

SELF-DIRECTION AND LIFELONG LEARNING IN THE INFORMATION AGE: CAN PLEs HELP?

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ABSTRACT

This paper offers a perspective on what it means for individuals to learn in the information age and examines challenges concerning learner control and self-direction. Supporting learners and learning are also discussed and considers how the PLE (personal learning environment) idea, as a methodology, can deliver holistic support within and beyond institutional learning engagements.

KEYWORDS

self-directed learning – lifelong learning – LMS
– PLE – web 2.0

INTRODUCTION

The information age—described by Jason Frand (2000, p. 16) as “globally connected, service- and information-intense, digitally based culture”—has witnessed continuing explosion of information and communication technologies (ICTs) and has changed the way people think and operate. This major cultural shift has prompted renewed interests in self-directed learning and, consequently, lifelong learning. Philip Candy (2004), one of the leading proponents of self directed learning, offers a perspective for the increasing twin attractions to self-directed and lifelong learning:

...the growing interest in self-directed learning is being driven not only by its potential value to educators, but by a surge of interest in learning more generally... [V]ital as it is, the learning that occurs in schools, colleges, universities and training centres constitutes only a minute fraction of all the learning that occurs throughout a lifetime... [Which indicates] a great deal of people's intellectual and emotional energy, not to mention their discretionary time, is taken up in work-related learning (pp. 42-45).

The need to maintain currency in ones chosen discipline is more prevalent now than ever before, as well as keeping abreast of the technologies commonly encountered within that field. It therefore necessitates continuing learning across the lifespan (Candy, 2004; Frand, 2000). Seen in this context, the dichotomy between school-based and work-based learning is indeed blurring. As Edgar Faure concludes in his book ‘Learning to be’, education must combine practical experience with academic studies, and it must do this in a way that promotes self-direction and prepares people for lifelong learning (cited in Gibbons et al, 1980). While the ongoing

demands for learning bear good news for those whose business it is to provide continuing education and training, there remain some underlying challenges in responding to such needs. The critical aspect of these challenges is enabling learners’ capacity to manage and control their learning within and beyond institutional settings. This is predominantly due to the systemic limitations of, not only instructional approaches and institutional mindsets, but also the design of technologies that service them.

This paper considers these challenges as it explores learner control and self-direction in the information age. The important distinction between self-direction and learner-control is explained in the second section and suggests strategies for supporting learners and learning. The notion of personal learning environment or PLE, as a methodology towards holistic support for self-direction and lifelong learning is explored in the final section. “The key concept of the PLE is that the use of a Service Oriented Approach allows the individual to choose the suite of tools that they want to work with (their Personal Learning Toolkit), and the PLE is the glue that brings the individual tools together and allows them to interoperate” (Milligan, 2006). PLEs are being touted as a revolutionary concept for learning engagements of individuals throughout life. As such, the author argues that awareness of the affordances of Web 2.0 technology associated with PLEs, coupled with adequate preparation while engaged in formal education, hold the key for self-directed learning across the lifespan.

LEARNING IN THE INFORMATION AGE

The present age is distinguished by growing dependence on ICTs and by elevation of information and knowledge work (Candy, 2004). According to Carole Barone (2003), learning in the information age is such that the conceptualisation of the “learning environment is transitioning from learning in a physical space—that is, the classroom—to a student-centered

learning environment situated in cyberspace” (p. 42). Indeed, the notion of ‘flexible learning’ has been the subject of discussions and debate in recent times, alongside the ideas of ‘hybrid learning’, ‘distributed learning’ and more recently the terms ‘blended learning’ and ‘e-learning’. There are at least two common themes in this discourse: 1) the proliferation of ICTs in education; and 2) the changing nature of learning and teaching (Barone, 2003).

These recent developments in education challenged the dichotomy of educational delivery with the ongoing convergence of on-campus and off-campus modes of delivery, thus continuously affecting the way that students learn (Palaskas & Muldoon, 2003). Web-based technologies, in particular Learning Management Systems (LMSs), have been attributed as mediating this convergence, which commentators claim add new dimensions of richness and complexity to the learning experience (see Barone, 2003; Candy, 2004; Graham, 2004; Reay, 2001; Sands, 2002; Young 2002). Candy (2004) for instance suggests that the web has the capacity to offer certain forms of self-directed learning and provide greater social contact for learners than the former stand-alone systems, and electronic devices that preceded them. Universities across Australia share this view where most have adopted a model of formal learning heavily entrenched in LMS such as Blackboard, WebCT, Moodle or Sakai (Jones & Muldoon, 2007).

