

Open Access and Responsible Research: Preparing Future Faculty at the University of Kansas

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Abstract

The University of Kansas (KU) is planning for open access to ETDs in its institutional repository, KU ScholarWorks. The KU Libraries are working to educate graduate students about copyright, fair use, and open access to research as part of its scholarly communications program. This paper will describe the ETD program and scholarly communication initiatives KU has tailored for graduate students. The KU School of Graduate Studies, with assistance from the Libraries, administers the University's ETD program. In January 2005, a task force comprising faculty and staff from the School and the Libraries formed to implement electronic submission of theses and dissertations quickly and at minimal cost. KU instituted mandatory submission of electronic theses and dissertations for December 2005 graduates following a small pilot study earlier that year. KU held workshops to prepare students for the electronic submission process. However, most students' questions were not about technology, but issues such as copyright and fair use. A need existed to educate students about copyright issues at the research stage rather than after they had finished writing. In response, the Libraries expanded its scholarly communication program to include workshops to help prepare graduate students for future roles as readers, researchers, authors, and instructors. The University opted to use a commercial product for submissions to avoid the need for system development and maintenance. However, open access to ETDs remained an issue because the University is committed to addressing scholarly communications issues and encouraging open access to research. Faculty members consistently identify dissertations as desirable content for KU ScholarWorks. The paper will outline the process by which KU plans to implement open access to ETDs in 2007, with no additional effort by students or the Graduate School. The educational offerings and KU's plan to assess the impact of these initiatives on its research community will be described.

Introduction

The University of Kansas (KU) is a comprehensive educational and research institution with 30,000 students and more than 2,200 faculty members. A member of the Association of American Universities, KU's 14 schools (College of Liberal Arts and Sciences; the Graduate School; and the schools of Allied Health, Architecture and Urban Design, Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, Law, Medicine, Nursing, Pharmacy, and Social Welfare) award degrees in more than 170 fields of study. The flagship public university in the state of Kansas, KU includes the main campus in Lawrence, a city of about 90,000 in northeastern Kansas; the medical center in Kansas City, Kan.; the Edwards Campus in Overland Park; a clinical campus of the School of Medicine in Wichita; and educational and research facilities throughout the state. KU awarded its first doctoral degree in 1896, and today graduate students pursue degrees in more than 90 programs. The Graduate School awards approximately 1400 master's and first professional degrees, and 250 doctorates a year.

The Graduate Council is responsible for general policies regarding requirements for admission to graduate study and advanced degree requirements, reviewing proposals for new degrees or degree program changes, defining the membership categories of the Graduate Faculty, and establishing policies in the interest of maintaining and enhancing the quality of graduate education at the University of Kansas. Graduate divisions are administrative offices within each school or college responsible for graduate programs. For most matters, graduate students interact with graduate divisions that certify completion of degree requirements, including submission of the approved thesis or dissertation.

The KU Libraries and Information Technology are divisions within Information Services. Information Services works with partners throughout the university to serve the information and related technology needs of KU students, faculty, and staff. The KU Libraries system comprises six libraries on the Lawrence campus and an additional facility on the Edwards campus. There also are medical libraries on the Wichita and Kansas City campuses, and a law library on the Lawrence campus. The Libraries holdings include more than 4.1 million volumes, and a recently opened a high-density storage facility houses lightly circulated items, including bound print theses and dissertations.

The KU ScholarWorks Repository

KU has a reputation as an advocate for scholarly communications reforms. Former Provost David Shulenburg proposed establishment of a national repository, the National Electronic Article Repository (NEAR), as early as 1998 (Shulenburg 1998). In 2003, with support of the Provost, Information Services leadership began planning for an institutional repository at KU. During the pilot phase of the institutional repository, a working group identified faculty early adopters and spoke to campus groups about the repository service. Faculty were extremely supportive of placing theses and dissertations in an open repository as a method to draw attention to KU graduate research, but planning for ETDs lagged behind general repository development.

In March 2005, KU Information Services launched KU ScholarWorks, the digital repository for scholarly work created by the faculty and staff of the University of Kansas. KU ScholarWorks runs on DSpace repository software with few customizations. Most items in KU ScholarWorks are self-archived; the Libraries perform few mediated submissions on behalf of authors, and all items are available without access restrictions. The faculty at KU have been supportive of the KU ScholarWorks service. In fact, the university governance body passed the Resolution on Access to Scholarly Information the same month KU ScholarWorks entered production (Shulenburg 2005). However, faculty support for the service has not resulted in a large influx of submissions to date.

KU ScholarWorks administrators work to promote the service throughout the campus, but also rely on library subject liaisons (bibliographers) to promote the service to their respective schools and departments. Librarians have spoken to individual and groups of faculty and administrators about the benefits of using KU ScholarWorks to disseminate and preserve scholarly work. During these presentations faculty often indicated their support for inclusion of dissertations in KU ScholarWorks.

