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What Matters in Higher Education

A meta-analysis of a decade of learning design

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Abstract

The Journal of Learning Design (JLD) has had a relatively short history of open-access peer-reviewed publication in the broad field of multidisciplinary pedagogy and learning design in higher education with a focus on the innovative use of technology. It began in 2005 and its decade of publication has coincided with a period of great volatility in higher education largely wrought by technology and changes in the demographics and location of our student populations. During this decade, learning design has received growing attention as educational institutions have grappled with shifts to blended learning, incorporation of Web 2.0 technologies in course offerings, and conduct of fully online program suites. MOOCs, certification and badging have swept us off our feet at the same time as increasing scrutiny has been applied to ensure program quality and more efficient delivery methods. The Journal of Learning Design (JLD) has been a contemporaneous witness to this period of change and, along with others of its ilk, has provided an authentic discourse of how our authors, who identify as system leaders, academics and learning designers, have addressed the challenge of a changing learning environment.

Keywords

higher education, learning design, blended learning, authentic learning

Introduction

This paper, through a meta-synthesis of the articles published in the *Journal of Learning Design* in the decade from 2005 to 2015, aims to provide a snapshot of a particularly volatile period of learning design in higher education with particular emphasis on the problems and tentative solutions both in Australia and internationally. It will attempt to identify and illustrate some of the recurring motifs of teaching and learning discussed in the Journal during this period, that is, what could be seen to matter to its authors, a collection of system leaders, academics and learning designers, in higher education. In this, it mirrors the accepted technique of drawing on a validated bibliographic data set to identify what is of importance or is problematic in the field (see, for example, Cretchley, Rooney & Gallois, 2010; Fox & Diezmann, 2007; Lubienski & Bowen, 2000). It will also attempt to identify what are the catalysts for the emergence of the motifs we

selected for detailed investigation. This paper should be seen as a companion to the 10-year celebration of the Journal in late 2015 (see Volume 8, Number 3).

Method

It has been noted that empirical studies of academic journals frequently focus on such factors as citation thus ignoring "the evolution of themes and concepts in the journal over its entire history" (Cretchley, et al., 2010, p. 318). The focus of this paper is rather to look for the developing themes of learning design, here referred to as recurring motifs, as documented through the keywords, titles and texts published by the journal from 2005 to 2015. As noted, this study was informed by the work of Lubienski and Bowen (2000), Cretchley, Rooney and Gallois (2010) and Fox and Diezmann (2007). For example, Lubienski and Bowen (2000) identified a data set of relevant articles from the ERIC database and ascertained the representativeness of the selected literature through a thematic categorisation and a frequency count. Fox and Diezmann (2007) similarly used the ERIC database answer two specific research questions relating to early childhood mathematics research. Cretchley et al. (2010) looked at 40 years of a specific journal, *Journal of Cross-Cultural Psychology*, and presented its core themes chronologically, using visual maps generated by Leximancer. The value of such an approach lies in its enforcing of a broader perspective than might be drawn from one's own experience and a narrow discipline or location bias. Lubienski and Bowen (2000) explained that claims in the field might "seem consistent with one's own impressions of the literature, one might still wonder if these impressions are accurate" (p. 626). As the current editors of *the Journal of Learning Design*, we began to wonder if we were too close to the minutiae of layout and referencing conventions to fully appreciate the value of the journal archive as a witness of change in teaching and learning in higher education over time.

For this study, we reviewed all articles published in JLD between Volume 1(1) in 2005 and Volume 8(1) in 2015 (N=149). We firstly paid attention to the keywords assigned by the authors to develop an overall sense of the content and range of topics covered within its (online) pages. The keywords were then subjected to an iterative process of coding and creative categorisation based on Strauss and Corbin's (1998) notion of the "ability of researchers to aptly name categories, ask stimulating questions, make comparisons, and extract an innovative, integrated, realistic scheme from masses of unorganized raw data" (p. 13).

