ETD2005 Conference
Full Disclosure
How Authors and Readers Really Feel about ETDs

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ABSTRACT

Being on the "bleeding edge," as Virginia Tech was by requiring its graduate students to submit their theses and dissertations electronically in 1997, has at least one advantage. Years of online surveys provide extensive data from ETD authors as well as from users. Information gathered from Virginia Tech's graduate students when they submitted their works and from ETD users who voluntarily responded to point-of-use surveys, provides input from thousands of anonymous and candid people that can help us to better understand this genre of information resource and the effectiveness of related library and graduate school services. This paper provides a brief look at over 7,000 surveys.
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1. INTRODUCTION

Virtually every graduate student author of a master's thesis and doctoral dissertation at Virginia Polytechnic Institute and State University (Virginia Tech) has completed a survey since ETDs became a requirement on January 1, 1997. Surveys have also been available since then for self-selecting ETD users to complete. The perspectives described here, however, are based solely on 21st Century data and avoid the early period of the university's radical decision. This paper discusses survey findings (http://lumiere.lib.vt.edu/surveys/results/) from the last five-six years, a stable period in the relatively young history of electronic theses and electronic dissertations.

2. FULL DISCLOSURE: AUTHORS' PERSPECTIVES

When graduate students submit their ETDs at Virginia Tech, they have the opportunity to complete an online survey of 11 questions. The following summarizes the surveys completed by 3,564 authors during fiscal years (July 1 – June 30) 2000-2005.

2.1. Resources Authors Consulted for Assistance

When they needed help with their questions about ETDs, the top two sources of information for VT graduate students may be at opposite ends of a reliability spectrum--the VT ETD web site and their friends. The ETD web site increased in popularity, growing from 43% to 56% of the selected responses, while using friends as their source of information decreased slightly from 18% to 15%. The authors' consulted their committees only about half as often as they did their friends. 97% of those who consulted the VT ETD web site rated it useful, ranging from 47%

selecting very useful, 19% selecting useful, and 30% selecting somewhat useful. Somewhat less than half of the helpful sources were offline and this may correlate with the anecdotal evidence that faculty are largely working offline with graduate students on their theses and dissertations. A popular comment for those who consulted other sources included contacts at the Graduate School along with department and library personnel.

Never as popular as anticipated, workshops became a waning source of answers for graduate students, declining to less than 2% of the 2005 survey respondents. Initially organized by the Graduate School, ETD workshops were held at a variety of locations and at varying times meant to appeal to students. Those early workshops were intended to introduce students to the new ETD requirement as well as to provide help and advice for preparing digital theses and dissertations and the submission process. When the New Media Center (NMC) began presenting the workshops in 2000 the focus shifted almost entirely to the mechanics of preparing theses and dissertations for online submission.

For those who attended ETD workshops at the NMC, their usefulness rating fluctuated. They were rated useful by 84% in 2000, to 75% in 2002, and 91% in 2005. During these period respondents generally found the NMC staff to be helpful, though those rating them "very helpful" declined from 67% to 52%.

2.2 Some Characteristics of VT ETD Authors

Based on the decline in the number of graduate students that submitted their ETDs from the NMC, they may be more confident and need less assistance. Five years ago 11% submitted from the on-campus NMC while last year only 3% did. With the recent availability of the ETD Acrobat tutorial online (http://etd.vt.edu/etdtutorials/) and on CD, there may be less need for NMC services.

Where were these graduate students when they submitted their ETDs and completed these survey questions? An increasing percentage submitted their ETDs from off campus residences, growing from 13% to 33% in the five years covered by this review. About 12%-13% submitted from their off-campus workplaces each year. There has been a 5% decline in those who submitted from their on campus offices, down from 34% in 2001 to 29% in 2005.

When reviewing VT ETD web-use statistics, we often wonder who was downloading our ETDs. After looking at the survey responses to the question, "How many ETDs did you consult while preparing your ETD?" we know that VT graduate students consulted an increasing number over the last five fiscal years. The percentage that responded that they consulted three to five ETDs increased from 23% to 37% and the percentage that consulted six to ten doubled during the same period, from 4% to 8%. The authors who consulted only one or two ETDs before answering the survey declined from 47% to 34%, and the percentage that did not consult any ETDs declined from 25% to 18%.

What kind of computers did these ETD authors use? The vast majority, around 90%, used PCs while a steady 5% were Mac users.

