



# Standing on the shoulders of others: creating sharable learning designs

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As online and blended learning becomes the norm in higher education practice, academic developers and learning designers are increasingly required to work as part of curriculum development teams to facilitate the design of engaging and interactive online courses and activities. A range of highly-effective models of workshops and programs focused on curriculum design have been developed and widely reported, each with the primary aim of developing a 'learning design'. But what form does this learning design take? How is it prepared, shared and edited amongst the curriculum team members? And how is it then translated into a functioning online site or activity for students to access? This paper focuses on the output of curriculum design workshops, and presents a highly simplified and accessible solution for time-poor curriculum teams.

**Keywords:** Learning design; online learning; rapid curriculum design, backwards mapping,

## Introduction

Online education is rapidly becoming a global phenomenon, improving access to education for non-traditional students varying in location and socioeconomic status. International Consultants for Education and Fairs (ICEF, 2012) ranked Australia among the eight countries leading the way in online education. According to ICEF,

Over the past five years, the online education market in Australia has grown by almost 20% and is expected to be worth an estimated US\$4.68 billion this year. (Australia section, para. 2).

This growing demand has caused a shift in many higher education institutions, particularly in the way programs and subjects are designed and developed. More specifically, a shift in the role of the academic developer / curriculum designer has occurred in recent years, moving from the primary role of presenting staff development workshops and consultations on demand, to a more hands-on role as part of curriculum design teams. This move is partly driven by recognition that short-term centrally-offered professional development has (with a few notable exceptions) at best minimal ongoing impact (for a brief review, see Weaver et al 2013), and partly by the increasing emphasis on blended and online learning, requiring curriculum redesigns. Concurrently, the higher education community is recognising that teaching and curriculum design is no longer a solo activity, but one which draws on the expertise of many.

The focus has shifted in recent years from the individual teacher designing a module or session to include teams designing whole courses." (Laurillard, 2013, p26)

A range of models for facilitating team-based curriculum design have been developed, trialed and evaluated, each with a primary objective of developing a shared learning design. Academics are now seeing evidence of hybrid versions of these, where institutions or even individual curriculum designers select preferred components of different models, and compile into their own version – much in the same way that teaching academics are encouraged to select preferred learning objects from open educational resource repositories, and repackage them for their own purposes. This paper focuses on just the output of a curriculum design workshop – the 'learning design', and selecting different aspects from a range of models, to propose a simplified yet accessible format.

## Terminology

Before proceeding, the use of the term 'learning design' must be defined for the purposes of this paper. A distinction has been made between learning design (no capitalisation) and Learning Design (capitalised) (Britain, 2004; Dalziel, 2003), with the former term used to "describe a representation of the learning experience to which students are exposed" (Oliver et al, 2013, p228), and the latter to refer to the concept implemented in the IMS specification, with the ultimate aim of this Learning Design being an output which is 'runnable' within a software package. Much work has been done in the Learning Design sphere, particularly by James Dalziel with the LAMS package (<http://lamsfoundation.org/>), but uptake has been poor, likely due to the complexity of working with such technical products:

“... attempts to engage practitioners in the Learning Design approach have met with only partial success. This may reflect the poorly established nature of learning design within mainstream educational thinking, but could also indicate more fundamental difficulties with the transfer of standardized vocabularies and methods from an expert group to wider use.” (McAndrew & Goodyear, 2013, p.285-6)

For curriculum designers working with faculty members with time constraints, requiring team members to adopt new technologies, even those without complex coding specifications, is untenable. For our purposes, we use the term 'learning design' to refer to the design of a complete subject (or unit of study within a program or course), including the subject intended learning outcomes, assessment, learning activities and resources.

This paper focuses on the development of a simple method of capturing a learning design, to produce an accessible artefact that is intuitive and embedded with elements of a quality online subject.

