

# **What's Going on with ETDs in Canada and at Library and Archives Canada**

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## **ABSTRACT**

This paper discusses the ETD (electronic theses and dissertations) harvesting program at Library and Archives Canada and one of Theses Canada's goals, which is to help Canadian universities make the transition from paper based to digital theses. In order to accomplish this goal it is necessary to know the status of ETD initiatives at universities. To determine that Theses Canada conducted a telephone survey of many of its university participants in the spring of 2009. Universities where the status was already known were not contacted, nor were ten universities with very small graduate programs. Detailed results of the survey for both Ontario universities and other universities across Canada are reported in this paper. Updates on specific universities are provided where available.

## **1. ETDs AT LIBRARY AND ARCHIVES CANADA**

Library and Archives Canada (LAC) has been acquiring theses and dissertations from university participants since 1965 and electronic theses and dissertations (ETDs) since 2003. The institution acquires ETDs in two ways. The first is from ProQuest, the company with which LAC has a contract to digitize Canadian theses and to reproduce them on microfiche. The second way, which will be the focus of this paper, is by "harvesting" them from universities that have implemented electronic submission for their students.

In 2003 Theses Canada held discussions with the University of Waterloo and Université Laval, the only two universities accepting ETDs at that time, about developing a program to harvest (ingest) their metadata and ETDs using the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH). The software application, which was relatively new at the time, was developed as an easy to implement mechanism to share scholarly research across various systems. While the intention of the Protocol is to harvest only metadata a programmer at LAC added an extension to it which allows LAC to ingest the electronic theses themselves.

In 2004 and 2005 LAC conducted a pilot project with the University of Waterloo, Université Laval and the Universities of Saskatchewan and Manitoba to test the Protocol. It proved to be a viable way for LAC to acquire both ETDs and their related metadata and in April 2006 the Theses Canada harvesting program was made available with the objective of adding universities as they implemented ETD submission programs for their students.

Over the past four years additional universities have started to participate in the program, notably the University of Alberta, the University of British Columbia, Dalhousie University, the University of Guelph, McGill University, Université de Montréal, the University of Ontario Institute of Technology, Université du Québec à Montréal, Queen's University, Royal Roads University, the University of Toronto, and the University of Victoria. LAC is waiting for the go-ahead from several other universities (Lethbridge, Windsor) to test harvest their repositories.

There are currently approximately 99,000 ETDs in LAC's collection, one third from harvesting and two thirds digitized by ProQuest.<sup>1</sup>

## **2. THESES CANADA GOAL**

One of the goals of Theses Canada is to help Canadian universities make the transition from paper based to electronic theses and dissertations. There are several useful documents on the Theses Canada Portal designed to do just that – [How to Set Up an ETD Submission Program](#) and [Theses Canada Requirements for Harvesting Electronic Theses and Metadata](#) (both documents are in the process of being revised. New versions will be available on the Theses Canada Portal soon).

To accomplish this particular goal it is necessary to know the status of ETD implementation activities at various institutions across the country. In order to establish this several surveys have been conducted in the past. In 2005 Theses Canada sent an email survey to its university contacts, which was partially updated in 2007. Last spring an update was overdue and Theses Canada conducted a major telephone survey. The benefit of the telephone survey was that information was gathered from every institution contacted.

## **3. SURVEY METHODOLOGY**

Sixty five graduate schools participate in the Theses Canada program. In March 2009 a questionnaire was developed (see Appendix A). Nancy Stuart, a librarian from the University of Victoria, was on study leave at Theses Canada at the time and conducted the survey. Over the course of April and May thirty eight universities were surveyed by telephone and four more received the questionnaire by email. There was no need to survey the ten universities LAC was already harvesting. As well, Theses Canada was already aware of the status at École de technologie supérieure, which was in the preliminary stages of discussion at the time, so it was not necessary to contact that university. Unfortunately Theses Canada was unable to locate the appropriate people to contact at two smaller universities in Quebec. The remaining ten institutions were not surveyed since they have very small graduate programs.

## **4. DETAILED RESULTS – ONTARIO UNIVERSITIES**

Theses Canada has information on the status of ETD initiatives at twenty one Ontario universities, including tiny Conrad Grebel University College (see Appendix B: ETD Initiatives at Ontario Universities). Nineteen universities participated in the 2009 telephone survey. Four Ontario universities have implemented ETD submission programs: the University of Ontario Institute of Technology, Queen's, the University of Toronto and the University of Waterloo. All four universities require mandatory submission of ETDs. This winter the University of Guelph completed its pilot project and is starting to accept ETDs from students and have its metadata and theses harvested by LAC. All five universities are using DSpace for their IRs.