ETD Implementation

The Libraries have been a repository for dissertations since KU granted its first doctoral degree. In recent years, students would submit a copy of the thesis or dissertation to the Libraries for binding, cataloging, local use, and interlibrary lending. In fall 1990, the Graduate School issued *Publication Requirements for Doctoral Dissertations*, which enumerated a policy requiring dissertations to be published, and stating that University Microfilms (now UMI ProQuest) was the preferred publisher and vehicle for dissemination (University of Kansas Graduate School 1990). Submission of master's theses to UMI was optional.

In fall 2004, leaders from the Libraries and the Graduate School independently saw demonstrations of UMI ProQuest's submission system for electronic theses and dissertations and

the University began to consider how KU could implement an ETD program. The Deans of the Libraries and Graduate School formed a task force including representatives from the Graduate School and the Libraries to create an implementation plan for ETDs at KU. The Deans made a joint proposal to implement an ETD program to the Graduate Council Executive Committee, who in December 2004 accepted the task force recommendations to use the UMI ProQuest submission system. A pilot project took place in the summer of 2005, and students and graduate division administrators found the submission process straightforward. The graduate school dean issued a memorandum to students and faculty outlining how the submission process would change, stressing that the thesis or dissertation still must meet the requirements of the student's committee, the graduate division, and the Graduate School (Carlin 2004). Mandatory electronic submission began for all in December 2005.

KU ScholarWorks and Graduate Student Work

There are master's-level programs at KU that do not require a thesis. For some professional programs, students must demonstrate they have achieved a sufficient level of competency to advance into the workplace. Students in these programs often complete a final master's project or portfolio in lieu of a thesis. Two such programs are located in the School of Journalism and Mass Communication and the School of Engineering. The engineering management program in the School of Engineering requires submission of a final project. The mission of the engineering management program is "to prepare technical managers from fields of engineering, science, math, and computer science to manage more effectively within technology-based organizations and to promote entrepreneurial activities in the formation of new business enterprises" (University of Kansas. Engineering Management Program 2007). The Engineering Management final projects were a natural place to begin making KU student work available centrally in electronic format because the program director was ready to move from print to electronic submission, and there were staff to perform all submissions to KU ScholarWorks. Availability in KU ScholarWorks would increase access to students' work. All projects had been placed on library reserve at the Edwards Campus so that current students could use them as examples. Electronic availability through KU ScholarWorks makes it easier for students to view the projects. Increasing awareness of issues such as copyright and fair use were not among the stated goals for placing field projects in KU ScholarWorks, but because the electronic versions had wider distribution than the print versions, students had to verify they had permission to use others' work in their projects. Some students in the program were not aware when fair use applied and when they needed to seek permission of the copyright holder.

The field projects are consistently among the top downloaded items from KU ScholarWorks. As of April 2007, three field projects are among the ten most-downloaded items in KU ScholarWorks. The average views per item in all of KU ScholarWorks is 259; the average is 694 for Engineering Management field projects. The statistics do not tell us who is downloading the projects or why, but students in the engineering management program likely refer to projects as examples when preparing their own field projects. KU does not currently track the origin of download requests, but the three field projects among the top ten cover topics that might appeal to a popular as well as scholarly audience (IT outsourcing, Wal-Mart, and project management for construction firms).

Electronic Submission

Inclusion of engineering management field projects has been successful, but the process used for them would not work for ETDs. Having students use KU ScholarWorks to submit the ETD was not an acceptable alternative because KU ScholarWorks does not support most of the workflow features found in the ProQuest system; a submission process that started with KU ScholarWorks and ended with submission to UMI ProQuest would not be effective. Staffing existed at the program level to assume submission of the engineering management field projects, but this would not scale for all dissertations and theses. The ETD task force considered recommending a workflow that would require students to submit twice – once to UMI ProQuest and then to KU ScholarWorks, but version discrepancies would be inevitable.

The University opted to use the UMI ProQuest electronic submission interface because of the ease of implementation and use. The ProQuest submission system has helped streamline the submission process for students and the graduate divisions alike. However, by the time KU had implemented mandatory electronic submission, UMI ProQuest did not allow open access without payment. KU opted to implement the ETD program in a relatively short amount of time by temporarily setting aside the issue of open access to KU theses and dissertations.

In fall 2006, KU learned it could receive from UMI ProQuest the “pre-publication” versions of KU ETDs. The pre-publication thesis or dissertation is the digital equivalent of the print copy previously deposited in the Libraries, so the Graduate School and the Libraries determined this version was acceptable for availability through KU ScholarWorks. KU will receive all ETDs and corresponding metadata records submitted to UMI ProQuest. The Libraries will convert the metadata records to Dublin Core XML using DSpace tools developed by other institutions, and will then import the files into two separate KU ScholarWorks collections, one for theses, and one for dissertations.