## Curriculum design intensive (CDI) workshops

Learning designs are usually the main output of Curriculum Design workshops. Many institutions have developed their own versions of Curriculum Design Intensives (CDIs), or implemented customized versions of those developed elsewhere. The origin of many of these is Gilly Salmon's Carpe Diem model (Salmon et al, 2008; Armellini & Aiyegbayo, 2010), a two-day facilitated workshop for curriculum teams to design programs or subjects. The team at Oxford Brookes University (Benfield, 2008; also see <https://wiki.brookes.ac.uk/display/CDIs/Home>) modelled their CDI on Carpe Diem, and took this a step further by involving multiple project teams working on an entire program in the same workshop. Both models are similar, in that they involve cross-disciplinary teams (subject matter experts, e-learning experts, learning technologists, librarians et cetera) designing and building programs and/or subjects in a highly-productive and rapid development environment.

La Trobe University adopted the Oxford Brookes CDI model as part of its FOLD (Flexible and Online Learning Development) project in 2012 (Lyons et al, 2013).

## The Partnership

As one arm of its strategy to increase its online offerings, La Trobe University entered into a partnership with Academic Partnerships (AP) to develop postgraduate programs. These programs are designed around six-week subjects, equivalent to the more traditional twelve-week semester-long subjects, on a program rotation model, referred to as a 'carousel', providing students with multiple entry points into the program.

Through this agreement, AP worked collaboratively with the university to deliver marketing campaigns, enroll students, and retain students, as well as provide support and quality assurance during the program and subject design phase. The Academic Services Team within AP worked in close alignment with the university's Learning and Teaching Centre on planning the cadence of the partnership, and setting milestones, timelines, and objectives for a successful transition to online instruction. In addition, (and relevant to this paper), they provided hands-on and ongoing assistance to curriculum design teams in program planning, design, and subject development process, and in providing feedback at agreed points during the process. The authors of this paper were a curriculum

designer employed by La Trobe University, and a curriculum quality control consultant employed by Academic Partnerships.

### **Subject Development Process**

The subject development begins with an initial meeting to explain the processes and agree on expectations and subject development timelines. A team is formed to work through designing the subject, usually including a curriculum designer, subject convener or subject matter expert (SME), and an educational technologist. The primary objective of this stage is the development of a subject learning design, or subject blueprint, detailing the key components of the subject (ILOs, assessment tasks and due dates, weekly topics and key learning activities). This initial session is followed by ongoing communication between the curriculum designer and SME, ideally by face to face meeting, but often via web-conferencing or other means, to complete all remaining aspects of the learning design.

Once the learning design has been completed and reviewed, the subject development team begins to build the subject site in the Learning Management System (LMS). The subject undergoes two quality revisions by AP and final edits before going live to students. As the final stage, once the subject has been taught to students, a quality assessment is conducted, including feedback on student interaction, assessments, as well as facilitator presence. This feedback is the foundation for any changes or modifications made prior to the subject being offered for the second time.

### **Capturing the learning design**

This current project began with an inherited Word document template for a subject learning design from AP, to which minor adaptations were made, primarily to wording to reflect more appropriate Australian language. Subject development teams worked on this document to develop a blueprint for the entire subject, meaning that over time, the document grew to be very large and complex. During online discussions between the authors, it quickly became apparent that the existing template was cumbersome for subject conveners to navigate, and its format was hindering the design of good 'flow' for students to work through their materials and activities in an efficient sequence.

In an attempt to create a more workable and intuitive template for the curriculum design, acceptable to both institutions, the authors undertook a redesign of the blueprint template, drawing on what they considered the best features of the existing template, and of other models they had experienced, to develop a visually informative design, with intuitive layout, while still encouraging good practice in online teaching.

