tools like TeacherTube, Twitter, del.icio.us and personalized communities (MySpace, Facebook, StudiVz, ...) can be used for learning and teaching purposed by providing RSS-Feeds or Webservices. By the use of such online media discussions, conversations, sharing files and information can exceed the finishing time of a lecture. Including daily-used tools to teaching and learning behavior can lead to a positive effect. By using tools of every daily life learners are able to concentrate on the content instead of dealing with different programs or tools.

²⁹ <http://www.slideshare.net> (last visited: August 2008)

- Creativity, curiosity within a closed, big and rigid system: EduPunk as well as the described strategy aims to bring different tools together. Building appropriate learning Mashups (Kulathuramaiyer & Maurer, 2007) will help to strengthen creativity and curiosity. On the other side well-known and proven benefits of a closed system will be accustomed available as ever. Centralization, unique entry point for all users, enclosed learning communities by using all benefits of Web 2.0 becomes possible.
- Field research work by early adopters: Similar to the Technology Adoption Life Cycle it (Moore, 1999) seems that technology enhanced learning also needs so called early adopters to help both the early and the late majority to improve their teaching and learning behaviour. Only by carrying out serious field studies with different measures existing approaches can be stated as valuable or improvement of the system. Afterwards the enhancement of existing scenarios can be taken into account. From this point of view discussion forums can be seen as successful consequence of former newsgroups.

CONCLUSION

This publication points out the growing importance of Web 2.0 applications for teaching in learning purposes. It introduces to the term of EduPunk. EduPunk addresses the user's edited steadily growing, flexible and therefore apparently unstructured component of the e-Learning 2.0 world. In respect to different learning approaches a university concept is presented to overcome the problem of rigid platforms ignoring the usefulness of the sharing, collaborating and communicating WorldWideWeb. The intended and suggested solution from a technical point of view is to integrate different APIs or to allow integrating different Web-Services into enclosed platforms. The main research questions of this publication are:

- *How can EduPunk-teachers be supported in a meaningful way?*
- *How can their valuable work be made visible?*

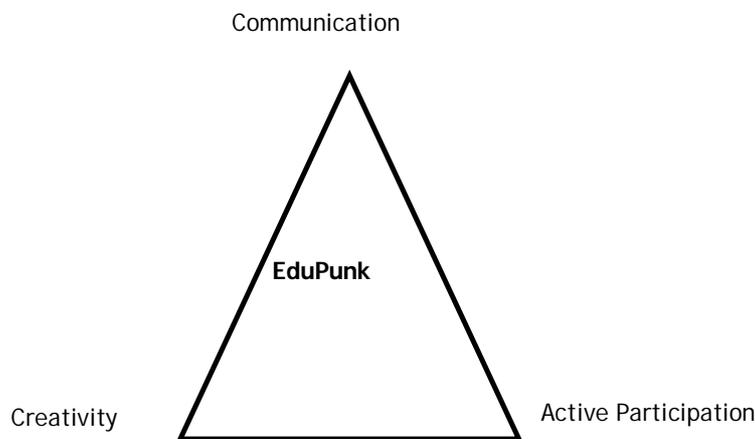


Fig. 3 EduPunk Triangle

It is of even more importance to think about the teaching and learning behavior as an ongoing, growing, changing process. EduPunk bases on three crucial factors (see Fig. 3): Communication, Creativity and Active Participation. It has become necessary to support the encouragement of the teachers with technologies and strategies to let them design appropriate individual settings for educating the next-generation. To avoid statements like “The only thing that I see missing in these discussions of “edupunk” are students”³⁰ EduPunk is to be seen as a process that enhances and changes the future of learning. If the WorldWideWeb should be brought to the lecturing room an appropriate environment will be needed too ensuring the mission statement of TU Graz: Learning and teaching should not depend on technology – it should happen amongst using it.

³⁰ <http://students2oh.org/2008/06/03/edupunk/> (last visited: August 2008)

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