# Pedagogical Approaches that Facilitate Writing in Postgraduate Research Candidature in Science and Technology

Janice Catterall
*University of Western Sydney, Australia*, j.catterall@uws.edu.au

Pauline Ross
*University of Western Sydney*

Claire Aitchison
*University of Western Sydney*

Shelley Burgin
*University of Western Sydney*

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## Keywords

postgraduate research writing, advanced academic literacy, supervision, doctoral writing

## Introduction

Various changes to universities over recent decades have aggravated concerns about students' writing competence. The confluence of changing university missions, the changing student and staff populations resulting from widening participation agendas and internationalisation (David 2010) and the push to enhance productivity through publication (Aitchison, Kamler & Lee 2010) all contribute to the pressure on doctoral students, their supervisors and their institutions to ensure writing competence as a research priority.

Although the research thesis is the capstone of the doctoral candidature (Winston & Field 2003), academics around the world are increasingly recognising that research students do not always know 'how to write'; nor are they necessarily active publishers (Aitchison, Kamler & Lee 2010). Similarly, supervisors do not necessarily know how to teach writing, nor as Kamler and Thompson (2008) point out, are they or their students well served by formulaic 'advice'. Paré, Starke-Meyerring and McAlpine (2009, 180) go further, suggesting that the "linguistic and rhetorical complexities of the dissertation are simply inexpressible for most academics." With the growing managerial concern to improve both doctoral completion rates and publication rates (Lee & Kamler 2007; McGrail, Rickard & Jones 2006), it is imperative that institutions address issues of writing pedagogy. It is hoped that the writing experiences of doctoral students that are documented in this study will contribute to this discussion.

The research reported on here views the practice of writing as central to research, as a mechanism for knowledge production and exchange. In keeping with an academic-literacies approach (Lea & Street 1998), writing is constructed as a social practice rather than an autonomous set of skills; thus simply knowing how to write does not automatically enable one to write as, for example, a biologist or an anthropologist. Navigating the disciplinary differences requires an understanding of context, including how knowledge is constructed in the field and how writers adopt and critically defend positions. An academic-literacies perspective is concerned with how teaching and learning about writing occurs within a complex social system that incorporates issues of epistemology, power and identity (Lillis 2001). These issues are central to students as they seek to become experts in their disciplinary communities.

It is thus pertinent when examining the writing experiences of research students to consider the knowledge and skills they will need to become members of their disciplinary research communities. Bruce (2008, 1) identifies three stages of development through which the student writer can "successfully launch an academic or professional career":

- developing knowledge frameworks to be able to deconstruct and reconstruct the discourses of the discipline;
- developing an authorial 'voice' and an 'identity' within their target discourse community; and
- developing a critical competence to innovate, challenge, resist and reshape the discourses of their own academic community.

The context in which Bruce (2008) is situated is as a teacher of research writing to postgraduate students in relatively brief, often introductory courses. These, he believes, contribute to the development of student writing mainly in the first area of discourse competence. A typical writing course might examine models of writing in a student's chosen discipline and help writers acquire tools of analysis and textual construction. While such courses may provide students with an explicit understanding of their disciplinary discourse and a useful metalanguage as a scaffold for further development, such classes may not be widely available, and it may be difficult to ensure that supervisors and students will subsequently share a common understanding of writing process

and product.

The supervisor/student relationship has traditionally been at the heart of the doctoral learning process (Parker 2009): the supervisor as expert provides ongoing guidance and feedback to the candidate. Student experiences of writing can more often be via immersion and slow acculturation than as a result of direct instruction, and the expertise of supervisors in teaching writing may vary. Carter (2007, p.385) observes that "because professors typically learn to write in their disciplines not by direct instruction but by a process of slow acculturation through various apprenticeship discourses, they are unable to see that writing itself is specific to the discipline". This view of writing expertise, as a generic skill rather than as central to production in a discipline, might be one factor contributing to the tardiness of many institutions in responding effectively to the changing higher-education climate.

