Chapter 26
User Experience in Institutional Repositories:
A Systematic Literature Review

Laura Icela González-Pérez

Monterrey Institute of Technology and Higher Education, Monterrey, Mexico

María-Soledad Ramírez-Montoya

Monterrey Institute of Technology and Higher Education, Monterrey, Mexico

Francisco J. García-Peñalvo

https://orcid.org/0000-0001-9987-5584

GRIAL Research Group, Department of Computer Science, Science Education Research Institute (IUCE), University of Salamanca, Salamanca, Spain

ABSTRACT

Disruptive ideas and innovative business models take shape from observing and investigating the needs and demands of potential users and measuring their success based on the acceptance by users and their satisfaction. In an educational context, a new mission of the university has emerged, supported by the transfer of open access knowledge through Institutional Repositories (IR); it is important to know the motivations and needs of the academic community to promote scientific dissemination using these platforms. The present article uses the method of systematic literature review: using 29 studies from SCOPUS and WoS, involving the topics User-Centered Design (UCD) and repositories. The results show that two of the three UCD phases—evaluation and requirements—are closely linked and are the reiterative focus of UCD; thus, it is desirable to promote the design of custom-made prototypes according to the users' motivations. It is necessary to redefine methodologies for IR development within open-access ecosystems to guide them towards meeting their potential users' needs and motivations.

1. INTRODUCTION

In an educational context, a new mission of the university has emerged, supported by the transfer of open access scientific knowledge through visualization platforms, such as the Massive Open Online Courses (MOOC) (Martínez Abad, Rodríguez Conde, and García-Peñalvo, 2014) and Institutional Repositories (García-Peñalvo et al., 2010); it is important, then, to know the motivations and needs of the academic community to promote scientific and academic dissemination using these platforms.

One of the most important platforms in the technological ecosystem of the open access movement is the Institutional Repository. However, to date, a repository's success has been measured from the perspective of software developers, and has neglected to measure user satisfaction and acceptance (Clements, Pawlowski & Manouselis, 2015). Two of the main challenges when implementing technological services in repositories are (a) visualization and discovery of information through the design of search interfaces that improve the retrieval of scientific and academic information (Gaona-Garcia, Martin-Moncunill and Montenegro-Marin, 2017) and (b) to develop prototypes that efficiently guide the objective for which they were created based on the users' needs and validating the requirements through acceptance metrics and criteria that take into account users' needs (Meyerson, Galloway & Bias, 2012). By identifying the technological services and criteria required for the success of an Institutional Repository its use could increase significantly, and it would also be able to evolve according to new technology and information management trends.

The new business models of the 21st century integrate technology as an indispensable engine for them to incorporate into the digital market. Farwick, Schweda, Breu and Hanschke (2016) point out that the importance of strengthening the architectural model of information management and the design of processes applicable to a context lies on the fact that the capacities of modern companies depend on their information systems and the technological infrastructure that supports them. Therefore, universities should strive to search and participate in innovative and cutting-edge initiatives, and then generate disruptive innovation models to manage and provide visibility to their scientific and academic information worldwide.

It is essential to create prototypes of use and evaluation contexts for Institutional Repositories by seeking studies that have made contributions of evaluation and analysis of requirements. A systematic review of the literature carried out by Clements, Pawlowski and Manouselis (2016) is a significant contribution, in it they issued a recommendation to measure the success of Open Access Repositories, which can help developers, communities and future projects to design tools for the measurement of the success of a repository. The metrics they propose are:

1. People - Contributors and Users (Number of, growth, number of active, contribution frequency, contribution lifetime, collaborative edit);
2. Resources (Size, growth);
3. Interactions (Visits, Views, Downloads, Re-use, Contribution, Commenting, Collaborative contribution);
4. Repository lifetime.

Institutional repositories are embedded in at least four contexts of application: 1) technological services, which ensure the availability and security of information resources, 2) information architecture and design standards, 3) institutional and governmental regulations for open access dissemination and

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