Implications of Writing, Reading, and Tagging on the Web for Reflection Support in Informal Learning

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Abstract. The use of tags as user generated meta-data as well as the visualisation in tag clouds has recently received a lot of attention in research and practice. This paper focuses on supporting reflection of learners by using different presentation approaches of user-generated meta-data for reflection support. Previous research has shown that implicit interest expression can be a valuable source for reflection support. Visualising implicit or "tacit" interest in tag clouds could help learners to understand the connections of their content related activities to the tags that are assigned to the content. For grounding this potential in the social practice of using tags in teams and small communities, we conducted a three month experiment. This experiment focused on the social practices of using tags explicitly and implicitly. In this paper we analyse the data of the experiment with regard to social navigation of teams and small communities, relations of implicit and explicit interest in tags, and usages of tags on different participation levels. The findings on these dimensions of the social practice of using and sharing tags in groups help to develop a better view on the requirements of providing reflection support.

Keywords: informal learning, learning communities, social software, web2.0, evaluation.

1 Introduction

The use of tags as user generated meta-data has recently received a lot of attention in research and practice. A large number of scientific contributions focus on community driven creation of meta-data [10, 11], or on improved accessibility of contents through this kind of meta-data [12, 18]. So far, only few publications have focussed on the relations between the explicit usage of tags and their implicit usage in search queries and while accessing information [7, 16]. Particularly, contributions on applying tags in the educational domain basically address the value of tags for improving access to relevant content. From an educational perspective this covers only a limited part of learning processes, because these processes include – among others – reflection activities. Reflection is a fundamental learning activity and is needed to articulate, express, and apply knowledge appropriately [21].

In this paper we address the need of supporting reflection of learners in open environments by applying different presentations of user generated meta-data. A common

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Fig. 1. Team.sPace tag cloud (detail view)

example of such presentation is a "tag cloud", in which the tags are not only listed, but the usage of a tag is shown in its display size. I.e. tags are larger size if they are more frequently used than other tags (see Fig. 1). The frequency of a tag is therefore *encoded* in its display size.

We propose that different forms of information encoding in tag clouds can stimulate and support reflection on learning processes that are embedded in other activities. Previously, we outlined how this can be achieved [8, 9]. Furthermore, we deduced from insights in self-regulated learning [2] that reflection support might be dependent to the context in which learners are active. However, these approaches of reflection support are to this stage conceptual outlines, which require a better understanding of the social practice of the contexts in which tags are applied.

This study analyzes the differences between the explicit use of tags for bookmarking or blogging in comparison with their implicit use when reading tagged contributions. In this paper we report on our findings from a three month experimental pilot and answer the question if explicit and implicit interest expression hold different information that is potentially meaningful for learners.

2 Background

One aspect of supporting reflection through tag clouds is that the information encoding helps to visualize relations between different information types. Given our goal to help users in recognising their tacit knowledge, the interest in tags must not be restricted to the explicit use of tags, but has to take the implicit tag usage into account. So far only limited research has reported on "implicit interest expressions" [3] and the relations of interest and social practices in online communities.

We approach this gap and analyze implicit and explicit tag usage of a group of users who were using the team.sPace environment [8]. team.sPace is a web-based community portal that allows its users to share bookmarks and blog entries. Figure 2 shows a typical view of the team.sPace web-site from a user's perspective. The