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Swimming with crocs: Professional development in a Northern context

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Abstract

Professional development for teacher educators is critical in a rapidly changing environment where graduate teachers are expected to have 21st Century skills and knowledge. As made explicit in a recent report on teacher education in Australia, ‘the evidence is clear: enhancing the capability of teachers is vital to raising the overall quality of Australia’s school system and lifting student outcomes. Action to improve the quality of teachers in Australian schools must begin when they are first prepared for the profession’ (Teacher Education Ministerial Advisory Group, 2014).

But in a fast paced and continually changing higher education environment, are the teacher educators keeping up with their own professional development? A recent study indicates that ‘educators typically have a narrow conception of Web 2.0 technologies’ (Bower, 2015, p.1). Other reports point to a digital skills gap and a generational skills gap between students and academic staff and to the importance of increasing the digital media literacy for educators teaching with technology (Johnson et al., 2015), addressing issues of ‘digital fluency training in pre- and in-service teachers, along with the students they teach’ (Johnson et al., 2015, p. 24). This indicates the critical need for academics, and particularly teacher educators, to engage with ongoing professional development to continually keep up. One way to do this is through engagement with professional development activities provided centrally by academic development units within universities where the teacher educators work.

This paper explores the role and potential of one such academic unit at a Northern Australia university. Charles Darwin University (CDU) is a predominantly online university, with a significant percentage of its HE students studying externally. So this means lecturing staff have to keep up with their own discipline / subject knowledge and also the technological knowledge needed for them to teach effectively online. The Office of Learning and Teaching (OLT), the academic development unit at CDU, is responsible for providing ongoing professional development and support in learning and teaching matters, particularly around teaching in the online space. Therefore the paper is written from the perspective of academic developers working in the OLT and focuses on the potential synergies between academic developers and teacher educators. It also highlights the inherent tensions in the role, the challenges faced and emerging models of Professional Development to support the professional development of teacher educators in an environment where there is a lingering sense that the crocs are just below the surface ready to attack the complacent and the unwary. Ultimately the paper seeks to explore ways of optimising the efficacy of services provided by academic developers to assist teacher educators deal with the changing nature of their work.

Introduction

Professional development for teacher educators is critical in a rapidly changing environment where graduate teachers are expected to have 21st Century skills and knowledge. Constant

changes and reforms in the profession necessitate ongoing professional development. There is, however, little research on how teacher educators are prepared for and maintain currency in their work of teaching teachers (Ben-Peretz et al., 2012). This is a possible consequence of the dearth of attention that has been given to teacher educators' competencies in the past (Smith, 2005; Koster et al., 2005). While in some countries, such as the Netherlands, standards for teacher educators have now been developed, information on how teacher educators will achieve them is still lacking (Smith, 2005). Internationally, while only a few initiatives have been directly targeted at developing teacher educators' competencies (Ben-Peretz, 2012), what is particularly interesting about them is that there is no mention of the role played by universities in supporting the ongoing professional learning of teacher educators. Yet the work of academic developers working in university academic development units is key to the provision of support for the professional development of all academic staff, including teacher educators.

This paper therefore explores the role of the central academic unit, the Office of Learning and Teaching (OLT) at Charles Darwin University (CDU) and in particular its role in supporting the changing work of teacher educators in relation to the use of learning technologies. The reason for the specific focus on learning technologies is that it is an area of rapid change where teacher educators may find it a challenge to keep up but also an area where academic development units would have expertise, and are often change leaders in the university setting. This paper will therefore:

- Address the CDU context generally and then discuss the OLT;
- Position the work of academic developers within academic development units broadly in relation to the literature as well as specifically in the context of Charles Darwin University; and
- Examine the changing nature of the work of the teacher educator, with a particular focus on the disruptive force of continual technological change and the consequent need for ongoing professional development for teacher educators.

CDU Context

CDU has its main campus in tropical Darwin, Northern Territory, and is one of five dual sector tertiary providers in Australia. The Higher Education component of CDU comprises ten schools plus numerous research institutions across two faculties. These schools are located across centres and campuses in many towns and major cities in Australia, including Darwin, Palmerston, Alice Springs, Nhulunbuy, Tennant Creek, Sydney, Melbourne and Adelaide.