CHALLENGES WITHIN THE HIGHER EDUCATION SECTOR

While the usefulness of ICTs in education has been widely suggested in the literature, according to Candy (2004) “much of this turns out to be fundamentally about enduring educational problems and issues, rather than about anything dramatically new and transformational” (p. 39). The value of LMSs in particular is continuously being scrutinized, highlighting that pedagogical practices concerning the use of LMSs have yet to significantly challenge the prevailing educational tradition within the higher education sector. As explored below, these practices inhibit learner control and self-direction, both of which underpin a range of challenges for many university practitioners and administrators alike (Downs, 2006; Wilson et al 2006.).

Doing old things in the new medium

Current learning and teaching practices continually adopt an approach where the “existing pedagogy is retained and simply transferred to the new medium, the LMS” (Jones & Muldoon, 2007, p. 451). The pedagogy remains heavily influenced by the ‘telling’ mode

of teaching and teacher-directed learning, which over 30 years ago the distinguished educator Paulo Freire aptly described as ‘dominating’ the learners in the learning process instead of ‘liberating’ them (Freire, 1972). This begs the question of why, despite the promise of the empowering nature of ICTs, do approaches continue to promote teacher dependence rather than learner autonomy.

Distinction between learner and teacher capabilities

An assumption about LMS-based model of learning is that teachers can urge learners to be creative and participative where the learners are also exhorted to assume control of their learning (Wilson et al, 2006). The tools within LMSs, however, are not designed for learners to do so. Rather, these tools are specifically designed for teachers, deemed more knowledgeable to organize and sequence information, create content and direct instruction. Given the design of most learning environments within LMS typically exemplifies a passive role for learners, this sends a conflicting message and creates an uneven relationship (Wilson et al, 2006). Such practices directly contradict the desirable outcomes for learning in the information age, which draw heavily on learners’ active engagement, and in turn enable them to develop capabilities to become effective knowledge users as well as content producers (Downes, 2005).

Homogenous experience of context

Because of the learners’ limited ability to manage and organize or direct their learning, coupled with the course-centric nature of educational delivery in institutional settings, it results in homogeneity of experience within LMSs. As Wilson et al (2006) assert “all learners have the same experience of the system, see the same content, organized in the same fashion, with the same tools”. They experience the same artificial and often contrived ‘community’, whereby discussions have a fixed start and end-point (Downes, 2005). This is in contrast to the aspirations expressed in the lifelong learning movement that calls for greater learner autonomy and self-direction (Candy, 2004) and is indeed a far cry from rich and ongoing community-based interactions being experienced by learners outside institutional settings.

Anytime, anyplace access to resources

The notion of flexibility has been the catch phrase with the emergence of LMSs, claiming affordances for anytime, anyplace access to learning resources. Learners have the ability to go to the course site and access resources hosted in the LMS, anytime through networked

computers anywhere in the world. However, this 'I go get web' model (Vander Wal, 2006) rarely approached the kind of flexibility needed in the knowledge rich society. The limitations of this model in systems like LMSs are highlighted by the affordances of the 'come to me web' model (Vander Wal, 2006), where in addition to access, learners also have the capacity to build and manage their own collection of resources. The implication for learners in the latter model is that learning is available no matter what they are doing, with opportunities to connect with wider communities, re-use information and create content.

Scope of operation and institutional control of access

Institutions host, manage and control the system where access to LMS-based learning environments is only available to the cohort enrolled in a particular course (van Harmelen, 2006). Provision for continuous access to the same sets of resources, teachers, and other learners post enrolment is not possible in the current design of LMS. With such restrictions, there are no opportunities for cross-institutional learning, informal or incidental learning. The focus is on safeguarding content hence preventing access by others within the institution or the outside world (Wilson et al, 2006). However, commentators assert that the mindset in the information age has changed (see Barone, 2003; Frand, 2000) and that sharing of content is not viewed as unethical but hoarding it is considered antisocial (Downes, 2005). While there are benefits to be gained in formal learning at highly controlled environments like LMS, it also greatly inhibits capacities for wider community-based learning and self-direction.

The demands in the information age are such that institutes of higher learning would be better served if they were to genuinely promote lifelong learning opportunities. To do so, institutions need to provide transformational approaches, as well as systems and infrastructure that can support learner control and self-direction (see Jones, 2008, this issue). The next section offers a perspective for supporting learners and learning in ways that mediate learner control and self-direction within institutional settings and beyond.

SUPPORTING LEARNERS AND LEARNING IN THE INFORMATION AGE

In the online environment...there is platform for the storage and delivery of materials, learning projects that start out as independent and self-directed can subtly merge across into course and programs offered online-with or without the formality

of enrolment. Conversely, participation in an online course can give rise to the pursuit of more self-directed activities and interests... Thus there is a greater transparency in the online environment, a fluidity between formal education and training and the independent pursuit of learning which needs to be recognised by information and education providers alike (Candy, 2004, p. 51).