For the purposes of this paper, we then selected two of the most popular categories for further study. We thought it was essential to report on the recurring motifs, that is, the categories that appeared to be representative of the decade under review. This meant, in the first instance, that the category needed to have been a constant over time. We were also interested in frequency that is, a category that appeared to dominate the conversation, despite its being addressed from a multiplicity of perspectives and learning environments.

The category selected as a recurring motif on the basis of the criterion relating to recurrence was "blended learning." This category was addressed in the journal through nine articles from 2005 to 2014 with two articles in the first issue of the journal focused entirely on blended learning (Collis, Margaryn, & Amory, 2005; Matheos, Daniel, & McCalla, 2005). The permeation of blended learning through the journal was significant as was the clarity and distinctiveness of its identification. Whereas some categories were cobbled together in our nonlinear coding processes, blended learning was uniquely identified and was, occasionally, the only keyword to be offered by the articles' author(s). To be rigorous, however, we also looked to what could be analogous to "blended learning." For example, we checked those articles which had used "flexible learning" as a keyword, but these tended to refer to fully online learning experiences and were thus not included in our discussion.

The second category selected was "authentic learning." This satisfied the criterion relating to dominance with its featuring in twenty-five articles (N=149, 17.01%) dating from 2006 to 2013. Unlike the blended learning category which maintained a clear identity, differing keywords were attributed to authentic learning. These included: professional, work and field placements.

Our closer investigation of the selected categories made use of a number of critical discourse techniques. For example, informed by understandings from Foucault (1991) and Ball (1990), we realised that attention should be paid to how words were co-located within statements. We believed that identifying the instances of co-location with the category (or its synonym) within the identified articles would reveal more of the authors' contemporaneous understanding of blended learning and allow a lexical linking to related learning theories or approaches to teaching (after Bourke & Lidstone, 2015).

Findings and Discussion

The findings presented in this paper relate firstly to the recurring motifs identified through an analysis of the keywords applied by the article's author(s) to each of the articles published in the Journal of Learning Design from 2005 to 2015. Following this, are detailed discussions of selected categories or recurring motifs, namely, blended learning and authentic learning.

Recurring motifs

The articles reviewed (N=149) generated 617 keywords of which 323 were unique descriptors. As noted, an iterative coding took place that generated 60 distinct but descriptive categories. The largest of these categories was "disciplines" (n=34, 5.51%) which gave an indication of the breadth of contexts in which the reported studies were located. These included: agriculture, architecture, bioscience, chemistry (chemical education research, general chemistry, green chemistry, organic chemistry), computer science (programming, UML (Unified Modelling Language)), engineering, design, film and television, health, languages (French, English, second-language learning), law, mathematics, medicine (dentistry, medical imaging, nursing), microbiology, music, physics, police and justice studies, science, social sciences, and teacher education.

An unexpected finding through the coding process, however, was the naming of three individual researchers/theorists as keywords. These were:

> *Mayer*: Richard E. Mayer, the American psychologist who articulated a critical multimedia learning theory (Mayer & Moreno, 1998, 1999) (see Swann, 2013);
> *Laurillard*: Diana Laurillard, the British academic with particular expertise in the use of educational technologies who developed a conversational framework describing learning in terms of students' concepts and actions, teachers' concepts and the teacher's constructed learning environment (Laurillard, 2002) (see Brown, 2007); and,
> *Sweller*: John Sweller, the Australian academic best known for his contribution to the identification of cognitive load theory and the instructional implications of working memory limitations (Sweller, Merrienboer, & Paas, 1998) (see Swann, 2013).

A similar finding was the offering of a particular theory of learning design as a unique keyword, namely, the "first principles of instruction" (Merrill, 2002) (see Collis, et al., 2005). Cognitive theories were also included as keywords, for example, behaviourism, constructivism, and critical pedagogy. Further, keywords allied to pedagogical approaches were offered including: cross-disciplinary approach; enquiry/inquiry learning; participatory design; process-oriented guided inquiry learning (POGIL); project-based learning; situated/situational learning; socio-cultural theories of learning; and, threshold learning outcomes. There were also instances where authors articulate original learning frameworks or theories and included these as keywords, for example, bi-relational design (Adam, 2015), 5Cs Framework (Tom, 2015), and spiral learning (Schuetze, 2010).

