

Emerging strategies for a sustainable approach to professional development

Kuki Singh

Curtin Teaching and Learning
Curtin University

Judy Schrape

Curtin Teaching and Learning
Curtin University

Jacqui Kelly

Curtin Teaching and Learning
Curtin University

Recent elearning trends in higher education are unleashing non-traditional professional development strategies. Employing a pragmatic approach to research, an evolving evidence-based practice within an Australian university is examined to establish a set of guidelines for sustainable professional development practices. A combination of traditional and non-traditional professional development strategies are described and staff participation and strategic impacts are analysed. Whilst current initiatives demonstrate good practice in terms of approach, strategies, contexts, content, and quality indicators, incumbent challenges include a demonstrated preference among staff for traditional workshops, voluntary participation which contributes to uneven elearning development, and the absence of formal follow up on transferability of skills and impacts. The study concluded that a purpose driven, multi-dimensional professional development approach that is embedded across all layers of the organisation advances sustainability. Six design principles are proposed for the achievement of sustainability within a centralised professional development service at an Australian university.

Keywords: elearning, professional development, sustainability.

Introduction

Approaches to professional development in higher education is increasingly influenced by evolving models of teaching and learning, impacted by trends in technology. Four significant technology trends are extended access to educational resources; relationships supported by the ease of internet access; the expectation to be able to study anywhere, anytime facilitated by advancements in mobile technologies; and the capacity to learn in collaborative and engaging online spaces with rich resources using social media and cloud based technologies (Johnson, Levine, Smith, & Stone, 2010; Johnson, Smith, Willis, Levine, & Haywood, 2011). Staff development challenges associated with these trends are the expectation for staff and their students to be digitally literate; for staff to acquire the skills to work effectively within models of education that have emerged from the economic pressures of the last decade (e.g., large classes, diverse cohorts, multiple study periods, offshore partnerships, multiple delivery modes); for staff to keep pace with the proliferation of information, tools and devices integrated within learning environments; and for staff to understand and apply new metrics of evaluation in their work. These challenges are further compounded when the time pressures academics already face are factored into achievement of the common goal of effecting change in understanding, practice and beliefs in technology integrated environments (OECD, 2009; Wells, 2007). Such conditions are driving efforts to obtain new and sustainable ways of approaching staff development in higher education environments.

In this paper we examine our response to these trends to bring about sustainable change in knowledge, skills and attitudes amongst staff, with the use of non-traditional professional development strategies to complement a long standing traditional approach. Whilst 'leading in a climate of change' we analyse the sustainability of these emergent professional development strategies and extract a set of design principles to guide our future work.

Sustainability in professional development and learning

We take a broad perspective on sustainability in our work practice by examining the strategies we employ to promote staff engagement in elearning development that reaches beyond once off training and proof of concept teaching development projects to achieve change that is both strategic and embedded. To fully conceptualise our

approach, we draw from three related concepts: professional development, professional learning and sustainability.

The terms professional development and professional learning, although often used interchangeably in the profession, are differentiated in the literature. Authors such as Little (1999) and McLaughlin (1994) suggest that professional development refers to something that one ‘does’, or that ‘is provided’, or is ‘done to’ staff. It involves both formal and informal activities that “engage teachers or administrators in new learning about their professional practice” (Knapp, 2003, p. 112), and includes “activities that develop an individual’s skills, knowledge, expertise and other characteristics” (OECD, 2009, p. 49). This traditional approach is generally associated with generic workshops and in-service training, and has attracted much criticism for being fragmented and decontextualised. The use of the term professional learning signals a shift in thinking, as Knapp elaborates, “it refers to changes in thinking, knowledge, skills, and approaches to instruction that form . . . teachers’ or administrators’ repertoire” (pp. 112-113). This shift signals changes in one’s capacity for practice or changes in one’s practice itself. We are mindful of the shifts in thinking denoted by these terms and embrace the new directions within our work. To this end, Day and Sachs’ (2004), Wells’ (2007), Grant’s (1996) and Applebee, McShane, Sheely and Ellis’ (2005) explanations provide us with a cohesive conceptual understanding. We view professional development as encompassing formally planned and naturally occurring activities that staff may engage in collaboratively or independently, to acquire and develop ideas, knowledge, skills, attitudes and practices that bring about change in their work and foster inquiry-based learning within a supported environment. Therefore, our view of professional development is responsive to the shifts in thinking represented in the literature, and is articulated in our interchangeable use of the terminology within this paper. Our use of the term sustainability broadly refers to the capacity to achieve durability in practice. Our primary consideration of sustainability is from the perspective of achieving shifts in knowledge, skills and attitudes that contribute to lasting change in technology integrated teaching and learning practices. Additionally we consider sustainability in terms of our approach to addressing staff needs and institutional priorities in a timely and resource efficient manner.

