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Portuguese Postgraduate Teachers' Opinions about using Social Bookmarking: an exploratory study

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Abstract: This paper reports Portuguese postgraduate teachers' opinions about their experience of using, for one semester, the social bookmarking tool Del.icio.us. A group of 24 in-service teachers created accounts on del.icio.us and developed an electronic database for the group final research project. The instrument developed to collect their opinions is an online questionnaire with open and closed questions. Teachers' answers show they considered Del.icio.us very useful for the organization and sharing of Internet resources in the development of a group project. They also considered the tool was easy to use although for some the interface was neither intuitive nor pleasant. Regarding the possibility of integrating this web 2.0 tool in the classroom most teachers said they intended to do so and two said they were already using it in the classroom activities.

1. Introduction

The popularity of the websites that focus on the social interaction had an exponential growth in the last years. So much growth that this new generation of web services received a new designation, controversial no doubt, but, somehow, opportune: Web 2.0 (O'Reilly, 2006). Besides the debate that continues when it comes to decide whether a web application is (or not) of the "new" generation of the Internet the truth is that a great change occurred; the classic formats where the Web was a "chore" for the user had given place more dynamic models where the user starts to be a producer of contents through the variety of tools available on the web (like blogs, wikis, podcasts) (Ferreira, 2007).

This change in the current paradigm is a reality: the term Web 2,0 only serves to rotulate a more open web to the users, an Internet that allows teachers and students become producers and diffusers of the information in the global network A new communicational paradigm supported by a fan of interactive tools such as, blogs, wikis, podcasts, social bookmaking, social software and the web as a platform where social and professional relations take place (D'Souza, 2007). Despite of the enormous popularity that these new applications have next to the youth, in the school, many of the new concepts for web services do not have a direct path into teaching and learning (Abbitt & Odell, 2007). The (scarce) studies that analyse educational uses of the Web 2,0 tools in Portuguese schools (in special blogs, wikis and podcasts) point out, however, to very promising results (c.f. Coutinho & Bottentuit Junior, 2007). It matters therefore to continue to investigate and over all to explore the enormous potentialities that these and other tools of Web 2,0 can have in the access to the information, in the allotment and construction of the knowledge in the communication and in the promotion of social relations both professional and personal (Abbitt & Odell, 2007). We believe that an effective pedagogical use of these tools can have a determine the promotion of collaborative learning strategies in all educational contexts either formal or informal: "Rather than treat pedagogy as the transfer of knowledge from teachers who are experts to students who are receptacles, educators should consider more hands-on and informal types of learning. These methods are closer to an apprenticeship, a farther reaching, more multilayered approach than traditional formal education." (Brown, 2006).

The study we present in this paper aims to explore how social bookmarking can be used for teaching and learning. A group of 24 teachers explored the tool Del.ici.ous during a postgraduate course in Educational Technology for one semester. We believed that these services were perfect for groups to use for collective projects as

the one they had to develop for approval in Research Methods in Education (RME) program. Central to this project was the idea that there is a great benefit in enhancing collaboration among a group of peers. By studying the attitudes and opinions of teachers it would be possible to determine the next steps in the effective use of this new generation of web services in teaching and learning. On the other hand, as instructors in an education program we believed that the use of this new web tool could develop teachers' technological skills so important for an effective integration of ICT in the classrooms (Johnson & Liu, 2000; Woodbridge, 2004; Coutinho, 2007).

2. Social bookmarking

Social bookmarking is the practice of saving bookmarks to a public Web site. (Lomas, 2005). Bookmarking, on the other hand, is the practice of saving the address of a Web site you wish to visit in the future on your computer. To create a collection of social bookmarks, you register with a social bookmarking site, which lets you store bookmarks address, add tags of your choice, and designate individual bookmarks as public or private (Lomas, 2005). A tag is a keyword that is added to a digital object (e.g a website, a picture or video clip) to describe it but not as a formal classification system (Anderson, 2007, p. 8). In essence, social bookmarking lets you maintain a personal collection of links online – tags - , similar to the bookmarks or favourites in the browser, that are also accessible to others users of the web.

According to Lomas (2005), social bookmarking opens the door to new ways of organizing information and categorizing resources. The creator of a bookmark assigns tags to each resource, resulting in a user-directed, “amateur” method of classifying information. Because social bookmarking services indicate who created each bookmark and provide access to that person's other bookmarked resources, users can easily make social connections with other individuals interested in just about any topic. Users can also see how many people have used a tag and search for all resources that have been assigned that tag. In this way, the community of users over time will develop a unique structure of keywords to define resources something that has come to be known as a “folksonomy” (Lomas, 2005).