Excluding the "discipline" category, Table 1 summaries the five next highest occurring categories which cumulatively accounted for 20.26% of all keywords. These were: learning design; online learning; assessment; graduate skills; and curriculum. These represent very broad areas of concern in higher education. As well as adopting Strauss and Corbin's (1998) nonlinear, creative and iterative processes, we found it necessary to also follow Lincoln and Guba's (1985) classic advice to use "tacit and intuitive senses" to determine the groupings and to identify patterns in the

emerging codes. For example, a *Communication* category (*n*=9, 1.46%) was identified which included such descriptors as computer-mediated communication (CMC), discussion forums, and asynchronous communication. These might equally have been included in the *Educational Technologies* category (*n*=15, 2.43%, see Table 1) but reference to the source articles indicated quite distinct purposes. Similarly, an *Instructional Design* category (*n*=9, 1.46%) was kept apart from the *Learning Design* category (*n*=31, 5.02%, see Table 1) again based on the intent of the authors and the stronger emphasis on pedagogy in the latter category over more technical considerations expressed in the former.

Table 1
Highest occurring categories of keywords in learning design research 2005-2015

Category	Indicative keywords (alphabetical order)	n (%) *N*=617
Learning design	Active learning, design for learning, learning design, online pedagogies, pedagogy, pedagogical patterns, POGIL (Process Oriented Guided Inquiry Learning), problem-based learning, project-based learning, student-centered teaching.	31 (5.02%)
Online learning	CSCL (computer-supported collaborative learning), e-learning, elearning, "electracy," flexible delivery, online learning, online learning and teaching, online delivery, online education, online learning design, online learning environment, online meeting centres, podcasts, problem-based video instruction.	28 (4.54%)
Assessment	Assessment, authentic assessment, criteria, criterion-referenced assessment, examination, multiple choice, norm-referenced assessment, peer assessment, randomised testing, rubrics, self assessment, teacher judgement, testing.	24 (3.89%)
Graduate skills	Graduate attributes, graduate capabilities, performance standards, skills, academic literacy, academic integrity, critical literacy, generic learning outcomes, generic skill development, professional competencies, professional preparation, professionalism, quantitative literacy, self monitoring, self censorship, self-efficacy, self perceptions, technology skills.	22 (3.57%)
Curriculum	Capstone design, constructive alignment, curriculum, curriculum design, curriculum development, curriculum integration, curriculum planning, curriculum redesign, hidden curriculum, participatory design, postgraduate course design, program design, research-based education, unit design.	20 (3.24%)

Recurring Motif 1: Blended learning

Nine articles (*N*=149, 6.04%) in the *Journal of Learning Design* offered "blended learning" as a keyword (Collis, et al., 2005; Hamilton & Richardson, 2007; Lambert, & Brewer, 2007; Matheos, et al, 2005; Maybury & Farah, 2010; Rodrigo & Nguyen, 2013; Ruyters, Douglas, & Law, 2011; Thomson, Bridgstock, & Willems, 2014; Willems, 2015). Five of these articles also included the term in its title thus privileging blended learning in their discussions. Of particular interest is the multiplicity of disciplines represented in the "blended learning" papers. These include (in alphabetical order): business, computer science, corporate education, dentistry, design,

engineering, law and nursing (midwifery). Further to this, a number of articles in the journal's archive implicitly spoke of "blended learning." For example, Latham and Carr (2012) sought, in a teacher education program, to "use technology *authentically*, to provide a space where students could collaboratively build knowledge in ways that did not rely merely on face-to-face interaction" (p. 35, emphases added).

