Motivating Collaborative Learning Activities by Using Existing Web 2.0 Tools

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Collaborative learning activities have not been considered that much in previous formal higher education.
although collaboration has a positive effect on motivation as well as meta-cognition. Slavin (1990, in McConnel, 2000) describes the positive aspects of collaboration on the motivation and Dillenbourg (1999) states that additional cognitive mechanisms may appear more frequently in collaborative learning situations than in individual learning.

In this paper we want to compare traditional learning activities with novel learning activities that are supported by Web 2.0. On the one hand we will show the existing learning activities that have been practiced and documented in literature a lot and on the other hand we will call attention to those learning activities that are supported by Web 2.0. The background of our paper is that learners are very used to traditional learning activities such as reading article but still certainly not familiar with new learning activities like assessing or reworking articles of peers. The intention of our paper is to find a concept that motivates learners in getting involved in these novel Web 2.0 supporting collaborative learning activities that are most appreciated to stimulate reflection, critical thinking, self-directed and self-organised learning.

The web 2.0 provides novel possibilities of being involved in collaborative learning activities such as *discussing, arguing, disputing*, *revising*, *reviewing*, *assessing, writing, reworking* and *producing* articles. These are most welcome learning activities in the context of higher education, especially at universities, to stimulate overall learning objectives like *reflection, critical thinking, self-directed & self-organised learning*. These are competencies of a learner that have become most important in a society with a continuously growing amount of accessible information in order to be able to distinguish between good and bad knowledge resources.

Learning activities have been defined and classified according to their cognitive and meta-cognitive aspect (Fruhmann, 2010). In the self-regulated learning domain several key processes have been defined which are essential to self-regulated learning (Kitsantas, 2002; Dabbagh & Kitsantas, 2004). These key processes include goal setting, self-monitoring, self-evaluation, task strategy, help seeking, and time management. All of them focus on the meta-cognitive level, since they are related to controlling and reflecting the own learning process. Based on these key processes learning activities can be defined which refers to the performance fo such key processes.

An other classification of learning activities can be found in the 8 Learning Events Model (8LEM) (Leclercq & Poumay 2005). This model classifies learning into eight learning events which are imitating, receiving, exercising, exploring, experimenting, creating, self-reflecting, debating. Some of them have more focus on a cognitive level and some of the have more focus on a meta-cognitive level. According to this model, we can regard these learning events also as learning activities.

These classifications are rather on a high level and can be investigated with grater detail. For example goal setting can include details such as that goals can be set in a structured way, obstacle can be defined which could hinders from reaching goals, formulating goals in a specific way, or setting and revising goals frequently. Obviously the level of detail and granularity has great influence on the concrete definition of learning activities.

A learning process can be seen as a sequence of learning activities and depending on the nature of the learning process learning activities are assembled and performed in a different sequence and frequency. For example the self-regulated learning process defined in (Fruhmann, 2010) tries to model self-regulated learning in responsive

open learning environments. This process model recommends to perform learning activities such as goal setting, finding tools and resources, attaining knowledge and skills by using the selected learning resources, and self-reflecting on what has been learned. The sequence of learning activities can be planned in advance or it can just be done and the the learning process can be seen as a pattern of activities produced by performing them.

In order to reach some goals regarding attaining knowledge or skills, special learning activities have to be performed, while some learning activities can be seen as more appropriate and others are less appropriate. Obviously this would be an approach where sequences of learning activities are defined in advance.

However all these learning activities and rather refer to traditional learning with or without technology-enhanced learning system. Introspecting learning in a Web 2.0 environment would reveal, that learners perform other activities which can also be related to learning. Therefore an investigation should be performed which activities people perform in the context of 2.0 and if and how they are related to learning.

Although every student should be educated in self-directed & self-organised learning, reflection & critical thinking the outstanding opportunities to get involved in a lot of useful collaborative learning activities by using the Web 2.0 technology are still not discovered by most educators and students by themselves. There is a wide range of existing Web 2.0 tools such as Wikipedia but the use is mostly confined to reading and using articles. In contrast the use of production or assessing tools are mostly not used. The reason is on the one hand that these (learning) activities are not transparent enough to a reader and user of such an article and on the other hand these learning activities provided by Web 2.0 tools are in general not supported and accredited by courses in higher education.

Against this background our goal is to motivate these collaborative learning activities by using existing Web 2.0 tools. The question now is: HOW can the use of these tools and the collaborative learning activities be motivated?

We want to propose a game-like concept how to motivate collaborative learning activities by getting point for specific learning activities. Each learning activity can be assigned with a number of point depending on the importance regarding the didactic concept. The didactic concept is chosen by a teacher who decides on the assignments of points, for example, for the meta-cognitive learning objective *critical thinking* points are assigned to the collaborative learning activities *arguing pro and contra to a topic, assessing, disputing* and so on.

This approach is an idea at an early stage and is based on the psycho-pedagogical approach of the ROLE project (www.role-project.eu) which focuses on self-regulated learning. In the European project "Responsive Open Learning Environments" (ROLE) a more elaborated approach will be implemented.

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