The term folksonomy (also known as collaborative tagging, social classification, social indexing, social tagging, and other names) is generally acknowledged to have been coined by Thomas Vander Wal (Hayman, 2007). According to Vander Wal (2004), folksonomy tagging is done in a social environment (shared and open) and is not collaborative and it is not a form of categorisation. He makes the point that the value of a folksonomy is derived from people using their own vocabulary in order to add explicit meaning to the information or object they are consuming (either as a user or producer).

Folksonomy is frequently criticized because of its lack of terminological control that it seems to be more likely to produce unreliable and inconsistent results (Hayman, 2007). In fact, social bookmarking is done by amateurs. There is no oversight as to how resources are organized and tagged so this can lead to inconsistent or otherwise poor use of tags (Lomas, 2005). A possible solution to the shortcomings of folksonomies and controlled vocabulary is a *collabulary* (a collective vocabulary), which can be conceptualized as a compromise between the two: a team of experts collaborates with content consumers to create rich, but more systematic content tagging systems (Anderson, 2007). A collabulary arises much the way a folksonomy does, but it is developed in a spirit of collaboration with experts in the field. The result is a system that combines the benefits of folksonomies — low entry costs, a rich vocabulary that is broadly shared and comprehensible by the user base, and the capacity to respond quickly to language change — without the errors that inevitably arise in naive, unsupervised folksonomies (Hayman, 2007).

Using a folksonomy/collabulary based tool for research projects lets one take advantage of the insights of other users to find information related to the topic you are researching, even in areas that aren't obviously connected to the primary topic. It is this unique combination of social interaction with a focus on collaboration and the sharing of information based on common interest that makes the application of social bookmarking to the field of education very appealing. According to Lomas (2005) it may become less important to know and remember where information was found and more important to know how to retrieve it using a framework created by and shared with peers and colleagues. Social bookmarking simplifies the distribution of reference lists, bibliographies, papers, and other resources among peers or students and those were the features of the software we explored with our group of high school teachers.

3. Method

The descriptive study (Alreck & Settle, 1995) we present in this paper was developed in the first semester of 2007/08 and enrolled 24 post graduate students who attended a program on Research Methods in Education (RME) as part of a Master Degree in Educational Technology. RME is a 3 hours/week lecturer class that aims to

provide students with competences in a broad range of social scientific methods necessary for the development of an original dissertation that is compulsory for obtaining the degree. Our previous experience of teaching this program suggested that social bookmarking was the ideal tool to assist novice researchers in the search and categorising of relevant information available in the web, a skill that is essential in the fast-changing knowledge-based societies we live in. A different strategy was then tested: students organized into small group (3-4) and developed a project on a chosen research methodology. Each group produced an essay to present to the whole class for assessment. A del.icio.us account was created to bookmark internet resources related to the project. The aim of the study was to evaluate the learning experience of using social bookmarking: a) for the development of a research project; b) to enhance autonomy and habits to search and use the information on the web, d) to develop skills and positive attitudes regarding the integration of technologies in the classroom