A metasynthesis of the "blended learning" articles identified reveals an initial vagary in the definition of the term which appears to have matured over time. In Volume 1(1), Matheos et al. (2005) succinctly noted that "blended learning means different things to different people" (p. 56) and that "this growing interest … has been accompanied by many definitions so a universal definition has been neither developed nor accepted" (p. 57). In 2010, it was similarly contended that "blended learning is in its very essence a taxonomically imprecise term, one given to a locally enmeshed definition as a starting point rather than any universal or objective clarity imposed from above" (Maybury & Farah, 2010, p. 43). More recent articles appear to assume an understanding of blended learning, that is, it is no longer described as something lacking in definition. For example, Rodrigo and Nguyen (2013) simply spoke of a hybrid form - "socialised blended learning" - that makes use of a social media platform without offering a definition of blended learning. This could indicate that there has been an increasing acceptance and wider adoption of blended learning such that it no longer needs definition.

We firstly looked at the keywords provided for the nine identified articles. The majority of instances saw "blended learning" co-located with generic terms such as: inclusive learning, course design, curriculum design, and assessment. There were four instances of co-location with terms relating to authentic learning (discussed later in this paper). These included: "work-based" learning and assessment (Collis et al, 2005; Hamilton & Richardson, 2007); and "situated" and "situational" learning (Lambert & Brewer, 2007). There were also four instances of co-location of "blended learning" with terms relating to collaboration or to social media (Matheos et al. 2005; Rodrigo & Nguyen, 2013; Ruyters et al., 2011). From this, a temporal pattern can be noted of blended learning becoming more interactive and "social" in recent years (from 2011) thus indicating a shift in thinking from blended learning being a strategy to apply to "work-based" to more general learning environments. It might further be conjectured that the increasing availability of and familiarity with synchronous collaborative technologies are contributing factors to this change.

Following the review of keywords, we moved to noting the co-location of "blended learning" within the text of the nine articles. We first noted that the terms "blended" and "blended learning" were co-located as adjectives with nouns to create instances of learning design, namely, environment, approach, application, structure, process, and flexible approach. In one instance, a particular technology, a virtual microscope, was referred to as "a blended artefact" (Maybury & Farah, 2010, p. 42). This variance created initial disquiet during our analysis in that it would seem, often within an individual article, the term could be either a process or an environment. This might, however, indicate an acceptance that, to be effective, "blended learning" needs to have both pedagogical and technological scaffolds put in place. This was confirmed through Willems' (2015) co-location of blended learning with a set of positive descriptors, namely, "pedagogically rich, technologically interactive, highly engaging, blended learning" (p. 88) which connected blended learning with pedagogy, technology and engagement. "Blended learning" is a holistic learning design which cannot be separated from its context.

We further noted, through its co-location with the conjunctions of "and" and "or," that "blended learning" had clearly become regarded as a distinct entity, an approach in its own right. For example, Willems (2015) and Thomson et al. (2014) made a clear distinction between "blended" and "online" by consistently separating these terms with an "and." Ruyters et al. (2011) clearly delineated the distinction by referring to "face-to-face, online *or* blended learning" (p. 51, emphases added) and Lambert and Brewer (2007) similarly referred to "blended *or* fully online modes of teaching and learning" (p. 79, emphases added). In one article, a distinction was made, without definition, between "blended learning and electronically mediated pedagogy" (Maybury &

Farah, 2010, p. 49). These observations support the notion that blended learning is regarded as being distinct from both face-to-face and online learning although it clearly shares characteristics of both. This is indicated by the proffered definitions of blended learning as:

- juxtaposing "face-to-face contact with online contact" in medical education (Maybury & Farah, 2010, p. 46);
- combining "face-to-face learning with a technology based component" in law and engineering (Lambert & Brewer, 2007);
- combining "face-to-face and online learning" (Ruyters et al., 2011, p. 47) in law; and,
- integrating "the online environment with the traditional studio … [providing] the potential to add affordances that the face to face environment did not support well, such as connectedness between students and with the design process" (Rodrigo & Nguyen, 2013, p. 32).