Over the last decade or so CDU has moved increasingly from internal delivery of its courses to external delivery. This process of externalising courses to meet market demand has created a paradigm shift in how, where and when students can engage in learning. The more traditional distance education model with print packages has been superseded by technology-mediated delivery of units utilising Blackboard as its Learning Management System (LMS) with electronic unit materials and activities available day and night for the duration of the teaching period. The percentage of students studying externally has grown from 35% in 2005 to 62% in 2014 on a course enrolment basis and CDU is "one of only a few Australian universities at which more than 50% of the student population is enrolled in some form of distance education" (Charles Darwin University, 2012a, p.5). In 2014 CDU offered 995 units that were delivered through the LMS.

This move to online learning has attracted large numbers of mature age students and students from non-traditional backgrounds which is reflected in the student profile in Higher Education at CDU. In the 2013 academic year 75% of students were aged 25 years or over, 68% were female and just over 6% were of Aboriginal or Torres Strait Islander origin (Charles Darwin University, 2014, p.10).

In some schools the percentage of students enrolled externally is much higher. For example, in the School of Education 87% of students enrolled in courses that led to teacher registration in 2014 were enrolled as external students. This is in turn reflected in the increase of online units in the School of Education from 91 units in 2012 to 191 units in 2014. This rapid increase in the use of learning technologies has a massive disruptive impact on teacher educators, with the use of technology often highlighting 'fundamental questions about content and pedagogy that can overwhelm even experienced instructors' (Mishra & Koehler, 2006, p.1030).

The increase in external enrolment at CDU has been achieved primarily through the development of online learning systems that are also proving equally beneficial for on-campus students. For a unit of study, both internal and external cohorts of students normally have access to the same teaching resources in the LMS. One perception of this blended delivery might be that the internal students have gained access to resources designed for the external student in virtual teaching spaces. However, blended delivery has blurred the temporal and spatial patterning of traditional learning for the internal student. Now the teacher, peers and resources are available around the clock and the learning place is no longer confined to a university building for internal or external students.

A major project commenced at CDU in 2011 to upgrade teaching spaces with standard equipment as a minimum level of technology in the classroom environment. One of the specific implementations was a number of rooms which were designed to support the use of web-conferencing software through a virtual online classroom in the LMS. This technology allows for increasing engagement and collaboration between internal and external students and teachers. The technology 'disrupt[s] the status quo, requiring teachers to reconfigure not just their understanding of technology' (Mishra & Koehler, 2006, p.1030), but of pedagogy, content and technology and the intersections between them.

Clearly, there has been a rapid and enormous shift towards more ubiquitous technologically enhanced learning environments made possible by the new learning technologies and the question is: who supports the academics to cope with the changes and harness the potential of these developments?

What is the role of the Academic Developer?

The work of academic developers, within universities, deals specifically with the development of academic staff. The specific function of academic development focuses on supporting staff in developing and enhancing teaching and learning (Fraser, 2001). While the positioning and influence of the role of academic development differs from one institution to the other, Gibbs (2013) outlines the focus of the work related to academic development that it is conducted across different academic development units. This includes:

Categories for focus of work (Gibbs, 2013)	Examples of what this looks like at CDU
Developing individuals	1:1 support provided to academic staff by academic developers, on request. This includes strategic, planned sessions as well as just in time support across a broad range of skills and knowledge areas; online self-paced, not-for-credit online units on specific aspects of teaching practice; Graduate Certificate of University Teaching and Learning (GCUTL)
Developing groups of teachers/teams	Orientation to Tertiary Teaching @ CDU (3 day program for new teaching staff run twice a year); Faculty PD Sessions (in Semester 1 2015 this was a weekly 2 hour seminar or workshop themed around Transition Pedagogies, co-facilitated by OLT academic developers, retention project coordinator, and the faculty Associate Deans Teaching & Learning); School level PD (as requested by schools, negotiated between academic developers and the school).
Developing learning environments	Working with individuals and teams on the evaluation, design and development of online units. Development of frameworks such as the 6 Key Principles for Online Teaching to guide the development of online learning environments; Guiding schools and individuals on implementation of the HE Template for online units.
Developing the institution	Co-ordination of an annual, university wide Learning & Teaching Week.
Influencing the external environment	Through participation in projects with potential impact on the sector, e.g. Federal OLT Learning Analytics project
Identifying emergent change and spreading best practice	Research and scholarship, often in conjunction with faculty members, for example iScholars; Development of frameworks to guide teaching practice, for example, development of the '6 Key Principles for Online Teaching'; dissemination internally (for example, during Learning & Teaching Week) and externally through conference presentations and publications.
Developing students	Direct responsibility for student development is not a role of academic developers at CDU, however, academic developers are involved on a case by case basis in student orientation (for example MEDi Ready program, and student induction sessions at interstate campuses) and developed and maintain an online Orientation to Learnline unit made available to all students on enrolment.

Developing quality assurance systems	Academic developers support schools and individual academic staff with curriculum development and provide support through unit and course accreditation processes. Academic developers are not responsible for developing QA systems but provide input and feedback on them as part of the university community.
Undertaking educational evaluation	Evaluation of learning design and teaching practices as requested by individuals or schools occurs using the 6 Key Principles for Online Teaching as a guiding framework. Learning Analytics within the LMS provides tools for academic developers to engage in more detailed quantitative evaluation and to assist academics to evaluate their own units and practices. Guidelines around the use of data and access levels to data are currently in development.
Undertaking educational research or educational development research and supporting the scholarship of teaching across the institution	Academic developers support scholarship of teaching through course coordination and teaching into the Graduate Certificate of University Teaching and Learning (GCUTL). Academic developers also work in partnership with teaching academics on educational research projects.

Different institutions emphasise some foci of activity more than others depending on organisational structure, culture or needs of academic staff.

At CDU the team of academic developers work within the central Office of Learning and Teaching (OLT). Along with other areas of the OLT, they are tasked with the role of supporting higher education academic staff to enhance the quality of learning and teaching across the university. The academic development team is involved in four broad functions. These functions explicitly encompass most aspects of the work of academic development described by Gibbs except for influencing the external environment and developing students. However, support for student transition into the online learning environment is also increasingly falling into the realm of the academic development team.

The academic development team at CDU is involved in:

- **Course design and accreditation (links to: Developing quality assurance systems; Developing the institution)**
This includes supporting curriculum design and development activities and the attendant accreditation documentation. It happens at school and faculty level to support university strategic priorities and external requirements.
- **Unit Design/Development and Implementation (links to: Developing learning environments, and Undertaking educational evaluation; Identifying emergent change and spreading best practice)**
This includes learning design related activities and teaching practice support at unit level. This happens at an individual staff member level but can occasionally involve teams.
- **Scholarship of Learning and Teaching (links to: Supporting the scholarship of teaching across the university)**
Supporting staff to be reflective practitioners and engaging in teaching related research activities with them and supporting them in the application of grants and

awards. This is usually done with individuals but can involve groups within a school or faculty.

- **Professional development (links to: Developing individuals; Developing groups of teachers/teams)**

Facilitating opportunities for professional learning, sharing of knowledge and skills that enhance academics' capacity to carry out their teaching more efficiently and effectively.

Charles Darwin University, as discussed in the previous section, is a predominantly online university, and as such the discussion of technological integration pervades all the four functions outlined above. For instance at course design level the academic development team assist in the conceptualisation of pedagogical approaches relevant to the disciplinary area and how technology will be used to mediate them. Through unit development and implementation, strategies for practical application of learning technologies are applied through authentic problem solving in the context of the teaching environment and content. Thus the function of professional development is critical and when effective, contributes to the production of 'the deep-learning that can assist teachers in becoming intelligent users of technology for pedagogy' (Mishra & Koehler, 2006, p.1032) and in the effective integration of learning technologies throughout the course cycle (planning, development, delivery and review).

