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Minding the 'P's for Implementing Online Education: Purpose, Pedagogy, and Practicalities

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Abstract: Online education has a presence in most Australian universities, and its uptake has been broadly understood as being driven by external imperatives associated with intensive competition within the global knowledge economy. However, the implementation of online education does not take place uniformly, and tensions can arise as a consequence of the considerable variation in approaches taken by institutions, faculties, departments and individual educators. In this paper, we analyse interview data from five Australian universities to consider how senior administrators, teacher educators and educational designers interpret the drivers of and barriers to online education. Our findings indicate that there are considerable tensions between the economic considerations driving online delivery, the pedagogical approaches embraced by many teaching academics, and the practicalities associated with financial and human resource costs, technological supports and succession planning. We argue that minding the 'P's of purpose, pedagogy and practicalities can be a valuable and productive way forward for addressing ongoing issues of quality and sustainability in online education.

Background: Online Learning in the Policy Context

Higher education is a major contributor to educational export earnings of many nations. In Australia in 2006, higher education generated revenue totalling $15.5 billion, and in 2007, more than $7 billion of Australia's total education export earnings were generated from the university sector (see, for example Department of Education Employment and Workplace Relations, 2008). Under knowledge economy policies (Kenway, Bullen, Fahey, & Robb, 2006), the expansion of higher education in Australia mirrors figures globally. New technologies are seen as enabling more flexible modes of delivery to increasing numbers of students both on and offshore (Bach, Haynes, & Lewis Smith, 2006; Bell, Bush, Nicholson, O'Brien, & Tran, 2002; Saltmarsh, Sutherland-Smith, & Kitto, 2008). The policy context provides an important backdrop to this study, significantly shaping what many within the sector have come to see as the underlying purpose of online education, and driving pragmatic expectations about the implementation and delivery of online educational programs.

For some, differences between management and staff understandings about the purposes of online delivery, as well as different orientations to pedagogy and professional values, can create tensions that act as potential barriers to the successful implementation of online university programs. This may be particularly the case in teacher education, where orientations to pedagogic practice play a significant role in the subjectivities of teacher educators (Saltmarsh and Sutherland-Smith, 2010). However, the convergence of disciplinary-specific orientations to online learning and teaching practice with government and institutional policy drivers, remains largely unexamined (Hermann, 2006; Maag, 2006; Mumtaz, 2000; Watson, 2001). This paper probes this gap in the literature, by considering how tertiary managers, teacher educators and educational designers understand policy drivers as shaping their orientations and practice. The study employed technographic methodology (Saltmarsh, Sutherland-Smith and Kitto, 2008), informed by the work of Bruno Latour (1988, 1991) and Steve Woolgar (2005), concerning what Woolgar describes as ''the apprehension, reception, use, deployment, depiction and representation of technologies'' (2005, p. 27-28). Our purpose is not to critique one group at the expense of the other, but rather to gain an understanding of how "claims about and representations of technical capability and effect'' (Woolgar, 2005, p. 28) can contribute to thinking about technology in learning and teaching contexts. In so doing, we explore how the opportunities and challenges of online program implementation and delivery are shaped by and within the policy context.

On the basis of our research findings, we argue that minding the 'P's of purpose, pedagogy and practicalities can be a valuable and productive way forward for university managers and educators alike. We note with interest that despite its widespread emergence in Australian higher education, the ongoing implementation of new online programs and approaches continues to catalyse changes in teaching and learning practices, course structures and policy agendas (Flew, 2005; Land & Bayne, 2004; Robins & Webster, 2002). Despite both the economic and pedagogic potential of online learning, a number of educators and critics caution that insufficient attention has been paid to the problems, tensions and long-term implications of learning and teaching in virtual environments (Brabazon, 2002, 2007; Selwyn, 2007). In particular, they argue that technologically-mediated learning and teaching does not take place independently of other factors, such as attitudes to change, valued expertise, reflective practice and commitments to professional learning.

