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Individualised, Tailored and Personalised Approach to the Teacher-Learner Relationship in Postgraduate Staff Development Studies—A Case Study of Postgraduate Research Supervision Training

William E. Boyd[1], Airdre Grant[2]

[1]School of Environment, Science & Engineering, Southern Cross University, Lismore, Australia
[2]Centre for Teaching & Learning, Southern Cross University, Lismore, Australia
Email: William.Boyd@scu.edu.au, Airdre.Grant@scu.edu.au

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Abstract

This paper discusses the impact and value of feedback that was personable and individually tailored in a postgraduate staff development program that taught supervision skills at an Australian university. The modelling of this feedback style resulted in high student satisfaction. The students were all academic staff who reported transferring that style of feedback into their own teaching practices. They also indicated a desire to bring that feedback style into their supervisory practices as a strategy to promote engagement, retention and more rewarding supervisor-student relationships. The feedback style was seen as precursor to a more effective and rewarding academic relationship that would have ongoing impact on future collegial research and teaching connections.

Keywords

Research Supervision Training, Postgraduate, Individualised Feedback, Teacher-Student Relationship

1. Introduction

This paper overviews a postgraduate professional development unit of study[1] delivered to early career staff at the authors' university, TCH03411 Higher Degree

[1]At our university, the basic component of study is called a unit; a typical undergraduate degree comprises 24 units, while the postgraduate certificate in which the unit described here comprises four units. One unit is equivalent to 25% of a teaching session's full-time study.

Research Supervision, from the perspective of: a) an alignment between content and lecturer practice, and b) student outcomes that extend beyond the stated unit outcomes. As such, the paper presents a double focus on graduate education, since it deals with the education of research graduates on the one hand, and the upskilling of graduate faculty on the other hand.

An important focus of the unit of study is the mode of delivery and relationship between the supervisory staff and the students. The role and impact of feedback within the unit were central to this. In particular, the delivery drew on the tradition of teacher as mentor, notably the five roles of the academic mentor identified by Colvin (2015): connecting link; peer leader; learning coach; student advocate; and trusted friend. Such an approach converges with other advice regarding the role of a university supervisor. Adams (2016: p. 26) offers the following principles: positive regard; progression towards autonomy; describing rather than judging; encouraging responsibility; reciprocity; main focus on purpose. Of note is the specific style of conversational and personable feedback, which appears to have had an ongoing impact. This is articulated through student feedback indicating that students are projecting the skills learned within the unit regarding postgraduate research supervision and to other teaching and learning professional contexts.

The authors designed and delivered the unit to academic staff at our university in 2015-2016. The unit information guide describes the unit thus:

> "Developing and extending participants' repertoire of supervision skills and understandings through engagement with current literature, institutional practices and professional networks. Participants have the opportunity to engage in critical self-reflection, critical analysis and the scholarship of higher degree research supervision. This critical and practical engagement is applied to their own supervisory practices and scenarios."

Student feedback has been very positive, focusing on the specific, targeted, tailored and personalised approach taken by the unit assessor, and indicates that the unit not only succeeded in meeting its objectives—developing postgraduate supervisory skills and knowledge—but extended to personal and professional development benefits. One student, for example, captured this extension of benefit as follows:

> "... the most obvious point to make is that "Bill-style"[2] has become part of the vernacular on our floor. Over the past two months a number of mine and my colleagues units are undergoing assessment scheme revisions, … we have been revising how we assess and monitor student learning and placement experiences. The go-to assessment has been a large reflective essay due on completion of placement. … This week, we have discussed how to integrate "Bill-style" reflective practice into three units across three disciplines. Reflections that encourage integration of theory and practice and deep-thinking, but do not inflict the arduous 3000 word essays expected

[2]The "Bill-style" references the lecturer's familiar and commonly used forename.

previously."

The student adopted the term "Bill-style" to shorthand the personalised and conversational approach taken by the unit teacher when responding to students' reflections about their studies. Other student unit feedback also indicated the success of this approach. Interestingly, it drew attention to the adoption of this approach outside of both unit studies themselves and the postgraduate research supervision that this unit was preparing staff to undertake. Some of the students talked of this approach being applicable to other parts of their professional academic life. This suggests that student learning extended beyond the stated unit outcomes, and that students projected the skills learned within the unit regarding postgraduate research supervision to other teaching and learning professional contexts.

This paper examines the unit from the perspective of this development, one that exceeded the formal outcomes of the unit. The paper outlines the content, structure and delivery of the unit, drawing on student responses to the assignments and requirements for reflective comment, and on the unit assessor's responses to student submissions, and will seek to isolate the critical teaching and learning process that has resulted in such projected and extended student benefit. It draws on narratives around the unit (cf. Boyd et al., 2010, 2012, 2013), notably narratives of content and student activity, and of the unit assessor's responses to the students. These narratives create a case study to provide insight into the success of the unit in achieving its intentions (Yin, 2009).

2. The Study Unit TCH03411 Higher Degree Research Supervision

The unit TCH03411 Higher Degree Research Supervision was delivered to a small number of academic staff completing a Graduate Certificate in Academic Practice. The intention was to provide introductory background and professional skills to allow them to develop their skills as scholars supervising research candidates. The model of research supervision adopted in our university is the individual apprentice-master model, in which a scholar draws on their disciplinary expertise to mentor and guide a research candidate—at Honours, Masters or PhD level—through the practical process of conceptualising, planning, implementing and writing up a major piece of scholarly research.

The unit was delivered on-line, scaffolded into seven modules, and presented through the learning management system, Blackboard©. The design provided a scaffold for the sequential evolution and development of facets of inquiry and levels of student autonomy (Willison & O'Regan, 2007). Each module comprised explanatory or background text, learning activities, and for most an assessment activity. The learning activities and assessment were based on published literature and guided reflection of the students' scholarly experience. The background content became slimmer as the unit progressed with a greater reliance on the students' own reading. Although Blackboard has the capacity for students to submit assessment items online, the lecturer chose to ask student to email all

items to him directly; this emphasized the individual focus of review and feedback on assessment items. The unit was an ungraded unit—the university can award a grade of SR (Satisfied Requirements) for such units—which took the pressure off valuation, and re-emphasized the learning aspects of assessment. All assessment items were to be completed, since they represent a progression of skills acquisition and mastery. While the unit was timetabled throughout a teaching session, the emphasis was on quality of learning, placed in the context that all the students were fully employed as university academics, and temporal flexibility was important and respected by the teaching staff.