We contend that our approach aims to reach beyond traditional professional development strategies that typically involve one-off workshops with limited continuity or contextualisation based on a model of expert-to-novice knowledge and skills transfer. Such an approach offers limited sustainability with its focus on ‘just in time’, discrete improvements in practice focused largely on individuals, making it resource intensive compounded by scheduling difficulties and low participation (see Kelly, Singh, & Schrape, 2011). In fact, the Westchester Institute for Human Services Research (2012) claims, “such conventional forms of professional development have little effect on educator practices, organizational changes, and student outcomes” (para. 9), raising concerns over strategic impacts and sustainability.

Our approach to professional development and learning aims, therefore, to strengthen links to classroom practices; create ongoing, self-directed and collaborative opportunities for staff to engage in elearning developments; to keep abreast of emergent trends in educational technologies to promote innovative pedagogies; and to enhance research led teaching. This aligns our approach to professional development and learning to some of Hawley and Valli’s (1999) influential design principles. The strategies we employ incorporate contemporary approaches such as teacher networks, joint networks, collaborations, action research, mentor programs and peer coaching, as we believe these address complex and multifaceted needs, including that of strategic and sustainable practice.

Approach to the design of professional learning and development

Given the multiple layers of elearning development strategies that have evolved in our practice, we sought an approach that would allow us to derive evidence-based claims about our work. A design based approach was considered suitable as it would enable us to develop a set of principles to guide our practice in iterative cycles (Barab & Squire, 2004). Additionally, this was a preferred approach because it allowed us to address the messiness of real-world practice, recognise the influence of the local context including the multiple dependent variables, and capture the social interactions in which our work is embedded. Most importantly, it values the staff as participants who contribute to the design and evaluation of our practices (Collins, 1999).

This approach enabled us to situate our analysis and reflection in the local context, enabling us to theorise our work by focusing on contextual aspects including staff participation data and our responsiveness to elearning developments, and to uncover a set of guidelines for future work.

Professional development strategies

The complex organisational nature of universities, accompanied by evolving pedagogies, requires multiple professional development strategies to effectively address needs, respond to emerging trends in teaching and learning and facilitate improvements. We 'push' information out to staff by modelling the use of web 2.0 technologies, and we 'pull' staff in through traditional workshops. Our group and project learning strategies combine both approaches. Our use of a combination of 'push' and 'pull' strategies converge to contribute to strategic teaching and learning goals. However, it is problematic to demonstrate a direct link between the professional development opportunities we offer and teaching and learning enhancements (Ingvarson, Meiers, & Beavis, 2005; Meiers & Invarson, 2005). At best we claim a convergence across these areas, evidenced consistently through eVALUATE, the university's online system for gathering and reporting student feedback on teaching and learning experiences, and CASS, the Curtin Annual Student Satisfaction Survey data on students' elearning experiences.

e-Newsletters

Electronic newsletters are published monthly in a university blog as well as via a broadcast email to all staff. Topics on emerging educational technologies and their pedagogical applications are strategically selected to raise awareness and stimulate interest among staff. Typically a member of the elearning team volunteers to draft a newsletter on a topic of interest, and the document is then developed collaboratively. To date we have produced 32 e-newsletters on topics ranging from *Using Skype in Education* to *Interactive Rubrics*. Anecdotal feedback from staff suggests this is a highly valued professional learning resource, providing timely information throughout the semester. The collection of e-newsletters is located at: <http://blogs.curtin.edu.au/ceI/category/ceI-newsletter/> and is available beyond the university. Pushing out information and teaching tips in this way, provides an ongoing source of professional learning designed to raise staff awareness, knowledge and skills about teaching with technology issues. Modelling the use of the blog tool tacitly promotes staff engagement with web 2.0. The e-newsletters also serve the strategic purpose of raising the profile of the Centre and its services, mainstreaming elearning. We find this a sustainable strategy as it strengthens team collaboration, disperses the workload, and generates university wide reach in an efficient and effective manner.

Curation – Scoop.it

The recent increase in the rise of content aggregation tools has provided new opportunities to quickly and easily organise, summarise and share (republish) information on topics of interest. One such tool currently being trialled at Curtin is *Scoop.it* (<http://www.scoop.it/>), which offers a magazine style layout of curated topics. Users are permitted to publish up to five topics at no cost, and our subscription at a nominal monthly cost permits the creation of up to 20 Scoop.it topics.

To integrate and facilitate adoption of cloud-based curation tools we are increasingly embedding curated topics within related professional learning resources made available via our website. In the first two months of adoption we are managing 14 topics and we have received over 14,300 views since adoption mid April 2012, with an average of 140 views per day. Our curated topics include current interests in *Mobile Learning in Higher Education*, *Learning Analytics in Higher Education* and *Open Educational Resources*. Curation offers a dynamic and flexible means of extending our professional learning offerings within and beyond the university, making this a sustainable team based strategy that we use to strengthen a range of existing resources, and simultaneously generate interest and build knowledge in current educational trends.

