Initial Evaluation of an Online-Based Collaborative Repository of Research to Enhance Interdisciplinary Collaboration

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**Recommended Citation**

https://commons.pacificu.edu/idschol/2
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Description

Sharing research data is not a new idea; the success of the Inter-University Consortium for Political and Social Science Research (ICPSR) data archive provides evidence of data sharing's utility in the social sciences, while recent articles (Piwowar, Becich, Bilofsky & Crowley, 2008; Piwowar, Day, & Fridsma, 2007) in the biomedical literature have reiterated the importance of data sharing to the advancement of science and knowledge. The American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (APA, 2002) affirms the importance of making research data available – to the extent possible within legal and ethical boundaries – for the purposes of reanalysis by other professionals.

The availability of data sets from researchers around the world in online repositories such as ICPSR and PsychData (www.zpid.de) encourages collaborative work across institutions and national boundaries. However, such large scale efforts to share data are not ideal for serving more local aims: the encouragement of intra-and interdisciplinary collaborative research within a single institution.

To meet that need, this project focuses on the creation of a searchable database of existing faculty research data sets that can be accessed internally (within Pacific University) for the purposes of developing new uses of data for theses, dissertations and scholarly publications.

Disciplines

Databases and Information Systems

Comments

Poster presented at 2009 ASAHP Annual Conference, San Antonio, TX, October 21-23.

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Initial Evaluation of an Online-Based Collaborative Repository of Research to Enhance Interdisciplinary Collaboration

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MATERIALS

The Dataverse Network (DVN), a freely available platform from Harvard University, was selected to host the database. A hosted Dataverse was created for Pacific University and branded with University colors and logos.

Within the Dataverse, indexing templates were created to guide the input of data set metadata. Accounts were also set up in the Dataverse to identify future disciplinary research interest. The Dataverse Network (DVN) can help attenuate barriers such as time, cost, and expertise by providing a platform for researchers to share their findings and collaborate on new research.

INSTITUTIONAL CONTEXT

Pacific University is a small, private doctoral/research university (Carnegie Basic Classification) with four campuses in western Oregon and four colleges: College of Arts & Sciences, College of Education, College of Health Professions and College of Optometry.

The College of Health Professions (CHP) is composed of six graduate programs and one undergraduate program. Interprofessional communication and collaboration is a particular emphasis within CHP, and faculty in different programs often have related research/practice interests.

INTRODUCTION

Sharing research data is not a new idea; the success of the Inter-University Consortium for Political and Social Science Research (ICPSR) data archive provides evidence of data sharing’s utility in the social sciences, while recent articles (Piwowar, Beich, Bilofsky & Crowley, 2008; Piwowar, Day, & Fridsma, 2007) in the biomedical literature have reiterated the importance of data sharing to the advancement of science and knowledge. The American Psychological Association’s Ethical Principles of Psychologists and Code of Conduct (APA, 2002) affirms the importance of making research data available – to the extent possible within legal and ethical boundaries – for the purposes of reanalysis by other professionals.

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METHODS

Phase I of the current project involved the collection of available data set information from participating faculty in the School of Professional Psychology (SPP), with planned expansion to the College of Health Professions in Spring 2010. For the purposes of this phase, actual data sets were not uploaded. The database records (Dataverse; figure 1) about these data sets provided descriptions of sample size, population and assessment instruments used in the studies. All fields in the database records were searchable, allowing users to look for information about data sets relevant to their interests (and search terms). In total, information about 6 studies from 7 participants were available online.

Concurrent with the ingest of data set metadata, an initial anonymous survey was sent via SurveyMonkey to all SPP faculty and doctoral students. The purpose of the survey was to determine a) interest in intra- and interdisciplinary collaboration within SPP and b) current level of research activity within SPP. Two weeks following the initial survey, a second survey was sent to request feedback on the usability of the interface and to determine whether or not any collaborative ideas had been generated through use of the Dataverse.

RESULTS

• 71 faculty and students (13 & 58 respectively) responded to the first survey. Table 1 summarizes findings of interest. In summary, while most respondents report interest in conducting research and engaging in interdisciplinary collaboration, actual engagement was considerably less.

• For both faculty and students, time was a significant barrier in conducting research. Students also reported difficulties in finding faculty with similar research interests; difficulties in securing publications of research interests and problems with developing new research collaborations.

• 4 faculty and 19 students responded to the follow-up survey assessing use of the online data repository. Table 2 summarizes their responses.

DISCUSSION

Faculty and student engagement is a vital part of academic life in an allied health professions college; however, it can be a difficult process. In the present study, students and faculty within the psychology department of a college of health professions indicated a disparity between their interest in research and interdisciplinary collaboration and their actual engagement. Availability of resources, most notably time was the greatest barrier for faculty, while students also reported time issues, but also difficulty in developing ideas or finding faculty with similar interests.

The online data repository, a searchable database of faculty research was piloted to address some of these issues and preliminary data are quite promising. Of the 23 students and faculty that reviewed it, there was overwhelming satisfaction with ease of use and willingness to utilize it in the future. More importantly, over 56% of those that utilized DVN found data of interest to them; of those, nearly 1/3rd contacted the data owners to discuss the data.

This preliminary study suggests an online research database such as the DVN can help attenuate barriers such as time, cost, and knowledge of existing research and assist in the development of new research collaborations.

LITERATURE CITED


ACKNOWLEDGEMENTS

This research is made possible by funding from the Berglund Center for Internet Studies at Pacific University.

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8% (43.5%) 56.5% 75% 66.7% 87% 100%

Table 2. Summary Results of Faculty & Student Evaluation of Online Data Repository (DVN) (Survey 2)

(9), e183. Retrieved from http://dx.doi.org/10.1371/journal.pmed.0050183

Table 1. Summary Results of Faculty & Student Current Research Engagement (Survey 1)

15% 35% 45% 15%

Student Barriers to Research

Time Topic Motivation Costs Finding Subjects

Table 1. Summary Results of Faculty & Student Current Research Engagement (Survey 1)

Published/Presented Research % “somewhat” or “very” interested in conducting research % “somewhat” or “very” interested in interdisciplinary collaboration % engaged in any research collaboration % discusses research with colleagues in disciplines (“sometimes” or more) % discusses research with colleagues in other disciplines (“sometimes” or more)

1.3% (0-7) 71.4% 58.4% 23.9% 80.3% 35.2%

Table 2. Summary Results of Faculty & Student Evaluation of Online Data Repository (DVN) (Survey 2)

Mean rating (out of 10) on ease of use of DVN % that found data of interest on DVN % of the 17% who contacted a researcher via DVN engaged in research as a result of that contact % of the 17% who contacted a researcher via DVN engaged in research related to DVN data % willing to add their data to DVN % that would use DVN to identify future research collaborations

8 (43.5%) 56.5% 75% 66.7% 87% 100%