An important design consideration was whether to develop a significant body of new content. The context of this discussion between the authors—the first-named author was the unit lecturer and assessor, while the second-named author was the course coordinator—was that the unit lecturer is a senior academic with a significant research and research student supervisory background; he has conducted research across the physical, social and cultural sciences globally, published widely, and has graduated many research students. He is currently the chair of the university's Human Research Ethics Committee, and thus centrally involved in research planning and practice.

There is much guiding literature in this field of higher degree research supervision, and while it was possible to frame the unit around the abundance of scholarship of teaching and learning and higher education literature, it was decided to focus the unit on practice guides. Many universities or publishing houses now publish pragmatic guides, and three were chosen (Anon, 2013; Chiappetta-Swanson & Watt, 2011; James & Baldwin, 1999), largely since they captured the sense of postgraduate research training supervision as practised at the authors' university. These resources are all open source and readily accessible by all students. Additional resources were posted during the session as required, but students were advised that reading through all three books would provide a sound basis for students to commence their careers as higher degree research supervisors.

3. Overview of the Unit Content

The first module provided a statement to the background and approach to the unit. The opening sentence—"The purpose of universities is to create and disseminate knowledge"—was crucial, setting the scene for the central role for postgraduate research supervision as situated at the core of a university's purpose. The introductory statement continued to comment on the role of scholars. Scholars are required to engage in scholarly enquiry, commonly known as "research", which is conventionally and traditionally understood in terms of observation, experimentation, data collection, and analysis. Conventionally, this has been based on the scholar as expert, involved in research activities that are removed from everyday life. Academic language, concepts and practices are obscure and specialised—hence the image of the university as the "ivory tower". However, research increasingly involves forms of engagement with communi-

ties, in which the creation and dissemination of knowledge is a shared activity between specialists and the public. This is especially so in an institution such as the authors' university, which has a mandate to service the needs of its region and community. Our university's founding Act states that, "the University has the following principle functions for the promotion of its objective: a) the provision of facilities for education and research of university standard, having particular regard to the needs of the north coast region of the State, [and] … c) the provision of course of study or instruction across a range of field, and the carrying out of research, to meet the needs of the community …".

The remainder of the unit background laid out principles regarding the form of research training adopted by our university. Whatever approach a scholar adopts, he or she needs to develop mastery of their methodologies, methods, techniques and intellectual prowess. This is a continual learning in which the academic hones his or her skills through ongoing practice and engagement with research. The early stages of this journey are typically through introductory courses, often at undergraduate level, in which students are exposed to the work of their teachers, to the intellectual content of their chosen fields, and to the specific methods and techniques required to generate rigorous data. The next stage for an aspiring scholar is the apprenticeship stage.

The world of scholarly research has adopted the apprenticeship model for further training. The research Masters or PhD candidate becomes apprenticed to an accredited and authorised scholar, who will oversee and guide the candidate through a period of training. Some talk of this relationship as a form of mentoring (Colvin, 2015). Professional mentoring is often a time-limited relationship, targeted as specific professional development needs. Clearly the postgraduate research time line tends to be long but the purpose is much the same.

And what is the mode of training? The scholarly world has largely adopted a practice model rather than an instructional model (although there are elements of the instructional model in, for example, the US and European PhD training systems). The practice model is based round a large research project, in which the candidate is supervised through all the stages of planning, designing, implementing, analysing and reporting. The model relies on the supervisor being someone acknowledged by his or her peers to be a master of their field. This person is one who has mastered the intellectual and practical skills required to ask deep and searching questions about their part of the world, to identify the evidence required to tackle the questions, to select, design and apply suitable methods (i.e. methods validated within their own discipline), to collect, collate and analyse relevant data and information, critique the results, and to report outcomes with authority and credibility. Typically their expertise is evidenced by publication and funding success. The candidate will, through the apprentice-master relationship, develop the skills and abilities to mirror the supervisor's expertise.

The final device adopted by the scholarly world is the "thesis". This is the report upon which evaluation of the candidate's mastery is made. The thesis is an

unusual document, in effect, a very large project report. In some fields, especially the sciences, where publishing tradition is dominated by journal articles, the thesis is largely a one-off; a scientist will rarely produce a publication of this style and magnitude again. In other fields, such as in parts of the arts, publication by book is more common, so the thesis presages future scholarly behaviour. In either case the thesis was regarded as the *opus magnus*, a significant contribution to scholarship in its own right. While this remains to some extent true—the project should be of sufficient import to contribute significantly to knowledge— the thesis has become something more. It is, in effect, a record of the apprentice's progress from being someone identified as having the potential to be a scholar through to being a scholar capable of independent and authoritative scholarly inquiry. To that end, the thesis should be intellectually rigorous, while demonstrating that the candidate understands the cultural practices of his or her discipline.

This characterisation of scholarly research training—that the candidate and supervisor are associated through an apprenticeship-master relationship, learning through a practice model, based round a large-scale intellectually demanding research projects, and resulting in the production of a thesis—has several implications. First, the supervisor needs to have academic credibility and expertise. Traditionally, this was all it took: the candidate would apprentice themselves to the best in their field. However, if we consider this characterisation further, the model is more complex. A typical full-time PhD runs for at least three years, with median completion over four years; part-time enrolment may extend over eight years. This is a long time to maintain a good, healthy, working relationship between supervisor and candidate. Furthermore, while, on the face of it, the PhD training is about mastery of research methods, it is deeper. It is a process of enculturation, by which the candidate is becoming a member of a cultural group—their academic discipline—learning the cultural mores of the group: hierarchies; values; specialist language; social practices; modes of communication; etc. The apprenticeship provides a career pathway as an identifiable academic.

4. The Research Supervisor's Training Pathway—the Unit Modules

With this background laid out, the students were reminded that the unit would introduce the aspiring research training supervisor to the primary elements of successful supervision. Importantly, the unit would not deal with the discipline-specific knowledge and expertise required by a supervisor, but with the relationships and activities that lie around the teaching of the expertise. The introduction of the word "relationships" at this stage was important; the term echoes throughout the unit. Students would be mentored through six modules following the apprentice-supervisor journey; a final module points to "What Next?".

- **Module 1: Introduction**
- **Module 2: Critical choices in supervising a PhD candidate … you and your student**. The students considered: what it takes to ensure the partnership between themselves and their students is right for the project; how to get

to know student and assess his or her needs; establishing reasonable, agreed expectations; and considering how they may support their student to get involved in the life of their department, school or academic centre[3].