Website Resources

The Curtin Teaching and Learning website (<http://ctl.curtin.edu.au>) is an information hub where staff can access resources and information. Resources focused on good practice guidelines and tips addressing e-pedagogy, learning technologies and using *Blackboard*, are updated regularly. Information and access to projects, policies and documents, services and news and events are provided. Local case studies are showcased in a gallery area as a further strategy for advancing good practice in elearning. The strategic direction to develop our initiatives in particular areas has meant that we have shifted to tapping into *Blackboard* resources supplied by external providers, as well as continuing to develop 'home grown' tip sheets focused on e-pedagogy. This has enabled us to extend the range of resources to include video and tip sheets covering a wider range of topics, thus adding to sustainability in our practice. The website receives between 3,000-6,000 unique visitors every month, making it a vital professional learning resource for staff. The continuous process of managing the website is highly

sustainable as we utilise the web development expertise available within the team, and all team members contribute to content generation and updating of materials.

University-wide Workshops

An extensive workshop program is run throughout the year. The hourly sessions mainly cover topics designed to develop effective use of *Blackboard* and other integrated technologies. The number of workshops offered for the last three years is as follows: 2010 = 165 (75 + 90); 2011 = 162 (74 + 88); and 2012 = 89 in semester one. All sessions are facilitated by two elearning advisors. Staff self-enrol into sessions using an online booking system. Participant numbers are capped at 10 to allow for small group discussions and hands on practice with the relevant technologies (see Kelly, et al., 2011). The range of workshop offerings and attendance figures during Semester 1 2010, Semester 1 2011 and Semester 1 2012 are supplied in Figure 1.

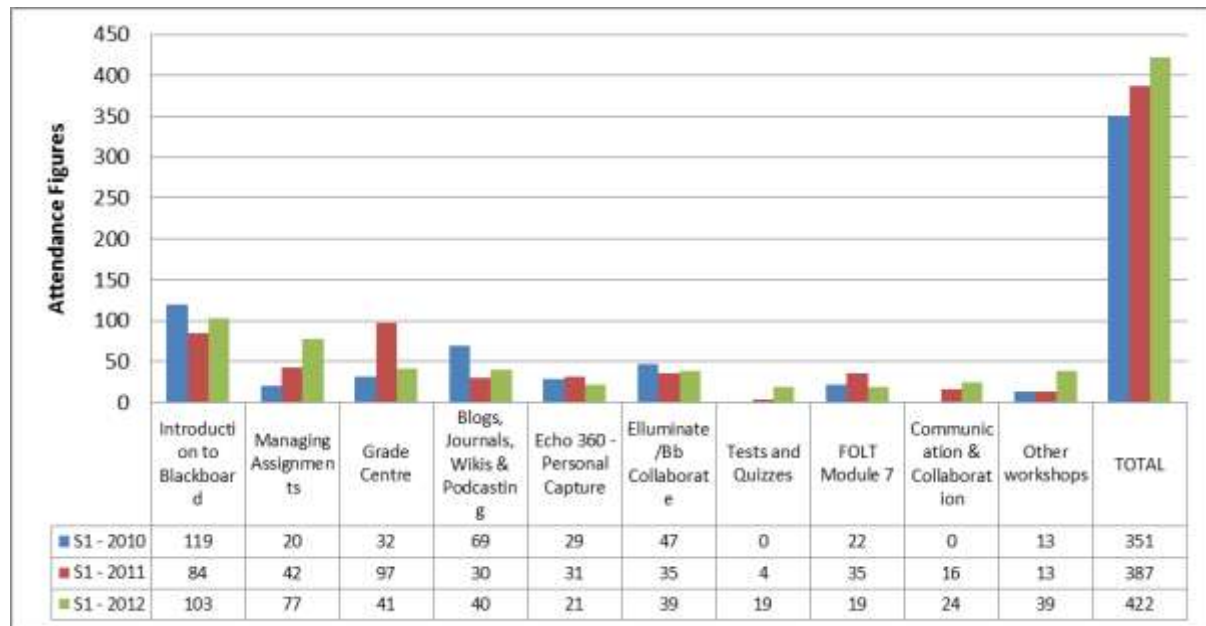


Figure 1: Semester 1 workshop attendance figures over three years

The workshops continue to attract a relatively large number of staff demonstrated by first semester figures for 2010, 2011 and 2012 reaching 351, 387 and 422 respectively. This reflects a participation rate of between 10-12% of Curtin staff (n = approximately 3500). We consider this a reasonably good reach given that less than half of all staff have a teaching responsibility and so the workshops would hold no interest for them. However, the pervasiveness of technology integration across most areas in the university, is contributing to increasing numbers of non-teaching staff attending some of these workshops to further develop their knowledge and skills.