Chris Bigum and Leonie Rowan (2008) have observed that the field of teacher education has been remarkably slow in the up-take of new technologies. They attribute the tendency of teacher education to 'domesticate' the technological landscape to a mindset that favours either integrating new technologies into existing practices, or, where risks or threats are perceived, to limiting or banning the technologies altogether. Thus, they argue:

> An integration mindset privileges existing ways of doing things. It reflects a view of linear, manageable change and, to date, has allowed teacher education and schools to keep up technical appearances. (Bigum and Rowan, 2008, p. 247)

This view is consistent with our own research findings, and as we have noted elsewhere in relation to this study (Saltmarsh and Sutherland-Smith, 2010), the personal attachments and emotional investments associated with professional approaches pedagogy play an important part in determining educators' approaches to online teaching. Together, such factors play an important role in many facets of both ICT use and subject specific learning cultures (Mumtaz, 2000; Watson, 2001).

In Australia, changing university course delivery modes in many faculties pertain to increased enrolments and different patterns of student participation, often resulting in shifts toward flexible modes of study. For example, enrolments in Australian tertiary education increased by 33 per cent between 1995 and 2003 (Organisation for Economic Cooperation and Development [OECD], 2007, p. 3). Australian undergraduate taxpayer-supported places increased by ten per cent between 1996 and 2005, with overseas students representing approximately 25 per cent of the 957,176 students enrolled in 2005 (OECD, 2007, p.x). In addition to increased numbers of students are increased numbers of offshore enrolments. For example, in 2005, the Department of Education, Science and Technology reported that nearly 64,000 overseas students enrolled in Australian universities were studying offshore, representing 27 per cent of the total overseas students and more than double the number enrolled offshore in 2000 (OECD, 2007, pp. xiii–iv). Such figures give an indication of the significance of research into online learning and of the importance of developing more sophisticated ways of analysing the barriers and facilitators to its widespread uptake as a mainstream mode of delivery. Whilst acknowledging that offshore study does not necessarily equate to online study, increasingly the delivery of education for students studying within the nation and outside it, includes a substantial online component (Saltmarsh, Sutherland-Smith, & Kitto, 2008).

In Australian universities, enrolments have increased, but of specific interest to governments and university management are the well-documented changing patterns of participation and student profiles. For example, there has been a marked increase in student preferences for flexibility, such that in 2004–2005, 45 per cent of domestic students had attendance patterns other than internal full-time (OECD, 2007). Additionally, increasing numbers of full-time students are also in paid employment, with a nine per cent increase recorded between 1994 and 1999 (Bell, Bush, Nicholson, O'Brien, & Tran, 2002). Recent figures suggest that more than 70 per cent of full-time undergraduate students work during semester (Bradley, 2008), while "over half of undergraduate and postgraduate part-time students indicated that their work commitments adversely affected their performance at university, causing them to miss classes. (James, et al, 2007, cited in Bradley, 2008, p. 50-51). These demographic shifts contribute to increasing consumer demand for high quality university opportunities that enable students to meet complex workplace, family and lifestyle commitments.

The Australian federal government recognises the significance of online education as a means of enabling universities to address the needs of these rapidly changing and expanding student cohorts (Department of Education Science and Training, 2005). In particular, information and communications technology infrastructure that improves "the cost-effectiveness and quality of educational delivery" (Department of Education Employment and Workplace Relations, 2006, p. 26) constitutes one of the four major areas targeted for capital development by the Australian Federal Government, which in 2006 approved the allocation of $22.9 million in 2007 and $70.9 million in 2008 and 2009. There is also acknowledgement that more research is needed to understand the complex curricular, pedagogical and cultural issues that remain unaddressed in online education (Bell, et al., 2002; Organisation for Economic Cooperation and Development, 2007). The change of federal government in 2007 introduced additional commitments to both education and online learning technologies. The Joint Ministerial Statement for ICT in Australian Education and Training (2008-2011), which was subsequently endorsed by the

Ministerial Council on Education, Employment, Training and Youth Affairs and the Ministerial Council for Vocational and Technical Education, commits to:

> National, cross jurisdictional and cross sectoral approaches through the Australian ICT in Education Committee to address the ICT enablers of technology rich learning environments: developing educators' capabilities; access to computers and ICT equipment; secure and robust infrastructure, including broadband; systems and architectures that support access, transfer and sharing of information within and between institutions; and affordable access to appropriate online learning resources.
> (URL:http://www.aictec.edu.au/aictec/webdav/site/standardssite/shared/JMS on ICT in Australian Education and Training.pdf)

In addition to these commitments, the Joint Ministerial Statement cited above acknowledges that leadership will be a key to achieving stated intentions of creating flexible learning environments and supporting educators to enhance their ICT capabilities. As will be discussed in the following sections of this paper, however, our study shows that factors such as a lack of succession planning and insufficient understanding of teacher attitudes and professional values to online learning and teaching continue to contribute to reduced success in achieving sustainable online course delivery.