- **Module 3: Planning and starting the research**. The students considered needs around working with their student to establish a strong conceptual structure and research plan, and successfully complete confirmation[4].
- **Module 4: Supervising the research**. The students were introduced to skills needed to manage the project to successful completion, responsibilities as the supervisor, practices around regular contact and feedback, and ways to encourage their student to be inspired, motivated and productive.
- **Module 5: Completing the PhD**. The students considered the skills and practices required to ensure that their student is able to finalise the thesis through to thesis submission and examination.
- **Module 6: Relationships and rescues**. The supervisor's relationship with their student is all-important. This module focused on managing this relationship, academic and personal crises, completion, future careers and early exit strategies.
- **Module 7: What next? … after the unit is finished, continuing learning**. This module reminded the students that developing their supervisory skills continues throughout their career.

The background content for these modules, as indicated above, tended to become increasingly slight at the unit progressed. This reflected the emphasis on the students' own reading. Text examples provide a flavour of the content and delivery tone and style (Text Box 1).

5. The Learning Activities

The learning activities followed a predictable pattern of *reading—self-checking—context—reflection*. For module 1, for example, the reading directed the students to Chapter I in one of the readings, with the commentary that, "this is a brief introduction to mentoring and supervision, setting the scene. You might like to bookmark the table on p. 3, and return to it at the end of the unit to overview your learning." A second reading is introduced thus: "This chapter introduces the roles and responsibilities of you, as the supervisor, and your student as the candidate. Naturally, this means that the relationships between you and your student need to be considered. What sort of supervisor will you be?" These readings are followed by a self-checking activity to reinforce the content and introduce practical tools. In module 1, for example, the self-checking activity references Chiappetta-Swanson & Watts' Appendix B (Ten Questions to Ask

[3]In our university the basic disciplinary unit of organisation is the school, equivalent to a department in many universities. The university also has a number of centres, either specialised research entities or support entities (i.e. Teaching and Learning or Indigenous units); these are equivalent to the schools.

[4]Confirmation is part of the quality management of a research candidate's progress, requiring a public presentation at the one-year mark, in which the project is outlined, a progress report, background report and progress towards data collection is presented and evaluated by a committee of academics; this needs to be satisfied to allow the student to continue their candidature.

BEFORE You Take On a Supervision), and asks the students to try to answer the ten questions. At this stage, the learning is directed to draw on practical experience: "If you have a student already, you might use that student to guide your answers. If you are not yet supervising a research student, you might like to think about the final year students in the undergraduate course you teach into, and try to answer the questions against how you think they are."

The learning activity then extends to the institutional context. Again drawing on Module 1 as an example, the students are asked to obtain a copy of the university's strategic plan, and to make themselves aware of the goals that guide the university's approach to research and research training. They are reminded that supervision will always be set within institutional constraints, so understanding these is important. Reinforcement and scaffolding is provided by guiding the students attention to Chiappetta-Swanson & Watts' Appendix C (A Checklist of Critical Things to Know at Your Institution), and posing the question, "Can you answer these questions?", followed by commentary: "If so, very good; if not, how will you go about getting to know this information? You should make sure you know this information, so keep this checklist and review it at the end of the unit. How much more will you know then? Where are the gaps?".

This pattern of *reading—self-checking—context—reflection* repeats itself through the topic list, building on successive elements. After all such activities, the students are directed towards guided reflection: "Once you have completed the readings, draft a short account of yourself as a potential supervisor … Your account should briefly describe who you are, and what you expect to get out of the unit. Identify the quality of one academic you have studied under that especially admire. Finally, did you find the ten questions (item 3) useful? Why? I will compile your responses anonymously, of course) and distribute these introductions in week 3.". In some cases these are formally submitted for assessment. In module 2, for example, the students are given two challenges. The first is to identify key strengths and gaps, using a Graduate Student Skills Inventory (Chiappetta-Swanson & Watts, 2011), and consider how they would fill the gaps. "What might this self-exercise tell you about how you approach your potential student?" they are subsequently asked. They are then challenged to consider what type of supervisor they are. The subsequent modules provide a sequence of analytical and reflective activities taking the students through the process of higher degree supervision, assisting them on identifying their own qualities and strengths, and providing experience in using various tools to assist in decision-making.

6. Did This Work?

The unit assessor's responses to the students from their first submission, the personal account of themselves as potential supervisors, commenced the habit of individualised and tailored responses. This assignment was designed to serve several purposes—an introduction to the lecturer; a reflection on what type of supervisor the student might be; an introduction to the need to understand one-

self and one's students. It also allowed the lecturer to commence individualisation of response to the students. Despite common themes and language, each response was designed to reflect the context, character and needs of the individual student. Five of the ten students in the unit allowed the authors to draw on their learning materials (all the student names used here are pseudonyms). Examples, for assignment 1, illustrate this point (Text Box 2). The detail of each student statement is not important, rather the unit assessor's responses.

By the third assignment, commentary was diverging significantly. Significantly, the students were diversifying in their responses. This partly reflected their varying degrees of maturity and confidence as scholars, partly the range of scholarly experience—notably in terms of prior teaching-research balance and research supervision and publishing experience. It transpired that some of the classes were already PhD qualified and engaged in post-doctoral research and research supervision, while others were still completing their PhD while working. They faced different demands, being required, for example, to supervise Honours and Masters research students[5]. The individual student needs, therefore, dictated a diverse response from the lecturer (Text Box 3). While module 4 did not provide the final student reflection, we close on a few edited examples of feedback at this later stage of the unit. Diversification was well advanced, and the reflections being submitted had ceased, despite common instructions, following similar paths (Text Box 4). This assignment is about publishing; publishing is the touchstone of research, the public duty of public servants—and yet one of the more daunting areas for beginning scholars.

The final assignment, a longer essay provided feedback from the students on the effect of this tailored individualised style of feedback. The quotation in the introduction was part of Kate's reflective essay: "... the most obvious point to make is that "Bill-style" has become part of the vernacular on our floor. Over the past two months a number of mine and my colleagues units are undergoing … revisions … [and] … we have discussed how to integrate "Bill-style" reflective practice into three units across three disciplines. …" Sandra, in her cover email for her final submission, commented: "Thank you for being so understanding about the time lines. It's been an absolute breath of fresh air having you as a UA [unit assessor]. I felt you were role modelling the supervisory relationship and I have so much respect for your approach. You were walking the talk and by doing so you have modelled the role that I was learning about in the readings and reflections!"

