MePrints: Building User Centred Repositories

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ABSTRACT

Over the last few years we have been working to reinvent Teaching and Learning Repositories learning from the best practices of Web 2.0. Over this time we have successfully deployed a number of innovative repositories, including Southampton University EdShare, The Language Box, The HumBox, Open University's LORO and Worcester Learning Box. A key part of this work has been the development of an extension for the EPrints repository platform, called MePrints, that enables configurable profile pages, and works alongside existing extensions such as IRStats and SNEEP in order to give users live feeds about repository events that matter to them. Through these deployments we have discovered that more sophisticated profile pages give users a home within a repository, act as a focus for their work, and help them feel more ownership of the work that they deposit. This increases the visibility of the repository and encourages more deposits.

Keywords

Repositories, User Profiles, EPrints, Web 2.0

1. INTRODUCTION

Repositories are often perceived as the end-destination for items being deposited. This can lead to them feeling like static archives, which is very problematic if the material being deposited is in the middle of its lifecycle, and continuous engagement with the depositor is needed. This is the case with teaching and learning repositories [1] – as teaching materials are constantly updated and refined – but it is a problem that must also be tackled for research repositories if they are to support any form of continuous online scholarship [3], such as supporting and recording the reuse of research data.

Over the last few years the authors have worked through a number of projects to try and re-imagine teaching and learning repositories as dynamic, living spaces where teachers and students share, reuse and remix materials [2, 4]. As a result we have produced a set of innovative software extensions to the EPrints repository called EdShare, which in addition to typical Web 2.0 features [5] includes inline preview, collections and support for remixing.

Key to our work has been refocusing the repository around users, and an important part of that was to create an advanced profile page that gives users a focus within the repository, and a single page where they can see all of their materials and give others a little information about themselves. In our experience this can improve user's sense of ownership over materials in the repository, help build community, and thus lead to greater user engagement.

In this paper we report on the EdShare extension called MePrints[1], that introduces configurable profile pages to any EPrints installation. MePrints is a simple widget framework and library that supports both public and private profile pages, and also enables profile information to be embedded in external sites such as personal websites and blogs. We believe that this type of profile system results in a repository that is much more user-centred, and therefore more capable of supporting continuous user engagement.

2. MOTIVATION

There are two main mechanisms for increasing the volume of materials made available though the repository; library staff deposit and self-deposit.

Currently deposit by library staff is the most successful of these two because it produces a healthy volume of deposits with good quality metadata (although there is a risk of potential bottlenecks to deposits if there are insufficient library staff.) However self-deposit is far less staff intensive since library staff merely review the metadata rather than creating it from scratch.

However, self-deposit requires the academic to interact with the repository directly by inputting metadata about their document. This data is then usually moved to a review area where the record is reviewed by a member of library staff to make sure that it is appropriate for deposit into the live archive. The lightweight process of reviewing the metadata allows librarians to serve academics by promoting their work externally rather than just managing research internally.

Although the repository serves to improve the status of the institution, academics in that institution still struggle to engage with the repository. Common reasons cited for this lack of engagement usually include:

- Lack of time to make deposits
- Ignorance of the existence of the repository
- Lack of perceived benefit from deposit compared to the time investment required
- In the case of research repositories journal publishers already advertise the work

Librarians in charge of an institutional research repository argue that as well as increasing the status of the institution, the repository also serves as a means to increase the profile of the

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[1] http://allaboutme.eprints.org/

academic's research [6]. However, academics struggle to see this direct benefit and this results in a lack of enthusiasm for depositing. We believe that this is partly because repositories have very few ways of communicating these benefits to academics in a tangible way. Some repositories keep download counts for all their records but in order to discover these a keen academic must go to each individual record, a process that becomes very tedious for a large number of records.

A user-centred repository should expose this key information in a clear way to users; profiles give users a place of their own within a repository, and encourage them to take more ownership of their deposits. Live usage data also encourage users to further participate. Our experience with EdShare is that a good profile page can give users a focus within the repository, and encourages them to link their repository profile page with other online pages associated with them.