2.3 Surprises for Authors

Authors were pleasantly surprised that turning their theses and dissertations into portable document format (PDF) files and submitting them electronically was easier than they expected. In fact, the percentage that expected difficulties declined during the last five years. When asked, "Compared to what you expected, how difficult was it to create a PDF file?" the percentage that

selected "much more difficult" declined from 8% to 3%. Those who selected "somewhat more difficult" declined about 5%. Every year more than one-third of VT's ETD authors found creating PDF files to be much less difficult than they expected and around 20% found it somewhat less difficult than they expected. A growing number of ETD authors were familiar with Adobe's PDF as evidenced in the rise in the percentage who selected "neither more nor less difficult," up from 17% in 2001 to 30% in 2005.

Each year about 40% find it much less difficult than they expected to submit theses and dissertations online, and 25% find it somewhat less difficult. But, every year up to 13% (about 100) find it somewhat more difficult than they expected. The percentage has declined, however, from 6% to 2%, that selected "much more difficult."

2.4 Publishing and Access Issues

The final survey questions asked of the VT authors submitting ETDs are very telling ones. In the last two questions the graduate students report plans to publish from their theses and dissertations and they reveal who advised them to restrict access when they did so.

Authors reported ambitious publication plans. Each year about half of the authors expect to publish journal articles and about one-fifth expect to publish in conference proceedings within one to two years of submitting their ETDs. Less than 20% don't know if they will publish anything during the year or two following completion of their masters and dissertations. One might assume that this percentage correlates to theses vs. dissertations but for Virginia Tech it does not. Our ratio is about 60/40 percent theses/dissertations.

During the last five fiscal years there have been shifts in authors' responses to the survey question, "If you restricted access to your VT ETD, what did you base your decision on?" The percentage of authors restricting access due to patents pending declined from 5% to 2%. Those who described their reasoning as "personal choice" dropped from 23% to 17%. Given the opportunity to comment, responses included data usage agreement and proprietary information from sponsor, ethical reasons, and "pending publication."

Anecdotal evidence tells us that faculty advisors are afraid that ETDs available on the web will be considered published and will lead to difficulties when authors submit articles based on ETD chapters for consideration by academic journals. According to author survey respondents, this fear of many faculty has grown during the last five years. Faculty are increasingly advising graduate student authors to restrict access: in 2001 46% gave this advice, but last year 55% did. Faculty seem to be unaware of data available from publishers such as that in the DLA Survey Database and reported by Nan Seamans at the ETD conference at Cal Tech (Seamans 2003) or the Academic Journal Policy Database available online from the University of Cincinnati. Faculty are not considering what publishers are telling graduate students. According to our survey respondents, last year only 3% of the VT ETD authors were advised by publishers to restrict access. This is down from 6% in 2000.

Perhaps it is time to redo the 1999 alumni survey conducted by John Eaton, then Dean of the VT Graduate School. (Eaton, Fox, McMillan 2000) 86% of the ETD authors completing the online survey indicated that they would publish something from their ETDs within two years. As alumni, 43% of his survey respondents had been published when they responded to Eaton's survey. The published authors reported that *they did not encounter any resistance from publishers because the articles submitted had been derived from online theses or dissertations.* These alumni also reported that they were satisfied (67%) or somewhat satisfied (29%) that their work was more widely known and appreciated because their ETDs were accessible. Over

40% had been contacted as a result of having their works on the web, and 88% were satisfied or somewhat satisfied with contacts resulting from their web-accessible ETDs. 28% were satisfied and 56% were somewhat satisfied that ETDs helped to expand their network of research colleagues. Of those who received comments about their ETDs, 83% reported receiving somewhat positive comments, though 17% said they received somewhat negative comments.

This site is great! Being a VT grad, I expected nothing less. [2003 User Survey]

3. FULL DISCLOSURE: USERS' PERSPECTIVES

Perhaps those who contacted ETD authors also completed one of our user surveys. Internet users who accessed VT ETD websites had the opportunity to complete a 13-question online survey. The following summarizes 3,474 point-of-use surveys received during fiscal years 2000–2005.

3.1 Who were the User Survey Respondents?

As one might expect from a survey linked to an ETD database, over 90% of the respondents indicated that they were from universities and colleges. It is also not surprising that we stopped offering K-12 as a choice when responses steadily declined from 6% in 2000 to 2% in 2004. What is somewhat surprising is the drop in the number of responses from those working in industry or business. They declined from 11% to 6% in the last six years. Some other users volunteered that they were from government, international, non-profit, and regulatory agencies.

