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This is an author produced version of a paper published in

Journal of Advanced Nursing (ISSN 0309-2402, eISSN 1365-2648)

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#### Citation Details

##### Citation for the version of the work held in 'OpenAIR@RGU':

MACDUFF, C., 2009. An evaluation of the process and initial impact of disseminating a nursing e-thesis. Available from *OpenAIR@RGU*. [online]. Available from: <http://openair.rgu.ac.uk>

##### Citation for the publisher's version:

MACDUFF, C., 2009. An evaluation of the process and initial impact of disseminating a nursing e-thesis. *Journal of Advanced Nursing*, 65 (5), pp. 1010-1018.

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## THE PROCESS AND INITIAL IMPACT OF DISSEMINATING A NURSING E-THESIS

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### **Abstract**

**Aim.** This paper is a report of a study conducted to evaluate product, process and outcome aspects of the dissemination of a nursing PhD thesis via an open-access electronic institutional repository.

**Background.** Despite the growth of university institutional repositories which make theses easily accessible via the world wide web, nursing has been very slow to evaluate related processes and outcomes.

**Method.** Drawing on Stake's evaluation research methods, a case study design was adopted. The case is described using a four-phase structure within which key aspects of process and impact are reflexively analysed.

**Findings.** In the conceptualisation/re-conceptualisation phase, fundamental questions about the purpose, format and imagined readership for a published nursing PhD were considered. In the preparation phase, seven key practical processes were identified that are likely to be relevant to most e-theses. In the dissemination phase email invitations were primarily used to invite engagement. The evaluation phase involved quantitative indicators of initial impact, such as page viewing and download statistics and qualitative feedback on processes and product.

**Conclusion.** Analysis of process and impact elements of e-thesis dissemination is likely to have more than intrinsic value. The advent of e-theses housed in web-based institutional repositories has the potential to transform thesis access and use. It also offers potential to transform the nature and scope of thesis production and dissemination. Nursing scholars can exploit and evaluate such opportunities.

**Keywords:** dissemination, doctoral education, e-thesis, evaluation, impact, institutional repositories, nursing, process

### **What is already known about this topic**

- A growing number of nursing theses and dissertations are becoming easily accessible through university institutional repositories on the world wide web
- Electronic theses and dissertations are accessed much more frequently than their traditional hard-bound counterparts in libraries
- Very few authors have recognised the potential of these developments for nursing scholarship

### **What this paper adds**

- An overview of current e-thesis development within nursing, with details of institutional repository search resources
- A new-four stage model of the e-thesis dissemination process
- Recognition of the potential for further research based on an emergent e-academy of doctoral scholarship

### **Implications for policy and practice**

- Higher education institutions should support nursing scholars to exploit the potential e-theses offer for more creative construction, production, presentation and dissemination of their doctoral work
- Nurses working in practice, education, research or policy contexts can now freely access this body of detailed scholarly work

## **INTRODUCTION**

As a medium for dissemination of research, the traditional hard-bound printed PhD is virtually useless. In recent years, episodes of access to the UK Royal College of Nursing's Steinberg collection of over 1000 hard-bound theses have totalled fewer than 300 annually (personal communication from library staff). This low level of thesis usage is also characteristic of UK university libraries (Copeland and Penman 2004), where processes for interlibrary thesis loans will take a minimum of several days and may still involve recourse to a microfilmed copy from the British Library.

However, libraries throughout the world are increasingly making electronically-formatted theses (e-theses) freely accessible on-line via web based Institutional Repositories (Copeland et al 2005). To date, however, there is a dearth of research evaluating the process, impact and implications of disseminating a nursing PhD through this means. In this paper I address this challenge by: reviewing "traditional" nursing PhD dissemination; describing recent developments with e-thesis dissemination; presenting an evaluative, reflexive case study of one recent e-thesis dissemination; suggesting a four-stage model for e-thesis dissemination; and discussing future implications for the development of nursing as a discipline.

