

# Edutags – Social Bookmarking for Teachers: A German Case Study

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## Introduction

It has been widely agreed that the continuous professional development of teachers is a pivotal element in the provision of high quality education. Similarly, Hokka and Etelapelto (2013) have stated that “*there is a global consensus that teacher education must be improved and resources and obstacles to developing teacher education need to be elaborated if it is to meet the challenges of the 21st century*” (p. 1). Additionally, authors like Hew and Hara (2007) have stipulated that such a development would particularly be fostered by enabling teachers to share knowledge with each other, in a process of collaboratively improving their practice. Yet, while the potential for collaborative learning activities amongst teachers appears to have been acknowledged, the most prominent delivery method to train participants, in general, has been instructor-led classrooms (Armstrong & Sadler-Smith, 2008). This method provides the foundation for more advanced learning (Soden & Halliday, 2000), and provides participants with the necessary building blocks to continue with more a detailed and practically oriented training (Robey, Khoo, & Powers, 2000). Yet, researchers have criticized this method of delivery for decoupling knowledge from its real-life applicability within actual working environments (Eraut, 2000).

With the growing availability and potential of online learning tools, institutes and institutions for teacher education and training can now choose from a wide range of new methodologies that can foster professional development (Chalmers & Keown, 2006). More specifically, virtual communities of practice (CoP) have been suggested as a valuable tool to connect participants and enable them to openly share knowledge, insights and experiences (Wenger, 1998). In essence, CoP constitute “*groups of people, who share a concern, set of problems or passion about a topic and who deepen their knowledge and expertise in this area by interacting on an ongoing basis*” (Wenger, McDermott, & Snyder, 2002, p. 4). A few practical examples of CoP that have already been established and that can be considered as hubs, where interested teachers can gather information, gain new insights and jointly contribute to each other’s learning process, as well as teaching practice include:

- The ProTeacher Community (<http://www.proteacher.net/>)
- Connected Educators (<http://connectededucators.org/>)
- TeachersTalk (<http://www.teacherstalk.co.uk/>)
- Innovative Technologies for Engaging Classrooms (iTEC) (<http://itec.eun.org/web/guest>)
- Zentrale für Unterrichtsmedien im Internet (ZUM) (<http://www.zum.de/>)

While these examples certainly provide positive showcases of CoP in teacher education, it can be argued that they not yet fully capitalize on the potential of what Web 2.0 has to offer. More specifically, within the context of Web 2.0, a wide range of mechanisms and tools has been developed that allow participants not only to collect resources, but also to actively engage in the evaluation of content and the collaborative development of a joint knowledge base (Kerres, 2006). Among the many available tools, collaborative bookmarking systems, also referred to as social bookmarking, have gained an increasing amount of popularity among practitioners and researchers alike (e.g. Huang, Lin, & Chan, 2012). Common examples include services like Delicious (<https://delicious.com/>) and Diigo (<https://www.diigo.com/>). Again, these sites and service provide a valuable starting point to provide teachers with the possibility to share resources and contribute to a growing repository of valuable materials for teaching practice. However, these sites are not specifically dedicated to teachers and their demands and requirement. Instead, Delicious, Diigo and other services are freely available to anyone, who would like to use them. While this further enhances the pool of available, socially bookmarked resources, it also makes it more difficult to create a sense of belonging and trust between the affected actors, which has been repeatedly posed as an essential factor in maintain CoP (Gannon-Leary & Fontainha, 2007). The proposed workshop will introduce a dedicated social bookmarking platform for teachers, called Edutags (<http://edutags.de/>). While the focus group of this particular platform consists of school teachers, the consideration concerning the design implementation and facilitation can be applied also in other domains and target groups. More specifically, we believe that the insights shared during the workshop can provide valuable contributions to practitioners in the domain of business administration and economics, who consider to use social bookmarking in the future as part of the their teacher training initiatives. In the following, this

proposal for a workshop will first provide some more background on the underlying considerations when designing and implementing social bookmarking platforms for teachers. The proposal will then introduce Edutags, as a particular approach to provide social bookmarking facilities for teachers. Finally, the proposal will shortly highlight how the proposed workshop will contribute to the knowledge and insights of the audience.