The breadth of the work of academic developers at CDU is a source of tension for the academics sitting in these roles. The tensions within the role, of which this is one, are the metaphorical crocodiles referred to in the title of the paper. Whereas in some institutions academic development units focus on a few of the elements described in Gibb's model, at CDU the majority of these are encompassed in the four functions of the academic developer. As the academic development unit comprises a staff of five educational developers, the broad scope of the role necessarily limits the depth to which each work responsibility can be covered. In addition, the work model at CDU sees educational developers allocated responsibilities across multiple schools. Therefore the professional development that the unit provides must necessarily be strategic, targeted and focused clearly on the needs of individual and groups as well as aligned with the strategic direction and priorities of the university with regard to learning and teaching. It is, however, somewhat of a challenge to define and contain the focus of the professional development agenda at CDU given the breadth of responsibilities and the fast pace of change in educational technologies and accordingly in the needs of academic staff and the priorities of the university.

A way of strategically approaching the focus of professional development is by referencing the literature, and in particular, theories of professional development and models that these generate. One such model with strong resonance to a technologically enhanced teaching environment is the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006). This framework helps to conceptualise the knowledge areas required for effective teaching, and the intersections and overlaps between the areas of pedagogy, technology and content knowledge. While it is the responsibility of academic staff and the schools they work in to address professional learning around content specific knowledge, an academic development unit is well placed to focus on the intersections and overlaps of content knowledge with pedagogical and technological knowledge.

These areas of overlap provide a focus for the CDU academic development unit. Opportunities to explore and negotiate these complex areas of teaching practice are facilitated by the academic development unit in a broad range of professional development activities that include the induction and orientation to the learning and teaching environment of new

staff, co-facilitation with the teaching faculties of a weekly faculty seminar and workshop program, online not for credit courses on a variety of topics related to the development of technological pedagogical content knowledge and skills, coordination of the Graduate Certificate of Teaching and Learning in partnership with the School of Education, and the coordination of an annual Teaching & Learning Week. In addition individual just in time support is perhaps the most valued, but also the most resource intensive way in which academic developers provide professional development and support academic staff in the conduct of their work.

What does this mean for teacher educators in the School of Education?

Professional development of teacher educators is seen as being motivated by the constant changes and reforms in the profession, one of which is the assimilation of ICT in education in general (Ben-Peretz et al., 2012). In Australia, digital technologies and digital literacies are recognised as essential for young people to participate fully in a knowledge-based society (see *Melbourne Declaration on the Educational Goals for Young Australians*, MCEETYA 2008). This is reflected somewhat in the Australian Professional Standards for Teachers set by the Australian Institute for Teaching and School Leadership (AITSL). While these standards do not apply explicitly to teacher educators, the flow on is such that teacher educators necessarily need to have expertise in all aspects of teaching as referred to by the standards in order to educate teachers to achieve these standards. Engagement in professional learning is another requirement of teachers under Standard 7 of the Australian Professional Standards for Teachers (AITSL, 2014) and it is equally important for teacher educators to engage similarly with ongoing learning.

In the context of Charles Darwin University, technology use in educational contexts is an area of rapid change where teacher educators may find it a challenge to keep up but it is an area where academic development units have expertise. The force of continual technological change impacts directly on the work of teacher educators on two fronts. Teacher educators need to be able to utilise digital technologies effectively in their own teaching, whether this be in a face-to-face or online environment. However, many teacher educators are new to teaching with digital technologies in an online environment and are on a journey to develop expertise in this continually changing and developing medium. Additionally, teacher educators need to maintain currency in the technological innovations and possibilities afforded by digital technologies in the classrooms their students will be entering and teaching in.

Teacher educators therefore need to engage in continuous professional learning in the area of learning technologies relevant for their particular context. In the case of teacher educators who have considerable content and pedagogical knowledge, the TPACK framework helps to conceptualise and focus their professional development needs around the murky areas (where crocodiles lurk!), where content and pedagogical knowledge cross over with technology. In particular, many teacher educators need to rethink the teaching of practical skills for an online environment in disciplinary areas such as science and the performing arts.