## **BACKGROUND**

In the 74 years that Doctor of Philosophy degrees have been awarded in the discipline of nursing (Yam 2005), attention has gradually shifted away from the professional novelty value of such a qualification towards more mature consideration of the PhD as a process and product. This both reflects and informs international endeavours to establish global quality criteria, standards and indicators for doctoral programmes in nursing (Kim et al 2006). These endeavours tend to focus on core structure and process elements of the PhD experience in order to ensure high quality of research training, with the quality of associated output being seen as consequential. Although there is usually a general expectation that a PhD in nursing will aim towards improving the care of patients and clients (Kim et al 2006), the primary readership for the hard-bound output product remains the examining and supervisory team and other interested academics. Indeed, this is often the only readership for the product.

The traditional remedy to this dissemination dilemma has been to seek publication of selected parts of the PhD output in academic journals. However, the process of further peer review and acceptance for publication can be lengthy, and word-length restrictions necessarily limit the

nature and scope of what can be included. Similarly, adapting the thesis into a book for publication may be a means of dissemination, but involves even more time and delay in sharing work with a wider professional audience.

However, a recent development offers the potential to radically change the nature and scope of doctoral dissemination activity and to transform PhD access and use. This potent force is the electronic thesis and dissertation (ETDs) movement. During the past decade, university libraries and other institutions in the UK have developed institutional repositories (IRs) which make peer-reviewed, electronically formatted, academic outputs such as PhD theses, Master's dissertations, journal papers, conference proceedings and reports freely available via the world wide web (Copeland and Penman 2004). This is part of a truly international movement led by The Networked Digital Library of Theses and Dissertations (NDLTD). Countries such as Canada, the USA, Brazil, Australia, New Zealand, India, South Africa, Sweden, Germany and the UK have been prominent in developing ETD capacity. Importantly, evidence from around the world suggests that this way of presenting electronic theses and dissertations results in very high levels of interest and use compared to previous methods (Copeland and Penman 2004). For example, West Virginia University found that their ETDs were accessed 1,181,111 times during 2000-2001 compared with a figure of 813 episodes of access to printed theses during 1998-1999 (Hagen 2007).

As part of this movement, internet portals/resources have been created which offer the ability to search for, within, and across open access IRs. Table 1 gives an overview of some of the most prominent of these search resources and an indication of the results that they yield for nursing PhDs/theses. The resources outlined in Table 1 vary in their coverage, indexing policies and search functionality, and the search outcomes reflect this. Where less precise search options are offered, a relatively large number of "false hits" can be expected. Moreover, the terms "thesis" and "dissertation" can be interpreted differently in different countries and academic disciplines, and structures and formats can vary widely.

Nevertheless, it is clear from Table 1 that this open access international movement is starting to make full text nursing theses freely, widely and readily accessible. This movement co-exists with established subscription-based ETD providers such as PROQUEST UMI, who have a large number of e-theses available. As review of knowledge transfer theory and practice (Thompson et al 2006) suggests, however, simply making information available does not in itself ensure engagement or uptake. Rather, other strategies such as championing will also usually be required.

In this context, it is significant that to date there appears to have been no research in nursing into the effect that ETDs may be having on the PhD as process and product, and the related impact that this may be having on potential readers/users. A literature search of the CINAHL database using the term “electronic thesis/theses” identified only 13 papers, ten of which were primarily technical and information services-oriented. Deets (1999) and Holaday (2000) are unusual and prescient in writing about the ETD movement from a nursing perspective. However, their papers are essentially anticipatory and aspirational rather than evaluative in nature. Accordingly, there seems both need and scope for more academic studies of modern nursing PhD thesis dissemination.

## **THE STUDY**

### **Aim**

The aim of this study was to evaluate product, process and outcome aspects of the dissemination of a nursing PhD thesis via an open-access electronic institutional repository.

The objectives were:

- 1) To compare pre-dissemination perceptions of ‘product’ content, quality and ‘market’ utility with subsequent perceptions received in response to the dissemination process.
- 2) To identify and appraise the key process elements involved in preparing a recently completed thesis for an institutional repository.
- 3) To articulate and undertake an integrated publicity strategy that would support the dissemination of the thesis via an institutional repository.
- 4) To collate and analyse data that would indicate the nature and extent of engagement achieved through this dissemination activity.
- 5) To identify the relative strengths and weaknesses of the above processes, with reference to relevant evaluative literature in the fields of information and health studies.