### **Evaluation of the Inherited Template**

The structure of the original template was effective at ensuring constructive alignment, but its layout meant it was less effective at capturing the preferred sequence for students to work through the various readings and activities, or the context around these resources and activities. It was effective at capturing the key elements of the design, and for encouraging strong alignment of the subject learning outcomes, weekly (module) learning outcomes, weekly activities, and the assessment. By the use of targeted questions and instructions, the template was also effective in prompting subject conveners to consider facets of their subject design which they may not have previously thought through for their face-to-face teaching (for example – "List the videos or multimedia resources that you would like students to view, with a short description. Include an estimate of the time it will take students to watch this.").

The template was a large table in a Word document, meaning ubiquitous and easily-sharable technology was used, which everyone was familiar with, and could add to, comment upon, and use the review features to track changes. Table rows represented separate components (for example, required readings, optional readings, multimedia etc), which encouraged a focus on content before learning activities, and the set order of these rows did not allow for design teams to indicate which was the preferred or optimal order in which students should complete these activities.

In addition, a major issue was the location of the assessment tasks at the bottom of the table, implying that assessment was to be considered after the identification of all readings and resources.

In many cases, this structure encouraged a 'content dump' of readings and resources from the existing on-campus subject design, without the necessary rethinking required to redesign for online learning. This often resulted in a lack of, or poorly thought-through, student activities to drive the engagement with these materials.

Furthermore, the size and layout of the template (multiple columns on a large A3 size document) made navigation through the document increasingly difficult as more and more details were added to the design and for many, the document quickly became unworkable, especially for time-poor academic staff struggling to find relevant sections in a structure that was not intuitive to use.

### **Criteria of a learning design artefact**

Regardless of the format in which learning designs are documented, essential elements include identifying the key actors involved (teachers and students), what they are expected to do (teaching and learning tasks), what educational resources are used to support the activities, and the sequence in which the activities unfold. (Lockyer et al, 2013, p1442-1443)

Before discussing how the template could be restructured, it is important to define what was required from this artefact. A key artefact from all curriculum design workshops is a draft learning design, or subject roadmap. In some sessions, this is developed on whiteboards and then photographed, which captures ideas, but does not allow easy redevelopment of those ideas. In other sessions, the design is captured on large sheets of butcher's paper, using coloured Post-it notes® to represent the sequence of different aspects (learning activities, resources, assessment, support etc.), following the method used by Ale Armellini when conducting Carpe Diem workshops (Armellini & Aiyegbayo, 2010). This is an engaging and effective method to collaboratively develop a design, especially when mapping how long activities will take and looking at due dates etc., as it is easy to move the post-it notes around, and visually understand how the subject would roll out for students. However, this model results in a physical artefact which is not then easy to share or digitally edit.

### **Usability criteria**

The first step in our redesign was identifying the usability criteria for the artefact:

- **Easy to use**- essential to allow time-poor academic staff to begin their subject development process without any training or induction into the use of the template.
- **Shareable and editable**- as the blueprint document evolves through different stages in the subject development process, it must be accessed and edited by different individuals.

### **Pedagogical Criteria**

When transitioning a subject that was first taught on campus, it is often common for facilitators to want to use the same curriculum and activities. However, a key strategy to discourage a simple translation of face-to-face teaching into the online environment is to encourage subject conveners to take a 'backwards mapping' approach, looking at the learning outcomes and assessment tasks before considering learning activities, and leaving decisions on content and other resources until last (Great Schools Partnership, 2013). This often takes subject conveners out of their comfort zone, but is effective in designing the necessary alignment. A learning design template needs to address the following considerations in order to encourage a backwards mapping approach to curriculum.

#### *Alignment*

Constructive alignment among ILOs, assessments, readings, and activities is crucial in any subject design (Biggs & Tang, 2007). The most common pitfalls in a subject are unclear learning objectives as well as assessments that are not aligned with the learning objectives (Jones et al, 2011) Therefore, the learning outcomes and assessments were deemed to be crucial parts of the template; all other activities must revolve around these two main components.