The unit assessor's response to Kate's assignment 5 provides an example of both his own reflection on the style and the role it may play in a continuing discussion with the student.

> "Thanks for your thoughts and reflections, [and] for the positive comments about the style and pace of the unit and its contribution to you being able to reflect and learn. That's very positive. Of course, from a postgraduate su-

[5]The university has a policy, in common with most other universities, that an academic can only supervise up to the highest level of their own qualification.

pervision perspective, it reminds us that learning takes time, and we all take our own time. So part of the relationship between supervisor and student can include a negotiation of the time required. The challenge, of course, is to strike a balance between encouraging a student forward and giving them enough time to develop. … I'm flattered by the 'Bill-style' approach. Actually, I would be very interested to see how you and your colleagues progress in adapting it to your teaching needs. I agree, the "arduous 3000 word essays" are not helpful, so how do we find efficient yet effective ways to help students reflect and grown? I like it that you are thinking about this, and encourage you to keep up the discussions with your colleagues. You will all benefit from this, I expect. The attachment of reflection to grades is an important observation; the ideal formative assessment, of course, does not have that value-judgment element attached to it. I have sometimes even found ways to remove the academic from the equation, marking or not marking, but to provide the students a structure and knowledge for self or peer assessment. … Keep on discussing with your colleagues, reflecting, and, most importantly, taking up the challenge of supervision, research and your own PhD. I wish you all the best for the future."

7. Elements of Success

To close this essay, we consider a model of learning that may help explain the success of this individualised approach. Kuk & Banning (2014) recently reminded scholars of an old model of learning, Blocher's 1974 Ecological Learning Theory. While Kuk & Banning were interested in the model to evaluate the success of a distance education PhD program, its components resonate with elements of the unit described here; the relationship between this unit and a PhD program are, of course, coincidental. While there are many models of learning available in the contemporary teaching and learning literature, Blocher's model examines learning provides a structural approach that reflects the scaffolded approach adopted in the unit discussed in this paper. The model examines the conditions in the learning environment that allow individual learning to flourish. The model (**Figure 1**) identifies three subsystems—opportunity, support and reward—each comprising important components of a learning system.

Following Kuk & Banning's (2014) lead, in which they evaluated a higher education leadership distance PhD program against these components—their conclusion that "the outcome data that has been presented suggested that the Higher Education Leadership Distance Ph.D. program has been successful in retention, progress toward degree, and promotions and advancement in higher level positions" (p. 709) instills confidence in this approach—we seek to evaluate the Higher Degree Research Supervision unit reviewed here in a similar manner. We also seek to further test Kuk & Banning's question, "Does the thematic structure associated with the processes and procedures of the program of study link to the conditions noted as necessary for learning and development posited by the Blocher model?" (pp. 709-710). Our evaluation follows (**Table 1**).

Table 1. An evaluation and commentary of the component elements embedded within the TCH03411 Higher Degree Research Supervision unit, against the subsystem components of Blocher's (1974) Ecological Learning Theory.

Blocher's Ecological Learning Theory Subsystem	Ecological Learning Theory Subsystem Component	Commentary on the component elements embedded within the TCH03411 Higher Degree Research Supervision unit
Opportunity	Task—Involvement	The learning activities all promoted active involvement in learning. Rather than provide set material—as may previously have been presented in lectures, for example—the teaching staff provided scaffolding information, short statements of context and relevance, and pointed the students towards active reading. The "active" component of the reading was reinforced by directed self-reflection, contextualisation, external reflection and an applied component, notably applying simple practical published professional development tools to the student's own experience. All the students responded to being encouraged to be actively involved in the learning activities.
	Task—Challenge	The challenge in this unit was to move beyond both prior experience and given text-based knowledge. Drawing only on a student's prior experience risks reinforcement and validation of prior behaviour, rather than learning and progression to enhanced scholarly behaviour. The challenge was to move beyond current practice and understandings. All the activities explicitly challenged to students to look forward to what they could be: the final reflection provided individual statements of both the challenges students faced and powerful statement of the students' sense of a new way forward. This paper is predicated on one such response, the challenge a group of students have set themselves to adopt a new style of engagement with students.
	Task—Integration	This component underlay the design and delivery of the unit. In essence, all the attitudes, perspectives and practices presented in core readings were modeled in the unit delivery by the teaching staff. Individual teacher-student relationships were developed, based on the types of evaluation and reflection advocated in the core readings, using the techniques provided in these readings. The success of this approach is articulated in the diverging responses to the student assignments.
Support	Structure—Content of learning	Previous versions of the unit (delivered by other academics) had focused on either government-wide context for research and research training, theoretical aspects of teaching and learning, or the pragmatics of internal bureaucratic processes around management of postgraduate training and supervision. While these have relevance, and should be understood by supervisors, it was understood that primary importance lay in the relationship between supervisor and student, especially in the tradition of one-on-one apprentice-master learning. The unit content aimed to focus primarily on this approach. Many texts were reviewed prior to selecting the three core readings. Neither of the latter provided the perfect content, but the combination appears to cover all the ground considered necessary. Additionally, presenting three texts emphasised the value of diverse approach, language, context and method to achieve the same outcome. With the teacher's individual approach to delivering the unit content, these provided solid example of "walking the talk"—an essential quality of a good postgraduate research supervisor.
	Support—Diversity of supportive relationships	The unit commenced with a statement of the individual student's character, academic background and scholarly and teaching needs. This opened the issue of diversity within the student cohort, and demanded an individualised approach to the students' learning. In the event, the diversity was greater than expected, especially following the discovery that some of the students were still PhD candidates themselves, being required to supervise sub-PhD research students while still learning the tools of the trade as they maintain their primary day job, university teaching. Other students were experienced PhD-qualified researchers, for whom research was their main academic activity, and they required stronger input to the teaching end of the work. The unit and the unit assessor required the capacity to respond to such diversity, and delivered on this need.
Reward	Feedback—Continuous and accurate information to participants, resulting recognition of new learning and successes	While the core readings, scaffolded through learning activities taking students beyond the content, were essential to this unit, the other core element was the feedback to students at all stages of the the unit. It commenced as individualised and tailored responses—there are, strictly, no correct or incorrect student responses—that (a) built on the student's writing, experience and views, acknowledging their present situation, and (b) provided a springboard for further and, to some students, new ideas, the "what's next" step. The natural consequence of such an approach is that the students' responses to the challenges also diversified, as they built on their own needs and experiences, and consequently the lecturer's responses diversified. While there were some common themes, these were introduced individually, in context, but always made relevant to the learning experience of the student.