In the institution examined in this study, and perhaps in the current higher-education climate more generally, the notion of 'slow acculturation' seems under threat. The diversification of the student population, as well as upward pressure on academic workloads and reduced candidature duration, has made the formation of sustained supervisor-student relationships more difficult. These externally driven pressures could be affecting universities and disciplines more broadly, rendering the contemporary equivalent of 'immersion' increasingly less effective. We would not, though, seek to generalise the results of this study to other disciplines, as different disciplines may attract student cohorts with different characteristics (Kamler 2008,), and supervisors from different disciplines may also have varying levels of interest and competence in the teaching of writing (Aitchison, Catterall, Ross & Burgin 2011). It should be noted that the discipline areas within science and technology are themselves diverse in their approach to the teaching of writing. Overall, however, it does seem that, across a range of disciplines, discussion has moved beyond notions of immersion to consideration of the most effective methods of direct instruction (Aitchison & Lee 2006; Carter 2007; Bruce 2008, Stracke 2010).

## The study

A study was conducted in a large, science, health and technology faculty to examine perceptions of research students and their supervisors in relation to research writing in those disciplines. The aim of the study was to identify what has and has not been helpful for learning the advanced writing skills necessary for successful doctoral candidature, in order that successful pedagogies might be adopted more widely.

## Methodology

Data was collected by online survey, focus groups and interviews between December 2007 and July 2008. The survey targeted students enrolled in postgraduate research degrees and experienced supervisors currently supervising graduate students from a range of disciplines including biomedical and natural sciences, nursing, engineering, computing and maths. An on-line 16-question survey was emailed to 177 research students and 187 supervisors. There were 65 respondents (29 supervisors and 36 students; a response rate of 17.85%) to the on-line survey. Ninety percent of supervisors who responded to the survey were acting as principal supervisors. The students who contributed to the study were typical of the profile of students within the College. For example, student respondents (86.0%, n=31) to the on-line survey stated that they were enrolled in the PhD program and 75% (n = 23) were in the middle to latter stages of doctoral candidature.

Focus groups and interviews were conducted to follow up on issues that emerged from the survey and to provide a detailed account of perceptions of the writing experience. Twenty-eight

supervisors (seven focus groups) and nine students self-selected to take part in the focus group and interviews respectively. The objective of the focus groups and interviews was to give participants an opportunity to discuss how they thought learning to write occurred during doctoral candidature. Supervisors were encouraged to reflect on the pedagogical practices they employed to help students learn to write. They were also asked what pedagogies they considered would be helpful for students beyond the immediate supervisor-student dyad. Students were requested to speak about themselves as writers, and about their writing experiences as graduate students, and they were asked to define their supervisors' role in developing their writing skills, together with other help that they accessed during the process of learning to write.

Quantitative data from the on-line survey were recorded as percentages, enabling comparison between groups of respondents. The qualitative data from the on-line surveys and the focus and interview transcripts were coded and compared against the quantitative results.

## Results

### Overview of writing support and uptake

When asked in the online survey about the support provided for doctoral writing, the majority of students and supervisors were able to point to support received through workshops, supervisors or communal support provided through thesis writing circles or retreats. A smaller percentage considered that support for doctoral writing was 'insufficient' or 'not provided'.

Although only a few students (11%) and supervisors (14%) considered that the supervisor's role in developing writing skills was 'critical for developing writing', students valued support from supervisors in providing "writing help/guidance" (31%), "encouraging student/encouraging writing" (17%), "developing style" (17%) and "giving feedback" (14%). Despite more students identifying 'writing help/guidance' as the role of supervisors than any other activity discussed, only one supervisor identified this activity as one of the roles for supervisors. Few supervisors saw that their role was 'encouraging student/encouraging writing' (7%).

When asked in the on-line survey "What do you think is the most helpful way to develop research writing skills?", a higher percentage of student respondents considered formal institutional support (e.g., writing workshops, classes, courses, writing retreats; 17%) and 'on-going writing support such as writing groups' (14%) as effective compared to other options presented. 'Being critiqued, receiving feedback' was also valued by students (14% mentioned this strategy). Other nominated strategies that were identified by more than 10% of students were 'reviewing, critiquing models including peer review', 'practice writing; just do it, often' and the 'supervisor'. Supervisors (17%) most frequently identified 'reviewing, critiquing models including peer review' (17%), 'formal writing workshops, classes, courses, writing retreats' (10%), and 'the practice of writing; just do it, often' as the important strategies in developing research writing.

When asked in the on-line survey to nominate strategies for developing doctoral writing skills, slightly less than half the responses (45% of both supervisors and students) identified some form of collegial activity (e.g., critique, formal writing opportunities).