Both Carleton University and the University of Ottawa are working hard on pilot projects and should be making ETD submission available to students in the near future.

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<sup>1</sup> This proportion will change soon as LAC has received a large number of digitized theses from ProQuest which are not yet available in AMICUS, LAC's online catalogue.

The University of Windsor was almost ready for LAC to do a test harvest of its ETDs and metadata but had to temporarily close its window on ETD work at the end of December 2009 in order to concentrate on other projects. The OAI support in its repository needs some work which the university will address this spring.

As of May 2009 Lakehead University had a very small pilot project which involved both the university library and the Faculty of Graduate Studies. At that time the Head of Collections in the library was planning to contact the FGS about implementing the ETD program in fall 2009. Theses Canada has recently learned that the pilot project has been extended for a year with full implementation scheduled for fall 2010. The extension was related to a number of staff changes including the Dean of the Faculty of Graduate Studies.

According to the information gathered in the Theses Canada survey McMaster University was to begin an ETD pilot project in the fall of 2009. Recent information from Anne Pottier, Associate University Librarian at McMaster, indicates that the project did not start due to some staff changes in the School of Graduate Studies, including a change of dean. She anticipates that the pilot project will take place this spring so that ETD submission can be made available to graduate students in the fall of 2010.

## **5. DETAILED RESULTS – OTHER PROVINCES**

The survey revealed that several universities in provinces other than Ontario were in the process of conducting ETD pilot projects, i.e. Dalhousie and Mount Saint Vincent Universities in Nova Scotia, the University of Regina in Saskatchewan and Royal Roads University in BC (see Appendix C: ETD Initiatives at Non-Ontario Universities). Library and Archives Canada has since started to harvest metadata and ETDs from Dalhousie and Royal Roads.

A number of other universities were involved in the discussions required prior to conducting an ETD pilot project, i.e. Atlantic Veterinary College (UPEI), the University of Calgary, Concordia University, École de technologie supérieure, Memorial University, the Université du Québec à Trois-Rivières, the Université de Sherbrooke and Simon Fraser University. Simon Fraser has been operating a digitization program for paper theses of its students since 2004 so has a large collection of digitized theses but no true ETD submission program. Concordia University has just embarked on an ETD pilot project. The current status of the other universities is not known.

Several other interesting findings emerged at the time the survey was done. Acadia University has been acquiring ETDs from its students since 2006 and École polytechnique is now acquiring them as well. Theses Canada intends to follow up with these two universities to encourage them to allow LAC to harvest their metadata and ETDs.

The University of Lethbridge has an interesting ETD program where students hand in PDF theses to the Graduate Office and the PDFs are then uploaded to the university institutional repository by IT staff. This workload is manageable because the graduate school is small. Unfortunately at the moment the theses metadata that Lethbridge collects is not compatible with LAC's harvesting application. Lethbridge IT staff are working to fix this and will contact LAC when the university is ready to be harvested.

While the University of New Brunswick has had an ETD submission program since 2006 and was being harvested by LAC in the past, at some point in time the harvests started to fail and LAC lost all of UNB's ETDs. LAC IT staff are currently working with IT staff at UNB to sort out the problem.

## **6. DIVINITY COLLEGES**

A number of small divinity colleges participate in the Theses Canada program. Only four of them were contacted during the survey – Conrad Grebel, which has been submitting ETDs through the University of Waterloo since 2007, Providence College & Seminary, Trinity Western, which has been taking steps to set up ETD submission for its students, and the Vancouver School of Theology (VST). The rest of the divinity colleges were not contacted. The Theses Canada perspective is that it is more important for it to focus on assisting large and mid sized universities with ETD implementation first so that they can in turn help the very small ones.

Nancy Stuart suggested to Providence College, which is located in Manitoba, that it might be possible to submit ETDs to Theses Canada via the University of Manitoba. The College was planning to look into that possibility. She suggested something similar to the VST, i.e. that it might be possible to submit ETDs via UBC. Library staff followed up on her suggestion and are now submitting electronic theses to cIRcle, UBC's institutional repository.

Six divinity colleges are associated with larger universities that have already established ETD programs for their students. Theses Canada is planning to work with these small colleges and with the larger universities with which they are affiliated to enable the colleges to accept ETDs and submit them via the larger institutions – a similar strategy to that suggested to Providence College and the Vancouver School of Theology.