Continued

Application—Employment of learning in applied settings	The relevance of this unit lies in providing scholars with the professional skills to supervise postgraduate research students—this is the key aim. It is important, therefore, that students both understand and can articulate the application of the concepts, practices and tools introduced in the unit to their own teaching and learning situations. It is clear from the student responses that they were attempting to apply these in their own supervisory roles (and one student was trying to change the relationship with her own supervisor). The feedback that opened the paper is especially telling—students talk about adopting the approach used in this unit outside both unit studies and postgraduate research supervision. This suggests that student outcomes extended beyond the unit outcomes, and that students projected the skills learned within the unit to other teaching and learning professional contexts.

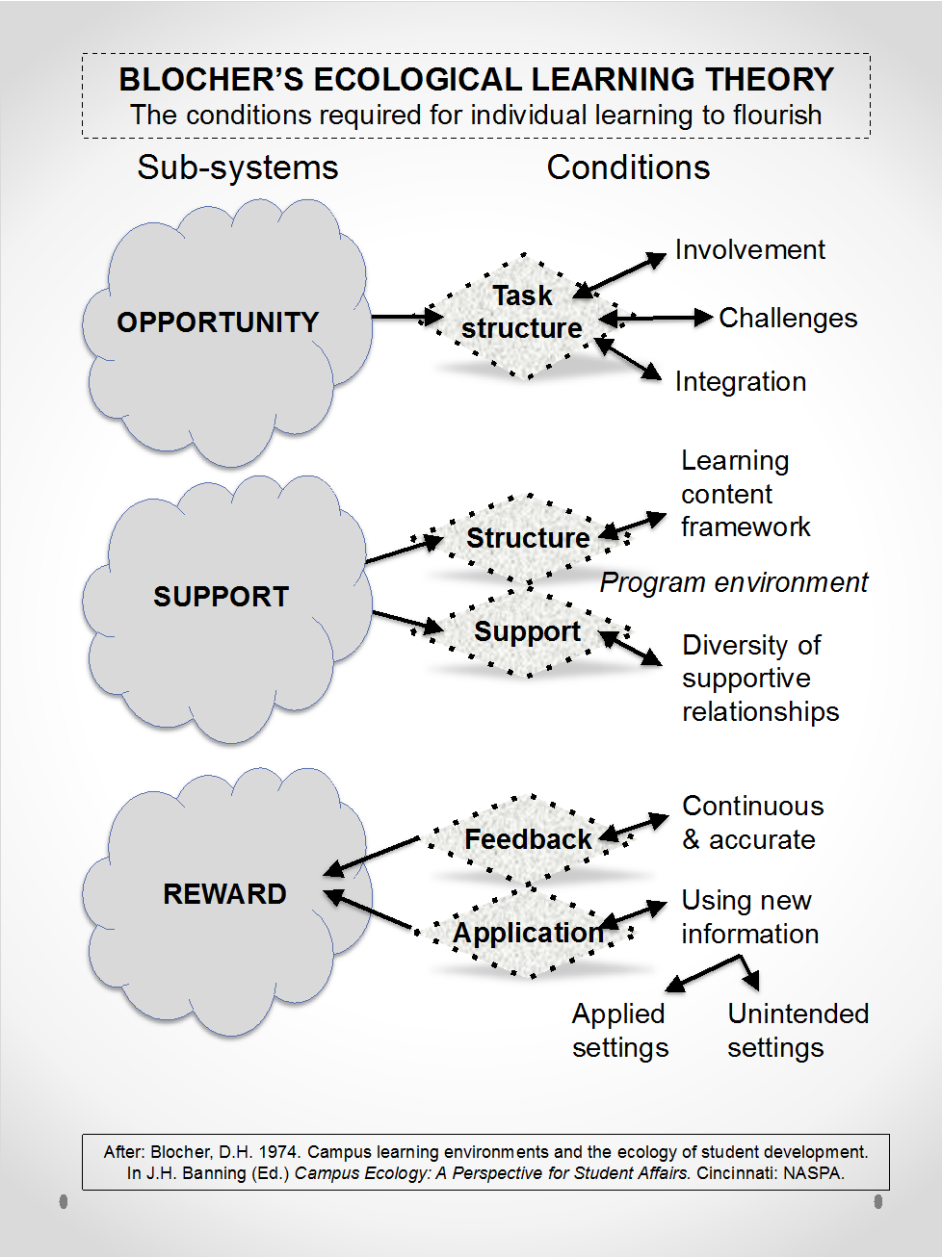

Figure 1. Blocher's ecological learning theory, based on Kuk & Banning's (2014) synthesis of Blocher's original (1974) model.

8. Conclusion

In conclusion, and mirroring Kuk & Banning's conclusion that, in their case, "the assessment of this program revealed that the various components of this program were contributing to the creation of an effective learning environment in each of the three subsystems of opportunity, supporting and rewarding as noted as necessary by Blocher (1974)" (2014, p. 710), we likewise find that all the essential components of the ecological learning model are present. Importantly, we find that they are aligned, thus providing the key linkages between content, processes of support, and rewards.

- Content—the focus on the importance of developing strong and individualised supervisor-student relationships in the PhD supervision partnership.
- Processes of support—the targeting, individualised and personalised response of teachers to the students and, especially, their individual experiences, needs and approaches to their studies.
- Rewards—the individual relevance of teacher feedback, with its focus on the individual student's needs, along with continual, evolving and context-relevant positive and supportive commentary.

In this light, it is noted that all of Adams' (2016: p. 26) principles regarding the roles of university supervisors—positive regard, progression towards autonomy, describing rather than judging, encouraging responsibility, reciprocity, main focus on purpose—are embedded in the unit and its delivery. The success of this unit may be considered to rest, furthermore, on the successful application of the three important aspects of research mentoring, as identified by Crisp & Cruz (2009): that mentoring focuses on the mentee's growth and achievements, provided through multiple forms of assistance; that broad support is provided, both for entry, learning and development; and that the relationships within the mentoring process are reciprocated and personal. Hay's (2013) suggestion to a beginning academic, in his "Letter to a new university teacher", that "principles, broadly conceived, can be variously interpreted and extended by individuals to usefully include, for example, empathy, reflection and respect", resonates with the findings here.