An evaluation survey of the workshop program is undertaken each semester to gauge staff satisfaction. Although participation rates in this survey are relatively low (2010 = 21.7%; 2011 = 26.1%; 2012 = 27.3%), the data provides a snapshot of staff attitudes and the perceived value of this strategy. We attribute the low participation to survey fatigue, timing of the survey, and staff workload issues (see Kelly et al., 2011), and we are cautious not to generalise the high satisfaction results to the population as a whole. Semester-on-semester data for three years supplied in Figure 2 show high overall satisfaction levels drawn from combined ratings of 'good' and 'very good' (2010 = 79%; 2011 = 96%; and 2012 = 90%).

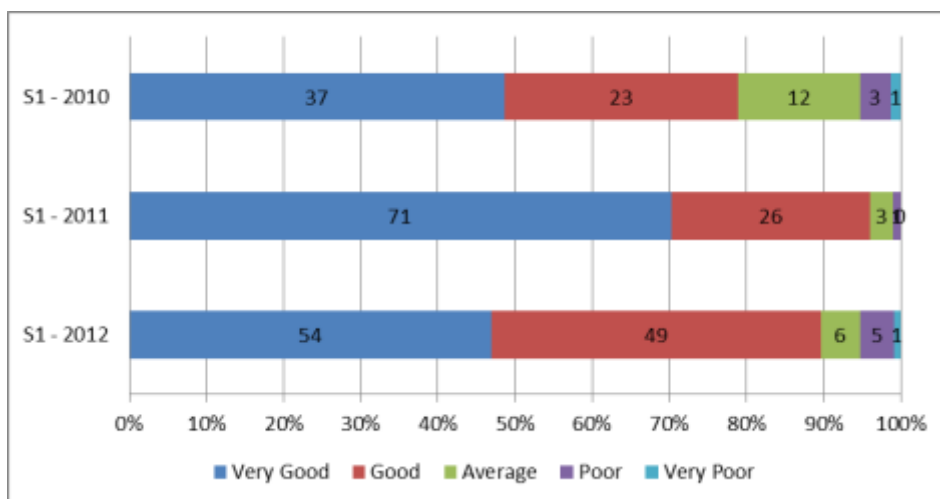


Figure 2: Satisfaction level with workshops attended

Respondents' perceptions of the level of support received (2010 = 89%; 2011 = 86%; 2012 = 83%), and e-pedagogy knowledge gained (2010 = 64%; 2011 = 86%; and 2012 = 87%) was consistently high with an exception in 2010. The latter is likely attributable to the focus on supporting staff to become familiar with integrated web 2.0 technologies as well as developing proficiency in a virtual classroom environment.

The above mentioned evidence suggests that despite being a traditional approach against which much criticism is levelled in the literature, workshops continue to be a much subscribed to professional development strategy at the university, possibly associated with traditional perceptions about 'training' and 'PD' among staff. Despite the criticism that the workshop strategy tends to focus on teaching discrete skills and techniques that fail to accomplish sustained change in teaching practice (Wells, 2007), its usefulness for delivering certain types of information (e.g., when rolling out new technologies) is proven (Little, 1994 as cited in Wells, 2007). However, unlike some of our other professional development strategies, workshops are resource intensive as we offer in the region of 80-90 workshops per semester, each one facilitated by one or two staff. Added to this, attendance patterns and learning needs vary throughout the semester making the workshop program a significant component of our day-to-day workload during teaching periods. They require constant updating of resources, and maintenance of the *Blackboard* training units used for hands-on practice in these lab based workshops. However, staff expectation, satisfactory participation rates, high overall satisfaction and increasing interest among non-teaching staff mean that this is likely to continue to be a core strategy. Criticisms against the conduciveness of this strategy for integration and adoption of new knowledge and skills (e.g., Wells, 2007) are partially mitigated by the complementary strategies emergent within our approach.

Departmental/School Based Workshops

Presentations and workshops are also run for Faculties, Schools and Departments on request and this strategy is particularly useful when rolling out new learning technologies, or upgrading systems. The number of workshops per semester varies from 8-12 with staff attendance ranging from 40 to 84, based on data from the past three years. With representation from Schools across all faculties and more recently non-teaching areas (e.g., the Library and Student Central) as well, this is potentially a powerful means of offering contextualised professional development with reasonably good 'reach,' further demonstrating the impact of our services across the university.

Providing professional development to local environments offers two significant benefits. First, it facilitates greater contextualisation enabling us to more effectively target and address specific needs. Second, it is more likely to generate collegial support and mentoring among staff, with 'early adopters' or more experienced users providing leadership and guidance within specific teams. This strategy facilitates customisation, combatting the limitations of decontextualised offerings. Also, the fact that this is a group based strategy means that we not only reach larger numbers of staff, but also that the potential for cooperative and collaborative engagement within disciplinary based communities is enhanced, all of which make this a sustainable alternative to university-wide workshops.