We also noted, that, in two instances, blended learning was lexically linked with "hybrid" learning (Lambert & Brewer, 2007; Rodrigo & Nguyen, 2013) and, less frequently, with "flexible" approaches or delivery (Rodrigo & Nguyen, 2013). Further to this, blended learning was variously identified:

- as being akin to both situated and authentic learning in a corporate setting, that is, "a blend of work-based activities in the workplace context within the structure and stimulation of peer-to-peer learning guided by an expert instructor" (Collis et al., 2005, p. 13);

- as being dependent on technology, in that "all forms of electronic knowledge are a blending of at least two or more media modalities and/or concepts and so blended learning itself also would most likely be unthinkable without this technological framework" (Maybury & Farah, 2010, p. 42);

- as striking "a balance in the choice of different instructional components in order to influence the integration of technology in teaching and learning" (Matheos et al., 2005, p. 56) and "the blending of media or pedagogical approaches" (Rodrigo & Nguyen, 2013, p. 30);

- as being critically dependent on instructional design but that "the design of blended learning differs from the usual practices of instructional design principles, given the wide range of pedagogical and technological options that could be combined for an effective learning environment than can serve diverse learners" (Matheos et al., 2005, p. 66); and,

- as offering "opportunities for social interactions to occur through reflective activity, collaboration and individual expression" (Rodrigo & Nguyen, 2013, p. 30) and allowing students "to contribute asynchronously and at their own pace, to receive written feedback, as well as an ability to engage with peers and teachers in more than one learning environment" (Ruyters et al., 2011, p. 51).

The differences which emerged through these definitions might indicate a change over time or, rather, be reflective of the context in which the approach was applied and the specific interest of the author(s). Where the proffered definitions are in alignment, this might be taken to indicate a growing maturity of the approach and a consensus over time. Whatever the case, the review of the articles clearly demonstrates a shift of blended learning from the periphery to mainstream over time. This is indicated in part by the more pressing need in the earlier publications to justify its use; a need which is not evident in more recent papers. For example, Lambert and Brewer (2007) posed the argument that blended learning achieved comparable outcomes to face-to-face learning environments and that a significant (but unidentified) number of students had made course selection decisions on the basis of blended options. Further, Matheos et al. (2005) noted the cost-effectiveness of blended learning. While cost was not mentioned in more recent articles, Willems (2015) spoke of other efficiencies possible through reusing resources:

> … [which] maximises their immediate relevance, re-usability and longevity - ultimately saving Academic X significant time and resources. Fieldwork becomes available to students without the logistical nightmares, time, costs, insurance implications and inconvenience of herding students onto buses. The "virtual fieldtrip" thus created, is supported by contextualised, detailed, referenced information, which encourages the students to follow-up on-site independently. (p. 89)

A shift over time is also apparent in the reporting of institutional commitment to blended learning, for example, one university's target for 2010 was to "expand the blending of face-to-face and online teaching from 40% of subjects to 80% of subjects so that teachers and students are operating flexibly in Extended Classrooms" (Lambert & Brewer, 2007, p. 72). A further justification of a shift over time comes through the evolution of student acceptance of blended approaches. Matheos et al. (2005) reported that "not all learners are comfortable with this shift. More than half of the students 53% who answered the survey still preferred traditional instructor-led lectures situated in classroom settings" (p. 64) while Rodrigo and Nguyen (2013) were able, by virtue of a change in student acceptance and familiarity over time, to contemplate "hybrid teaching environments that take advantage of … [students'] … developed online literacy are much more able to connect to their diverse patterns of information and knowledge management, scholarly publishing and learning" (p. 43).

The most significant change in approaches to blended learning as marked through the *Journal of Learning Design* appears to lie, as noted, in the applied use of available technologies and their impact on student-teacher interaction. For example, Hamilton and Richardson (2007) spoke of the use of web pages and CD-ROMs while Ruyters et al. (2011) referred to the use of Web 2.0 tools such as wikis and blogs. Thus, as with all other aspects of teaching and learning in higher education, the increasing use of more collaborative synchronous and asynchronous technologies has also impacted on blended learning. Lambert and Brewer (2007) encapsulated this change as they reported on re-usable designs over time, which they referred to as 1st, 2nd and 3rd generation implementations. These instances provide clear evidence of where technology is supporting pedagogy. It is of interest that Matheos et al. (2005) named one of their aims in investigating blended learning as understanding "how technology affects pedagogy" (p. 64). It would seem that this might well be a tacit aim of many of the authors concerned with blended learning over the journal's decade of publication.