#### *Interaction*

Opportunities for student interaction are considered indicators of quality of online subjects, as identified by the internationally recognized Online Learning Consortium scorecard Standard 1 of Teaching and Learning (OLC, 2015). This Standard states that "Student-to-student and faculty-to-

student interaction are essential characteristics and are encouraged and facilitated". Also related to this standard, these types of interactions promote the formation of a community of inquiry, and improve student motivation, student engagement, and student satisfaction (Drouin, 2008, Arbaugh et al, 2008). Moreover, Ke (2010) found that high online presence were positively correlated with learning satisfaction.

Accordingly, a learning design template should encourage interaction wherever possible and appropriate, both in assessment tasks and weekly learning activities.

#### *Flow of activities*

The template should encourage designers to consider the order in which students are likely to move through the activities and resources, and provide the necessary contextual linkages between these. Since different team members at La Trobe University utilize the template to build the subject in the LMS, the document should be sufficiently detailed for an educational designer to build the LMS site, without continually checking with other members of the design team.

#### *Time*

Providing estimates of the time required for activities and readings not only helps students plan their study, but also helps the design team monitor student workload. In addition, estimates of time required for facilitators to monitor discussions and give feedback on assessment tasks is useful during the planning stage to ensure these tasks can be met effectively. Throughout the six-week subjects, feedback on assessment submissions is required within five days, so the design team must ensure this is achievable for facilitators when planning due dates and other activities requiring moderation.

#### *Consistency*

The elements and key subject characteristics outlined in the template had to promote consistent subject structure throughout the program. Expecting the same subject structure regardless of the content of the subject helps build students' confidence, allowing them to focus on their learning instead of subject navigation.

### **Designing a new template**

It was decided early on that tables in a Word document was the preferred file type, utilizing ubiquitous technology in a format that is familiar to all staff, and easily editable by all, and to then redevelop the existing template to incorporate additional features, according to the identified criteria (above).

The method of planning learning designs used by Ale Armellini in his Carpe Diem workshops, using colour Post-it notes® on large sheets of butcher's paper, was very attractive. A co-author of this paper had adopted this method in similar workshops, and devised a simple Word table, with shaded columns colour-matched to the Post-it notes® to represent the same components, as a method of digitally capturing the output from a Carpe Diem session. This proved popular with curriculum teams, who were able to instantly recognize the colour-code as one which they had worked with in their workshop, and appreciated the easily sharable and editable format. However, this model comprised a very basic description of the learning design, and did not attempt to record key aspects such as ILOs, constructive alignment, or other necessary components.

The authors were also attracted to the task swimlane model developed by Conole (2013a), and built on the earlier concepts of Oliver and Herrington (2001). This model provides a clear and easily understood visualization of the learning pathway that learners were expected to take, including any resources or tools required to undertake that pathway. Conole's swimlane view was developed in CompendiumLD software, which allows users to create additional swim lanes (to represent other aspects of the design such as estimated time, teacher activity etc.), and also to attach key documents (for example, resources such as assessment instructions, rubrics etc.) to key activities. On the downside, this model requires all curriculum design team members to have access to the software (albeit freely available), and familiarity with the interface and terminology used, which is not always intuitive and takes significant time and effort to master (Conole, 2013b). Additionally, sharing the output can be difficult. Finished designs can be exported as jpeg images, which do not allow for other members of curriculum design teams or external collaborators to edit or add comments. Nevertheless, the concept of displaying learner activity, resources and other aspects (for example, teacher activity, detailed instructions etc.) is a powerful one.

After consulting these previous models, more recent literature and with colleagues, it was decided that the redesigned template should consist of three key sections:

1. Subject overview: Subject name and code, Subject intended learning outcomes (ILOs), and a brief subject description
2. Assessment: Each assessment task is detailed, with a brief description, instructions for students, together with the total marks available, due dates, format of submission, and key assessment criteria
3. Weekly modules: a brief description of the week's activities, then a detailed plan including all student instructions, links to readings and resources, details on activities (including links to any tools required), and all contextual statements to link these items in a logical and engaging sequence.