Background Notes Regarding to the Study

The research findings analysed here are drawn from a qualitative comparative study conducted from 2008-2009 in the education faculties of five Australian universities, all delivering undergraduate teacher education programs either 'fully online' or 'web dependant' (Bell et al., 2002, p.37). Following ethics approval, three to four interviews were conducted at each site within the education faculty. Participants included each faculty's Associate Dean of Teaching, who would usually have responsibility for overall program delivery in the faculty; one or two academics involved in design and delivery of online undergraduate teacher education courses; and the educational software designer responsible for the technological aspects of program delivery. Interview questions centred on key aspects of policy decisions and their implementation with respect to online learning and teaching, as well as key factors seen by participants as impacting on the effectiveness of online curriculum practices. Participants were also asked to comment on ways in which academic and professional values relevant to teacher education are developed in online teaching spaces. Subjects being taught online by the academics we interviewed covered a range of topic areas, but were not primarily connected to practicum units.

Interviews were digitally recorded and transcribed. Transcripts were de-identified, and the names of institutions and participants are represented here by the use of pseudonyms. Data were coded by theme using N*vivo qualitative software. Themes emerging from the study included institutional priorities, technical challenges and supports for staff, pedagogic approaches, and professional values and identities. Interviews within each institution, including participant descriptions of key issues and events, were compared for accuracy. This was supplemented by additional observational notes pertaining to each site, and, where available, examination of relevant university policies. In analysing factors that participants in our study spoke about as significantly shaping online educational delivery, we identified key disjunctions in the ways that participants viewed the purposes of online education.

These views in turn are understood here as significantly shaping and shaped by participants' orientations to pedagogy, and the professional values to which they subscribe. Each of these is analysed in the following sections, in dialogue with participants' views about the policy context already outlined.

Purpose: Tensions Between Product and Practice in Online Education Delivery

A key theme emerging from our study is the disjunction between managerial views of the purpose and benefits of online education and the views of academics teaching in those spaces. In an intensely competitive climate, academics responsible for online course delivery often voiced concern about the tensions between meeting the learning needs of students, and the economically oriented demands of tertiary institutions, whereas managers generally spoke of such tensions as indicative of teaching practices that no longer served the purpose of meeting market demand for online education. The managers were keenly aware of commercial pressures to compete in the global education marketplace, and in turn oriented their goals pertaining to online education toward having a complete educational product that can be offered in the local and global marketplaces. Other market drivers such as implementing online technologies as an indication of university courses being flexible, efficient and relevant were also mentioned. Larreamendy-Joerns and Leinhardt (2006), state that 'universities attempt to seize the online market with the expectation of expanding their reach, increasing revenues' and utilising online education as 'both a medium and a message of educational innovation' (p.571). Managerial focus on the need for commercially available educational product is illustrated by one senior administrator's comment that:

> From a faculty point of view, it's nice to have the product on the shelf …and when you drill down in, you know, you've got your readings and your activities and your assessment items and so on…So from a management point of view, getting that out of lecturers heads and getting it into some sort of format which we could call it product if you like, is not a bad idea, because you often get people who think of curriculum in that way, you know, people internationally, overseas, and so on, who think of curriculum that way and want to come and buy it. And when we are approached like that as a faculty, you think, well, they want to buy something off the shelf. (Gerry, senior management, interview #3, 2008).

Gerry also added that educational products must be complete; with a view to being 'market ready' in a format that readily meets the expectations of consumers. Academics are constructed, in Gerry's account, as repositories of information, which must in turn must be processed, packaged and marketed by faculties and institutions for online delivery. In this view, curriculum, pedagogy and assessment are not seen primarily as processes in which students participate, but rather are transformed into a saleable product that can be selected and purchased from 'off the shelf'.