As can be seen, these objectives are broadly contiguous with planning, acting, reflecting and concluding. Nevertheless, the actual experience of undertaking this research suggested that a slightly different model may be most relevant when considering e-thesis dissemination, namely: *conceptualisation/re-conceptualisation; preparation; dissemination; evaluation*. Accordingly, these headings are used below to structure the paper. This also incorporates description of the research methods used in these four phases.

## **Research design**

Given the absence of nursing research in this field, this paper presents research findings relating to the process and impact of my own dissemination activities. The design was informed by two main approaches. First, I drew on ideas from the experiential learning cycle of Kolb (1984), which relate essentially to planning, acting, reflecting and concluding. As the PhD was my own, the evaluation necessarily had to incorporate major active and reflexive elements.

Second, I drew on the case study research approach of Stake (1995), who suggests that such studies may be primarily intrinsic or instrumental in nature. In the former, the “given” case is often the only one available for study and there is intrinsic interest in this particular case. This was clearly true in my own context, where self-interest was a considerable motivation. Nevertheless, there was also curiosity to identify and explore issues which may be characteristic of more general experience in this new field. This reflects Stake’s notion of case study being used instrumentally to gain more general understanding, i.e. where the particular case is studied more as a means to an end. Thus, my case study can be seen primarily as intrinsic in nature, but it also incorporates instrumental aspirations. As Stake points out, “there is abiding tension between the case and the issues” (p. 25).

## **CASE STUDY**

### **Initial conceptualisation/re-conceptualisation phase**

On reflection, it was only towards the end of my doctoral studies that I really began to apprehend the potential value of electronic thesis dissemination. By this time, I had become aware of the OpenAIR Institutional Repository being developed in my own university. Therefore potential opportunity to do so was presenting itself. Moreover, I gradually became aware of the lack of nursing research in this field and of the opportunity to evaluate concurrently my dissemination activities.

The main driver behind all of this, however, was a perceived opportunity to influence policy and practice. My own situation may have been unusual to some extent in that a recent major policy review within my subject area (Scottish community nursing) had developed in such a way that my thesis was becoming particularly topical and relevant. As such, I recognised an opportunity to contribute to emergent developments through timely dissemination of the thesis. While I had previously harboured vague notions of publishing a book in the future based on the thesis, and had already published a number of papers based on earlier parts of the doctoral research, none of these seemed as useful as the idea of putting an in-depth body of work into the public domain in a freely accessible format.

In addition to the altruistic notion of making new knowledge available to the current “market”, my motivation was personal and selfish in several ways. At a basic level, there was the urge to make known my doctoral work on the analysis of the development of family health nursing and to gain feedback from a wider readership. Thus, motivation emerges as an important element within the initial phase where I was re-thinking the *format and purpose* of the PhD. This involved considering a number of aspects afresh from a different perspective. Firstly I was reconsidering the format and mode of presentation of the thesis itself. The thesis document had been developed in a standard word processing format since its inception, and the prospect of e-publication made me much more aware of my limited use of tables, figures and graphics to lighten the many words used. For the e-thesis offers huge opportunities for more innovative presentation via video clips, audio clips, and interactive graphics. These will best be realised when the thesis is seen as a living electronic entity from the start of the PhD process, rather than towards the end as in my case.

At a deeper level I was involved in re-thinking why I was doing the PhD, and what and whom it was for. Again motivation is a crucial factor here. For in many ways the PhD process is a selfish affair of the heart and the head, wherein the individual student embraces a specific body of knowledge. While there is recognition that supervisors and, ultimately, examiners will engage with this intimate dialectic, the idea of a substantive external readership may seem fanciful and certainly distant to most students. However I was beginning to think more deeply about just such an audience, considering the thesis as a ‘product’ in terms of quality indicators and ‘market’ utility. After a successful Viva Voce examination which required minimal amendments, I was in a position to take forward a more systematic pre-dissemination assessment of the thesis as a “product” and the potential “market” for it.