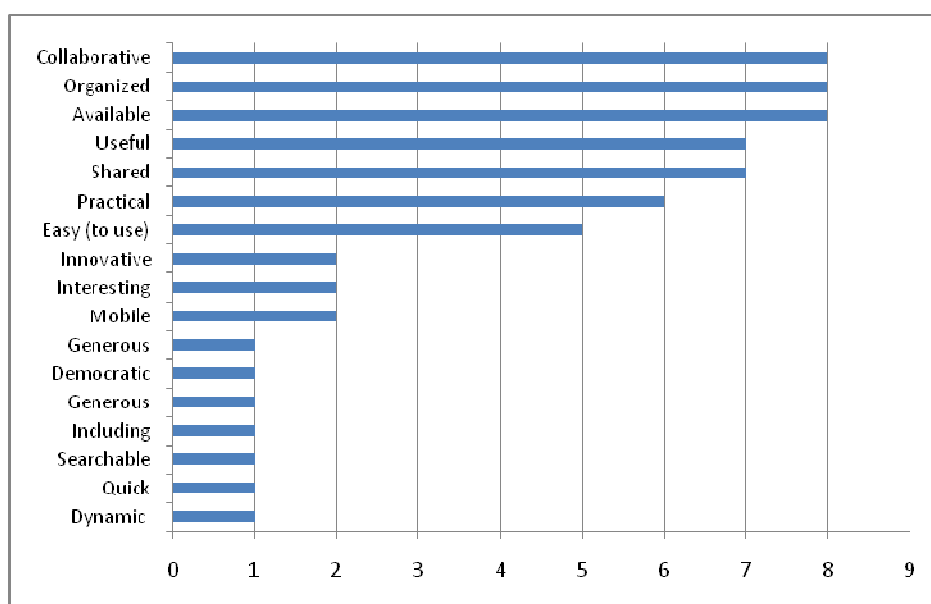
The learning activity was assessed thru a final online questionnaire that was specifically developed for the study. The online questionnaire consisted in a mixture of open and closed items. It was divided into two sections. The first part included items related to student personal data such as age, sex and previous experience with web 2.0 technologies. The second part was composed of open-ended questions and students were asked about specific aspects related to the importance social bookmarking, the difficulties they fell when using the tool, as well as an overall critical analysis of the learning activity.

4. Results

Twenty three teachers completed the online questionnaire developed in surveymonkey.com. The average age of teachers was 33 years old, and as to gender 61% were female and 39% male. Most were middle (65%) or high school teachers (17%) who worked in public schools; 4 were not in service at the moment. As to previous acknowledgment of social bookmarking concepts and tools, we verified most teachers were not familiar with the concept of social bookmarking (only 7 teachers said they already knew the concept); the term “Tags” was familiar to 66% of the respondents, “RSS” was familiar to one teacher but nobody had ever heard of the term “Folksonomy”. One teacher said he had already created a del.icio.us account for personal use but that the account was out of use for a long time.

When asked - *What was your first feeling when the social bookmarking activity was proposed to you in RME program?* – teachers’ answers show an array of opposite attitudes from negative feelings such as *“I thought it would be difficult”, “Useless”, “Unimportant”* or even *“I felt panic”* or *“Fear of not being able to use the tool”*, to positive expectations: *I thought it would be interesting and useful”, “I felt curiosity”* and even real enthusiasm: *“I said to myself I am going to use this tool at once!”*. Difficulties in using Del.icio.us were reported only by 3 teachers: one reported difficulties in the first contact with the technology and the other reported difficulties in organizing Tags.

The next question asked for teachers to write 3 adjectives they associated to the social bookmarking tool Del.icio.us. Graph 1 presents the list of the adjectives quoted by the respondents.



Graph 1 – List of adjectives associated with social bookmarking

As one can verify, the “collaborative”, “organized” and “available” were features of social bookmarking teachers most valued. “Useful”, “Shared”, “practical”, “easy” were other adjectives teachers used to associate to this Web 2.0 tool. Really unexpected were some of the remaining adjectives reported by teachers that show the enormous potential of this tool for the development of teachers’ skills and attitudes regarding innovative technologies: “mobile”, “democratic”, “generous”, “including” are really interesting features of social software that teachers’ valued after using it in the learning activity proposed for their education program.

The next question asked for teachers to point out both positive and negative characteristics of Del.icio.us. As to positive aspects teachers pointed out: a) the facility to organize the information with tags or topics; b) availability anytime and anywhere; c) the possibility to manage and share our preferred sites with colleagues; d) to accede to websites other searched before and e) the possibility to create a list of favourites and carry it with us. The negative features of the tool were: a) the interface that was neither intuitive nor pleasant; b) it only worked online; c) the existence of lots of garbage on the web that people can add to del.icio.us; d) the low level of organization allowed thru tagging that can be confounding for web users.

Asked if they intended to use Del.icio.us in their personal routines of searching information on the Web, 88% of the respondents said they would and only three answered “maybe”.