Candy's assertion highlights the blurring between formal and informal learning and gives rise to the distinction between learner control and self-direction. Traditionally in institutional settings, learner control often means giving learners some control over certain instructional functions, e.g. pacing of various topics within a course (see Candy, 1991). In contrast, self-directed learning is a term that recognises factors that facilitate learners taking primary responsibility for their learning, e.g. identifying learning needs, securing learning resources, implementing learning activities and assessing and evaluating learning (see Hiemstra, 1994). With the changing mindset in the information age these two terms no longer yield a dichotomy but a continuum for lifelong learning. The relevance of this continuum relates directly to the types of curriculum, facilitation and learner support required within institutional settings and beyond.

CRITICAL ELEMENTS OF HOLISTIC SUPPORT FOR LEARNERS AND LEARNING

Technology is deemed as the answer to many educational issues and challenges within the higher education sector. However, at this juncture it is pertinent to ask that if technology is indeed the answer what is the specific educational question that it is trying to solve? As highlighted in the previous section, despite the empowering nature of ICTs the inhibiting factors for effectively supporting learner control and self-direction persist. This paper therefore asks one of the more critical questions in higher education: *How can teachers devise ways of embedding learner control and fostering self-direction?*

The answer however cannot focus solely on technology. In fact, the focus also ought to be directed to principled learning designs, and an even greater focus towards the development of skills for life. This paper argues that the three critical elements of holistic support for learners and learning are: 1) facilitating principled learning designs; 2) effectively developing skills for life; and 3) harnessing the affordances of technology.

Supporting learners through principled learning designs

A 'principled learning design' is one that is driven by intended learning outcomes, with learning activities explicitly link to both learning outcomes and assessment, and where the latter measures the degree to which the learning outcomes have been achieved. Another critical element of the principled learning design is that the underlying principles of a particular theory of learning explicitly guide the design. In this context, the pedagogy and specific needs of learners and learning drive the design, rather than what the technology can do. In principled learning designs, the effectiveness of the learning-teaching transaction is highly transparent, not only to the teacher and others involved in the course design, but also to learners as well as observers external to the course. For example, the balance between teacher-directed and learner-driven activities is evident, which is informed by curriculum decisions linked to learning outcomes. Critically, one of the main goals of principled learning designs is to facilitate the blurring of theory and practice, hence explicitly embedding authentic learning activities and assessment. This approach paves the way for integrating vital lifelong learning skills within the coursework, where learners are afforded various opportunities to develop skills for life. Learner support is also explicitly embedded in a principled learning design, which often takes the form of enabling opportunities for learner control and self-direction. For example, the technology-mediated learning environment is organised in such a way that learners can prepare for the challenges that lie ahead, identify their learning needs, secure learning resources, engage in authentic learning activities, monitor progress and assess and evaluate learning, by themselves as well as with others. The learning environment is therefore centrally focused on what the learner does to facilitate learning, rather than what the teacher does to teach, thus consistently fostering learner autonomy. Research into the nature of learning, emerging from the design-based research movement, suggests that a theory-based or principled design of learning environments goes a long way in ensuring the effectiveness and transparency of the learning-teaching transaction (see Bareiter, 2002; Cobb et al, 2003; Design-Based Research Collective, 2003).

Supporting learners through the development of skills for life

In an era of unprecedented technological and information explosions, skills in information literacy and ICT literacy are the two vital skills for lifelong learning (Lanham, 1995). The varying degrees to which learner control and

self-direction are embedded in the principled learning design are themselves acting as enabling agents for developing and maintaining these essential skills for life. Simple semantics hold the key in understanding how this can occur, i.e. the use of the term *about* vs *with*. For example, learning *about* technology yields different learning outcomes than learning *with* technology. The latter experience-based approach enables learners to acquire and use technological knowledge, skills and attributes that can aid other facets of their life activities, as opposed to the more narrowly focused learning *about* approach. Furthermore, the traditional view on learning information literacy skills is that it is the province of librarians and other information specialists to teach these skills, typically an add-on to coursework. However, learners are more likely to place meaning on ideas when learned in context with how knowledge and skills will be used in real life. Therefore, gaining knowledge and skills in information literacy can be better served with instructional approaches that integrate both 'knowing' and 'doing' (see Brown, Collins & Duguid, 1989), as well as extending the development of skills and attributes beyond that required for completing university assignments. The principled learning design views the skills and attributes gained during the university experience as the learners' point of departure towards autonomy and self-direction.