The starting point for this was the examiners’ judgement indicating that the thesis was of doctoral standard. I also received positive feedback on the overall quality of the thesis from four academic colleagues with whom I’d shared it. Moreover, as an experienced researcher, I was confident that the thesis was a useful academic contribution. As indicated previously, the thesis also had currency and topical relevance. Nevertheless, I had some reservations about the thesis as a product for active dissemination rather than examination.

Specifically, I couldn’t recall other UK academic colleagues doing such a thing. While “academic reserve” might be an appropriate term and explanation in this context, it is not sufficient. Rather it seemed that if new PhD graduates had the energy and inclination for dissemination, they would usually select key content for a journal article or conference paper

that would give a distinct angle or cutting edge. My thesis had particularly broad ambit, with content ranging across policy, education, and practice. In turn this made me conscious that the unexpurgated thesis was, in itself, surely a blunt instrument. As such, there was a need for more detailed thinking about the “market”, ways of inviting engagement, and ways of making actual engagement easier. The strategy which emerged was taken forward in the preparation phase of the project.

### **Preparation phase**

Having thought through the main rationale for an e-thesis dissemination approach, the next phase of the project focused on practical preparations. Early consultation with the Senior Information Adviser in Library Services about the feasibility of publication through the institutional repository proved invaluable. As the repository was in its infancy, we identified a need early on to identify and appraise the key process elements involved in preparing a recently completed thesis for this type of web publication. This involved me and the library services team recording key meetings, activities and decisions (often in e-mail correspondence). This culminated in a reflexive group discussion approximately two weeks after the thesis was made available on OpenAIR. In this meeting we reviewed these records and the content of the previous five team meetings. From this discussion, seven key process elements were identified:

- technical set-up processes
- copyright-related processes relating to publication, such as obtaining permissions to reproduce figures in the thesis
- access and use copyright-related processes, such as deciding on the nature of any restrictions on readers’ usage of original figures in the thesis
- processes of presenting the thesis within a contextual “frame” so as to guide the reader
- dealing with errata
- preparing an integrated dissemination and publicity strategy
- establishing processes to collate and analyse data that would indicate the nature and extent of engagement achieved through this dissemination activity.

As these processes are likely to be relevant to most e-theses, and as they appear not to have been examined in the nursing literature before, they are now briefly reviewed. Readers are referred to the thesis on the web to illustrate the outcome of these processes (<http://www.rgu.ac.uk/nursing/research/page.cfm?pge=27219>) .

Library staff were involved in creating the web pages within the IR that would “house” the thesis. In particular, there was a need to create the “metadata” page, which presents the thesis abstract, keywords and other unique identifying information. These elements are crucial for indexing beyond the institution and to ensure that search resources such as those mentioned in Table 1 list the thesis prominently. Indeed, the major advantage of the thesis being housed in an institutional repository (rather than on a personal web page) is the high web visibility ensured by institutional sites that conform to international cataloguing standards. Such visibility can extend to general search engines. For example, my thesis is currently one of the top ten listed records when the terms “nursing” and “PhD” are combined in a Google search.

One of the main differences with an e-thesis is that it becomes a published PhD, rather than an unpublished work housed only in one or two libraries. This tends to highlight copyright issues, from the point of view of both the thesis author and the thesis user. A major part of the preparation process involved writing to publishers seeking permissions to reproduce figures and tables in the thesis. It took many e-mails and almost a month to obtain the necessary permissions. In the few instances where there was no reply (despite multiple attempts to seek permission), a pragmatic decision to publish was made. Such decisions are best informed by library and/or legal counsel.

Publishing the thesis also requires consideration of the converse situation, whereby readers may want to use material from the thesis in their own publications. The full item record for the thesis within the IR gives details of any copyright restrictions decided on. In my own case, I have chosen the option that “No part of this publication may be reproduced without the prior permission of the copyright owner”. This is driven by curiosity to gauge level of use of the thesis in publications, and also by curiosity to see whether this obligation is actually observed. Other levels of use may be granted and the Creative Commons website gives useful guidance in this regard (see: <http://creativecommons.org/about/>).