3. MEPRINTS EXTENSION EPRINTS

MePrints is an extension to the EPrints repository platform designed to show repository users the impact of putting their work in the repository in a more direct way. The extension sits between the user and the repository in the form of a customisable, personalisable profile system. MePrints provides two versions of the profile page that the repository administrator can choose to activate separately or together. The first is a *private personal homepage*, the second is a *public profile page*.

The homepage comprises of some personal details, a profile picture and then a set of user selected widgets provided by the repository. Figure 1 shows a personal homepage from the HumBox repository. Widgets usually contain lightweight information from various aspects of the repository. The default set of widgets includes:

- A users most downloaded records
- Most recently added records
- Issues with those records and records currently in the users working area (effectively an automatic to do list)

Users can control which widgets are shown on their home page and can alter the location of those widgets if they wish.

The objective of the user's homepage is to have one page where a user can get an overview of all useful information about their activity in the repository. This page acts as a hub where all the users interactions with the repository begin. Through these mechanisms users can see tangible evidence of the impact of their work in the repository, which acts as an incentive for continued engagement.

The second type of page is a public facing profile page with a permanent URL. Figure 2 shows a public profile page from the HumBox repository. The public facing profile page contains a selection of widgets defined by the repository administrator in the repository configuration. This means that all public profile pages are visually consistent across the repository.

One of the key widgets is the User Feed (shown in Figure 1). This is a lightweight notification system that registers events from across the repository. In a default EPrints installation this includes creation, deletion and download events. However, other extensions can also generate notifications, and so the utility of the User Feed widget increases as more notification-aware extensions are added. For example, SNEEP is an EPrints extension that allows comments and notes to be added to

deposits. The most recently released SNEEP extension has been made notification aware, and so commentary events show up on the User Feed.

This sort of dynamic information is a crucial part of making the repository feel like a place where people are interacting, rather than just making deposits for others to find. The User Feed widget is of obvious benefit on the personal homepage, but it can also be a useful addition to public profiles, as it shows valuable attention metadata [7] that may help others to make informed judgements about a user based on the activity around their deposits.
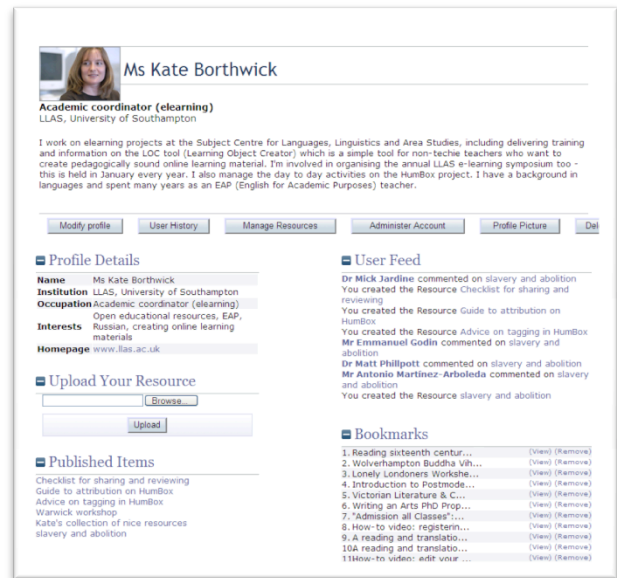