Recurring Motif 2: Authentic learning

Twenty-six articles (*N*=149, 17.45%) in the *Journal of Learning Design* were deemed to be concerned with "authentic learning." These were identified through keywords and titles including such terms as: authentic, authenticity, experience/experiential, professional, real world, field and work/work-based learning. The "authentic" articles came from a range of disciplines including: agriculture, corporate education, design (lighting); engineering; film-making; health (medical imaging, pathology); law (advocacy in criminal law, practical legal training (PLT) program for solicitors); science (biochemistry, microbiology); social science; sociology; and teacher education. Fifteen of the identified articles (*n*=26, 57.69%) included the word "authentic" or "authenticity" in: the title, abstract and keywords (*n*=6); the abstract and keywords (*n*=3); the title and abstract (*n*=1); or only the abstract (*n*=5). These self-identified "authentic" articles were: Borthwick, Lefoe, Bennett & Huber, 2007; Burton, 2010; Collis, et al., 2005; Chan, 2011; Cydis, 2015; Griffiths, 2012; Isoardi, 2010; Keshavarz & Baghdarnia (2013); Lambert & Brewer, 2007; Latham & Carr, 2012; McKee, 2007; Morgan & Cox, 2006; Oliver, Herrington, Herrington & Reeves, 2007; Reushle & Mitchell, 2009; and, Shipton, 2009. There was, as noted, a small overlap with the "blended learning" articles addressed in the previous section (Collis et al., 2005; Hamilton & Richardson, 2007; Lambert & Bower, 2007).

Terms relating to authentic learning were co-located in the keywords of the identified articles (*n*=25). This revealed that:

- "Authentic" was co-located with: assessment (Burton, 2010; Reushle & Mitchell, 2009); instruction (Borthwick et al., 2007; Cydis, 2015; Lambert & Brewer, 2007; McKee, 2007; Morgan & Cox, 2006; Oliver et al., 2007); and, learning tasks (Chan, 2011).
- "Case-based" was co-located with learning (Hartfield, 2010).
- "Experiential" was co-located with: learning (Griffiths, 2006); and, placements (Owen & Stupans, 2009).
- "Field" was co-located with: excursions (Morgan & Cox, 2006); and, placement (Reid, et al., 2005; Sossou & Dubus, 2013).
- "Practice" was co-located with: readiness (Cox, Simpson, Letts, & Cavanagh, 2015); and, professional (Starkey, 2011).
- "Professional" was co-located with: application (Angel & Simpson, 2007); coaching (Griffiths, 2006); competencies (Owen & Stupans, 2009); knowledge (Hartfield, 2010); learning (Oliver et al., 2007); practice (Starkey, 2011); and, preparation (Owen & Stupans, 2009).
- "Real" and "real world" were co-located with: assessment (Burton, 2011); and. projects (McKee, 2007). "Real" was co-located with experience in a title (Ferry, Kervin, Cambourne, Turbill, Hedberg, & Jonassen, 2005).
- "Situational" and "situated" were co-located with learning (Kukulska-Hulme, Traxler, & Petit, 2007; Lambert & Brewer, 2007).
- "Work" and "work-based" were co-located with: assessment (Hamilton & Richardson, 2007); learning (Collis et al., 2005); and, placements (Owen & Stupans, 2009).

What makes the history of authentic learning as documented in the *Journal of Learning Design* of particular interest, apart from the frequency of its inclusion, lies in the multiplicity of meaning it offers. Burton (2011) alluded to this multiplicity by contending that "authentic assessment is a relative notion contingent on what happens in practice, which varies across disciplines" (p. 21). To reduce this variance to a meaningful metasynthesis of the "authentic learning" articles, the models identified by Borthwick et al. (2007) were used to organise the article's content. These models were:

- an *apprenticeship* model where students are mentored in the workplace by an experienced professional;
- a *simulated reality* model where the "real world" is simulated in face-to-face, online or blended environments;
- an *enminding* model which gains its authenticity through moving a student's way of thinking more in line with their discipline.