## **Social Bookmarking – Collection and Exchange of Knowledge and Information**

Social Bookmarking, according to Huang and colleagues (2012), can be considered as a “*user-centric, social and democratic indexing system*” (p. 599). In contrast to Web 1.0, where content was merely meant to be read and consumed, social bookmarking provides individuals with the possibility to contribute to the already available pool of knowledge, by adding their own knowledge, insights and experiences, e.g. by tagging a certain website according to the use it has in their everyday teaching practice. More specifically, a teacher of an university course on economics might have found an interesting website on the latest developments in the market for crude oil. Previously, she could have read the content of the website and maybe even include it in her teaching. With the help of social bookmarking, she can now also add tags to the website that will help others teachers and students to put the website in a more specific context. For example, she could add the tags demand, supply, elasticity, government tax, in order to qualify the specific subdomains of Economics for which this website might be suitable. Moreover, she could also add tags along the lines of bachelor, real-life case and application, which would help her fellow colleagues to better understand how the website might also be helpful for them in their teaching practice. This is possible, even if the resource has initially not been published as a teaching or learning material, and has only been used by the individual teacher as an applicable resource (Kerres, Heinen, 2014).

As can be seen from this short exemplary case, it is easy for anyone to contribute to such a platform, irrespective of their level of experience. Alternatively, and referring to the work of Huang, Lin and Chan (2012, p. 1) “[even] [n]ovices are able to immediately participate in the system because it simply shifts from professional categorization to social tagging” (p. 599). The ease of access with which individuals can contribute to the collaborative efforts to improve one’s teaching practice, e.g. by publicly tagging available resources and indicating the specific context in which they can be used, allows the entire community to benefit from the efforts of each individual participant. Additionally, this setup can also contribute to the creation of what has been labelled “(neo)apprenticeship style learning” (e.g. Gannon-Leary & Fontainha, 2007), which fosters the process of unlocking individuals’ tacit knowledge, e.g. how certain pieces of information can effectively be used in teaching (Leonard & Sensiper, 1998). Here, (neo)apprenticeship is considered as a relationship between, in relative terms, *experts* and *novices* among teachers. While both parties collaboratively contribute and benefit to the growing repository of resources, the *experts* help the *novices* to evaluate how declarative information from websites can be applied and implemented within teaching practice. In return, the *novices* can contribute new ideas and experiences to this relationship. Moreover, the roles are not necessarily static or permanent. Instead, they depend on the situation at hand and are even expected to change over the course of time. The fact that novices are allowed and expected to slowly get acquainted to the community and then gradually becoming active members over time, is commonly referred to as “*legitimate peripheral participation*” (Lave & Wenger, 1991).

Yet, while this open exchange of knowledge and ideas is the main purpose of creating and implementing such social bookmarking site (for specific target groups, such as teachers), numerous researchers have highlighted that “*people typically value and protect what they know*” (Hew & Hara, 2007, p. 1). Even more so, based on a literature review on online-knowledge sharing among teachers, Hou Sung and Chang (2009) have found that “*most teachers do not interact in a culture in which teaching-related knowledge is exchanged [...]; [and] they are accustomed to designing teaching activities in isolation [...], which, in turn, prevents knowledge externalization and sharing.*” (p. 101). Consequently, more insights are required on whether and how teachers effectively use social bookmarking platforms and what type of knowledge they share with each other.

## **Edutags – A Social Bookmarking Site for Teachers**

The social bookmarking platform *Edutags* has been developed by the Learning Lab of the University Duisburg-Essen, in collaboration with the Deutsches Institut für Internationale Pädagogische Forschung (DIPF = German Institute for International Pedagogical Research) and is deployed in the context of the German Education Server (Heinen & Blees, 2011). *Edutags* constitutes a portal, where teachers can collect and share references to various online resources that they either already actively use, or plan to incorporate in their teaching practice. While doing this, teachers describe their online resources by using keywords – tags. This enables them to specify not only the type of resource being shared (e.g. software, video), or the domain for which an online resource can be applicable (e.g. marketing, finance, trade economics). By tagging their shared online resources, teachers can also indicate the specific