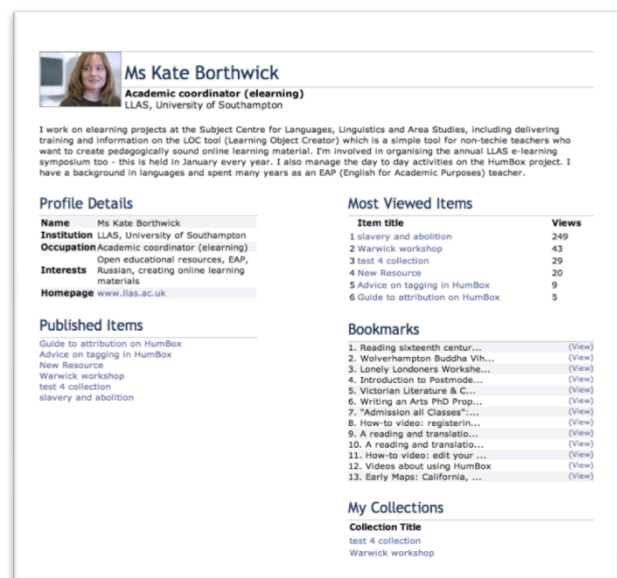**Figure 1: Private Personal Homepage from HumBox**

Figure 2: Public Profile Page on HumBox

In designing MePrints we were aware that creating a new must-check site for users can be problematic. Users tend to only have a short list of sites that they check everyday, and it is unrealistic to assume that they will add one (or more) repository pages to this list. To get around this issue MePrints includes an

embeddable profile that can be included in other core pages such as institutional profiles, blogs or even personal sites.

MePrints generates an embeddable profile that shows a subset of the widgets that are displayed on the user's profile. Typically this will include core information such as the items they have deposited in the repository and the popularity of the items they have deposited. In this instance there are two parties who benefit from the profile being embedded. Firstly the end user is able to expose their work to a wider audience then just the group of users who use your repository on a regular basis. Also it benefits the repository as it increases the exposure of the repository thanks to the links back to the repository.

Javascript is used as the technology to deliver the embeddable profile. This allows a "deploy once" approach for the user, which means that they only need to add a simple bit of HTML to their web page and the widget will load on that page. Additionally AJAX (Asynchronous Javascript and XML) is used to implement "phone home" functionality. Using this functionality administrators can begin to understand how embeddable profiles from a repository are being used around the web.

For styling, MePrints makes extensive use of HTML classes and appropriate markup, this makes it easy for the user to style the profile to fit in better with their webpage. The idea behind this is that users will be more likely to use the profile since it can be made to fit in with their existing styles/brands. Alternatively you can be much more prescriptive about the styles and branding used in the widget so that you can extend your repository style/brand (although the end user can always override the appearance of the profile through the application of CSS and additional JavaScript).

4. STAKEHOLDER IMPACT

MePrints is of use to many different kinds of community stakeholder:

Researchers – often use their institutional research repository as the main archive of their research publications. The MePrints profile gives them a single page, with its own URL, which acts as a definite list of their publications. It also helps them assess the impact of their work, by giving an overview of its popularity and helping to draw attention to trends.

Teachers – can be reluctant to incorporate repositories into their normal working and teaching patterns. This is partly because teaching and learning repositories often suffer because they are dead ends for information, as the real online interaction occurs in other digital spaces such as course websites or in a VLE. MePrints helps teachers use their teaching and learning repositories to supplement these other online spaces, by giving them an easy way to view the teaching and learning materials in the repository from other systems. The profile page also gives them a public teaching and learning presence, drawing attention to their work as educators.

Administrators and Advocates – want to encourage repository use, and thus create a more valuable online resource. The MePrints profiles gives people a user-centric view on the repository, which both encourage users to submit work (in order to build good profile pages) and start to develop community, and gives the repository a human face externally. These positive effects should mean that repository use increases.

5. CONCLUSIONS

Reimagining repositories as more dynamic community spaces is key to the development of the next generation of research repositories, and also for the success of teaching and learning repositories. Because in these new types of repositories items are deposited *during their lifetime*, not just at the end, and thus continuous user engagement is necessary for success.

MePrints is an EPrints extension that helps turn a repository into a community space, by making users – rather than deposited items – the focus of interaction. MePrints has been installed on a number of repositories running the EdShare extensions, and we have found that MePrints gives users a greater sense of ownership over their items, which increases the chances that users will adopt the repository as a way of managing their research or teaching and therefore increases the likelihood that users will self-deposit in the future.

6. ACKNOWLEDGMENTS

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