LEARNING TO MICROBLOG AND MICROBLOGGING TO LEARN. A CASE STUDY ON LEARNING SCENARIOS IN A MICROBLOGGING CONTEXT

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Abstract: Microblogging is the Web2.0 technology of the moment, having applications in many domains, including education. This paper will focus on Cirip.eu, but the conclusions can be extended to other microblogging platforms. Cirip.eu is an environment specially designed for education, having many uses such as: information and knowledge management, courses enhancement, delivering entire online courses (or in a blended manner), collaborative projects, communities of practice, hosting different workshops/scientifical events, building e-portfolios etc.
The main aspects the paper will focus on are the following:
• the facilities offered by Cirip.eu to use it as a modern and flexible Learning Management System (LMS), integrating participants’ Personal Learning Environments;
• how microblogging can be integrated with other Web2.0 technologies, and into the Open Educational Resources movement;
• how the experience and the new pedagogical approach in using microblogging can be captured and formally represented as learning design objects;
• how learning design objects can be shared, discussed, improved, reused on the microblogging platform.

Keywords: microblogging, higher education, learning design, cirip

I. INTRODUCTION

According to Wikipedia\(^1\), the etymology of the word 'microblog' (also, sometimes written with a hyphen: micro-blog) comes from the conjoining of the terms 'micro' and 'blog'. The first one is a common used prefix which means 'small' whereas the second term represents a webpage with a continous, regular and cronological series of information (text and/or multimedia content) about one or more subjects.

In other words, by microblog we understand a blog of small sizes composed by several short posts (maximum of 140-200 characters) that may sometimes includ links, images or video clips (not necessarily of small sizes) and are available to be read either by any internaut or just by a group of people.

The "lilliputian" character of the notes and the fact that they may be posted from wherever you are (online, by phone, sent as SMS, e-mail or instant messaging) has not only changed microblogging into a fast-food writing experience, circumventing the "usual editorial rigour", but may be considered as a possible explanation for its popularity.

The person who creates and maintains the entries is called "microblogger", entries are called "microposts" and the activity of writing is called "microblogging". The most popular microblogging applications include Twitter, Plurk, Tumblr, Posterous, identi.ca, Yammer, Edmodo, while the most notable Romanian platforms are Cirip.eu, Trigwee and Zumzi.

\(^1\) http://en.wiktionary.org/wiki/microblog
Summing up, we can state that microblogging is just another form of social media, recognized as Real-Time Web Publishing, which has won an impressive audience acceptance and surprisingly changed online expression and interaction for millions of users.

II. LITERATURE REVIEW OF EDUCATIONAL USES OF MICROBLOGGING

As the technology of microblogging is adopted in a variety of contexts, its usefulness becomes more and more compelling for educational actors. As popular microblogging platforms used in education we mention Twitter, Cirip, Edmodo, Plurk and a recent one Twiducate, four of them featuring in the Top 100 Tools for Learning 2009, compiled by Jane Hart from Centre for Learning & Performance Technologies.

Although most microblogging platforms are not perfect, different actors from the educational spectrum have found that microblogging can be successfully used / integrated in teaching-learning process or other didactical activities ([9], [10], [5], [11], [3], [1] and [4]). The aspects most emphasized in literature reveal that microblogging:

- offers the opportunity to discuss / practice different types of online discourse, to organize ideas, reflections;
- creates instant communities in unexpected environments;
- promotes a collaborative virtual environment which foster process-oriented learning;
- facilitates the work of multidisciplinary group;
- is a useful tool for cooperation and collaboration in project management or for assessing students opinions;
- is a viable platform for metacognition;
- is the preferred support for conferences or other events;
- is used in the convergence of knowledge;
- facilitates the creation of a personal learning network;
- allows exploration of colloquial language (important in learning foreign languages);
- can be a reference service in libraries;
- can be successfully used in teaching-learning process etc.

III. LEARNING TO MICROBLOG ON CIRIP.EU

4.1 Facilities of microblogging platform Cirip.eu

In March 2008 the Cirip.eu microblogging platform was launched, being especially designed for education and business. The implementation was done by Timsoft, a company specialized in eLearning and mobile applications, under the coordination of the first author.