Consideration of potential reader and user experience also involved reflecting on the more fundamental question: how can engagement with a huge document like a thesis be best enabled? In this regard, it soon became apparent that even a “user-friendly” IR will usually only present the abstract, the thesis and any associated documents such as appendices. However, I wished to give the reader more context and guidance, and to engage them so as to encourage feedback. The solution generated was to “bring the reader in” by initially giving the address of my individual web pages in the university system (<http://www.rgu.ac.uk/nursing/research/page.cfm?pge=27219>), which in turn included a direct link to the IR and thesis (<https://openair.rgu.ac.uk/handle/10059/89>). This “framing” mechanism

was designed to: introduce the thesis in context; persuade the visitor that it would be worth viewing; give a quick guide to the most relevant parts according to their particular areas of interest; present details of minor errata within the thesis; and give information that would inform any decision to take part in my dissemination research by completing an integrated feedback form or emailing me directly. Thus, substantial thought went into preparing the interface with the potential reader.

The discovery of minor errors in the thesis took place following its hard binding but prior to web publication. The issues of copyright and imminent publication had necessitated further re-reading of the thesis, and perhaps it is not surprising that during this process some errors were identified. The subsequent temptation was to make simple corrections to the original thesis in order to produce a correct new published version. However, this was resisted on the grounds that the university IR publishes the examined and approved thesis as it is. Accordingly, my individual web pages offered the most appropriate place to explain these errors.

These web pages also hosted the simple feedback form that was part of the integral dissemination research study. This form asked for feedback on aspects of the process of accessing the thesis and for comment on the content. The form could be completed and returned anonymously via the university's web system. Ethics approval for this small study was granted through my university, and the research protocol, study information sheet and invitation to take part were also made available on these web pages so as to fully inform potential participants. The study was designed so that visitors were free to ignore this invitation and to download the thesis without being individually identified in any way. Systems for carrying out routine recording of the number of "hits" on individual web pages and downloads of the thesis and associated documents were prepared in order to gauge impact more generally. The overall aim of this part of the study was to evaluate the nature and extent of engagement achieved during the six months after the thesis was published through the IR.

The development of an integrated dissemination and publicity strategy was a key part of the preparation phase. The strategy comprised two distinct areas of activity. First, a subject-specific strategy was planned, involving co-ordinated emailing of key individuals and groups relevant to the subject matter of the thesis. This aimed for coverage of those involved in developing policy, practice, education and research in community nursing, primary care, and nursing itself more generally, and drew on established contacts and publicly available email listings. The majority of these 200 or so contacts were UK-based, but international contacts were also included in the sample. A standard email letter of invitation was prepared, and this invited recipients to pass on the message to interested colleagues. The aim of this was to produce a "snowball" effect. The

strategy was also used to seek dissemination through a number of established email bulletins distributed to a total of over 5000 people. The aim of a second, less substantial strategy was to engage with a more general readership, such as students and staff in the host university and others involved in the ETD movement. In all, the preparation phase took around 10 weeks and involved much thought and sustained work.

### **Dissemination phase**

Following checks on the functionality of all the web links, the dissemination and publicity strategy was enacted. Individuals were emailed singly rather than as part of large lists in order to avoid respondents using the “reply to all” function. This often produced an initial positive response, with several respondents commenting on the novelty of the e-thesis as a concept. This seemed particularly the case in the UK. Almost 200 individual emails were sent during this first period. During the following six months further email invitations were sent as and when new opportunities arose. One general reminder email was sent towards the end of the study.

### **Evaluation phase**

Evaluation was an ongoing feature throughout all phases, but was formative in nature during most of the six-month study period. Personal email feedback on the thesis was a frequent feature during this time. Table 2 presents a quantitative summary of engagement with the thesis and associated documents over the six months of the study.

As Table 2 indicates, only 11 of the 310 people who accessed the feedback form actually completed and returned it. These responses were predominantly from UK-based educationists or researchers who had received the web link in an emailed personal message or newsletter. All had found the process of accessing the thesis easy, and nine thought that the way of presenting the documents was good. In this regard the “Quick guide” to the thesis was seen as helpful. Feedback on the content of the thesis was very positive, and this was also the case for the qualitative feedback received in personal emails. This tended to confirm the considerations about “product” quality made before dissemination, but more critical engagement may yet be forthcoming. Feedback also indicated some awareness of the thesis amongst national policy-making groups, but level of future citations will give a more robust indicator of impact for policy, practice, research and educational communities.