As teacher educators we were very interested in evaluating teachers’ perceptions on the potential of this tool as a pedagogical device to integrate in the classrooms activities and so a final open ended question was included in the questionnaire for this purpose. Three teachers said “maybe” they would use del.icio.us in the classroom, one said “*It depended on students’ informatics literacy*” and another answered “*I have not yet thought on the matter*”. The remaining teachers answered as follows:

T2: *Of course! With all this possibilities not using it would be a real waist of educational resources.*

T4: *I believe it will be interesting as it promotes to search and organize the information on the web*

T5: *As soon as I begin to teach I will use it doubtless!*

T6: *If it fits to curricular goals of course I will use it. I teach 8th grade students and they are still very dependent on the manual. The access to the internet is scarce for most students but I intend to try it as soon as possible.*

T7: *I think the tool is not suitable only if you teach elementary classes.*

T9: *Yes, I am already using it in one of my classes.*

T10: *Yes, for the development of a repositorium of sites for my curriculum program to be shared by all my students.*

T11: *Yes, I think this tool is important for students to use as it promotes skills for the search and organization of the information.*

T12: *Yes. When a research project is asked students can be guided through a list of Tags related to the topic using del.icio.us. This list can also be used to guide the search for bibliography, pictures, etc.*

T15: *Yes. As soon as I have time I intend to teach them to use the tool and to explain it can be for the future of their career or interests.*

T16: *I already use it. Del.icio.us is an important tool for users who use computers in its daily activities, as it is the case of the teachers and students. Through this tool, one can bookmark books, films, music and sites that are considered important. These registers can be organized by word-key (tags) or subscribing RSS of collections of other users. The professor can authorize its personal lists in order to guide the pupils in research activities or as bibliographical references. The pupil can subscribe a RSS of the teachers’ lists to be notified every time new information is added. During a reading, a debate, or during a lesson it can appear a key-idea (tag). The professor can take advantage of this situation to create a community using the Del.icio.us. The students would then be invited to make a research on this key-idea to and to register all related resources in the del.icio.us account. Each one would contribute with its links for the community (group). Other pupils, professors or communities could be invited to contribute in order to increase and to diversify resources. The final result would be an extensive set of materials (suggestions of reading, images, sites, etc.) that would be always available. Del.icio.us can also be an instrument of evaluation for the professor. He can consult the accounts of its pupils and verify the route of its research and the form they classified resources.*

T17: *Yes, I believe it is important for students to use this tool for research work.*

T 18: *Yes, as soon as I have an opportunity.*

5. Concluding remarks

Social bookmarking tools are freely available and relatively easy to use. However, they are not widely implemented in the education arena as one can verify for the scarceness of studies reported in the literature. The learning experience we present in this paper illustrates how a specific Web 2.0 tool - Del.icio.us - was used to create

a repository of internet resources (favourites) to support a research project as part of class work in a post graduate teacher education program. Data collected through an online questionnaire showed that this was the first time teachers had contact with social bookmarking technology and philosophy. Teachers valued the experience and believed social bookmarking opened the door to new ways of organizing information and categorizing resources. They also considered using the tool in the classroom as they believed it had potential to sustain several learning activities, particularly those where students need to be guided in the search and organization of information.

Teacher education programs often view technology as a subject to be added to the program rather than a tool to be integrated into current curriculum but if we want changes to occur teachers need to be introduced to new activities with technologies, then given time to practice and reflect about them (Paiva, 2002; Hokanson & Hooper, 2004). Teachers do not adopt new pedagogy simply because they think they possess the skills and knowledge to do so (Sandholtz & Reilly, 2004; Silva & Miranda, 2005), but because they believe in its effectiveness for pedagogical purposes, depending on students and the curriculum topics (Salinas, 2000). Social bookmarking belongs to a new generation of tools that can promote collaborative learning strategies in all educational contexts either formal or informal; they are effective either for searching, organizing or sharing the information available on the web. However as many of the resources available are not reliable, teachers should be guiders who conduct students in learning activities such as searching and saving internet sites with social bookmarking tools. Teachers need to consider new roles and functions (Perrenoud, 2000; Woodbridge, 2004), new ways of teaching and learning for the “digital natives” of the global society we live in (Prensky, 2001). As Moore (1973) said many years ago: “The potential for change in learning, in teaching, and in the structure of educational organizations is enormous. If we only think of using new technology for teaching the same old subjects to the same kinds of learners with the same methods within the same kinds of institutional structures, we completely miss the potential of the technology.”

6. Limitations

The number of participants in the study was relatively small and limits the scope of the study. Future research with more participants will certainly lead to more robust results. The course instructor was also the researcher and the single evaluator of the experience. Further evaluation to be performed will include content analysis of the del.icio.us accounts and should also be considered in a future experience. Finally we are also considering the possibility of interviewing the participants in this study within a year in order to verify if they really have developed similar experiences in the classroom.

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