



Evidence Summary

Implementing Web 2.0 Design Patterns in an Institutional Repository May Increase Community Participation

A Review of:

Cocciolo, A. (2010). Can Web 2.0 enhance community participation in an institutional repository? The case of PocketKnowledge at Teachers College, Columbia University. *The Journal of Academic Librarianship*, 36(4), 304–312. doi:10.1016/j.acalib.2010.05.004

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Abstract

Objective – To investigate whether Web 2.0 can enhance participation in institutional repositories (IRs) and whether its widespread use can lead to success in this context. Another purpose was to emphasize how an IR with a Web 2.0 approach can connect individuals in their creative and intellectual outputs, no matter what form of shared material is contributed.

Design – Comparative study.

Setting – Two IRs at Teachers College, Columbia University, which is a graduate and professional school of education in New York City.

Subjects – Students, faculty, and staff using the PocketKnowledge and CPC IRs.

Methods – Cocciolo compared two different IRs called PocketKnowledge and Community Program Collections (CPC). PocketKnowledge had the following Web 2.0 design patterns: users control their own data; users should be trusted; flexible tags are preferred over hierarchical taxonomies; the attitude should be playful;

software gets better the more people use it. The PocketKnowledge IR design patterns were compared with the traditional design of the CPC IR. The CPC IR organized information based on taxonomy (e.g., programs and departments), lack of user control of their own content, and centrality of authority.

Data were collected during a 22-month period. The PocketKnowledge IR was studied from September 2006 to July 2008, compiling information on both contributions and contributors. Contributions made by library staff to aid availability in archival collections were excluded from the data sets, because the study was focused on community participation in the learning environment. The CPC was studied between November 2004 and July 2006. Data collected included the contributions made to the system and information on the role of the contributor (e.g., student, faculty, or staff).

Main Results – Participation was much greater in the Web 2.0 system (PocketKnowledge) than in the non-Web 2.0 system (CPC). Involvement in the latter, the CPC, was noted primarily for faculty (59%), with a smaller proportion of students (11%) contributing. This trend was reversed with the Web 2.0 system, in which 79% of the contributions came from students. However, as a group, faculty were better represented than the student body as contributors to the Web 2.0 system (23% and 8% respectively). Faculty members who created an account (without contributing) represented 30% of the population. These observations suggest that Web 2.0 is attractive to students as a space to share their intellectual creations, and at the same time it does not alienate the faculty. Notwithstanding, although 31% of the student body had created a user account for PocketKnowledge, the Web 2.0 system, only 8% of the students actually contributed to this IR.

The study examined only the participation rates and was not concerned with what motivated contributions to PocketKnowledge. Accordingly, the results can be extrapolated by observing that

the limitation of previous IRs is that they focused primarily on the library goals of collecting and preserving scholarly work, and did not consider what prompted faculty to contribute. Despite the satisfactory participation in the two IRs of interest, the author argued that the incentive is associated more extensively with the role as teacher than with the role as researcher. This is related to the ambition of faculty to improve classroom-based experience by ensuring that their students are as engaged as possible in the teachers' areas of expertise. In other words, a faculty contribution is motivated by knowing that students will become familiar with what is contributed.

Conclusion – This study suggests that IRs can achieve greater participation by shifting the focus from the library goals to the objective of building localized teaching and learning communities by connecting individuals through their respective intellectual outputs. Creation of a system like the CPC that supports such exchange will advance library goals by storing faculty's scholarly work, whereas Web 2.0 offers a set of approaches and design patterns for establishing systems that help promote community participation. Greater student participation in an IR may prompt increased faculty participation, because the IR will be more extensively focused on the teaching and learning community than on the research community. Thus, the major finding of the study is that greater community participation resulted from a Web 2.0 design pattern approach.

Commentary

The study highlighted different strategies to motivate community participation in IRs. In particular, it emphasized how student participation (not contribution) can be increased by using the Web 2.0 approach in the PocketKnowledge IR. It would have been more suitable to compare the results if the two IRs had been investigated during the same time period. The phenomenon of Web 2.0 started

around 2006, but gathering of the data on the “traditional” CPC IR was begun in 2004. One could speculate that the launch of the Web 2.0 IR PocketKnowledge was timely with the Web 2.0 hype and therefore attracted special attention. What complicates matters even more is that contributing to and participating in an IR are not the same thing. In Table 1 of the article, the student contributions appear to have been more or less the same, regardless of whether PocketKnowledge or CPC was considered (11% and 8%, respectively, but the number of contributions was much greater in PocketKnowledge). However, creating an account on (not contributing to) the former IR was noted for as many as 31% of the entire student population. It was not indicated whether the individuals who created an account were active and actually participated in the teaching and learning community, which explains why the proportions of contributions were essentially the same for the two IRs. Another limitation of the investigation was that an experimental design was not used.

Another issue is the quality of the contributions from students. The author did not define what types of contributions were made to the Web 2.0 IR. If a study compares faculty members who deposit work in an IR, the objective is probably to expose the contributions that have been through the peer-review process, thus indicating a certain degree of quality. However, it is unclear what type of contributions was made by the faculty, which is also the weakness of the method. One could speculate that adapting the Web 2.0 concept for researchers depositing their peer-reviewed published articles in an IR may not be as urgent as for the teaching and learning environment. By mentioning that further

research is needed to ascertain whether community trust in an IR can replace regulations, the author implied that the issue of quality can be developed. This observation might be strongly associated with the potentially questionable quality of the contributions from students. As already mentioned, there was no clear differentiation regarding the type of contributions made by the faculty in their role as researchers as compared to those made in their role as teachers. In sum, the comparison of these two IRs have diffuse comparable parameters and not entirely comparable. For example, purpose of the repositories, the marketing of the repositories and the type of support that was available are not clarified. The question of whether these parameters would have had an impact on participation rates remains.

Finally, it should be noted that the majority of the publications in the reference list discussed what motivates researchers’ behaviour in relation to IRs, whereas only a few dealt with students’ behaviour and the use of IRs in the learning environment. Clearly, it would have been valuable if the author had included more investigations about students and their contribution of intellectual work to an IR learning environment or a learning management system in order to support the stated objectives and conclusions. It also would have been helpful if the author had stated in the introduction the definition of the term “institutional repository” in relation to the study. Nevertheless, the study has captured some user activity in the “real world” of two different IRs, and the results may indicate new directions for increased community participation in the learning environment.