The structure of the template for the weekly modules was designed in line with Conole's swimlane concept (Conole, 2013a), including columns for what students do, what resources they need, what facilitators do, and key due dates. These columns were then colour-coded to match the colour of the Post-it notes® used in the curriculum design workshops, similar to the coloured visual representation proposed by Agostinho (2006).

After the initial redesign, a period of consultation about the template with colleagues was undertaken. It proved impossible to gather a large group of colleagues together at the same time, so enlarged copies of the draft template (as well as associated documents about the entire CDI process) were taped to the centre of a whiteboard in a shared meeting/lunch room, with instructions written around this to provide minimal explanation and context. Colleagues were asked to leave comments, either on the whiteboard, or using Post-it notes® to add to the template document (so comments could be attached to particular areas). Over the course of a week, colleagues cheerfully engaged with this process, and some dozens of comments were left, providing a wealth of constructive suggestions to further improve both the entire CDI process, and particularly, the learning design template.

## Learning design template

The images below illustrate the structure of the template, including brief descriptions or explanations to help subject conveners understand what is required for each section.

<b>SUBJECT OVERVIEW</b>	Subject Name:		Subject Code:			
	Subject Intended Learning Outcomes (SILOS)  Write student-centred learning objectives, making sure to utilize an active verb & that SILOS are measurable.		Subject Description:  Brief description of subject, used for both this process and for the CIMS system / subject learning guide etc. Use 2 <sup>nd</sup> person language (eg. "In this subject, you will....")			
<b>Assessment tasks</b>						
Item	Type of Assessment (eg. essay, report, reflection etc), including group /individual)	Indicate if the assignment is graded or not graded	Aligned to SILO #	Format of submission  (eg. Word doc via Turnitin, Wiki, blog etc)	Due (eg midnight Sunday, end Week 2)	Key assessment criteria  Include relative weighting for each criterion
	Description of Assessment  Instructions for Student	Indicate value (%)				

Figure 1: Subject overview section of the template.

<b>MODULE 1</b>	<b>Module/Week No &amp; Name:</b>	<b>Module or Week ILOs:</b>  At the end of this module, you should be able to: 1.	<b>Brief description of this module or week:</b>					
	<b>Aligns with SILOs:</b>							
<b>Module 1 Learning design:</b>								
Student Perspective							Facilitator	
Steps	Action	Time	Module ILO Alignment	Learning Activity Description	Resource (cite appropriately)	Assessment & value	Teaching Activities	Time
Step 1	(Eg Listen...)	(eg 15 mins)	#		(eg Podcast)			
Step 2	(Eg Read...)	(eg 2 hours)	#		(eg Academic Journals/ Book Chapters (provide references))			
Step 3	(Eg Watch...)	(eg 15 mins)	#		(eg Video (provide URL))			
Step 4 etc	(Eg Write...)	(eg 30 mins)	#	Detailed Prompt here	All learning material	(eg Discussion Forum 5%)		
Optional activities	(Eg Further reading etc)							
Conclusion	(eg Read or answer...)			(Could be a review quiz, summary etc)				

**Figure 2: Weekly learning design section of the template. This section is copied for each module or week of the study period or semester.**

## Implementation and modification

The new template design was implemented immediately into the curriculum design process. It proved significantly easier to use than the previous design, and subject development teams reported it quickly became an integral part of the development process, often replacing the previous methods used to capture ideas. In some cases, where the subject convener was located at regional campuses or otherwise not available for face-to-face curriculum design workshops, the template could be used during a Skype meeting to discuss the key alignment and assessment components of the subject, and has been used successfully as a substitute for these face-to-face sessions.