## DISCUSSION

In making sense of the dissemination and evaluation process thus far, it is useful to return to Stake's ideas of the intrinsic and instrumental value of the case studied. In the apparent absence of other evaluative nursing literature in this field, it is somewhat difficult to know what aspects of my experience are particular and which have more generalised application. However, in the UK context, it seems safe to say that my approach to PhD thesis dissemination has been unusual. Many email responses highlighted this and respondents saw it as an exciting development with potentially widespread application. Indeed, several academic respondents mentioned that they would be seeking to exploit the possibilities of IRs for themselves and their students. In terms of Roger's diffusion of innovations theory (1995), these respondents might be seen as joining a small early adopter group in the UK.

The topicality of my particular thesis at the time of completion may also constitute an unusual conjunction of circumstances. Certainly this happened more by luck than due to any foresight or five-year plan. In taking forward a proactive strategy of dissemination a certain amount of confidence was required that may not be easy for PhD students with minimal previous experience as a practitioner and/or researcher. However, as McKenna (2005) points out, PhD students who are nurses often come to their doctoral studies at a relatively mature age and with extensive expertise in their particular field. Thus, the approach described in this paper may be feasible and attractive to many nurses undertaking PhDs.

Certainly it can be seen as an approach that has proved largely successful so far. The collated quantitative feedback in Table 2 clearly demonstrates the dissemination power of housing an e-thesis within an IR and actively promoting it via email and the world wide web. From the work of Copeland and Penman (2004) and others it seems clear that such levels of interest are not unusual for ETDs. Therefore it seems likely that other nursing e-theses in IRs may receive comparatively high levels of interest, even if more passive dissemination strategies are adopted. However, further research is needed, in three areas, namely: to gauge the marginal benefits that may be attributable to active championing and marketing of a nursing e-thesis; to explore the possible benefits of indexing open access IR-based ETDs in established nursing databases such as CINAHL; and to explore how ETD dissemination metrics compare and contrast with traditional metrics such as journal impact factor and citation index.

The contrast between the large number of "hits" on my thesis-related web pages and the relatively small number of feedback forms completed may be due to a number of factors, such as the amount of material presented; the novelty of the invitation to give feedback on a thesis;

reader passivity; and/or preference for personal email-based feedback. Nevertheless, one of the most surprising aspects of the experience has been the level of viewing/downloading of the methodological annexes to the thesis. While some of this interest may relate to the specific topic and field of study, it may be that there is more generic interest in looking at methods and their application in e-theses.

Indeed, there is a sense in which the growing body of e-theses will become an e-academy for other students, making standards visible within nursing and across other disciplines. Johnson and Burnard (2002) point out that many of the nursing PhD candidates whom they examined “had not really read other PhDs”. As they emphasise, “aspects of style, structure, level, size, quality of debate and strength of conclusions are all to be learned from the work of others at this level” (p.356). The open access ETD movement now offers a series of “virtual guest houses” (Macduff 2008) which students can visit to do this learning, and institutional repository searching offers a map and keys to these many doors.

Some of the learning derived from my experience and its evaluation clearly has generic application beyond the particular world of academic nursing. In this regard, the new four-stage model for e-thesis dissemination may be relevant to any academic discipline. Already this has been of value in teaching new PhD students from across a range of disciplines who come together to learn research methods in the university where I work. While I had to *re-conceptualise* the purpose and readership of a “traditionally” formatted thesis, there is an exciting opportunity for new students to conceptualise their nascent thesis as a vibrant, living electronic entity composed of different media.

Moreover, publication of the resulting end-product as an ETD in an IR does not preclude subsequent journal publications based on the content. Hagen’s research (2007 and 2008) highlights how ETDs, books and journal papers are different sorts of entities, and that open access makes them complementary rather than competing formats. The peer review processes for each are different, reflecting their different purposes. While journal papers have the advantage of summarising key aspects from a PhD, it is often difficult to do justice to the depth and scope of the research. One of the prime advantages of the ETD is its capacity to present both primary data and secondary interpretation in accessible form to both scientists and lay readers. Furthermore, the incorporation of a user-friendly quick guide, as attempted in my dissemination strategy, makes it possible for clinicians and others to engage with these detailed data. This engagement might be better facilitated by the insertion of hyper-links that take readers into the appropriate text in the thesis.

