PhD Portal: Developing an Online iSchool Doctoral Student Community

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ABSTRACT
iSchool doctoral students represent a diverse and growing community of information science and technology (IST) researchers. Each doctoral student manages his/her own IST career from admissions to graduation, using personal and varied methods of information management. As a result, lessons learned by students are not easily transmitted to each other. In this poster, we describe our design and development of an online doctoral student community that offers a single place for doctoral students to manage their daily graduate life from administration and course work to research and collaboration.

Categories and Subject Descriptors
H.5.2 **[INFORMATION INTERFACES AND PRESENTATION]**: User Interfaces - *User-centered design, Graphical user interfaces (GUI), Interaction styles*

General Terms
Design

Keywords
iSchool community portal, information management, user-centered design

1. INTRODUCTION

iSchool doctoral students juggle the demands of life and work on a daily basis by wearing many hats. They are students, research and teaching assistants, administrators, travel agents, presenters, friends, colleagues, collaborators, employees, parents, etc. At Drexel's iSchool, information regarding the doctoral student's IST career is distributed among many different technologies, making it difficult for doctoral students to manage their IST careers. According to Brooks and Fyffe (2004), "Undertaking doctoral studies is a huge shift in attitude and activity for most students" [1]. Thus, there is a strong need for a solution that offers a single place for doctoral students to manage their daily graduate life, whether it is course work, administration, research or socializing.

The iSchool PhD Experience is our design for a portal that connects doctoral students, whether near or far, helps them with research activities, guides them through administrative requirements, keeps them informed about what's happening in the field, and is a conduit for continuous communication and collaboration. It is built on a user-centered framework using Joomla [4] , an open-source content management system that offers flexibility, future growth and user development with little technical knowledge required for implementation.

2. BACKGROUND

In 2006, a group of IMLS Fellows in Drexel's iSchool, researched the need for a doctoral student community portal that could better support student research activities, administrative requirements and coursework. The team looked at available technology solutions, implemented an online survey to all IST doctoral students, and conducted a focus group with five students representing different stages of degree completion, and engaged in informal doctoral student group meetings and online discussions [3].

Their findings indicated that there was a strong need for a student community portal which could be one easy to use place for all information related to their doctoral studies. Results from the focus group indicated that the community portal needed to be an important part of the doctoral student program: "Of greater concern to the focus group was the motivation

required to have the system become a viable entity within the doctoral program" [3].

The research also identified constraints in terms of technologies. Based on these, the IMLS Fellows looked at open-source options that could support the needs of the doctoral student community.

This early research was the catalyst for a new group of IMLS Fellows to develop and implement the online doctoral student community in 2008.

3. DESIGN FRAMEWORK

Based on prior research, the online doctoral student community was designed with three important concepts in mind.

- **Resources** – students needed one place to find internal iSchool information (forms, FAQs, course offerings, etc.) as well as external information about the field (RSS Feeds, bookmarks, etc.).
- **Research** – students needed a way to communicate their research with each other, learn what is happening in their particular research area, and manage research projects online.
- **Community** – students needed a place to collaborate, communicate, and share information such as ideas, photos, videos, news, etc.

Some of the major features and functionality of the doctoral student portal include:

- Dynamic Content – user generated content can appear throughout the website in addition to automatically generated content such as RSS feeds of news, journals, blogs, etc.
- Faculty Research Tag Cloud – users can immediately learn about and identify iSchool Faculty research interests
- Forums – registered users can create discussion threads about courses, research, administration or just about anything.
- Projects – registered users can create and manage all aspects of a project and invite others to join the project through an online project management tool.
- Profile – registered users are automatically given a profile that can be edited and updated with personal and profession information. They can also create their own friendship networks by accepting and requesting friends within the community.

4. DEVELOPMENT

The development of the Drexel iSchool online doctoral student community focused on open-source technology solutions with flexibility and scalability. We analyzed the work of the previous IMLS Fellows and identified the important features and elements requested by the doctoral students and built a matrix that looked at each feature and its importance. Next, we reviewed the technology solutions suggested by the prior IMLS Fellows while looking at new open-source options available to determine the best solution for our needs. Technology options were eliminated based on compatibility with our servers, having the required features, time and skill required for implementation, flexibility, ease of use, and future scalability.

4. 1 Open-Source Options

The technology solutions were narrowed down to two open-source content management solutions with strong community support, Joomla [4] and Drupal [2], The matrix was updated to reflect these two options so that we could analyze each required feature with each possible solution.

Areas of Focus	Feature	Feature Elements	Drupal	Joomla	Notes	Priority
Community	Chat Client	Students can communicate with each other within the portal.	2	2		Low
Community	Group Activity	SIGs			Needs definition	High
Community	Group Activity	notification - if a new post occurred, users can get email if they opted in. Ability to opt in/out.	2	2		High
Community	Group Activity	RSS	1	1		High
Community	Group Activity	Project Management	3	3		High
Community	Calendar	Individual Calendar - ability to add events, links, etc.	5	3	Personal in some form on Joomla but not Drupal. Need to look at in detail for both systems.	Medium
Community	Calendar	General Calendar - ability to add events, links, etc.	2	2		High
Community	Calendar	Academic Calendar – school due dates, portfolio dates, conference deadlines, dissertation defense, form submission	2	2		High

Figure 1: Feature Matrix (Joomla & Drupal)

After analysis, we chose Joomla [4], which has a strong administrative focus that allows non-developers to quickly install and manage the system. It also offered a large number of modules that can be easily installed to meet the needs of the community.

4. 2 Online Doctoral Student Community

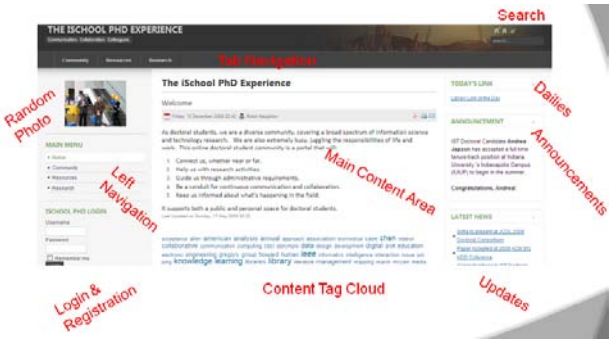

Figure 2: The iSchool PhD Experience home page

The online iSchool doctoral student community is now in its early stages. New and current doctoral students are joining the

community and contributing to grow and develop the community to meet their personal and group needs.

4. 3 Content

Based on the analysis of the user's needs, we developed content in two major areas. One is the resources for the process of doctoral studies. These include the academic calendars, the PhD program descriptions and requirements, various forms for portfolio reviews, advance to candidacy, and graduation, etc. The portal provides one place to access all these materials. The other resource is for the research need of doctoral students, which can help to develop a learning community [5]. These include access to all the publications of the ischool faculty, major readings of key authors in the field, research activities in other iSchools, and recent articles in relevant journals (such as JASIST and ARIST). Selected Bookmarks on relevant topics from Delicious and CiteULike are also included.

Most of the content are either from the user's input or the RSS feeds and other dynamic links. We expect the content to grow vigorously as the user community grows.

5. CONCLUSION & FUTURE WORK

The PhD Portal helps doctoral students with their IST careers and provides a much needed place for them to collaborate and communicate online.

The work on the portal will continue. The future work includes analyzing current system use and functionality to determine benefits and possible feature upgrades, expanding the portal to doctoral students in other iSchools beyond Drexel, adding requested features, and developing a method for continued growth and development of the community.

6. REFERENCES

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