The conceptualisation of knowledge domains relevant to teaching with technology in the TPACK framework provides a useful means for teacher educators in conjunction with university academic development units to evaluate needs and plan for professional learning. There are, however, a range of factors that impact on the focus and mix of PD opportunities offered by the academic development team at CDU. Paramount is the necessity for academic staff development in the technologies endorsed by the university to support teaching and learning. Service Level Agreements are negotiated with the faculties whereby the faculty leadership identify and prioritise school and faculty projects and professional learning needs.

Discussions also take place at least annually with Heads of School about the direction and needs of the school and related professional development needs of staff. Academic developers also have ongoing working relationships with academic staff in the schools and have a good understanding of discipline and individual professional learning needs from these interactions. Feedback forms are used to collect specific session level information that feeds back into the development of professional development planning. So while a range of sources inform PD development at CDU, there is currently no formal needs analysis process in place. Putting such a process in place would be useful in understanding individual level technology adoption (Rogers 2003) and the level (novice to expert) of training required more than the type of professional development required, as this is determined to a large extent by the context of the teaching environment at CDU.

Professional development: Issues and opportunities

It is common for those engaged with academic development in universities to experience tension and ambiguities in their roles (Little and Green, 2012; Napoli et al, 2010). This tension usually emanates from the need to fulfil institutional mandates and policy expectations while also dealing with the varied practical realities on the ground that may not be in congruence with institutional expectations. Academic developers at CDU experience a tension between the university's agenda with regard to the strategic priorities for professional development and the, at times, divergent priorities of the schools. In turn, the strong professional relationships built between educational developers and academics in schools bring a sense of obligation to cater for individual learning needs which may not align with the priorities of the university, faculty or school or the resourcing available. While quality teaching and learning outcomes are the focus of all, the priorities and focus may be quite different.

At the institutional level, professional development for higher education academic staff at CDU is underpinned by a university strategic plan (CDU, n.d.) and learning and teaching plan (CDU, 2012b). These strategic level documents set the direction for the work of the central academic unit and situate the context for learning and teaching support. In addition, with institutional adoption of new technologies that impact on teaching practice, such as analytics, the priorities of the academic development unit are necessarily realigned to provided training to staff on the broad impact of the innovation. For example, professional development is required for staff to understand and effectively use analytics, in the interpretation of analytics data at a conceptual level, in unpacking possible teaching and other responses, as well as in the technical and pragmatic aspects of use including such things as setting up the grade centre in the LMS to optimise the quality of data recorded.

In terms of the nature and style of professional development that is most effective and most likely to have a positive impact on student learning, research indicates that this is most likely where ongoing professional learning is situated in practice, takes place within a community of learners, and contains opportunities for activity and reflection on practice (Meiers & Ingvarson, 2005). The importance of a community of practice to effective professional learning aligns with Hart's (2015) focus on social learning as a critical aspect of professional development. In particular, Hart identifies the characteristics of that what she calls a 'smart employee', that is, a person who takes care of their own professional learning on a continual basis in the workplace through engagement in social learning. While the concept of the 'smart employee' refers to workplaces in general, it has strong resonance with the role of teacher educators and other academic staff taking ownership of their professional learning needs in a university context.

Then concept of the 'smart employee' taking charge of their own professional learning reflects to some extent the way in which engaged academics have always pursued further professional learning. The concept may appear to challenge the traditional role of a central academic unit in setting the professional development agenda. Indeed, the approach to looking after one's own professional learning may be in response to a perceived failure of a central academic unit in meeting staff expectations and needs. This is a sentiment echoed in many workplaces (Jensen & Klein, 2011). Indeed there is some evidence in the field of teacher education that 'the prevalence of professional development models and practices ... have not necessarily been helpful for improving teaching practice.' Such assertions need to be taken seriously by central academic units.

However, the concept of academic staff as responsible for their own continuing learning provides an excellent opportunity for central academic units to innovate on traditional professional development program formats and priorities. Indeed, given that the needs of individual staff across the areas of technological, pedagogical and content knowledge are diverse, central academic units cannot provide the full range of professional development needed by individuals.