## **CONCLUSION**

These considerations show how the conceptualisation, preparation and dissemination phases are interlinked and iterative processes, rather than discrete and mutually exclusive entities. The evaluation undertaken in this study only gives insight into the initial six months post-publication, but in the absence of comparative nursing literature it is important to put findings on processes and outcomes into the public domain. The need for much more active evaluation of dissemination experiences so that the nursing academy can learn more about doctoral processes and products is clearly highlighted. While quantitative indicators such as “hits” and citations are useful to some extent, there is a need for more qualitative studies of the e-thesis experience. These would elicit some of the richness of the experience and may suggest productive avenues for further development. In presenting a reflexive case study, I hope to have made a start along a road that will be more travelled.

## **ACKNOWLEDGEMENTS**

I would like to gratefully acknowledge help and guidance received from library staff at The Robert Gordon University, particularly Dr Susan Copeland, Colin MacLean and Sheila Scott. John Hagen from West Virginia University Libraries also provided valuable advice.

## References

Copeland, S. & Penman, A. (2004) "The development and promotion of electronic theses and dissertations (ETDs) within the UK", *New Review of Information Networking* Vol.10 No.1, pp19-32.

Copeland S, Penman A & Milne R (2005) Electronic theses: the turning point. *Program: electronic library and information systems* 39, 3, 185-197.

Creative Commons website. Available at: <http://creativecommons.org/about/> Accessed 11/3/08

Deets, C (1999) Research. Electronic theses and dissertations – the wave of the future. *Journal of Professional Nursing* 15 (6), 330.

Hagen, J (2007) Building effective discovery tools for academic promotion and tenure evidence: the added value of ETD and Institutional Repository metadata, citations and access.

Morgantown: West Virginia Libraries, USA. Available at:

<http://epc.uw.edu/se/etd2007/files/papers/paper-51.pdf> Accessed 11/3/08.

Hagen, J (2008) Open Sesame: From student success towards faculty research contributions in Institutional Repositories. Presentation at 11<sup>th</sup> International Symposium on ETDs, Spreading the Light 2008. The Robert Gordon University, Aberdeen. Available at:

[http://www.wvu.edu/~thesis/Presentations/ETD\\_2008\\_Paper\\_ETDs\\_Open\\_Access\\_Faculty\\_IR\\_Hagen.pdf](http://www.wvu.edu/~thesis/Presentations/ETD_2008_Paper_ETDs_Open_Access_Faculty_IR_Hagen.pdf). Accessed 27/7/08

Holaday, B (2000) Tapping into technology: the future of electronic theses and dissertations. *Excellence in nursing research and education* 1 (4), 1, 3.

Intute: repository search. Available at: <http://irs.ukoln.ac.uk/> Accessed 11/3/08

Johnson, M and Burnard, P (2002) The "pear-shaped" doctoral thesis and how to avoid it! *Nurse Education Today* 22, 355-357

Kolb, D (1984) *Experiential learning: experience as the source of learning and development*. New Jersey: Prentice Hall.

Kim M, McKenna H & Ketefian S (2006) Global quality criteria, standards, and indicators for doctoral programs in nursing; literature review and guideline development. *International Journal of Nursing Studies* 43, 477-489.

McKenna, H (2005) Doctoral education: some treasonable thoughts. *International Journal of Nursing Studies* 42, 245-246.

Macduff, C (2008) The PhD as a virtual guest house. *Journal of Clinical Nursing* 17, 2381-2383

Networked Digital Library of Theses and Dissertations (NDLTD) website. Available at: <http://www.ndltd.org> Accessed 11/3/08.

OAster website. Available at: <http://www.oaister.org/> Accessed 11/3/08.

OpenDOAR website: The Directory of Open Access Repositories. Available at: <http://www.openoar.org/index.html> Accessed 11/3/08.

Rogers, E (1995) *Diffusion of innovations* (4<sup>th</sup> edition) The Free Press: Toronto

Stake, R (1995) *The art of case study research*. Thousand Oaks: Sage.