Apprenticeship model

The apprenticeship model was implicit in a number of articles (see, for example, Collis et al., 2005; Isoardi, 2010; Morgan & Cox, 2006; Sossou & Dubus, 2013). The common thread was the location of learning experiences in real world settings despite these involving differing degrees of engagement. For example, Sossou and Dubus (2013) reported on the social work field placements of US students in Ghana. For these authors, the authenticity of such an experience is essential "in helping students to develop a greater sense of self-awareness, respect and appreciation of different cultural beliefs and practices of other people and cultures, and becoming conscious and cultural sensitive concerning issues of poverty and social injustice" (p. 10). Field trips were the most frequent instance of this model. For example, Morgan and Cox's (2006) practice of organising farm tours for agricultural students, explained as:

> The utilisation of student tours to commercial farms has been a well-established feature of agricultural education courses in Australia. This has had various benefits including the provision of currency and context to the teaching program in addition to the *authenticity* to be gained from involving practitioners in the bridging of campus-based tuition and industry practice. (p. 66, emphases added)

Similarly, Isoardi (2010) organised an international field trip for students in a postgraduate lighting design course. The identified benefits were:

> … increased knowledge and insight into manufacturing issues in lighting, experiential learning in lighting design practice not available locally (e.g., master planning), increased understanding of cultural influences in design and enhancing professional contacts within the lighting industry. Field trips may also act as an inverted curriculum experience for new students to engage them and promote learning within a professional context. (p. 37)

Finally, Collis et al.'s (2005) blended learning in a corporate setting might also sit within an apprenticeship model because of its being enmeshed in a real workplace. The corporate setting they describe "blends generic principles of learning and instruction with strategic goals important to the particular context, anchored in a commitment to *authentic* and engaging learning activities" (p. 12, emphases added).

Simulated reality model

Simulated reality is where learning and assessment is conducted in class (on campus or online) but is purposefully contextualised in the relevant discipline or profession. For example, Hartfield (2010), reporting on his teaching in biochemistry, argued that "a case, problem or inquiry is used to stimulate the acquisition of knowledge, skills and attitudes, so that these teaching and learning activities are placed in a context that promotes *authentic* learning" (p. 22, emphases added). Similarly, Lambert and Brewer (2007), in describing their re-use of learning design, explained that "the first iteration, a Practical Legal Training (PLT) program for solicitors using *authentic workplace-simulated* learning tasks, became the model for subjects in other subject disciplines" (p. 710, emphases added).

Several authors claimed benefits for authentic learning through a simulation of reality (see, for example, Cox, et al., 2015; Schultz, 2013). Of particular note is Reushle and Mitchell's (2007) article which included one of the author's reflection that (as a student):

> The pedagogical tools of authentic assessment and learning dilemmas enabled me to construct and critically reflect on my knowledge by situating it in my own profession practice. I was able to evaluate my learning through collaboration and interaction with my peers in an online community of practice. (p. 16)

McKee (2007) alternately found that, in its initial implementation, such simulated learning:

> … did not produce the authentic learning experience that we had hoped for. Reality did not provide authenticity for the students' learning. On the criteria of taking responsibility for completing the project and doing so to a given deadline and to a client's specifications, as noted above, the students failed to meet our desired learning outcomes. (p. 48)

Enminding model

Enminding is a way of thinking perhaps akin to acculturation. In this instance, it refers to how one comes to think (and act) like a member of one's profession. It can, at its simplest in a higher education setting, be equated with graduate attributes which, by definition, are authentic skills required by the workplace. The keywords, titles and text of the identified articles alluded to or made direct referred to such attributes. These included:

- academic integrity (Hamilton & Richardson, 2007)
- adult learners/learning (Griffiths, 2006; Reid et al., 2005)
- collaborative learning (Oliver et al., 2007; Owen & Davis, 2010)
- communication (Chan, 2011; Keshavarz & Baghdarnia, 2013)
- communities of practice (Oliver et al., 2007; Owen & Davis, 2010)
- engagement (Burton, 2010)
- ethics; ethical reasoning; (Angel & Simpson, 2007; Schultz, 2013)
- graduate attributes (Owen & Davis, 2010)
- intellectual skills (McKee, 2007)
- knowledge retention (Reid, Jacobsen & Katz, 2005)
- learning communities (Oliver et al., 2007)
- lifelong learning (Griffiths, 2006; Keshavarz & Baghdarnia, 2013)