In terms of developing a professional development model at CDU Hart (2015) provides some insight into the approaches and attitudes of a 21st century employee towards professional development. Hart identifies that many staff want to engage in professional learning but "don't have the inclination nor the time to learn in what me might call traditional ways – which take them out of the workflow – in a separate room for training or at a separate time to work on e-learning courses" (Hart 2015). These staff members are therefore not likely to engage in formal learning opportunities in the workplace and are more likely to focus on achieving solutions to just in time problems by looking for resources, particularly those that are easily accessible and easy to use. Additionally these staff members call on their social or professional networks in the first instance when they want to learn something new.

In addition, while these employees may be willing to engage in formal training this needs to be flexible, for example in online programs that have flexibility around attendance and time frames. Even more attractive are opportunities for learning in a social context where ideas can be shared and discussed with others. The 'smart employee' learns best when learning from others, through interaction with peers or colleagues, for example, through working collaboratively to solve problems.

The characteristics of the 'smart employee' provide central academic units with challenges as well as opportunities to rethink what professional development programs might look like in the future. Indeed the concept of the 'smart employee' could be considered not just a reflection of how many academic staff want to learn, but as an ideal of the type of engaged and proactive learner that central offices want to nurture and support. To do this requires a step away from traditional models of professional development to a model that provides high quality and easily accessible resources that academic staff can dip into as the need arises and in time frames that suit them. It also involves facilitating networks and communities of practice, and being integral members of communities of practice around learning and teaching. While central offices of learning and teaching have a continued role in leading whole of university professional learning around best practices in teaching and learning, the opportunities for professional learning must be broadened to include those that build on the characteristics and preferences of the employees in a digitally networked environment.

In developing a model for the professional development of higher education teaching staff at CDU the HETDT have taken into consideration the context of teaching and learning at CDU, the domains of knowledge relevant when teaching with technology (that is, the overlap of

technological, pedagogical and content knowledge as conceptualised in the TPACK framework), research into the impact of professional learning on student achievement, as well as the preference of the 21st century employees for accessible and high quality resources that they can dip into on a just in time basis and that build on to and reinforce social networks that support and enhance professional learning.

The new model proposed by the higher education academic development unit at CDU builds on existing professional development activities and approaches. The model encompasses a range of professional learning activities to meet the diverse needs of academic staff but which is based around a resources bank that can be drawn on by academic staff and by academic developers and staff in other support areas when facilitating professional learning. The model aims to be holistic in the sense that it represents a big picture view of learning and teaching at CDU through the conceptualisation of professional learning opportunities and events as integrated rather than being conceived as isolated stand-alone events. The new model, which is still in development, is about setting an agenda for learning and teaching based on the knowledge and areas of expertise within OLT, but which recognises and values the expertise in learning and teaching that exists across the university. The model has a focus on providing support and nurturing opportunities for academic staff to build on their professional networks and engage in professional learning in multiple ways that suit their needs at different times.

Conclusion

This paper sets out to explore the potential role of academic development units in teacher education with a particular focus on the academic development team in the Office of Learning and Teaching (OLT) at CDU. The paper articulates how OLT can support teacher educators at CDU in relation to the use of the rapidly changing learning technologies. The reality that teacher educators operate in rapidly changing technological environments has implications on at least two fronts: First that they need to have the skills to effectively use learning technologies in their teaching; this particularly so at CDU, which is predominantly online and is characterised by ubiquitous learning environments. Secondly, that they need to adequately prepare student teachers to use digital technologies in the classrooms where they will be working. The paper identifies that this is a challenge as the teacher educators do not always have formal training in the use of learning technologies. Hence the need for ongoing professional development.

In terms of how to effectively use learning technologies in their teaching, the opportunities provided by the OLT especially through academic developers, both directly and through linking to external resources and networks, are manifold. This is notwithstanding the tensions, like ever present crocodiles lurking in wait just below the surface, and the constraints that exist within the role. To optimally benefit from the expertise and services offered by the academic developers, teacher educators need to be smart professionals who know how to access what they need, when they need it in a format that is most convenient to them. The implication of this approach for the OLT is to reconceptualise its model of professional development and support such that it is ubiquitous, accessible and maintains currency and relevance.

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