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References

Adams, P. (2016). Preparing Learning Teacher: The Role of Collaborative Inquiry. *Canadian Journal of Action Research, 17,* 20-35.

Anon (2013). *Improving HDR Supervisor Practice-Supervisor Resource Book*. Mount Lawley: Edith Cowan University. http://www.uws.edu.au/__data/assets/pdf_file/0004/563620/ebookv1_ISP_interactive_2

.pdf

Blocher, D. H. (1974). Campus Learning Environments and the Ecology of Student Development. In J. H. Banning (Ed.), *Campus Ecology: A Perspective for Student Affairs* (pp. 17-23). Cincinnati, OH: NASPA Publisher.

Boyd, W. E., O'Reilly, M., Bucher, D., Fisher, K., Morton, A., Harrison, P. L., Nuske, E., Coyle, R., & Rendall, K. (2010). Activating the Teaching-Research Nexus in Smaller Universities: Case Studies Highlighting Diversity of Practice. *Journal of University Teaching & Learning Practice, 7,* 1-18.
http://ro.uow.edu.au/jutlp/vol7/iss2/9

Boyd, W. E., O'Reilly, M., Rendall, R., Rowe, S., Wilson, E., Dimmock, K., Boyd, W., Nuske, E., Edelheim, J., Bucher, D., & Fisher, K. (2012). "Friday Is My Research Day": Chance, Time and Desire in the Search for the Teaching-Research Nexus in the Life of a University Teacher. *Journal of University Teaching & Learning Practice, 9,* 1-17.
http://ro.uow.edu.au/jutlp/vol9/iss2/2

Boyd, W. E., Parry, S., Burger, N., Kelly, J., Boyd, W., & Smith, J. (2013). Writing for Ethical Research: Novice Researchers, Writing, and the Experience of Experiential Narrative. *Creative Education, 4,* 30-39.
https://doi.org/10.4236/ce.2013.412A1005

Chiappetta-Swanson, C., & Watt, S. (2011). *Good Practice in the Supervision & Mentoring of Postgraduate Students—It Takes an Academy to Raise a Scholar*. Hamilton: McMaster University.
http://docplayer.net/17981364-It-takes-an-academy-to-raise-a-scholar.html

Colvin, J. W. (2015). Peer Mentoring and Tutoring in Higher Education. In M. Li, & Y. Zhao (Eds.), *Exploring Learning & Teaching in Higher Education. New Frontiers of Educational Research* (pp. 207-229). Berlin: Springer-Verlag.
https://doi.org/10.1007/978-3-642-55352-3_9

Crisp, G., & Cruz, I. (2009). Mentoring College Students: A Critical Review of the Literature between 1990 and 2007. *Research in Higher Education, 50,* 525-545.
https://doi.org/10.1007/s11162-009-9130-2

Hay, I. (2013). Advice and Reflection for a University Teacher Beginning an Academic Career. *Journal of Geography in Higher Education, 37,* 578-594.
https://doi.org/10.1080/03098265.2013.828276

James, R., & Baldwin, G. (1999). *Eleven Practices of Effective Postgraduate Research Supervisors.* Melbourne: The Centre for the Study of Higher Education & The School of Graduate Studies, University of Melbourne.
http://melbourne-cshe.unimelb.edu.au/__data/assets/pdf_file/0004/1761502/11practices.pdf

Kuk, L., & Banning, J. H. (2014). A Higher Education Leadership Distance PhD Program: An Assessment Using Blocher's Ecological Learning Theory. *Creative Education, 5,* 701-712. https://doi.org/10.4236/ce.2014.59082

Willison, F., & O'Regan, K. (2007). Commonly Known, Commonly Not Known, Totally Unknown: A Framework for Students Becoming Researchers. *Higher Education Research and Development, 26,* 393-409.
https://doi.org/10.1080/07294360701658609

Yin, R. K. (2009). *Case Study Research: Design and Methods*. Thousand Oaks, CA: SAGE Publications.

Appendix

Text Box 1: *Examples of background text for each model in the Higher Degree Research Supervision unit.*

Module 2: Critical choices in supervising a PhD candidate … you and your student. Getting the relationship right at the start of your supervision is really important. While there is always an element of serendipity, there are a few things you can do to ensure as best as possible that the relationship will work. Understanding the potential candidate is essential, and it is little surprise that James & Baldwin open their little book with two chapters that address exactly this. Edith Cowan's chapter on selecting for success takes this further, with a number of evaluative tools you can use, both to evaluate yourself and your potential student. The second part of this process is the setting of expectations. Both James & Baldwin and the Edith Cowan guide reflect on this. James & Baldwin set the tone, with Edith Cowan providing a number of tools for you to dig more deeply into workout what your expectations might by, and how they may interact with those of the student and reflect the needs of the research itself and the process of successful apprenticeship. Of course, the relationship between you and your student is not the only critical relationship for the student. The student will become a member of your school, of your scholarly community. While many students find their own way, part of your role as the student's mentor is to assist in integrating the student into school and university life. James and Baldwin discuss this briefly, and providing some useful hints as to how you can play a role here.

Module 3: Planning and starting the research. Conceptualising, planning and designing a research project are crucial elements of research. While every researcher will, inevitably, be itching to get into the field, into the lab, running the surveys, doing interviews etc. etc., a weekly planned project is likely to provide tripwires. While the postgraduate research candidature will, at times, seem interminable and unending, it is in fact a short and sometimes very tight timeline. Getting the planning right at the start is critical. Your role as a supervisor is to ensure that this happens. In reality, you will find yourself rescuing a weakly planned piece of research later on-that appears to be quite normal-but the better your student can plan, the better and more rigorous the research data collection phase will be. Planning needs to find a fine balance between the big picture-theory, whole of discipline perspective and the detailed picture of the individual experiments, field data collection, methods, etc. This is especially hard for a novice researcher-i.e. your apprentice-and, as one student once commented to me, the best time to plan a project is once you have run it, found all the warts and tripwires, and sorted out the ideal method and timetable …