Supporting learners through the affordances of technology

As indicated earlier, "new tools being adopted to do the work of the old" (Siemens, 2008) is one of the major reasons for failing to realise the empowering aspects of ICTs. In principled learning designs, ICTs are seen as effective enabler and supporter, as well as a critical delivery mechanism for a given learning design. Without the power of ICTs, it would be difficult if not impossible to meet all the aims and objectives of instruction that are distinctively associated with a given learning design. In principled learning designs, technology is used as the catalyst within which the lifelong learning continuum is mediated, mixing and realising the transformative potential of both new and newer technologies. For example, an LMS serves a particular purpose in principled learning designs, such as enabling learner control for monitoring progress, e.g. online tests linked to Gradebook. However, behind the 'garden walls of LMS', other tools such as journals, wikis and blogs are at odds with the underlying philosophy of these technological innovations, e.g. accessible, open publishing (Tittenberger, 2007). On the other hand, publicly hosted wikis and blogs are

prevalent and more suited for supporting self-directed learning beyond the learners' university experience. The principled learning design uses a combination of controlled and publicly available systems because of their combined potential for meeting the learning needs of the here and now, as well as in the future. Integrating the use of publicly available systems while engaged in formal education forges the link to possible continuing learning engagements beyond institutional settings.

As can be seen, the three major elements of holistic support for learners and learning are inseparable, and that their interdependence is clearly evident. There is no one single system, however, that can support the varying needs of learners and learning, or a single system that can service and deliver all the demands of principled learning designs. The succeeding discussion explores the affordances of PLEs and how these might be leveraged for supporting learners and learning within and beyond institutional engagements.

TOWARDS HOLISTIC SUPPORT FOR LEARNER CONTROL AND SELF-DIRECTION

The limitations of systems common in most universities should not pose barriers towards achieving holistic support for learner control and self-direction. Rather the potential and purpose for which such systems are designed need to be leveraged and combined with other systems to loosen the albatross strangling both learners and teachers. Institutions therefore need a methodology that can guide the delivery of learner support within and beyond formal education. In this regard, the notion of PLE as a methodology is a worthwhile consideration.

Among the many perspectives on PLE currently proliferating the literature and discussions online, Graham Atwell's view provides a fitting description for the manner in which learners and learning can be holistically supported through out life. Atwell (2007) explains that:

The idea of Personal learning Environment recognises that learning is continuing and seeks to provide tools to support that learning. It also recognises the role of the individual in organising their own learning. Moreover, the pressures for a PLE are based on the idea that learning will take place in different contexts and situations and will not be provided by a single learning provider. Linked to this is an increasing recognition of the importance of informal learning (p.2).

The propositions so far elicited in this paper are directly connected to the potential of PLE, to bring together different worlds and inter-relate learning from institutional settings, work and life in general. Because a PLE "is comprised of all the different tools we use in our everyday life for learning" (Atwell 2007, p. 2), these tools, and the information and content generated within them, no longer need to be only used in one context and for one purpose as currently practised in most educational institutions. Social software associated with PLE, collectively described as Web 2.0 technology, offers learners the ability to search information (Google, Flock) create and publish (blogs, podcasts, youtube, Flickr), collaborate and share ideas (wiki, del.icio.us), join communities (Facebook, MySpace) and create their own identities (eportfolio, MySpace, Facebook). All of these tools carry longitudinal attachments with each learner because of the affordances of such tools to provide learner control and self-direction and, critically, because there are no restrictions of access. Throughout life, learners have the capacity to access and manage these tools, not only to continually access information, but also to re-use and re-purpose them, as well as to generate new content (LTC, 2008). Indeed the idea of continuing access to tools, information and other content goes along way in supporting learners and learning e.g. knowledge generated in institutional settings that remained inert can be remedied if learners were encouraged to keep a blog or other forms of artefacts at the time of exposure to a particular idea or situation. This in turn may facilitate reflection, re-learning or recognition of additional learning requirements. In this context, the learner is responsible for identifying learning needs, and has the capacity to collect and build his/her own knowledge database from a variety of both formal and informal educational exposures.

Given this situation, the central line of reasoning in this paper is that awareness and preparation hold the key. If learners are already experienced and appropriately skilled for the way information is accessed, used, re-purposed and generated whilst in formal education, then chances for lifelong learning engagements are significantly enhanced. However, it is highly unlikely that simply knowing *about* the tools for lifelong learning will deliver learner and learning transformation. Learners need to learn *with* those Web 2.0 tools during their exposure to formal education. In this regard, the PLE methodology can mediate the three critical elements of holistic support for learners and learning highlighted above, all of which may be used as a conduit to deliver the transformational promise of ICTs.

CONCLUSION

The eloquence of Jason Frand (2000) provides a powerful concluding message, which reflects the propositions elicited in this paper:

The outlook of those we teach has changed, and thus the way in which we teach must change. The world in which we all live has changed, and thus the content we teach must change. The industrial age has become the information age, and thus the way we organize our institutions must change, as must the meaning we attach to the terms "student," "teacher," and "alumni." The challenge will be for educators and higher education institutions to incorporate the information age mindset of today's learners into our programs so as to create communities of lifelong learners (p.5).

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