Communities of Practice

'Communities of practice' are a further professional learning strategy we implement. Borrowing from Wenger (2006), these initiatives strive to "facilitate knowing and learning" to improve practice. Three characteristics apply to this professional learning strategy – (1) The groups have an identity defined by a common interest; (2) Members engage in joint activities and discussions to help each other and share information; and (3) Members are a group of practitioners who develop a shared repository of resources, experiences and ways of addressing recurring problems (Smith, 2003, 2009; Wenger 2006). Building and sustaining relationships among staff across areas of the university and pooling expertise to pursue common interests drives this strategy, making it a sustainable professional learning strategy as the community supports each other in problem solving, sharing information and experiences, reusing assets, harnessing synergy through coordination of efforts, activities and developments, documenting processes, mapping knowledge and identifying gaps, as proposed by Wenger.

The iPad Users Group is one of our communities of practice. Initiated and facilitated by members of the elearning advisory team, this group aims to create a forum for collective learning. An initial meeting was held in March 2012 as a catalyst to bring together as many interested people as possible to share information, ideas and resources on using iPads. A self-sustaining learning group was established to facilitate networking among staff on a variety of topics and issues and a *Blackboard* community space was created to support the group. To meet the diverse needs of the community, multiple interest groups were established with the facility for users to self enrol into the following groups: 'Absolute beginners', 'App development', 'Managing multiple iPads', 'Mine's not an iPad', 'iBooks', and 'iPads in education: Resources, apps, ideas.' The site also provides a range of resources, tips and tricks. In its first week, the community grew to 50+ members and six months later it has reached 227 members. Again, borrowing from Wenger (2006), the iPad Users Group is a collection of people "who share a passion for something they do and they learn how to do it better." Through their regular interactions, they make professional learning a self-driven activity demonstrating the viability of this as a sustainable practice.

The eReps group is our second community of practice. Similar in its purpose to the iPad Users Group, this group, also initiated by the elearning advisory team, is aimed at creating a forum for collective learning. This thematic group was formed in November 2011 to facilitate communication, networking and support among faculty based elearning staff and our centrally based elearning team. Operating as a community of practice, this group identifies key elearning issues and concerns occurring across the university and shares ideas and resources to meet emerging needs. Meetings are held monthly and are organised to incorporate an open discussion as well as presentations by invited guests and group members. The presentations segment has covered topical issues such as 'Uploading of student assignments/presentations (file size issues)' and '*Blackboard* analytics.' Members can attend face-to-face meetings or join in via *Elluminate Live!* All meetings are recorded, with the minutes and recordings made available via the eReps blog available to Curtin staff (at: <http://blogs.curtin.edu.au/elreps/elreps/>). This initiative serves as a second tier professional learning opportunity, as the focus is on 'teacher-to-teacher' learning to strengthen support and networking through identification of common issues and information sharing to seek solutions. To date, this forum reaches 65 elearning staff located across the university, making it a powerful forum for information and resource sharing and generating good practice guidelines, and is proving to be a highly sustainable practice.

The communities of practice approach, outlined in the abovementioned examples, enhances our 'presence' and allows us to have strategic impact across the university through practices that are highly sustainable.

eScholars Program

A further substantial professional learning opportunity we offer is through the eScholars Program (for more information visit: http://ctl.curtin.edu.au/awards_grants/escholars/eScholars.cfm). As a strategic program supporting the university's flexible learning goals, individual projects implemented by staff, with support from the elearning advisory team, are aimed at promoting quality teaching and learning practices to positively impact the learning experience, student retention, and to support particular cohorts (e.g., first year, large classes, and culturally diverse groups). Aligned to these criteria individual projects also seek to address the technology trends identified earlier. The program is now in its third year, and consists of a \$10 000 scholarship grant awarded to 10 successful eScholar individual or group applicants annually. The grant monies can be used for approved teaching buy out or resources associated with the particular project. The projects involve designing, implementing and evaluating elearning initiatives within particular teaching contexts. This strategy provides an enabling environment, which addresses the barrier of academics being time poor and/or having insufficient resources to explore new educational technologies (Appelbee, McShane, Sheedy, & Ellis, 2005). The

application process is deliberately simple to encourage academics to apply, and the selection process is competitive. Over the lifespan of the project, 95 applications were received, and 20 projects were implemented during 2010 and 2011 and a further 10 are underway. Fourteen projects are reported on in an e-book published in 2012, <http://tinyurl.com/escholar2012> with the remaining projects to be included in a later publication. Figure 3 provides a visual summary of the projects, in terms of the primary learning technology integrated. Most projects were strengthened by their integration of multiple technologies to support achievement of student learning outcomes, including the integration of opportunities to build digital literacies and work readiness skills.