Besides the facilities of a microblogging platform, Cirip.eu provides the following:

- the possibility for users to specify in their profile the domain of their notes (this simplifies the search for microblogs in a specific domain, particularly in education);
- creating public or private user groups; collaboration groups can be established between the members of a class or a university year, for a course enhancement or to run an entire course (both online or blended manner);
- the possibility to embed multimedia objects in the notes: images, audio and (live) video files, presentations, files, livestreaming;
- the possibility to monitor RSS feeds for sites, blogs, or activities on other social networks or search feeds;
- tags, statistics, representations of the users’ interaction networks;
- polls and quizzes which can be answered online or by SMS.

2 http://www.c4lpt.co.uk/recommended/
The interface can be accessed in three languages: Romanian, English and German (facilitating an international collaboration, around 10% of the users being foreigners) and through a large variety of applications and different mobile devices.

4.2 Cirip.eu as social network

Cirip.eu integrates a wide range of Web2.0 applications and social networks organized around educational resources, many of them in Top 100 Tools for Learning 2009, compiled by Jane Hart from Centre for Learning & Performance Technologies. This integration is realized in order to encourage teachers and students to discover and integrate them in education.

Cirip allows the creation of a personal profile / portfolio including ideas, projects, research, information resources, multimedia objects created individually or collaboratively. All users’ activities are developed in a dynamic manner and follow a continuous evaluation process by communicating with members of groups or of the platform. Thus on Cirip each member can build not only a Personal Learning Environment but also a Personal Learning Network (PLE / PLN).

![Figure 1 PLE on cirip.eu](http://www.cirip.ro/status/1629920)

From this perspective and according to classification of [13] and analysis of [12] Cirip is a profile-centric network. Furthermore, Cirip is a social network around multimedia objects, thus an object-centric network:

- the objects are part of the communication-conversation flow of the platform;
- the objects connect Cirip with other social networking / Web2.0 applications organized around educational objects;
- objects can be reused, validated, created or recreated individually or collaboratively - we can say Cirip offers an opening to Open Educational Resources – OERs;
- meta-objects meaning objects of learning design - LD can be created; the objects of learning design specify learning scenarios, best practices for integrating new technologies (Cirip in particular) in education;
- by extension, public or private groups can be considered as social objects.
IV. FRAMEWORK OF MICROBLOGGING TO LEARN ON CIRIP.EU

4.1 Theoretical framework setting

This work is part of a broader approach of the authors regarding the use of microblogging in education (see the articles published so far by the authors- [5], [6], [7] and [8]), especially in academia, in which we proposed:

- to investigate the degree of integration of the microblogging technology in:
  - teaching activities (both formal and on many levels, from undergraduate to higher education and informal, in adult education - LLL Lifelong Learning)
  - as a professional development environment (CoP)
  - and as a personal development environment (PLE / PLN);
- to study the impact of using microblogging elements on the educational process and on its staff (teachers, students, factors responsible for the education policy, etc.) including the socio-cognitive behavior;
- to find advantages, but also drawbacks of using microblogging in education;
- to identify models / cases of good practice in teaching / learning / training / as well as the degree to which various disciplines benefit from the advantages of this technology;
- to identify opportunities for communication and collaboration on microblogging platforms by using mobile applications and devices for learning;
- to define those indicators of social interactions in the microsphere useful in educational management (at the class, course, institution, group etc.), in relation to the conversation dynamics and networking;
- to identify success factors (academic success generators) / directions / future trends in using microblogging, especially regarding this question very often raised but less clarified: whether and how microblogging brings quality in education?

We will examine in the following sections how the intersection between educational activities and microblogging can be specified as learning designs.

4.2 Learning design objects in microblogging context: a group for sharing educational strategies

Learning design aims to enable reflection, refinement, change and communication by focusing on forms of representation, notation and documentation, also to support teachers in making pedagogically informed, better use of technologies. The scope of learning design is to improve the quality of the learning experience, learning outcomes and learner support [12].

As [4] notes, there has been increasing research done on the use of microblogging in learning scenarios. Therefore, a few months ago, the authors have opened a group of learning design³ (LD) to share best practices. LD group members can be teachers, practitioners in education, trainers, students, but also other persons interested to maximize the benefits of using social media for career development or business.

The aims of the group are:

- to support innovative strategies in order to engage and empower teachers and learners and make learning more accessible and participative;
- to inform about the learning design domain and its importance for the educational process;
- to encourage the sharing of effective pedagogies experiences and the integration of new technologies (in particular Cirip.eu) in education;
- to create, discuss, analyze, evaluate, improve, adapt, and reuse such best practices represented as learning designs;
- to get learners’ feedback, empowering them as creative participants in the design of learning;
- the scenarios refer to formal, non-formal and informal education, to educational events, to social learning in general.