Regardless of the method employed for electronic submission, securing author permission is required prior to deposit in KU ScholarWorks. University General Counsel approved language for a generic KU ScholarWorks non-exclusive distribution license (University of Kansas 2005), and subsequent adaptation for student work such as the engineering management field projects. That license is now used for ETDs (University of Kansas 2007). The non-exclusive distribution license is now a required form for degree completion. Only ETDs whose authors sign the release form will be publicly available through KU ScholarWorks. Signing the form became mandatory in March 2007, but not all May 2007 graduates have signed it because they might have submitted the ETD prior to March. KU expects to make available all ETDs for August 2007 graduates. There are some exceptions to the open access requirement. Dissertations may be embargoed due to patents pending or other intellectual property concerns. The Graduate School holds these dissertations and submits them to UMI ProQuest only after the embargo is lifted. The Graduate School works with the affected students individually rather than alter the Graduate School requirement of open access.

Outcomes of Electronic Submission

Positive outcomes of electronic submission may include wider dissemination of research, greater visibility for KU’s graduate programs, and increased operational efficiency for the Graduate School, graduate divisions, and the Libraries. Wider dissemination of quality student work can enhance the reputation of KU’s graduate degree programs by raising awareness of the quality of scholarship occurring at the University.

An electronic workflow allows Graduate School administrators to track progress toward completion of the necessary paperwork and payment of fees. Preparation of theses and dissertations were already taking place using word processing software and other computer programs, so electronic submission is a natural extension of a process that began digitally. However, the advantages of working in the digital environment extend beyond those of convenience. Future faculty must be prepared to teach and publish in the digital environment. Future professionals and corporate executives must be able to communicate effectively in the digital environment. Electronic submission and the open access requirement are providing opportunities for students to contribute to digital scholarship. The following sections will describe some of the initiatives underway at KU to help prepare students for future roles as readers, researchers, authors, and instructors.

Digital Scholarship

ETDs are an opportunity for students and the University to gain more experience with digital scholarship – research or creative endeavor authored and delivered electronically. Electronic submission has not significantly altered the way students create the thesis or dissertation; it is still a largely textual document. Yet digital works allow for greater expressiveness because they can incorporate a wider range of media. A desirable outcome from the move to electronic submission is that students will gain a greater understanding of how to create scholarly digital works that incorporate rich media, and will better understand the benefits of wider electronic distribution of their scholarly works. Kathleen Carlisle Fountain notes the importance of introducing junior faculty to digital scholarship in order for it to gain acceptance as a publishing medium. Creators of digital scholarship must be able to explain the value of the work to others, such as a dissertation committee or a tenure and promotion committee. She wrote,

Familiarity with the way Web work is disseminated and professionally accepted will help them knowledgeably consider the merits of subsequent work. In addition, as senior faculty, they may succeed in efforts to modify or clarify written evaluation standards and serve as mentors to technologically savvy junior faculty (Fountain 2004).

This requires campus-wide collaboration; the Graduate School and academic departments must be involved, but also the Libraries, the Writing Center, and even the Information Technology department has a role to play in preparing graduate students for life as academics, researchers, or professionals. The University of Central Florida reached a similar conclusion when it implemented an ETD program, noting “Students who produce electronic documents as part of their learning experiences gain essential skills for employment and career development” (Bishop, Marshall et al. 2007).

While not tied as closely to scholarly communication at KU as it could be (or perhaps ought to be), digital scholarship and ETDs are important components of graduate education. Emphasizing this relationship requires infusing concepts such as digital scholarship, copyright and fair use, ethics, research compliance, and the responsible conduct of research into the graduate program curricula. As a result, ETDs are a product of students’ disciplinary knowledge and students’ understanding of what is referred to at KU as the “digital difference” (Fyffe and Walter 2005).

Open access to research is an issue of importance to KU faculty, as evidenced by the University Council’s resolution on access to scholarly information. Research free of certain intellectual property constraints (such as patents) should be accessible by scholars and the broader public

alike. During the ETD implementation process, faculty from across the disciplines at KU expressed an interest in open access to KU dissertations via KU ScholarWorks.

Educational Components Complementing the ETD Program

The Libraries are working to educate graduate students about copyright, fair use, and open access to research as part of its scholarly communications program. In conjunction with the Graduate School's programs, the goal is to assist graduate students early in their careers as students to make informed decisions about their options, rights, and responsibilities as creators and consumers of scholarship.