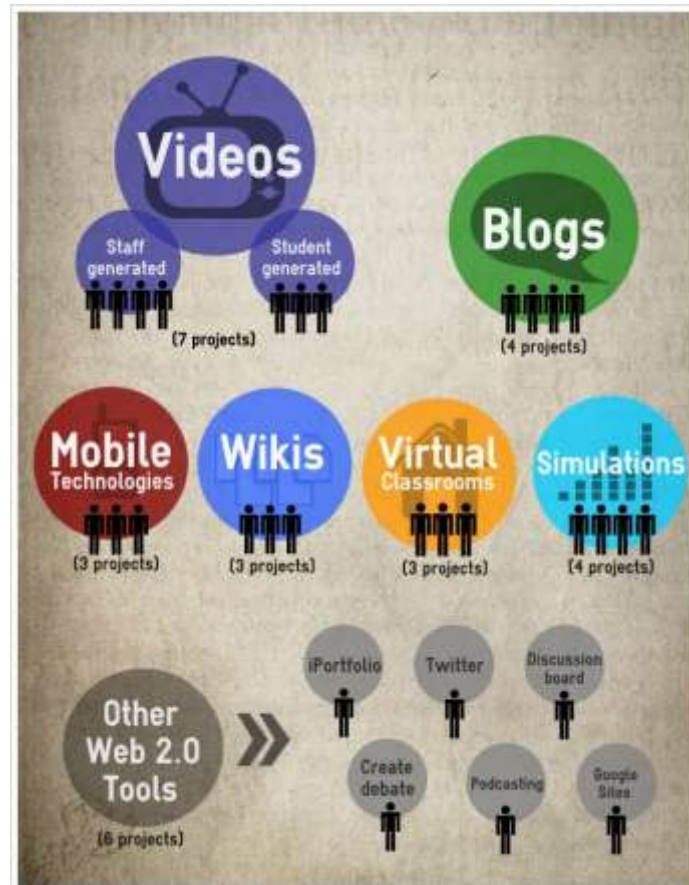


Figure 3: eScholar Projects categorised by learning technology (n=30)

The eScholars program drives professional learning through an integrated approach. It stimulates and gives impetus to improving teaching and learning through an award scheme; it promotes professional learning through action learning (analysing and mapping needs, aligning teaching practice with the university's strategic goals); curriculum development (i.e. designing learning activities, selecting appropriate learning technologies, implementing new elearning pedagogies, and evaluating and reporting the outcomes), and fosters research led teaching. At a more strategic (organisational) level, the eScholars program promotes awareness amongst staff and innovation with educational technologies. Experiences are shared among peers within the university and beyond through video case studies, conference presentations and an eScholar publication. These outputs are reusable resources that are used to showcase innovative teaching with technology at Curtin, and above all, the project makes significant impacts on teaching developments and technology integrated learning.

Discussion

The professional development literature purports that teaching and learning are complex processes that require comprehensive approaches that reach beyond short term, episodic skills training. Traditional one-off workshops of short duration, unconnected to the specific needs of individual teachers and their students and other professional learning activities are viewed as having limited impact on practice.

Therefore, our approach integrates multiple strategies that have been supported in previous research. The diversity in the range of strategies used reflects the different drivers including trends in elearning, the institutional culture and conditions, and responses to local pressures to support staff, similar to issues identified

by Applebee et al. (2005). Our approach is aligned with several of the characteristics of professional development identified by Doecke, Parr and North (2008) and Mayer and Lloyd (2011) whose work focused on effective professional learning approaches for school teachers, but their findings are sufficiently broad to have relevance to higher education environments also. These features include collaborative engagement, experiences being anchored in specific contexts and contextually focused, sustained inquiry, and evidence based practice. Our focus on the practice of multiple forms of professional development, namely formalised activities (e.g., workshops, seminars); informal activities (e. g., discussion groups); immersion and problem solving; curriculum development, action research; coaching and mentoring, and professional networks and communities of practice, is also sanctioned by previous work in the schools sector (e. g., Day, 1999; Knapp, 2003; Meiers & Ingvarson, 2005), and sufficiently address the need for multiple approaches and strategies within higher education settings. In its focus on context, our work is aimed at enabling staff to bring about positive student learning impacts. We do this by providing external expertise to local environments, challenging problematic discourses, creating opportunities for professionals to interact within communities, and ensuring our content is aligned with strategic goals, which are further strategies endorsed by Doecke, et al. With regard to the content of professional learning, our work ensures the integration of knowledge in three areas – pedagogy, students, and technologies, aligning it with Timperley, Wilson, Barrar, and Fung’s (2007) research that focused on the first two areas, and Applebee et al.’s (2005) work which addressed the third area. The quality indicators that guide our work include alignment with strategic university goals; being embedded within teaching; being diverse in form; being appropriate to both individual and group needs; promoting collaborative engagement; inducting early career teachers and those new to elearning; and demonstrating accountability through evaluation of practice, most of which derive support from both Doecke et al. and Applebee et al. Similarly, McNaught, Phillips, Rossitter, and Winn’s (2000) study provided a helpful framework to reflect on and guide the analysis of our professional development approach, particularly its focus on staff issues and attitudes, policy supporting / inhibiting diffusion and uptake, institutional resources, customisation and examples of good practice. We believe the combined elements provide us opportunities to leverage staff engagement to bring about changes in thinking, knowledge, skills and practice.