The largest category of users has consistently been student—36%, nearly matched by researcher--34%. Twenty-two percent of the user survey respondents selected the educator categories, faculty (5.6%), teacher (11.3%), and librarian (5.6%). The nearly 11% that chose "other," entered various occupations including administrator, patent examiner, engineers of various types (structural, consulting, instrumentation, control, etc.), as well as training manager, knowledge management specialist, horticulturalist, and economic research institute, tourism, transportation agency, and scholarly electronic journal. Along with the most unusual response, midwife, these responses demonstrate the wide appeal of ETDs.

Survey respondents were overwhelmingly PC, not Mac, users. During the years under review, responses grew from 88% to 95% PC users. They were already very familiar with PDF. Though 75% of the survey respondents were familiar with PDF in 2000, by fiscal year 2005, 96% were. They were largely familiar with online databases; their responses agreeing with this statement fluctuated between 65% and 75%.

In 2000 only 52% of the survey respondents were from universities that accepted ETDs, but since fiscal year 2002 three-quarters of the user survey respondents were from ETD-accepting institutions. Survey respondents, however, were not, for the most part ETD authors. Only 18% had submitted an electronic thesis or electronic dissertation when they completed the VT ETD User Survey.

3.2 Use of ETD Collections

Describing their reasons for using the VT ETD collection, 64% used it for research. 24% responded use was for personal interest and to learn about ETDs. 9% said their purpose was job related. The 3% who selected "other" provided explanations such as "reviewing dissertations

in preparation for my own topic," "seeking information about my final project," "search for potential thesis directors for students," and "teaching info skills to post-grad users." Other expected responses for using the ETD collection included writing an article, seeking information, and exploring.

The VT ETD collection probably gets a surprising number of repeat users. Survey respondents who planned to use the VT ETD collections weekly almost doubled from 25% initially to 42% last fiscal year. The percentage that said they would use it occasionally did not change, holding steady at about 30%. Those who responded that they would use it daily dropped from 11% to 8%, and anticipated monthly use dropped from 12% to 4%.

Of the most recent user survey respondents, 42%-48% downloaded one-to-two ETDs. Nearly 20% downloaded three-to-five ETDs. Approximately 10% downloaded six-to-ten ETDs and another 10% download more than ten ETDs.

When they use find one ETD collection, they intended to use other ETD collections also. Responses to "how often do you plan to use other ETD libraries?" were very similar to the responses to "how often do you plan to use the VT ETD library?" 58% indicated they would use the VT collection daily/weekly/monthly, while 43% said they would use it rarely/occasionally.

3.3 They Find ETDs Quickly and Easily

Three-fourths of the survey respondents described response time for their ETDs searches as fast, but one-fourth complained that it was slow. There was a 13% increase in six years in those who selected fairly fast response time, up from 26% to 39%. There was no change in those who responded slow, 19%, and very slow, 4%.

The responses to the question "If you searched for an ETD, how fast was the response to your search request?" do not correlate, as one might expect, to the responses to the question, "What speed/type of connection do you have?" 64% of the respondents have ISDN, Ethernet, T1, or cable modem. 18% of them don't know what type of connection they have.

Not surprising, the number of users accessing ETDs at the slower speeds has dropped, while users working at high speed Internet connections has increased. The percentage of Ethernet users has nearly tripled, growing steadily from 10% initially to 29% last year. The percentage of users that don't know what type of connection they have dropped by nearly one-third.

When asked, "If you downloaded any ETDs, how did you find them?" survey responses reveal that users prefer searching to browsing. Browsing by department is preferred over browsing by author, the only two browsing options. 60% responded that the VT ETDs they downloaded were discovered through searches, while 26% browsed by department and 14% browsed by author.

71% of our user survey respondents said it was easy to find what they were looking for in the VT ETD collection. Unfortunately there was a slight increase over six years in those who replied that it was "very difficult" to find what they were looking for, up from 7% to 10%. Many survey respondents offered suggestions, particularly about improving searching and providing more categories for browsing though the general comments were overwhelmingly positive. The Digital Library and Archives, home of VT's ETDs, uses the Ultraseek search engine. Every word in every born-digital theses and dissertation is indexed, so the six-year increase in ETDs added substantially to the possible hits on words and phrases. During that time the collection grew from 2,127 to 6,716 searchable ETDs and there was a 9% increase in those who fairly easily found to find what they were looking for.