## **7. WHY SOME UNIVERSITIES ARE SLOW TO IMPLEMENT**

In the past faculty resistance to ETD programs was a common barrier to implementing ETD programs at universities. This is less the case now. Two problems persist however. An important one is the lack of a “champion” to move the ETD program forward. It is particularly helpful to have a champion in the senior level of administration, such as the dean of the faculty of graduate studies, but there are certainly ETD programs that have gotten off the ground with someone at a lower level pushing it forward and lobbying senior administrators.

Slow implementation can also result from changes or departures of key staff. In fact this was the reason for the delays at both Lakehead and McMaster.

## **8. HARVESTING PROBLEMS**

LAC has now been operating its program to harvest theses and metadata for six years now and over the years staff have learned that a few things can cause harvests to fail. The biggest problem by far occurs when a university migrates its ETDs to a new version of its institutional repository software. This often results in the loss of the identifier in the metadata that LAC's harvester looks for. Universities are advised to contact Theses Canada before making such changes to ensure that LAC can continue to successfully harvest university data repositories.

## **9. INSTITUTIONAL REPOSITORIES IN CANADA**

While it was not a formal survey question Theses Canada collected information about the status of institutional repositories at Canadian universities from survey participants. Of the institutions surveyed at the time 62% had already implemented institutional repositories (IRs). DSpace was

found to be the most popular IR software. Several institutions were using Digital Commons and several had implemented ContentDM. Several universities in Quebec are using Eprints. Carleton University is developing its IR using Fedora software.

The Canadian Association for Research Libraries (CARL) implemented an institutional repository program in 2003. Since IRs are often seeded with collections of ETDs Theses Canada and the CARL IR program are in the process of building a stronger relationship. The [CARL](#) website indicates that thirty CARL libraries have developed institutional repositories, twelve of which are in Ontario.

## **10. CANADIAN ETD AND OPEN REPOSITORIES WORKSHOP**

In order to assist Canadian universities to make the transition from paper based to electronic theses and dissertations a workshop will be held at Carleton University on May 10 and 11, 2010. Speakers will cover ETD workflow and systems best practices, tutorials for students, etc. As well there will be a number of sessions related to institutional repositories. More information is available on the workshop website at [http://conferences.uvic.ca/index.php?conference=etd&schedConf=etd\\_May\\_2010](http://conferences.uvic.ca/index.php?conference=etd&schedConf=etd_May_2010) .

## **11. CONCLUSION**

It is almost a year since the survey was done and already things have changed at some of the institutions which Theses Canada surveyed. At the present time twenty universities across the country are accepting ETDs, representing 31% of Theses Canada participants. Eight universities are conducting ETD pilot projects and another ten are planning for pilot projects, representing an additional 28%. The trend towards electronic theses and dissertations at Canadian universities is very clear. By the end of the 2010-2011 fiscal year it is possible that 60% of Canadian universities will be accepting ETDs resulting in the critical mass that Theses Canada has been expecting.

**Appendix A**  
**Survey on ETD Initiatives at Canadian Universities 2009**  
**Conducted by telephone**

Does your university have an electronic theses submission program in place?

If yes:

How long has it been in place?

What formats are acceptable for electronic theses and accompanying material, e.g. PDF, XML, Excel, Media formats, etc.?

What software did you use for the ETD submission program, e.g. ETD\_db software from Virginia Tech, Dspace, Fedora?

Are you submitting ETDs to Theses Canada via ProQuest as well?

If so, how? Via FTP; PDF on CD-ROM, paper

Is student participation voluntary or mandatory?

Do you anticipate implementing a mandatory submission program?  
When?

Are you ready to be harvested by LAC?

Do you create MARC records for your catalogue from the DC metadata?  
Would you like to?

If no:

Does your university plan to set up a program to accept electronic theses and dissertations from students?

If no, say thanks and ask them to contact Theses Canada in the future if the university changes its plans.

If yes, please identify what stage you are at:

- a) informal discussions have taken place but an ETD program has not been approved
- b) formal committee is in place and is developing a proposal for approval
- c) approval has been given to conduct a pilot project and planning for the pilot is underway
- d) a pilot project is in progress

If you are planning/conducting a pilot project:

- a) In what format will/do you require students to submit ETDs and supplementary material, e.g. PDF, XML, Excel, Media formats?

- b) What software are you considering/did you select for the ETD submission program, e.g. ETD\_db software from Virginia Tech, DSpace, Fedora?
- c) When do you expect to finish your pilot project and implement a formal ETD submission program?

Are you aware of the Information for Universities on LACs Theses Canada Portal?

How could Theses Canada help you in your transition to ETDs? Info? Personal visit?

Would you be interested in attending a Canadian ETD workshop in May 2010?