Whilst our current initiatives reflect good practice principles in professional development with regard to approach, strategies, contexts, content, and quality indicators, it is not without a few challenges. For instance, although we consider the overall participation rate in workshops to be satisfactory, it raises concerns that a large proportion of staff still prefer this traditional form of professional development, which has recognised limitation in terms of transferring and embedding the skills into one’s practice. A further challenge is that it is not a requirement for teaching staff to participate in elearning professional development, yet all staff teach online (to varying degrees), and for many this is a new environment requiring different pedagogies. Associated with this challenge is the notion of staff motivation to participate in available elearning professional development opportunities. Currently this appears to be driven by need and the desire to gain new or additional skills among some, in the absence of a reward and recognition scheme. The latter could significantly increase participation rates contributing to widespread and perhaps a more even spread of elearning developments. A final challenge we face is the absence of follow-up on professional development activities, other than the eScholars program, to gain a better sense of strategic impacts on teaching and learning enhancements. We are exploring how these challenges might be addressed as we move forward.

Having analysed our current initiatives and situated our work within the professional development literature, we are able to extract a set of design principles for sustainable professional development focused on technology integrated teaching and learning within our higher education environment. These six principles articulate some of the ideas proposed by Hawley and Valli (1999) and Wells (2007), and reflects our evolving conditions and practices.

To be sustainable our professional development approach must:

1. Be aligned with the university’s strategic teaching and learning goals, technology trends and infrastructure;
2. Give staff timely access to professional development opportunities that are integrated into a coherent system of recognition and reward;
3. Afford continuous and ongoing conditions, resources and opportunities for innovation and scholarly activity with integrated support and follow-up mechanisms;
4. Embed participant experience in active engagement with educational technologies;
5. Implement multiple approaches and strategies that are responsive to situational complexity and educational change to support knowledge building and sharing across institutional structures.
6. Integrate accountability measures demonstrated through evaluation metrics and quality indicators such as teaching innovation, learning enhancements, leadership, scholarship and sustainability of practice.

Conclusions

In this paper we described and analysed our approach to professional development by reflecting on the traditional and non-traditional strategies we adopt to respond to rapidly evolving educational technology trends. We have drawn on evidence-based practice to construct a set of design principles to guide future iterations of our approach to professional development. Underpinning these design principles is the understanding that technology innovation is both technical and social, therefore professional development should be built around purpose and simultaneously embedded across all layers of the organisation. From this, we conclude that it is necessary to adopt multiple, relevant and sustainable professional development strategies to respond to issues within a rapidly evolving higher educational climate. Our analyses have identified several challenges and raised the following implications to shape our future practice.

Firstly, our design of professional development has evolved from the traditional approach of one-off workshops to a complex and diverse range of activities. Success of this new approach requires positive leadership, strategic direction and the conditions to make advancements in elearning a core activity within the university.

Secondly, leading in a climate of change demands specific and complementary skills and attributes within the elearning advisory team, which facilitates 'stepping up' as agents of change who simultaneously promote innovation through 'lighthouse' projects, develop capacity among staff and embed quality practices in elearning across the university.

Thirdly, all of our initiatives must foster a culture of digital literacy by influencing how staff 'think' about and 'do' teaching and learning, rather than limit our focus to the tools used. This requires stronger shifts towards technology integration to realise new forms of scholarly collaboration and engagement. This shift has already begun to occur in most of our work, but can benefit from continued development in this direction.

Implementation of our guiding principles and mindfulness of the above mentioned implications provides us with direction to shape the next iteration of our approach to professional development.

References

- Applebee, A.C., McShane, K., Sheely, S. D., & Ellis, R. A. (2005). Balancing act: How can universities recognise the scholarly nature of elearning development for university teachers? In *Balance, fidelity, mobility, maintaining the momentum* Proceedings ascilite Brisbane 2005. http://www.ascilite.org.au/conferences/brisbane05/blogs/proceedings/03_Applebee.pdf
- Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *The Journal of the Learning Sciences*, 13(4), 1-14. https://doi.org/10.1207/s15327809jls1301_1
- Collins, A. (1999). The changing infrastructure of education research. In E. C. Lagemann & L. S. Shulman (Eds.). *Issues in educational research: Problems and possibilities* (pp. 289-298). San Francisco: Jossey-Bass Publishers.
- Day, C. (1999). *Developing teachers: The challenges of lifelong learning*. London: Falmer Press.
- Day, C., & Sachs, J. (2004). *International handbook on the continuing professional development of teachers*. Maidenhead, UK: Open University Press.
- Doecke, B., Parr, D., & North, S. (2008). *National mapping of teacher professional learning project*. Canberra: Department of Education, Science and Training (DEST).
- Franke, M. L., Carpenter, T. P., Fennema, E., Ansell, E., & Behrend, J. (1998). Understanding teachers' self-sustaining generative change in the context of professional development. *Teaching the Teacher Education*, 14, 67-80. [https://doi.org/10.1016/S0742-051X\(97\)00061-9](https://doi.org/10.1016/S0742-051X(97)00061-9)
- Grant, C. M. (1996). Professional development in a technological age: New definitions, old challenges, new resources. In A. Feldman (Ed.). *Technology infusion and school change: Perspectives and practices*. Cambridge, MA: TERC Research Monograph.
- Hawley, W., & Valli, L. (1999). The essentials of effective professional development: A new consensus. In L. Darling-Hammond & G. Sykes (Eds.). (1999). *Teaching and the learning profession: Handbook of policy and practice*, San Francisco: Jossey-Bass.
- Johnson, L., Levine, A., Smith, R., & Stone, S. (2010). *The 2010 Horizon Report*. Austin, Texas: The New Media Consortium. Retrieved from <http://wp.nmc.org/horizon2010/>
- Johnson, L., Smith, R., Willis, H., Levine, A., & Haywood, K., (2011). *The 2011 Horizon Report*. Austin, Texas: The New Media Consortium. Retrieved from <http://wp.nmc.org/horizon2011/>