I'm researching possible topics for a doctoral dissertation. I haven't decided if I want to pursue the advanced degree. However, because of your site I'm thinking more favorably of it. [2000 User Survey]

4. LIBRARY PERSPECTIVES

In 1999 I wrote that the advent of electronic theses and dissertations raised a cadre of issues and responsibilities for libraries to address, including improving access to information, maintaining the information server, and archiving. (McMillan 1999) Today these issues are largely moot, except for archiving. Maintaining a server for ETDs has not proven to be a burdensome responsibility, especially considering the many other digital works universities now make available.

The weakest aspect of most ETD initiatives is proactive digital preservation for long-term access. While libraries improve workflow and take advantage of the ease of providing prompt access to born-digital works like ETDs, they also should be taking concerted action to maintain the availability of online resources for the long-term. None of the authors or ETD users surveyed questioned the long-term viability of this information resource. For their trust in libraries to be well founded, libraries should implement sound and effective practices such as reciprocal digital archiving. This year the Networked Digital Library of Theses and Dissertations (NDLTD) Board of Directors is being asked to consider a proposal to do this using the LOCKSS software (Jannik, McDonald, McMillan 2005) as a benefit for the membership.

5. CONCLUSION

This paper reviewed the perspectives of more than 7,000 21st Century ETD authors and users. Their responses may be interpreted somewhat differently for Virginia Tech (and perhaps other universities well experienced in ETDs) than they would be for institutions with less experience. For VT the message is largely one of reaffirmation for many of its ETD-related services. Its ETD web site serves authors well, for example. Workshops, in contrast, are serving a declining clientele of graduate students, but were very useful to those who attended them. Therefore, workshops may be of more use in the early stages of ETD initiatives.

Users provided overwhelmingly positive opinions of the VT ETD collection, but many gave advice for making improvements. While nearly three-quarters easily found what they were looking for, many written comments were about improving searching (i.e., finding ETDs). For VT this may mean reexamining our choice of search engines, though it may also be a factor of how many ETDs are available and the fact that all are word indexed and lack controlled vocabulary.

It is time for Virginia Tech to reconsider the questions in both its graduate student author and user surveys (http://lumiere.lib.vt.edu/surveys/take_survey.php3?set_ID=ETD_fall_05_author and http://lumiere.lib.vt.edu/surveys/take_survey.php3?set_ID=2005/2006_ETD_User, respectively). We might consider adding questions about the variety of formats and media used or considered and intellectual property issues. The addition of scanned theses and dissertations (i.e., not word indexed works) into the ETD database and the online Acrobat tutorial are likely to have an impact on survey response trends.

The speed with which research becomes available, combined with easy access on the Internet and Web, has resulted in many graduate works getting the exposure and use they have long

deserved. At Virginia Tech we have garnered experience from ten years of direct contact with many cultures, both within and outside the academy, and they will continue to contribute to the evolution of resources and services to ETD authors and users.

I believe this kind of knowledge base is extremely generous and helpful for any student or interested individual that wants to study and research advanced subjects from different parts of the world and from va rious disciplines and sciences. I really appreciate the work and philosophy of this kind of initiative. [2004 User Survey]

6. References

Academic Journal Policy Database. Retrieved Aug. 31, 2005 from http://www.etd.uc.edu/journal/

Digital Library and Archives' Survey Database. Review Results. (n.d.) Retrieved Aug. 28, 2005 from http://lumiere.lib.vt.edu/surveys/results/

Eaton, J., Fox, E. A., McMillan, G. (2000, Nov.) Results of a Survey of Virginia Tech Graduates Whose Digital Theses and Dissertations Are Accessible Worldwide. *CGS Communicator, 33,* 1, 7-8. Retrieved from http://www.cgsnet.org/PublicationsPolicyRes/Communicatorpdfs/2000/November00.pdf Aug. 28, 2005.

Jannik, C. M., R. H. McDonald, G. M. McMillan (2005, Sept.). A Practical, Working and Replicable Approach to ETD Preservation. Paper presented at the 8th International Symposium on Electronic Theses and Dissertations. Sydney, Australia.

McMillan, G. (1999, Oct). Perspectives on Electronic Theses and Dissertations. Paper presented at the 4th International Conference on Grey Literature, Gallaudet University, Washington, DC. Retrieved Aug. 28, 2005 from http://scholar.lib.vt.edu/gailmac/presentations/GL99ETD.pdf

NDLTD Membership List. Retrieved Aug. 28, 2005 from http://tennessee.cc.vt.edu/~lming/cgi-bin/ODL/nm-ui/members/

Seamans, N. H. (2003). Electronic Theses and Dissertations as Prior Publications: What the Editors Say. *Library Hi Tech, 21,* 56-61.