Themes that emerged from the survey were explored in more depth in focus groups. Everyone in the focus groups agreed that writing was important, and a measure of doctoral competency. However, there was considerable disparity in the views about the role of the supervisor in fostering writing skills (the process of writing), and in regard to the final thesis itself (the product of writing). Overall, there appeared to be ambivalence about what kind of assistance was considered appropriate and to what extent supervisors should help students with their writing.

**Supervisor as writing teacher**

In focus groups, students and supervisors expressed a degree of frustration around writing. For some students the process of writing is subsumed by gathering and working on experimental data, and there is little time for writing practice or repeated drafts. One supervisor commented, "Students could be working very long hours at the bench and writing gets pushed into the background." And sometimes it is not only the students who relegate writing to a less important position. One student complained that her supervisors "have only begun to look at my writing in the last year when I am about to submit". These problematic late approaches to the writing were contrasted with early approaches that seemed to produce much more successful results. A number of supervisors spoke of a 'write early, write often' approach:

*I think you have to encourage students to write early, start to write about what their ideas are…*

*One of the biggest things that I never let my students do is collect data before they've written a Lit Review and methods chapter…they have all this data and then right at the end they go 'I'm going to write it up now… and it's just overwhelming…its important as a supervisor that you make the students engage in writing from the beginning.*

Overall, both students and supervisors cited feedback as a dominant pedagogy. As with other aspects of supervision, some students had positive experiences, others negative. One student summarised what seemed to be generally regarded as good feedback practice: timely, developmental and supportive. Supervisors, too, referred to the importance of timely feedback, with one reporting, "That's one of my KPIs. I would really like to think that everyone got feedback within, within at least a week." A number of supervisors spoke of techniques for breaking down tasks into chunks or of getting students to reflect on parts of the research such as an article or a model thesis section. These supervisors felt that meeting regularly to give feedback on smaller tasks would prevent the students being overwhelmed.

Some students considered that the feedback was not timely; for example, one student reported that a supervisor kept drafts for two months. This student compared this practice with that of her other supervisors, whose responses she considered both timely and constructive. The highly valued feedback was broad in nature, covering goals and timelines, argument structure and editing and grammar tips. There was also an element of scaffolding-independent revision. "At first they would offer suggestions, but in the last year would just circle things and expect me to know how to improve".

Supervisors too, reported some frustrations in relation to feedback. In one focus group, supervisors complained that their efforts to model good writing by 'rewriting' chunks would often be turned into 'fixing' as students merely adopted the rewrites as their own.

**Writing development beyond the student-supervisor dyad**

In discussions about how they learned doctoral writing, students spoke of other-than-supervisor pedagogies such as writing groups, workshops and a reading group. Students also spoke of the value of reading/viewing good models and practising writing. Several spoke ruefully of being unaware of institutional support and instead having to rely on their own initiative and/family and friends to help with their writing. For example, one student said, "I went to a friend who was an infants' teacher and borrowed books on parts of speech, and another friend had a husband who was a good writer…." Almost half of the students mentioned involvement in writing for publication.

Those students and supervisors who were familiar with workshops and writing groups found them

to be beneficial. For example, one student said, "Most helpful was a course on writing a thesis proposal". Another identified the thesis writing circles as "... a big help…I went to a one-day workshop…and found out about Thesis Writing Circles. I joined one last year. The group suggests literature, reads your work every couple of weeks [and] gives useful feedback". Other examples of positive feedback from institutionally organised activities were:

*I am a member of a writing circle which I find has improved my confidence, knowledge and writing style. I value the nurturing environment and feedback on my work. (student)*

*Often…[there is] the opportunity to work together with…peers and [be] guided by someone more experienced during those sort of writing sessions. I certainly know one of my PhD students speaks quite highly of that approach." (supervisor)*

*I think the Writing Circles are very useful for all students but particularly for the international students because one of the dangers of the PhD…unfortunately it's an isolating and lonely road. (supervisor)*

Writing for publication was recognised by some supervisors and students as being beneficial for learning writing skills, for research and for development of confidence. When students spoke about writing for publication, they mentioned the difficulties but also the rewards. Some considered writing for publication to be an adjunct activity to writing their thesis; for others it was an integral part of their research experience. In some disciplines writing for publication was expected with numerous perceived benefits attached. For example, one supervisor saw it as the way to train students to write:

*…because there's often so many difficulties with the structure of writing: they overuse words, they write in purple prose, they make unsupported assertions, they don't write their ideas well, they have too long sentences, too jargonistic sentences, just all of that. So, what I try and do is train them from the beginning to write with clarity. And the way I do that is that my students, all of my students, have to submit two papers a year for peer review.*

**Challenges and constraints: why doctoral writing frustrates**

Findings from across all data sets indicated that writing, particularly writing the thesis, is a challenge for most students. In the online survey students and supervisors ranked writing the thesis as both the most important and the most challenging writing task of doctoral candidature. Supervisors and students ranked the journal article as the second most challenging. Most students spoke of writing as difficult or a challenge but differed in that some considered the experience enjoyable while for others it was the opposite. Many supervisors agreed that writing was a struggle for their students. One supervisor expressed a common concern that the standard of writing might affect completion and the students' passage into the profession.

*It has become a major concern in the candidature of my students – the publication process can be lengthened by 2-3 years because of the students' inherent weaknesses in writing, and scientific careers can be affected.*

Concerns that the quality of student writing may affect completion were most often expressed in relation to the constraints around candidature time. For example, one supervisor believed that "due to the pressure of the three-year PhD, developing the writing skills of students during this time is nearly impossible." For several supervisors this pressure meant taking more ownership of student writing than they would have liked. This is evident in the following exchange in a supervisor focus group:

*Supervisor 1:      The pressures of time just force you to say, "Well we can't keep going over this – here, give it here".*

*Supervisor 2:      That's what happens with three out of four of my candidates anyway.*

For one supervisor, such action was a question of moral responsibility. According to this supervisor, "to take on a student from [country] or anywhere else for that matter and then expect them to sink or swim, in my view is morally reprehensible."

Although the pressure of trying to ensure timely completion was something that arose as an issue in every supervisor focus group, there were also supervisors for whom the writing of the thesis was strictly a student responsibility. One supervisor tells his students, "What you're presenting should be your work and not your supervisor's work." Another supervisor would not use the track-changes function because "they tend to just accept all the changes." For another supervisor it was not the ability to write a paragraph that was the issue, but the ability to "write in a scientific way". Several supervisors felt that they did not have either the time or expertise to teach language.

This perceived lack of ability to teach writing and/or English was a theme in several focus groups. Although one supervisor said that they were also "trying to learn [writing skills]…as well, not being a native speaker", the perceived problems associated with being able to support student writing were not restricted to supervisors with English as a second language. Some native English speakers expressed reservations about their ability to assist students with writing because they had not been explicitly taught themselves. However, a smaller number of supervisors felt confident in both their own writing skills and their ability to teach writing.

Constraints in candidacy time, students' varied language proficiency and the differing expertise and/or confidence of supervisors in teaching writing were sometimes aggravated by inadequate or inappropriate pre-doctoral learning. In this study a significant proportion of students in the 'hard' and technical sciences had progressed to doctoral study directly from Honours programs  Of the nine students interviewed, seven had completed an Honours award; six of those considered that their previous study had been inadequate preparation for doctoral writing:

*Going through undergraduate and honours my written work came back with feedback suggesting poor writing but I didn't have to do much writing and I was a top student and that pulled me through. I was not prepared for PhD writing by previous writing experiences. Marks were on content and mostly writing was ignored.*

*In undergraduate I thought I was a much better writer than I was. I used to go really good and get high distinctions. I rarely got bad comments. Sometimes I lost marks. I'm not sure why, maybe for writing.*

Although the pre-doctoral writing experiences of the students who self-selected for our study were largely negative, supervisors in one focus group reported positive experiences in Honours, with one student achieving a highly successful publication from her Honours year. In another focus group a supervisor differentiated between the more competent writing of those who achieved First Class Honours compared with those who achieved lower awards. In general, though, supervisors did not dwell on the nature of their students' previous writing experiences. Several supervisors concurred that it was the ability to synthesise and be critical that students tended to struggle with. Another made comments similar to those of the students interviewed, saying that the undergraduate-to-Honours pathway may not have provided sufficient writing experience.

*None of the ones that I've supervised or co-supervised who have come from an undergraduate program and gone on to Honours and PhDs straight after that have had a great deal of experience – they've all struggled with the writing.*

It is possible that the time constraints that affect efforts to develop student writing in the PhD may also affect lecturers' efforts to prepare students in the pathways to doctoral studies.