- literacy (Ferry et al., 2005)
- student responsibilities (Angel & Simpson, 2007);
- problem-based learning (Hartfield, 2010; Shipton, 2009);
- professionalism (Angel & Simpson, 2007);
- professional application (Angel & Simpson, 2007); professional competencies (Owen & Stupans, 2009); professional practice (Starkey, year); professional preparation (Oliver et al., 2007)
- [student] responsibilities (Angel & Simpson, 2007);
- team work (Keshavarz & Baghdarnia, 2013; Lambert & Brewer, 2007)

The overwhelming finding which emerged from the "authentic" articles was the perceived value of this approach. For example, Lambert and Brewer (2007) reported that "students recognised the value of the authentic learning environment. In response to the question "what were the best things about this subject" students responded that they "*valued experience exchange from various cultures, industry and various working levels.*" The authors noted that students frequently commented on the authenticity of the learning environment: "*a realistic circumstance in which to develop their skills*"; "*implementation and outsourcing taught me a lot about real life situations of outsourcing*"; "*it looks like a real project*" and "*freedom to develop a maintenance system, with justification, and to receive good feedback on our ideas."* Other students liked "*the workshops"; "mixture of face to face and project work*"; "*team environment, learning about issues and experiences*" and "*learning new maintenance and industrial strategies.* (p. 79)

Morgan and Cox (2006) offered an explanation of the positive effect of authentic learning [in the farm visits they organise] by contending that:

> Consistent with constructivist theory, this design protects against students being cognitively dependent on their instructors and also provides relevance and authenticity to student learning. Both the students and cooperating farm managers have endorsed the design as a valuable and effective learning structure. (p. 71)

Unlike the first recurring motif investigated, namely blended learning, authentic learning was multifaceted rather than a singular entity. It was necessary to use an established framework to present how the authors of the journal had designed and implemented authentic learning. There was consensus in its core theme of making learning relevant to the workplace but, from this point, the form of the learning took its shape from its discipline. Authentic learning drew its philosophy and approach from its discipline, that is, it was grounded in the profession it served.

Conclusion

This paper has attempted to provide a snapshot of what has mattered over the past decade of learning design research. It has taken a single archive, that is, a decade of publishing in the *Journal of Learning Design*, as its bibliographical source. While it is not a comprehensive archive, it presents the interests, problems and tentative solutions of stakeholders from a range of disciplines and across a range of countries and educational settings and can be seen as a representative sample. This paper, as the authors intended, has shown us something familiar in an unfamiliar light. Its metasynthesis of the content of the published papers has allowed broad categorisation of the universal areas of concern: learning design; online learning; assessment; graduate skills; and curriculum. The paper has also, through using critical discourse techniques, uncovered the recurring motifs within these areas and has focused on two of these: blended learning and authentic learning. While blended learning was clearly understood as a singular entity, its form and implementation had changed over time largely influenced by changes in available technology. Authentic learning was a single idea but not a singular entity. Its form and implementation was a direct consequence of the cognitive and affective demands of the discipline it supported. That technology and context are the key shaping influences of contemporary learning design in higher education is an area calling for further research and to guide further analysis of peer-reviewed articles in the field.

What this investigation has revealed is that teaching and learning are almost infinitely complex activities inextricably linked to context. It has also shown the interdependence of the identified motifs showing that learning design evolves to circumstance rather than being predicated on or consciously founded in established learning theory. The pages of the *Journal of Learning Design* continue to tell rich stories of beliefs about teaching and learning being melded with a passion for a discipline constrained or enabled by pedagogical practice and available technology. Motifs recur, not because they are not unresolved problems, but because they are evolving and settling into new learning environments. We are left to wonder what we will find when we return to this investigation after another decade of publication.

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