Thompson G, Estabrooks, C and Degner, L (2006) Clarifying the concepts in knowledge transfer: a literature review *Journal of Advanced Nursing* 53 (6) 691-701

Yam, B (2005) Professional doctorate and professional nursing practice. *Nurse Education Today* 25, 564-572

**Table 1: Indicative overview of resources to search for Institutional Repositories (IRs) and nursing Electronic Theses and Dissertations (ETDs) (as on March 2008)**

<b>Internet search resource</b>	<b>Nature of resource and scope of coverage</b>	<b>Records identified by combining “nursing and thesis” as search terms</b>	<b>Records identified by combining “nursing and PhD” as search terms</b>
Networked Digital Library of Theses and Dissertations (NDLTD) <a href="http://www.ndltd.org">http://www.ndltd.org</a>	Houses an international database dedicated to ETDs. Allows searching at title and abstract level to aid precision. Wide international coverage.	352 records identified where “nursing” is in the title and “thesis” is in the complete document/entire record field.	75 records identified where “nursing” is in the title and “PhD” is in the complete document/entire record field.
OAIster <a href="http://www.oaister.org/">http://www.oaister.org/</a>	A “union catalogue of digital resources” giving wide international coverage of a range of digital media and resources, including IRs and ETDs	449 records identified where “nursing” is in the title and “thesis” is in the complete document/entire record field.	19 records identified where “nursing” is in the title and “PhD” is in the complete document/entire record field.
OpenDOAR: The Directory of Open Access Repositories <a href="http://www.openoar.org/">http://www.openoar.org/</a>	Facilitates searching for IRs and search of their contents using Google’s Custom Search Engine. Wide international coverage, but search function offered is basic rather than advanced. Therefore less precise.	491 records identified by combining “nursing and thesis” as search terms.	276 records identified by combining “nursing and PhD” as search terms.
ARROW: Australian Research Repositories On-Line to the World <a href="http://www.arrow.edu.au/">http://www.arrow.edu.au/</a>	Project to enable accessibility and discoverability of research from Australian institutional repositories. Despite limited geographical coverage, a rich source of nursing theses.	287 records identified by combining “nursing and thesis” as search terms.	74 records identified by combining “nursing and PhD” as search terms.
ADT: Australasian Digital Theses Program <a href="http://adt.caul.edu.au/">http://adt.caul.edu.au/</a>	Database of digital versions of theses produced by the postgraduate research students at 40 Australasian universities. Despite limited geographical coverage, a rich source of nursing theses.	208 records identified where “nursing” is a subject word and “thesis” is in the complete document/entire record field.	29 records identified where “nursing” is a subject word and “PhD” is in the complete document/entire record field.
Intute: <a href="http://irs.ukoln.ac.uk/">http://irs.ukoln.ac.uk/</a>	Search service for teaching, learning and research materials held in 89 UK academic repositories. Limited geographical coverage, but a developing source of nursing theses.	12 records identified by combining “nursing and thesis” as search terms.	9 records identified by combining “nursing and PhD” as search terms.

**Table 2: Quantitative overview of engagement with the thesis over a six month period**

<b>Aspect of dissemination strategy</b>	<b>Evaluative evidence gathered</b>
Personal web pages within university's website, customised to "frame", explain and give context for the thesis	1050 "hits" on the "face" page since the start of thesis dissemination. 852 hits on the specific page explaining the thesis and integral research project.
The main record page within the institutional repository which presents the thesis abstract and associated meta-data.	953 "hits" on this page since the start of thesis dissemination.
The full text thesis itself	710 views/downloads of this document.
Annex 1: an associated report for the Scottish government	316 views/downloads of this document.
Annex 2: a report giving full details of methods used in the Scottish Government related part of the thesis	201 views/downloads of this document.
Annex 3: a document giving in-depth insights into the methods and content of interviews with key informants at policy level of family health nurse development	241 views/downloads of this document.
The feedback form within my personal web pages	310 views/downloads of this document, but only 11 returned via the university web system.
Dissemination e mails to individuals and via mailing lists	75 direct email responses received in relation to the thesis and/or associated processes.