didactical (e.g. project, experiment, worksheet) and educational context (e.g. high school, college, university) in which the material(s) can be used. The tags are the prerogative of the users. Moreover, while teachers can choose from a subject-specific list of keywords and tags, they can also add new tags based upon their individual criteria. Irrespective of the teachers' choice which tag(s) to use, the decisive element is that they can illustrate and reflect upon their own concepts pursuant to the resources (Kimmerle, Cress, & Held, 2010). Additionally, as the amount of teachers using a certain tag increases, thereby adding to the available amount of metadata on a particular resource, so does the likelihood that other users will be aware of the resource. In contrast to similar other platforms for teachers, Edutags specifically follows a broader strategy and also allows to share resources that are not explicitly defined as "teaching materials", which opens up the possibility to also include all other kinds of materials, such as YouTube videos and Flickr pictures.

In addition to acting as a platform for teachers to collect and share resources among their colleagues, as a second step, Edutags foresees to also make the applicable resources available to students. As a result, Edutags offers a total of four (user) interfaces. More specifically, results from a search query on a certain topic can be (1) issued as PDF files; (2) printed out and distributed among students; embedded as a (3) tag cloud on various other sites or (learning) platforms; (4) passed on as an RSS-Feed. Edutags therefore can really be considered as a bridge between various content platforms and content providers and the learning platform of interested institutes of (higher) education (Kerres, Heinen, 2014). Consequently, it thereby contributes to users' personal learning environments that connect them with others (Hölterhof & Heinen, 2014).

## **(Re)Designing the Platform – The Continuous Evaluation of the Platform**

During the design phase of the platform, as well as during the entire duration of its existence, the project team conducted a range of focus group meetings, to which members of the targeted teacher community were invited. The underlying motivation was based on the consideration to integrate the teachers' needs and requirements in the entire process of the platform (Morgan, D. L., 1997). The specific members of the focus group meetings were chosen on the basis of different aspects, including their (potential) affinity with digital media, their membership of didactical expert groups, as well as their current status in their professional development (e.g. currently in teacher training, various levels of tenure).

While there have been a wide range of topics that have been raised by the teachers, and which have been attended to if it was (technically) feasible, a number of aspects remain an issue of concern and need to be addressed for the future. Among the most prominent topics mentioned by teachers is their concern of the "*commercialisation of the internet*". This quote from the focus groups describes the question of whether (high quality) teaching and learning resources may only be possible to access against payment in the future. The points towards the larger topic of "*Open Educational Resources*" (OER), which has received a growing amount of attention across various content domains and contexts. In accordance with the UNESCO Paris declaration (2012), guiding questions that remain to be satisfactorily answered include How can a social bookmarking system foster the awareness and use of OER? How can a social bookmarking system for teaching be part of a strategic alliance for OER? How can a social bookmarking system help to find, retrieve and share OER?

## **Proposed Workshop**

The proposed workshop will not only introduce the Edutags platform as such, but will also spend more time on the underlying theoretical and methodological considerations, which were taken into account when designing and implementing the platform. Moreover, we will highlight how the presented scenario can be transferred and translated into the context of teaching in business administration and economics. Additionally, we will provide first-hand insights on the practical limitations and hurdles that had to be faced in the initial stages of the platform, as well as on an ongoing basis while maintaining and further developing the platform. Furthermore, we will strive to make the workshop as interactive as possible by inviting participants to share their own experiences with social bookmarking tools and assist them with any question on how to apply the presented scenario in their own working environments. Finally, we will encourage participants of the workshop to critically evaluate the Edutags platform, by sharing their thoughts on layout, structure and (envisioned) functionalities. Specific questions that will be asked include: How would you address the issue of "*protecting one's knowledge*"? What would you consider to be valuable additions to the tag-search functionality? How important do you consider face-to-face meetings, to further enhance the creation of a sense of belonging and community? Do you think it would be feasible and/or desirable to expand Edutags to also include teachers from other forms of education (e.g. colleges, universities) and countries (across Europe)?

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