When electronic submission was a new procedure, workshops were held each semester on the Lawrence, Edwards, and Medical Center campuses. Now that the ETD program is well established, the ETD workshop takes place once per year on the Lawrence campus, and by request on the other KU campuses. The annual workshops are sufficient to address the mechanics of submission, deadlines, formatting questions, and the like. These workshops focus primarily on procedures for creating a PDF and submitting the accepted thesis or dissertation. The workshops also cover topics such as copyright and responsible research, but the ninety-minute workshops are not adequate to cover these complex and important topics (ETD Working Group 2007). Most attendees are students at or nearing the end of the dissertation process.

The Libraries now sponsor separate workshops for students in the early stages of thesis or dissertation writing, and focus on topics such as copyright issues, scholarly publication and communication, and effective use of multimedia, including fundamentals of digital preservation. Due to the copyright questions students raised, the Libraries and Graduate School co-sponsored a workshop in February 2007 titled, "Copyright and the Graduate Student: What You Need to Know Now." A panel discussion led by intellectual property experts from the School of Law, University General Counsel, and the Libraries, the workshop covered topics such as copyright and intellectual property law, patents, and fair use in the classroom. The workshop included a discussion of copyright issues specific to ETDs. The organizers asked attendees to indicate their interest in future workshop topics, and three topics were most often selected: issues of plagiarism in a digital world, disseminating widely your scholarship (open access to research), and information connoisseurship (information literacy for graduate students). The Libraries will continue to sponsor scholarly communication and information literacy workshops for graduate students, and planning is underway for a 2008 scholarly communications workshop series.

KU has found it effective "to promote discussions of the scholarly communication environment among the graduate student and faculty audiences already coming together for regular discussions of their professional work..." (Fyffe and Walter 2005). The Graduate School sponsors two programs that serve as venues for discussion of changes in scholarly communications. The first, Preparing Future Faculty (PFF) (Preparing Future Faculty National Office), selects fellows from among the graduate students at KU who are at the dissertation stage of their academic careers, and who are or soon will be seeking academic positions. The University of Kansas collaborates with other higher education institutions in the states of Kansas and Missouri to provide doctoral students with personal experiences at a variety of academic institutions. Additionally, fellows attend a one credit-hour course by the same name, and affiliated events such as the Copyright and the Graduate Student workshop are open to all graduate students.

The Graduate School is working to develop best practices for teaching the ethical use of information and responsible conduct of research. The program was developed with funding from

the Council of Graduate Schools and the KU Office of the Vice Provost for Research (Council of Graduate Schools). Now in its third year, the Responsible Conduct of Research (RCR) program at KU includes a weeklong program for graduate students on the Lawrence, Edwards, and Medical Center campuses at KU.

Two former assistant deans of libraries, Richard Fyffe and Scott Walter, co-authored *The Digital Difference: Responsible Conduct of Research in a Networked World* for KU's RCR program (Fyffe and Walter 2005). Available digitally from KU ScholarWorks, *The Digital Difference* handbook is required or recommended reading in the research methods courses of several graduate programs, and is one of the most popular items in KU ScholarWorks.

The KU Libraries are collaborating with the Graduate School, and with academic departments and graduate divisions to provide relevant and just-in-time instruction for graduate students. In describing KU's approach to scholarly communications outreach, Fyffe and Walter stated that by "building on the model of instructional outreach already established on many of our campuses in support of information literacy initiatives, we may find that the audience for this related discussion is simply waiting for us to ask" (Fyffe and Walter 2005). The Graduate School and the graduate divisions have been willing partners in outreach efforts to graduate students, and there are signs that the embedded approach to scholarly communications instruction is a successful collaboration.

Program Assessment and Future Plans

More time will be required to assess the impact of open access ETDs, and the implications for students, faculty advisors, Graduate School administrators, and the Libraries. Providing open access to ETDs is now in the late planning stages, and the Libraries will be working to streamline the process of importing ETDs to KU ScholarWorks so they are available with minimal delay when available from UMI ProQuest. The Graduate School and the Libraries will monitor the policies and workflow surrounding the required documentations for students and graduate division administrators. Finally, the Libraries will pay close attention to usage statistics for ETDs in KU ScholarWorks.

Assessment of the impact of the aforementioned scholarly communications initiatives on the KU community is in the early stages. Feedback from graduate students clearly indicates a desire for continued programming to address scholarly communications issues. The Libraries will expand the scholarly communications workshops for the 2008 academic year, and will need to assess whether they are indeed helping students to make better informed decisions as digital scholars. While scholarly communications workshops are one mechanism reaching graduate students, "embedding" the most important concepts into the graduate curriculum is likely the most meaningful way to teach students about the cycle of scholarly communication and the digital difference in their chosen disciplines.

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