³ http://www.cirip.ro/grup/lds
The discussions and exchange of experiences in the group dedicated to learning design both assess the value of technology-enhanced learning and bring new resources and information in the field.

The “Announcement” section of the group presents the Learning Design field, together with notable projects: variants of EML - Educational Modeling Language developed by the Valkenburg Group, IMS-LD standard, JISC Design for Learning Program, modeling tools such as LAMS, Reload, CopperCore, CompendiumLD, etc. If other communities of practice related to LD are hosted by dedicated platforms, the LD group on Cirip.eu is integrated on the platform where these scenarios are used effectively, so they can be validated and improved. Thus, the possibility to communicate and collaborate around the LD meta-objects makes Cirip similar to Cloudworks, but Cloudworks is a network focused strictly on LD.

For the purpose of the research, the authors chose mindmaps and diagrams, with the corresponding Web 2.0 applications Mindmeister, Mindomo and Diagrammr as solution for non-formal representations of learning design. These are accessible to non-technical users, can be collaboratively edited and can be embedded in Cirip notes.

Thus the conversation in the group is built around these learning design objects. They can also be considered meta-objects, as they reflect scenarios for different activities on the platform.

4.3 Experimental framework: Learning design for academic courses

For modelling the courses using learning scenarios, the university courses hosted on Cirip.eu, in private, closed, blended-mannered groups, during the last 2 years were the subject of analysis (see table 1). The courses are part of the curricular offer for different specialisations, study forms and years from the Politehnica University and the Western University of Timisoara.

During these courses the students learn and practice different Web 2.0 technologies/applications, such as: RSS feeds, social bookmarking, social networking, blogging and microblogging, wikis, mashups, presentation and document sharing tools, images/audio/video creation/editing/sharing, mindmapping, screen recording, and digital storytelling.

<table>
<thead>
<tr>
<th>Study form</th>
<th>Year of study</th>
<th>No. Of courses</th>
<th>No. Of students / course</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>I</td>
<td>5</td>
<td>374</td>
</tr>
<tr>
<td>U</td>
<td>II</td>
<td>6</td>
<td>254</td>
</tr>
<tr>
<td>U</td>
<td>IV</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>M</td>
<td>I</td>
<td>3</td>
<td>153</td>
</tr>
<tr>
<td>M</td>
<td>II</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>16</td>
<td>809</td>
</tr>
</tbody>
</table>

Legend: U – undergraduated studies; M - Master

In this manner, the dimensioning of learning scenarios, in order to identify primary impact elements in using the microblogging technology for study and learning, was based on establishing specific contents for each instruction level, in conformity with the recommendations placed by [12].

But IF we want the use of these learning scenarios to actually lead to learning results oriented to performance and school success, we need to (re)adapt for microblogging the taxonomy of Bloom (rewritten from Andrew Churches for on-line environment in 2008/2009) [15].

a) REMEMBERING. Possible activities for recalling or recognition of specific information:
   - retrieving: messages can be seen or written online through Web, email, mobile, SMS / IM / Jabber / Gtalk / mJAVA, firefox extension CiripFox / iGoogle cirip Gadget /ciripAIR, FF Ubiquity, Twitter account / from RSS2cirip; correspondingly under each message the source is written (web / mobile / ciripfox / twitter2cirip / rss2cirip; information about receiving / sending through SMS)
   - listing: widgets on sites, notifications by email, SMS, iCIRIP
• **basic search** after different criteria in all or just the tracked messages, with RSS generation, looking up users using name, microblog type, gender or place.
  - search messages using a search feed - on every page (in all public messages, in personal messages, in accounts/feeds/current groups or in followed feeds / groups)
  - search users after different criteria at **Users** (name, location, domain)
  - search groups after criteria - at **Groups** (name, moderator, type)
• **social networking** (each microblog has a network section, displaying following/followers users, groups and feeds)
• **highlighting** through **Wall** and **TimeLine** ([http://www.cirip.ro/u/Gabriela/timeline](http://www.cirip.ro/u/Gabriela/timeline))

• **locating/finding** with maps ([http://www.cirip.ro/cirip/map](http://www.cirip.ro/cirip/map)).

b) **UNDERSTANDING.** Possible activities for construction meaning:

• **advanced searching** with
• **categorising** and **tagging** (see **TagCloud**, too)
• **commenting** (see reply messages with @ and RC and email for an entire group)
• **annotating**: bookmarklet button Cirip (Send on cirip)
• **subscribing** (RSS2cirip, RSS blogs, other sites)
• **twittering** - Twitter integration (cirip2twitter, twitter2cirip – at message level, user (authentification) or for import to/from groups)

• **classifying/comparing** (with **TOP** statistics, **Network** from each user microblog menu)
• **summarising**: collaborative documents (voicethread, dotsub, **mindmeister**)
• **collection/explanation**: mindmapping in courses strategy (in collaborative or individual settings) – mindmeister, mindomo, diagrammr
• **show & tell**: audio/video recording tool – vocaroo, seesmic, lifestreaming – qik.

c) **APPLYING.** The use of new knowledge, the application of abstract representations in particular and specific cases:

• **loading**: any type of file (pdf, doc, ...)
• **illustration**: capzles (historic tale construction application)
• **screencapturing**: screnr, screenjelly, screencastle
• **presentation** with prezi, glogster, authorstream
• **interview**: any sound recorder – > mp3 file with audio; vocaroo, lifestreaming
• **uploading**: flickr, picasa, photopeach, youtube, vimeo, slideshare
• **sharing**: links (shorten), audio (eok, deezer, blipfm, trilulilu), video (youtube, vimeo, 220.ro, myvideo), presentation (slideshare, photopeach)
• **editing**: dotsub (students can work in collaboration, for eg. in Google Docs and then export the file to be uploaded later online).

d) **ANALYSING.** The decomposition into constitutiv parts for a detail exploration:

• **polls and surveys** (through Web and SMS, and poll facility from Photopeach)
• **database** (learning users about CC) – flickr
• **mindmaps**: mindmeister, mindomo, diagrammr
• **graph** – any image (by URL) can represent the result of a graph utility.

e) **EVALUATING.** The justification of the decision or of an intercession / wording of judgements (quantitative, respective qualitative) that establish to which level the materials and methods meet the proposed or established criteria of the one that studies:

• **commenting**: @ replies and through RC
• **testing** (Quizz and Polls)
• **moderating, collaborating, networking** – the user is turning into content creator / group facilitator.

f) **CREATING.** Generating new ideas, products or ways to see things / combining fragments / elements to form a new structure, which couldn’t be seen clearly before (creation of a personal work):

• **ALL** of the multimedia objects within the messages are referred to.

But **HOW** do we achieve the promotion of new teaching methods by using the learning scenarios? From the cognitive architectures described before, for constructing learning scenarios with final goal to the visible improvement of the student’s motivation to learn, the applications of cognitive maps detach (see figure 2).
Note: We say this because we do consider that the success key in using microblogging in education is to be aware of the fact that there is a relationship between the student, the technologic environment / the platform and his learning activities / the education to use microblogging FURTHERMORE (in fact how we sustain the dinamization of the participants after finishing the class).

V. Conclusion and future work

Like all communication and collaboration on Cirip, the LD group is an illustration of JP Rangaswami's metaphor: "Conversations grow around social objects, much like pearls grow around microscopic dust. Social objects are about growth, they are live"[^4].

The group encourages peer-working and peer-mentoring in creating / recreating scenarios, but also in preparation and facilitation of courses and educational events. A teacher or facilitator can apply successful scenarios, and can be assisted / helped in facilitating the course by a more experienced colleague. Feedback will be brought in LD group, by teachers and participants for all member’s benefit.

The immediate consequence of such collaboration was both rethinking the teaching process and learning activities / objects and redesigning the curriculum - see Figure 3.

[^4]: http://confusedofcalcutta.com/2008/02/16/musing-about-social-objects-molluscs-that-matter/
Our future research will focus on assessing possible compatibility between Cirip learning design objects and formalisms such as CompendiumLD and LAMS.

The Multimedia section of microblogs and groups, currently consisting in playlists for audio / video, will contain multimedia objects created individually or collaboratively by members, for easier retrieval and reuse, in order to facilitate a wider opening to OERs.

We appreciate that the microblogging platform Cirip.eu has facilities which permit to deliver successful and quality online courses; the communication, authoring, monitoring, statistical facilities foster Cirip.eu as a modern free LMS which integrates many Web2.0 technologies, and also allows participants to develop their PLEs/PLNs.

References


Worked Example – Blended Distance Course Design de Hazel Owen, http://www.mindomo.com/view.htm?m=c2219b6f7eb6f47c1a9b8907e59d5a1a0.