Managers of learning and teaching in other institutions expressed similar views that academics must accept the need for increased online course offerings and adjust to supporting faculty or university driven market-oriented teaching initiatives. A senior faculty manager from another university, Kim, observed that academics in her institution, 'see the writing on the wall' as online learning has 'been a huge push by the faculty… you can't get out of it, it has to happen' (Kim, senior manager,

interview #9, 2008). In Kim's view, institutional viability in the intensely competitive tertiary sector is dependent upon adequately addressing the demands of the marketplace. In an institution where student enrolments in some other faculties were declining, enrolments had increased in Kim's department with the introduction of online courses. Because of the perceived imperative to maintain student numbers via online offerings, she considers that reluctance or refusal of staff to work in online environments as 'a performance issue' and accepts that her institution's decision to incorporate online learning 'has been driven not by philosophy – but certainly by a strategic decision' (Kim, senior manager, interview #9, 2008).

Kim's words constitute a dire warning for staff contesting wholesale uptake of online learning focussed on corporate ideals. Similarly, Gerry maintains that it is not up to individual academics to dispute the incorporation of online learning because 'the reality is, you've got to engage with it because it's not going away' (Gerry, senior manager, interview #3, 2008). The managers we interviewed generally acknowledged the conceptual, temporal and ideological demands that shifts toward online delivery placed on individual academics, and some had invested additional resources such as technical support and training in order to facilitate the transition. However, they also maintained compliance requirements associated with adopting and adequately performing within the online educational environment (Bell, et al, 2002) with the express purpose not of addressing pedagogical needs, but rather of meeting market demand. As Larreamendy-Joerns et al observe, 'business models may dissociate, in the name of efficiency, course conceptions and development from their pedagogical enactment' (2006, p.583).

By comparison, the teacher educators who participated in the study placed much greater emphasis on the importance of learning relationships in their accounts of implementing online education. Typically, they voiced concern that particular pedagogical approaches may be compromised in online settings. A number argued that the crucial elements of learning and teaching are not located within, and cannot be experienced through, pre-packaged product content. Instead, they constructed the success of learning and teaching as integral to and dependant upon the quality and engagement of the pedagogic encounter (Saltmarsh and Sutherland-Smith, 2010) For those who were positively inclined toward using online modes of delivery, student learning was seen as best facilitated through multiple opportunities to explore options and share learning experiences with peers in the online space. For example, Jack is a senior academic who describes some activities with students while using Second Life as a virtual teaching space:

> …we actually did excursions in Second Life where from the tutorial room we would actually go off to a place where they were showing simulations and they would see how simulations could be used in a Second Live environment, and we would go somewhere else where we could look at where online role playing could be used and use those activities as discussions starters around the actual readings…(Jack, interview # 8, 2008)

> …we're just looking at different tools that can be used for various things…all throughout the environment there's a whole lot of little break out rooms, here is quite a large one for people to sit on, this one moves which is…but they could go off and say they actually like being able to go off different places in the environment and have discussions well away from everybody else…(Jack, interview # 8, 2008)

For participants who were more sceptical about online education, the online environment was not seen as conducive to the high levels of student interaction, student-centred learning and authentic task discussion that they considered most important elements of pedagogy.

Pedagogy: Approaches to Online Learning and Teaching

In contrast to managerial concerns with the development of commercially viable educational products, the participants in our study who were teaching in online environments concerns focused on the quality of student learning experiences in the online environment. These participants saw their teaching practice as shaped primarily by philosophical and pedagogical, rather than political, drivers. In particular, they spoke at length about efforts to engage students in quality learning opportunities and ensure that their teaching approaches continue to reflect student-centred learning. While generally sceptical of political and economic motivations for the introduction of online education, the academics we interviewed expressed openness, and in some cases a very strong commitment to, exploring the potential that teaching online offers.

Creating opportunities for students to engage in social interaction and collaborative activities, and encouraging a diversity of perspectives and dynamic exchange, were seen as essential elements of effective pedagogy. Overwhelmingly the academics we interviewed considered teaching online to be more demanding than in face-to-face classrooms. Reasons cited for this included the perception of online learning spaces as impersonal, potentially isolating and seemingly disengaged from embodied interaction, concerns they applied to the experience of both students and teaching staff. As we have written elsewhere (Saltmarsh and Sutherland-Smith, 2010), beliefs about pedagogy can be a significant means by which teacher educators construct professional and personal identities. It is perhaps not surprising, then, that there was a tendency amongst these participants to see their role as bridging the perceived divide that exists in the space of technological mediation.