Module 4: Supervising the research. By this stage, you will have established your working relationship with your student. You will have got to know then, how they work, their strengths and weaknesses, and they will have got to know yours. We have not talked about co-supervisors or team supervision-you will have come across reference to that in the readings, and should know that SCU

requires each postgraduate research student to be supervised by at least two supervisors. This allows for leave of absence etc., but more importantly allows for enriched mentoring and supervision. Each supervisor comes with their own strengths and weaknesses, characters, expertise and so on. A good supervisory team may comprise very different people who interact with the student in different ways. This can bring considerable strength to the relationship. While this may be seen as a possible problem—will the student by confused by the apparently different approach his or her supervisors are taking?—you will have now read enough and thought enough about expectations and skills within the team to know that the benefits of multiple supervisors will be evident. This module covers two territories. Ostensibly, it takes off from where the confirmation left off. That is, now that establishing of working relationships is done, the project is planned, and confirmation has been achieved, the 'real' work can be done. In fact, the 'real' work started a day one, indeed long before then. The content of this module, however, will support the roles of the supervisor and student from confirmation onwards, as they work up the substantial components of the research project, the major data collection phase, followed by analysis and writing. The skills and processes detailed here, however, apply during the first year, and a successful confirmation will, in part, reflect a successful application of the skills and processes detailed in this module's readings. You will see the patter of readings but now: an overview reading (this time courtesy of Chiappetta-Swanson & Watts), followed by a more detailed, task and process based account from Edith Cowan. James and Baldwin reflect on four key ideas: the imperative to maintain regular contact, to provide high quality feedback, to encourage student to write early and write often, and the need to inspire and motivate.

Text Box 2: *Examples of the unit assessor's responses to student submissions, illustrating the individualisation of feedback.*

Louise: Many thanks for this thoughtful response, Louise. I like the quote from Harbon; it resonates well with the description I had of my supervisor from the late 70s and early 80s. Like you, I admired this approach; the relationship is very important, but one that I prefer to think of as a mentoring rather than mastering relationship, and certainly focused on a balanced power relationship. I am pleased to see you positively adopting the awareness of strengths and limitations, the importance of life-long learning, and the message of the importance of the relationship between supervisor and candidate.

Ed: Many thanks for the thoughtful reflection, Ed. It's perhaps unsurprising that for many of us, our PhD supervisor was so influential. I often advise potential students to ask around amongst other students, to find out about the supervisor as a person. We can check their academic credentials, but how we interact with them as individuals is so important. You describe a really strong balance in your supervisor of rigour and humanity, so I can understand why you admire him. It's interesting that you pick up the points you do from the ten questions—the importance of understanding the student's needs, the importance of the team, and, especially, an awareness of the risks of creating dependency.

These all point towards you being a caring supervisor, one whose primary concern is of the students. This respect, I suggest, will give you the space to focus on the technical or scientific aspects of supervision.

Jackie: Thanks, for this clear and full statement, Jackie. You clearly have a strong sense of yourself as a scholarly supervisor. I note that you have are aware of the balance needed between disciplinary expertise and what we night call the mentoring or support needs for the student. It is easy for supervisor to become technical trainers—the older fashioned mode of research training in which the supervisor effectively directs the student through technical (albeit scholarly technical) processes. However, it is important, as you say to empower each student to take ownership of their project. The mutual relationship—trust, reciprocity, etc. embedded in this—is important. I sense that you are confident in your disciplinary expertise and standing, so this leaves you space to develop those relationship skills that can so often make or break a student-supervisor relationship. I am also pleased to see you use the work "balance". This is so important. A couple of final comments. I note you didn't nominate anyone that you have especially admired. While you talked of your own views—and I don't disagree with them—it is often helpful to think about where these may have come from. For most scholars, there is someone who has been most influential in developing our own approach, and it is often of value to make this explicit and to reflect on what is was about that person's approach that resonates with you. The second point is that I like your full answers to the ten questions. I sense that you did not find them challenging or confronting. Interestingly, you may like to know, some of the other students in the unit did, but found them helpful in pushing them to reconsidering their positions. The final bit of advice I'd suggest to you is that while you seem clear on your position, don't forget to reflect on it; in all my years as a scholar, I have found points at which I have had to question well-held perspectives on my approach, and inevitably I find I can build further on the skills I have. I look forward to seeing your further work in this unit.

Kate: Many thanks for your thoughtful and questioning response, Kate. You almost pose more questions than you ask, which is, of course, a perfectly good approach to take. I am pleased that while you are able to acknowledge your own standing and expertise, and thus where you see the gaps, this is not cause for despair, but for optimism. Yes, there is a need for expertise, but if we consider the student first, and are comfortable aligning our skills with their needs, then your background becomes valuable. I liked your comment on the difference between studying and learning. This is crucial: I always try to focus on the student's responsibility to take responsibility for their own learning, whether it is as undergrad or postgrad level. Of course, this does not just happen, and our role may well be to actively foster and support the student to develop the skills needed. You take a very positive view of the ten questions; I was interested that you saw them not only as helpful for planning, but also potentially useful in conflict resolution. The important thing, naturally, is that they allow you make ex-

plicit ideas and views that are often left unsaid, i.e. are implicit. Another wee mantra from my former teaching & learning days: "Never forget to make the implicit explicit".

Text Box 3: *Examples of the unit assessor's responses to later assignments, illustrating the continuing divergence of response.*

Sandra: Thanks, Sandra, for your assignment 3. It is a very well organised and clean plan, and suggests that you will be well organised for your student. It is good to identify the different types of tasks you have to complete; it is very easy for supervisors to get caught up in the bureaucratic jobs, leaving the student to flounder in the scholarship, or to focus only on the scholarship of the study and let the student discover the administrative aspects of being a candidate for themselves. A healthy balance from the supervisor is a great source of support for the student. Of course, the plan is only a best guess on what will actually happen, but it does provide a valuable framework, especially as confirmation looms and certain things need to get done! I have become increasing aware over the years that the exact journey supervisors take their students on will differ, sometimes quite dramatically, depending on the discipline or the school. Some disciplines get their student to focus on the literature and theory for most of their first year, whereas others focus on methods. In other words, the amount of time you get your student to work on the background and literature may depend on your context. It is good to find out what the expectations in your discipline and school are.