- Ingvarson, L., Meiers, M., & Beavis, A. (2005). Factors affecting the impact of professional development programs on teachers' knowledge, practice, student outcomes and efficacy. *Education Policy Analysis Archives*, 13(10). Retrieved from <http://epaa.asu.edu/epaa/v13n10>
- Kelly, J., Singh, K., & Schrape, J. (2011). Wins and hurdles: The ups and downs in providing professional development in elearning. In *Changing demands, changing directions*. Proceedings ascilite Hobart 2011. <http://www.ascilite.org.au/conferences/hobart11/downloads/papers/Kelly-full.pdf>
- Knapp, M. S. (2003). Professional development as a policy pathway. In R. E. Floden (Ed.). *Review of research in education* (pp. 109-158). Washington DC: American Educational Research Association.
- Little, J. W. (1999). *Organising schools for teacher learning*. In L. Darling-Hammond & G. Sykes (Eds.). *Teaching as the learning profession: Handbook of policy and practice* (pp. 233-262). San Francisco: Jossey Bass.
- Marshall, S. J. (1998). Professional development and quality in higher education institutions of the 21st century. *Australian Journal of Education*, 42, 321- 329. <https://doi.org/10.1177/000494419804200308>
- Mayer, D., & Lloyd, M. (2011). *Professional learning: an introduction to the research literature*. Melbourne: Australian Institute for Teaching and School Leadership (AITSL).
- McLaughlin, M. W., (1994). Strategic sites for teachers' professional development. In P. Grimmett & J. Neufield (Eds.). *Teacher development and the struggle for authenticity: Professional growth and restructuring in the context of change* (pp. 31-51). New York: Teachers College Press.
- McNaught, C., Phillips, R., Rossiter, D., & Winn, J. (2000). *Developing a framework for a useable and useful inventory of computer-facilitated learning and support materials in Australian universities*. Canberra: DETYA, Commonwealth of Australia.
- Meiers, M., & Ingvarson, L. (2005). *Investigating the links between teacher professional development and student learning outcomes*. Melbourne: Australian Council for Educational Research (ACER).
- Organisation for Economic Cooperation and Development (OECD). (2009). *Creating effective teaching and learning environments: First results from TALIS (Teaching and Learning International Survey)*. Paris: OECD.
- Smith, M. K. (2003, 2009). Communities of practice: *The encyclopedia of informal education*. Retrieved from http://www.infed.org/biblio/communities_of_practice.htm.
- Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Iterative Best Evidence Synthesis Programme*. Wellington: Ministry of Education.
- Westchester Institute for Human Services Research. (2012). *The balanced view: Professional development*. Retrieved from <http://www.sharingsuccess.org/code/bv/pd.html>
- Wells, J. G. (2007). Key design factors in durable instructional technology professional development. *Jl of Technology and Teacher Education*, 15(1), 101-122.
- Wenger, E. (2006). Communities of practice: A brief introduction. Retrieved from <http://www.ewenger.com/theory/>

Author contact details:

Kuki Singh, kuki.singh@curtin.edu.au

Please cite as: Singh, K., Schrape, J. and Kelly, J. (2012). Emerging strategies for a sustainable approach to professional development. In M. Brown, M. Hartnett & T. Stewart (Eds.), *Future challenges, sustainable futures*. Proceedings ascilite Wellington 2012. (pp.833-842).

<https://doi.org/10.14742/apubs.2012.1548>

Copyright © 2012 Kuki Singh, Judy Schrape and Jacqui Kelly.

The author(s) assign to the ascilite and educational non-profit institutions, a non-exclusive licence to use this document for personal use and in courses of instruction, provided that the article is used in full and this copyright statement is reproduced. The author(s) also grant a non-exclusive licence to ascilite to publish this document on the ascilite website and in other formats for the Proceedings ascilite 2012. Any other use is prohibited without the express permission of the author(s).