Marty, for example, who is an experienced online teacher, uses the online virtual world, Second Life, as a pedagogical tool. However, he is wary of virtual spaces within Second Life that mimic offline teaching spaces, seeing these as potentially working against the notion of learner creativity that he is endeavouring to foster:

> I deliberately don't use classrooms and places like that [in Second Life]…so trying to break down that very notion that learning occurs in this set space, you know, learning occurs in the classroom or in the lecture theatre, you know that there seems to be an assumption that learning doesn't happen outside that, in a formal sense, that you know, everything else is just stuff. (Marty, teacher educator, interview #2, 2008)

Instead, Marty encourages students to build more interactive spaces in Second Life, which he sees as stimulating learning exchanges. He sees exchanging ideas, developing broad technical skills and communicating effectively in collaborative contexts as important aspects of online pedagogical practice. He says, 'I see my role as engaging the students with this domain, not leading the charge or giving them the answers, and by doing that, they're forming their own support communities'. For Marty, student experimentation enables students to direct their own learning objectives.

The potential for student creativity in virtual environments is also a theme reiterated by Jack, for whom the pedagogic focus needs to be on students working 'to create activities that will assist others to learn various things or to share their knowledge or share their research projects' (Jack, interview #8, 2008). Like Marty, Jack uses collaborative assessment tasks based on research and interactive assessment design that is driven by students. The emphasis that both of these educators give to collaborative pedagogical practices; learner experimentation and co-production of knowledge, bear little resemblance to managerial concepts of online education as a pre-packaged course product. This is not to suggest that the managers in our study are opposed to or unsupportive of such approaches—indeed, we note that despite being keenly attuned to policy and economic drivers, a number of the senior managers we interviewed had supported extensive programs for professional development with a view to ensuring the quality of online educational programs. Rather, we are suggesting that there is a considerable disconnect between the language of online education as part of institutional positioning within a market sector and discourses of pedagogy predicated on creativity, flexibility and experimentation understood as most beneficial for learner engagement in online environments.

Not all of the teacher educators in our study appeared as comfortable with online teaching and learning as Marty and Jack. Carol, for instance, voiced concerns about what she described as a perceived loss of personal contact when teaching online:

> In the on-line environment I'm really conscious that I don't have body language and I don't have nuance in tone of voice … generally speaking in an on-line context you have fewer resources, there's less streams of information that give you a sense of a person and what the person's interests and interaction and needs are. (Carol, teacher educator, interview #7, 2008)

Like others in our study who expressed deeply held personal attachments to co-present models of teaching and learning (Saltmarsh and Sutherland-Smith, 2010), Carol maintains that to offset the absence of physical presence in her online classes, she must create spaces for student communication and interaction seen as necessary for students learning relationships with teaching staff and one another. Unlike Marty and Jack, for whom online and virtual spaces offer multiple possibilities for collaboration and interaction, Carol sees online teaching as a 'stripped back' practice. While she concedes that main ideas can be communicated well in the online environment, she maintains that:

> Because it is so print and symbol dependant and mediated, issues of representation and interpretation are moving through much narrower channels and so … you get the core but you miss all the peripheral stuff that shapes it. (Carol, teacher educator, interview #7, 2008)

Carol argues that purposeful, authentic tasks draw on learner's prior experience and ask them to reflect on new experiences, and that such tasks in turn assist students in overcoming what she sees as the reduced visual or linguistic signals in face-to-face learning spaces. Carol's view of face-to-face classrooms as 'the privileged scenario for learning', and that alternative spaces threaten 'the very essence of quality education', is not unusual (Larreamendy-Joerns & Leinhardt, 2006, p.572). In fact the success of online learning spaces is often measured in terms of an ability to emulate face-to-face characteristics (Panko, 2005), and particularly in the case of teacher educators whose sense of personal and professional worth are heavily invested

in notions of pedagogy that are reliant on teacher and learner co-presence (Saltmarsh and Sutherland-Smith, 2010).

Our point here is not to support or contest any one view of pedagogy, but rather to highlight the significance of deeply held views about pedagogy to the ways in which online education is taken up, resisted, and evolves within a particular institution. That being the case, we would argue that pedagogy needs to be discursively re-situated—not as a practice that facilitates online program implementation, but rather as an a priori condition that drives it, even when it is not recognised as such.