Jackie: Thanks, Jackie, for your assignment 3. You have taken a very different approach to the rest of the class, an approach I like. What you have a very useful statement linking your tasks as supervisor, your student's tasks as the apprentice, and the official expectations and guidelines of the university. This is very important, since, of course—and this is a bit of a truism—the research candidature has to align with the behavioural, bureaucratic and cultural expectations of the university. I think you are aware of how these various tasks can overlap. Of course, a plan is only the best guess on what will actually happen, the timing of each of your tasks may be quite fluid. The important thing about a plan is that it sets the framework for everything that needs to be done. The importance of confirmation, apart from establishing the credibility of your students as a continuing Masters or PhD candidate, is that it provides valuable benchmark for getting all those early preparatory tasks out of the way. By the time a candidate gets to confirmation, they should be fully established within the university system, and, perhaps more importantly, largely have their background, literature review and methods nailed down. Of course these will evolved and mature as the rest of the candidature progresses, but essential the basics of the first chapters of the thesis will be ready by confirmation.

Louise: Thanks, Louise that looks like a realistic flow of tasks and work. All the necessary steps are there. As you will be aware, a plan is only as good a guess as you can make—the only thing we can't predict is the future … So when you implement such a plan, don't be alarmed if some of the stages take longer (it is

usually longer than less time) than planned. In my experience, different disciplines, for example, have different habits about the lit review. Some like to have their students more or less completing it early, often as a precursor to developing the research problem and the methods statement, while other disciplines see these are running in parallel. The lit review can undergo several stages, as the students' ideas mature. The important thing here is to get to know the habits of your discipline and, perhaps, your school, so that your student's progress aligns with the scholarly expectations in your field. The ethics application, by the way, might be submitted before confirmation, but does not necessarily have to; it gets submitted when it is needed.

Ed: Thanks, Ed, for your assignment 3. I can see the strong science background in your approach, very clean, organised and crisp. Thanks also for including the areas of support from around the university—most others had forgotten that, so well done! I like the way you have sorted the various tasks into categories, another good sign of your organised mind. I note with interest that in the plan, you move straight to the data collection and fieldwork, i.e. methods. While embedded in the write up of the confirmation document you have the background and lit review, I'd suggest these need to be up front, much earlier in the process, at the stage where the student is working out what the research question is and what is already known and therefore what needs to be known. This will then guide the methods. Interestingly, different disciplines work differently. Science tends to be problem- and methods-based, and I appreciate that you will probably have projects you give the students, so a lot of the base work has been done. Other disciplines tend to be theory-based, and their students are required to work on the literature and conceptual basis of the work for much of their first year. The lesson is that it is important to understand the expectations and habits of your own discipline and school. In any case, I would encourage you to have an earlier start to the lit review and background writing. These can take quite a while, and tend to be a little iterative while the student gets his or her mind round what the research question really is.

Text Box 4: *Edited versions of feedback to students writing about their experience of publishing, illustrating the unit assessor's range of responses to the students' very differing, yet all relevant, experience of scholarly publishing.*

Louise: Thanks, Louise, for your thoughts on publishing. It is a daunting world, the publishing world, especially looking at it from the outside. You capture the anxieties well in your opening comments. However, I was pleased to see you move on from there! It is all too easy to get stuck on the issues and problems. Publishing is hard, and there are politics. … However, as you say, "seeing your name in print is really cool!!". You are absolutely right—getting published is a buzz. Even after all these years (three and a half decades!!), I still get a buzz from getting something in print. It is a creative process, … Co-writing with your supervisor is really important. Some supervisors are less inclined to do this, and indeed some PhD candidates feel worried about loss of control and prefer to publish on their own. I use the shared-writing experience a great deal both with

my PhD students and with the early- and mid-career colleagues… It is an ideal vehicle for a practical apprenticeship in scholarship. The shared writing exercise does several things: … So, yes, practice, practice, practice. Don't get too hung up on whether a journal is exactly the right place to publish, and don't get too hung up on crafting the manuscript of their exact house style. If you have something to say, then write it. And get your students to practice… So, write, write, write!

Jackie: Many thanks, Jackie, for this lovely piece of writing. You clearly enjoy writing, which in our business is a definite plus—after all, we are professional writers, when all is said and done. Thanks also for the links. You are working in important areas, and there is so much that needs to be said from a scholarly position that I can see you will have your work cut out for you for a long time… I was interested in your path into writing, through the discipline of writing opinion pieces. I haven't come across that, specifically, for an academic—usually it is the other way round, academics get asked to write opinion pieces, editorials etc. once they are known as published scholars, and this often results in rather low quality opinion pieces. You have a distinct advantage. In my day (do I sound like an old man?) the equivalent track was writing book reviews or other resource reviews for journals. I suspect this played a similar role to your experience… As for the students and student advice, I am pleased to see you are encouraging your students to write, but an encouragement tempered by a touch of reality! There are some research projects that really lend themselves to writing early and often; others require longer. There are some students who flourish in the writing environment … Overall, you seem to be developing a very healthy balance of writing; keep up the opinion piece writing and continue your scholarly writing. Oh, by the way, don't worry about appearing to be all over the place subject-wise. I have suffered from that affliction as someone who ranges widely across the disciplines, at least until the light bulb moment when I realised this was my strength and I found a way to use it in my favour…

Sandra: Many thanks for your story. What an amazing journey! I could feel your disappointment on finding that your research didn't support your hypothesis! But … that's what the scientific approach to scholarship and research is all about. What you have given me here is a great example of something you could ask your students to do: write their story. Some students find it hard, especially if they have been brought up to think that good scholarly writing is in some way dispassionate, objective, de-personalised. These characteristics are only tools we use deliberately to achieve a semblance of detachment in scientific research, but they are only tools. The trick is to find the style that suits the audience and requirements of the writing … Finally, thanks for reminding me about the meaning of 'pedantic', being careful about choice of words. What a positive spin to put on a quality that is often denigrated.

Kate: Thank you, Kate, for a lovely, readable assignment 4. Clearly one thing not holding you back from publishing is your ability to write clear, well-organised, readable prose. You express many of the anxieties that academic starting out on the publication trail hold. It is, after all, a brave new world, albeit one in

which we must all work… I've probably said this before, so do be patient with me, but all the best research and scholarship in the world is worth little if it is not communicated to the larger community. Now, of course, much of that can be through teaching, in whatever form that might take, or public presentation. But writing and publication is still important. Don't forget, of course, that part of your success as an academic teacher will rest in your reputation as a contributing author. It still surprises me, for example, when a student talks about one of my papers… The advice you have received from your colleagues and in reflecting on your own experience and history is all very positive (thankfully!!). It all resonates with my experience, and I get the sense that you are fully comfortable with it is and can see how you will translate it into your own activity as an academic writer and author. By the way, did you ever convert that lit review to a paper? …