*But the amount of time that we're allowed to supervise theses now, you can't spend the time. Or on Masters or Honours, you just can't correct their English, you know. (supervisor)*

## Discussion

Many students and staff would expect that students who aspire to doctoral studies would be well on the way to being experienced and competent research writers. When this turns out not to be so, optimism is often replaced by frustration and despair. The participants in this study seem to be caught in a vacuum between an imagined, traditional, apprenticeship model, in which student writing is developed slowly through immersion in disciplinary conversations within a close supervisory relationship, and the contemporary reality, in which student numbers and academic workloads preclude learning through slow acculturation. Further, it has been suggested that these same constraints of high student numbers and time, as well as perhaps gaps in curriculum design, may also hinder students in developing their writing in the pathways to higher-degree research.

In this study there was no consistency among supervisors in their perceptions of their role as a supervisor. In turn, students were also not consistent in the support they sought from supervisors. There was also a discrepancy between what students sought in the form of support for developing their writing skills from supervisors, and what supervisors were prepared and/or able to provide. Clearly some supervisors were employing exemplary writing pedagogies, such as encouraging students to regularly engage in writing from the early stages of candidature and giving timely and supportive feedback. In our study we found that students highly valued constructive feedback as a means for developing writing. Authors such as Cadman and Cargill (2007) agree, and practical advice on sound pedagogic practice in relation to feedback can be found in their work.

In other, highly valued pedagogic practices, supervisors spoke of breaking down large writing tasks such as the literature review into chunks by setting guided questions requiring reading and reflection. A few supervisors employed writing for publication as a pedagogy for developing writing, both for its value in giving the student writing practice and for the experience of receiving external feedback. A small number of supervisors engaged in co-authorship with students. Kamler (2008) endorses this practice, suggesting that co-authorship should be regarded not merely as an output measure, but as an explicit pedagogic practice. In our study, one group of supervisors spoke of the value of supervisor-led writing groups. Similar positive experiences have been reported by others; for example, Stracke (2010) and Thein and Beach (2010), who explore the mutually beneficial experiences that can arise out of mentoring and peer learning engagement between supervisor and student/s.

For some of the supervisors in our study, engagement in such practices reflected a recognition that they had a role to play in developing their students' ability to become good disciplinary writers; for other supervisors, the development of student writing was seen as beyond their province, a matter of 'English', rather than a case of developing disciplinary writing.

These differences indicate that there is no clear direction from the institution on what is required of a supervisor in relation to writing development, nor are students provided with guidelines about what to expect of supervisors. It is possible that there are no clearly articulated polices on what constitutes appropriate supervision in relation to writing within the institution studied. It is in this breach that the learning-development and research units offer workshop programs, thesis writing circles and, since the time of the study, online modules related to thesis writing. These forms of institutional support were clearly highly valued by some students and some of their supervisors;

however, it was clear that others did not know of their existence. Most students and supervisors relied on a limited repertoire of pedagogies to develop doctoral writing skills.

The current picture in the institution in this study reveals only *ad hoc* support for the development of student doctoral writing skills to the level of sophistication required in the three stage framework outlined by Bruce (2008). There is apparently little consistency in support for the development of writing skills, and this had led to frustration and lack of progression for some students. Although strengthening of professional development for PhD supervision has occurred in recent years, there has been only an indirect focus on what students are entitled to expect in terms of the development of their doctoral writing. There is a need to identify the appropriate pedagogies to develop students' academic writing skills, as well as the need for further dialogue on how best to deliver support. Bruce (2008) believes that introductory writing workshops contribute mainly to the first stage of development in student writing, that of being able to deconstruct and reconstruct the discourses of the discipline. It follows that further concurrent programs, such as coursework writing subjects and/or writing circles and writing retreats, are necessary to move this foundation work through the stages of developing authorial voice and identity and achieving critical competence. Writing specialists and discipline experts could fruitfully work together to plan and deliver joint programs.

Clear, systematic and institutionalised development of student writing should be a high priority for undergraduate and postgraduate coursework programs to create better transition experiences. Particular attention should be paid to the explicit transitions that occur in the development of scientific writing skills from undergraduate to honours, honours to research Masters or PhD programs and from the early to later stages of PhD candidature.