Practicalities: Time, Cost And Sustainability

In our study, managers and academics alike expressed frustrations about the competing agendas and imperatives that shape their respective workplace responsibilities. While teaching staff generally queried the wisdom of treating online education as a product for global distribution, managers tended to see the transformation of existing teaching models into programs suitable for online delivery as pivotal to ongoing institutional viability. Irrespective of such differences, though, there agreement amongst participants about a number of practicalities that most significantly contribute to the ongoing success and sustainability of online education within a particular institution. In particular, these pertained to the ways that online teaching is valued and supported in terms of the resources devoted to it, most notably in the form of time and costs associated with workload allocation. Participants also considered strategic planning and shared goals to be important for sustaining online program delivery.

Despite rhetorics of excellence in teaching, and the interest that managers expressed in ensuring the quality of online programs, the academics we interviewed shared a sense that their personal and professional goals associated with pedagogy were not really valued by their institutions. Gerry, a senior manager, concurs:

> Universities worry more about where they are in terms of research and in terms of where they sit against other universities…the reward is for managing the teaching, although they do sort of pay lip service to the creativity and the innovation of teaching through showcases…but really, when they look at the management of universities and they look at the key performance indicators of how well the faculty's doing in terms of teaching…I'm not sure that it's valued. (Gerry, senior manager, interview #3, 2008)

A key point of contention amongst the academics and educational support staff we interviewed was that whilst universities promote online teaching as a necessary activity for universities to engage in, there were numerous instances in which online teaching had been treated as a second-class pedagogical practice. Most considered that teaching is neither supported by sufficient infrastructure, nor allocated appropriate workload for the time taken to develop, teach and administer online courses. As Larreamendy-Joerns and Leinhardt (2006) observe, sustaining high quality online course delivery is jeopardised when academics deem their online teaching load 'oppressively time consuming' (p.576) and are reluctant to devote additional hours to online course preparation as it does not attract the same workload as face-to-face teaching. As we have noted elsewhere in this paper, some of the managers we interviewed had endeavoured to provide additional supports, particularly when initially introducing online programs. However, such supports were generally

seen as temporary initiatives for the purpose of easing inexperienced or reluctant staff into new roles of teaching online rather than face-to-face modes.

Despite issues such as increasing student numbers and the need to keep abreast of technological advances in order to maintain quality in online educational environments, what was less evident from these interviews was the development of longer term strategies for supporting teaching staff in ongoing ways. The teaching academics we interviewed overwhelmingly considered that while universities were eager to derive profit from online program delivery, they were less inclined to invest in technical training and support, or to employ the number of staff seen as appropriate to the task of effective online education. For example, Sarah, who co-ordinates quite a number of online courses, observed, 'The first unit that we did online that I taught had 280 students and we averaged 1000 messages a week for the whole semester' (Sarah, teacher educator, interview #5, 2008).

Sarah felt that there was a lack of appreciation on the part of management of the time constraints and personal pressure associated with a large volume of email traffic, particularly when the unit about which she was speaking was only one of the units she was involved in teaching. She considered that the faculty-wide decision to wholly embrace online learning had neither been supported logistically, nor adequately resourced. In her institution, the expectation was that academic staff would have to find ways to alter their practices in order to adjust to the increased volume of student queries, yet without any formal process of review for considering the implications of such increases on the actual quality of online educational delivery.

A senior manager at the same institution, agreed and added that the university, 'Hasn't got an e-strategy or any framework …it hasn't decided who its university cohort of students should be or could be, so it hasn't really come to grips with where it sits in the global environment' (Kim, senior manager, interview #9, 2008). Although Kim is committed to supporting the implementation of online units, she feels that the exponential growth in student enrolments in online courses means staff teaching those courses have reached breaking point in terms of coping with student queries and demands, and admits that this is not necessarily reflected in workload allocation. Kim reports having consistently argued to redress this imbalance, but considers that other managers above and below her within the faculty structure do not necessarily appreciate the additional time taken to prepare, set up and administer large cohorts of students in online environments. She noted that management appeared to 'labour under the delusion' that the software and information technical support staff had responsibility for those aspects of online education, observing that her repeated efforts to have the issue addressed had thus far been unsuccessful.

Dierdre, an educational designer from another institution, alluded to similar unresolved workload and teaching issues that she sees as creates problems for the sustainability of courses. She observed, for example, that when individual teachers who commit substantially more hours than is reflected in their workload to making online courses succeed, quit the faculty or university, there is often no one able or willing to continue online course development under similar conditions. Despite staff in her department creating a highly successful online teacher education subject, Dierdre observed, faculty management 'let it go, they ended up letting it go because as people left, they didn't quite know how to manage successive people' (Dierdre, educational designer, interview #10, 2008). The lack of succession planning spoken about by a number of staff we interviewed is a practical concern that merits much greater consideration if online learning and teaching are to continue to push

innovative boundaries, as espoused in so many university mission statements and learning and teaching policies.

Some of the academics we interviewed also considered that some managers appeared to be impervious to what Dierdre calls, 'the actual, the real cost, the human resource cost' of online work. She expands on this point, saying:

> Teachers had to develop their units; they had to learn how to think differently for teaching online, they had to learn the technologies, and they were very tight time frames, and you know, as I came in and observed I thought, you know, this is a huge ask of staff, and, yeah, there just seemed to be a lot of issues associated with it … everybody was working like mad and trying to come to grips all this, and there was a lot of stress, a lot of stress. (Dierdre, educational support staff, 2008 interview #10)

Engaging in dialogue about these issues is crucial for universities endeavouring to create sustainable online course delivery that meets international demands for higher education to provide courses that are: 'value adding, learner-centred, high quality, equitable, responsive, diverse, innovative, flexible, cost-effective, publicly accountable and socially responsible' (OECD, Thematic Review of Tertiary Education, 2007, p.8). As the experiences of our participants highlight, pedagogic principles and commitments can be undermined and overwhelmed by external pressures that treat pedagogy and professional values as subservient to the economic interests of the institution. Attending effectively to practicalities such as the time required for program development and delivery, the actual human resource and technical costs, and the need for strategic succession planning are all crucial to producing and maintaining quality online education.

Conclusion: Minding the 'P's

This paper highlights significant issues confronting the delivery of online programs in Australian teacher education, and argues that from policy through to implementation, there is a need for policy makers, managers, and academic staff alike to carefully attend to the purpose, pedagogy and practicalities associated with online education. At the policy level, we would suggest, there is a need for alternatives to economically and politically driven motivations for online education. As several academic participants in our study pointed out, education conceived as a marketable product often fails to deliver the expected outcomes, precisely because the purpose of education is understood by students and educators alike as extending beyond that of commercial transaction. However, such views operate in tension with the imperatives perceived by managers (many of whom have themselves worked as teaching academics) to be driving institutional moves toward online education.

With regard to pedagogy, our data suggest that the pedagogic orientations and approaches taken by staff play a significant part in the success or otherwise of online program delivery (Saltmarsh and Sutherland-Smith, 2010). We would argue that there is a need for greater recognition at all stages of online program development, implementation and delivery about the extent to which staff identities and professional values act as barriers to, or facilitators of, innovative and professionally relevant online courses is crucial. Indeed, pedagogy is an important factor in academics' interpretation and implementation of policies framing learning outcomes and graduate attributes. Greater understanding of and responsiveness to the

significance of academics' pedagogic orientations, practices and values on the part of university management and policy makers would be an important step in understanding what works and what doesn't in online education. Further, such understandings are crucial for stimulating much needed discussion about new ways of approaching online delivery in a continually changing sector.

Finally, the view taken here and supported by the findings of this study, is that practicalities associated with human resources, technical support services and succession planning must be given far greater priority in the Australian university sector. This is necessary for achieving departmental consistency over time with respect to the online program delivery, as well as for safeguarding the quality and sustainability of online programs. An important part of succession planning includes greater acknowledgement actual human resource cost of developing and delivering online units of study. Without such acknowledgement, and a commitment to addressing its implications, university educators will continue to struggle with unrealistic and exploitative demands, and university managers will struggle to generate enthusiasm and innovation amongst the academic and support staff for whom they have responsibility. In short, we argue, on the basis of these findings, that minding the 'P's of online education—purpose, pedagogy and practicalities—can provide a helpful starting point for productive dialogue between teachers, policy-makers and management, and provides the foundation for developing and sustaining quality online learning and teaching environments.

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