## Conclusions

Our study reveals that the provision of opportunities to develop writing was not uniform, with students reporting both positive and negative experiences. The main challenges appear to be a lack of recognition by staff and students that higher-degree research writing needs to be explicitly addressed, inadequate preparation in study pathways including Honours programs, the pressures of the three-year PhD, variations in the confidence of supervisors to develop writing and the heavy workloads of supervisors and students. Despite these constraints, strategies for developing writing emerged that were highly regarded by students and supervisors, most notably the facilitation of early and regular writing experiences, timely and positive feedback and writing for publication. Institutional writing support in the form of workshops and thesis writing circles was also highly valued.

The primary mechanism through which some students learn to write as a doctoral researcher is through sustained and productive interaction with their supervisors. It seems, however, that most students learn advanced academic literacy skills through a combination of effective supervisory practices and engagement in writing and review practices in other disciplinary social contexts. Our research indicates that students who believe they showed significant improvement in learning to write through the period of their candidature did so through an involvement in pedagogies that required the student to interact with peers; either other students or disciplinary peers as exemplified in the publication process. At its best, this occurred as a complement to good supervisory practices. The lack of commonality of practices adopted by supervisors and variation in the student experience indicate the need to introduce programs and practices that systematically address the development of student writing both before and during doctoral candidature.

# References

Aitchison, C. & Lee, A. (2006). Research writing: problems and pedagogies. *Teaching in Higher Education, 11(3)*, 265-278.

Aitchison, C., Kamler, B. & Lee, A. (2010). *Publishing Pedagogies for the Doctorate and Beyond*. Oxford: Routledge.

Aitchison, C., Catterall, J., Ross, P. & Burgin, S. (forthcoming). 'Tough love and tears': doctoral writing in the sciences. *Higher Education Research & Development.*

David, M. (2010). What are the issues? In M. David, ed., *Improving Learning by Widening Participation in Higher Education*. London: Routledge.

Bruce, I. J. (2008). Theorising tertiary writing instruction: accounting for the process, post-process, genre and critical literacies approaches. In *Proceedings of the TWN Biennial Colloquium: From Here to There,* Auckland, NZ: Auckland University of Technology.

Cadman, K. & Cargill, M. (2007). Providing quality advice on candidates writing. In C. Delholm &T. Evans, eds., *Supervising Doctorates Downunder: Keys to effective supervision*, pp.182-191.Victoria: Acer Press

Carter, M. (2007). Ways of knowing, doing, and writing in the disciplines. *College Composition and Communication, 58(3)*, 385-419.

Lea, M., & Street, B. (1998). Student writing in higher education: an academic literacies approach. *Studies in Higher Education, 23(2)*, 157-172.

Lee, A. & Kamler, B. (2007). Bringing pedagogy to doctoral publishing. In 2007 *AERA Annual Meeting and Exhibition.* Chicago: American Educational Research Association.

Lillis, T.M. (2001). *Student Writing: Access, Regulation, Desire*. London: Routledge.

Kamler, B. (2008). Rethinking doctoral publication practices: writing from and beyond the thesis. *Studies in Higher Education*, 33: 3, 283-294

Kamler, B. & Thomson, P. (2008). The failure of dissertation advice books: towards Alternative Pedagogies for Doctoral Writing. *Educational Researcher, 37(8)*, 507-18.

McGrail, M., Rickard, C. & Jones, R. (2006). Publish or perish: a systematic review of interventions to increase academic publication rates. *Higher Education Research & Development*, 25*(1)*, 19-35.

Paré, A., Starke-Meyerring, D. & McAlpine, L. (2009). The dissertation as multi-genre: many readers, many readings. In C. Bazerman, D. Figueiredo, & A. Bonini, eds., *Genre in a changing world*. Parlor Press and WAC Clearinghouse: Santa Barbara.

Parker, R. (2009). A learning community approach to doctoral education in the social sciences. *Teaching in Higher Education, 14(1)*, 43-54.

Stracke, E. (2010). Undertaking the journey together: Peer Learning for a successful and enjoyable PhD experience. *Journal of University Teaching & Learning Practice,* 7 (1), 8.

Thein, A.H. & Beach, R. (2010). Mentoring doctoral students towards publication within scholarly communities of practice, in C. Aitchison, B. Kamler & A. Lee, eds., *Publishing Pedagogies for the Doctorate and Beyond.* Oxford: Routledge.

Winston, B.E. & Field, D.L. (2003). Developing dissertation skills of doctoral students in an internet-based education curriculum: a case study. *The American Journal of Distance Education*, 17(3), 161-172.