Student Perspective				Facilitator				
Step	Action	Time (mins)	Module ILO	Learning Activity Description	Resource (cite appropriately)	Assessment & value	Teaching Activities	Time
5	Read Behling (1998) and reflect on questions	60		<p>A hotly contested topic is the extent to which individual differences predict employee performance and whether they should be used in the hiring process. Behling (1998) draws on substantive research to address this issue. Consider the following questions:</p> <ol style="list-style-type: none"> <li>1) Which personality traits are most relevant for your role? Are or were these considered in the selection process when you were hired (or promoted)?</li> <li>2) What are the potential advantages of using personality and general intelligence as part of the hiring process in your organization? Are there any disadvantages?</li> </ol> <p>Optionally, you may want to complete a self-assessment of how you score on the Five Factor Model of Personality. You can use the web link to complete an online self-assessment.</p> <p>Optionally, you may want to informally test your level of general intelligence. You can use the general intelligence sample test link to complete some sample items. You can follow the link on the same page to read further on the concept of general intelligence or g.</p>	<p>Article: Behling, O. 1998. Employee selection: Will intelligence and conscientiousness do the job? <i>Academy of Management Executive</i>, 12: 77-86.</p> <p>Personality Web Link: <a href="http://personality-testing.info/tests/BIG5.php">http://personality-testing.info/tests/BIG5.php</a></p> <p>General Intelligence Sample Test Web Link: <a href="http://www.psych.utoronto.ca/users/veingold/courses/intelligence/cache/1198gottfredbox1.html">http://www.psych.utoronto.ca/users/veingold/courses/intelligence/cache/1198gottfredbox1.html</a></p>	NA	<p>Teaching note: The article clearly notes that both general intelligence and conscientiousness are highly predictive of job performance. Though there is evidence that general intelligence is one of the strongest predictors of work performance, the issue of using general intelligence is often quite thorny, and the use of intelligence tests has a very negative history. Even among highly valid tests of general intelligence, there are concerns that using such tests can have adverse impact against minority groups (i.e., tests are often systematically biased).</p>	

Figure 3: Excerpt from a module learning design

Subject conveners appeared to find the layout of the module design section easy to use, and were encouraged to provide quality contextual statements and guiding questions for students, in a format ready to enter directly into the LMS (see Figure 3 for a short excerpt from a module learning design, demonstrating the detail provided for a single activity). Some even used the Teaching Activities column to add notes for tutors and facilitators, which could be added to the LMS (hidden from student view) to assist the teaching team (Figure 3).

Due to the short timelines of the subject development process involving multiple subjects at different stages of development, no formal evaluation of the template design could be implemented. However, observations from colleagues attest to the improved focus on student learning:



The current [template] speaks clearly to the academic and designer – a crucial issue. It also shifts emphasis in design from descriptions of content to sequences for teaching and learning activities. Hence [it] focuses on student paths to learning. (John Hannon, Senior Educational Developer, La Trobe University)

One of the original objectives was to produce a comprehensive artefact, with sufficient detail to enable a learning technologist to build the entire LMS site. It was quickly discovered that the pilot template included all the elements of the assessment and learning design, but missed a few vital elements usually required for the home page of a subject LMS site – for example, a welcome message (preferably via video) from the subject convener, contact details for the teaching team, a learning schedule to help students plan their study, and links to key university support services. Subsequently, an additional page was added to the template to include a checklist of these items (Figure 4).

<b>HOME PAGE</b>	<p><b>Home page of LMS site:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Welcome to subject text (<i>1-2 sentences only</i>)</li> <li><input type="checkbox"/> News (Announcements) forum</li> <li><input type="checkbox"/> Subject Learning Guide</li> <li><input type="checkbox"/> Subject Learning Outcomes</li> </ul>
<b>START HERE</b>	<p><b>Start Here module:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Welcome podcast from subject convener (<i>3-5 minutes</i>)</li> <li><input type="checkbox"/> Meet your facilitator / teaching team (<i>1-2 paragraphs detailing professional background of each of convener / tutor etc, plus photo of each</i>)</li> <li><input type="checkbox"/> Subject overview description (<i>from section above</i>)</li> <li><input type="checkbox"/> Essential University Resources (<i>e-Book with info on library, policies etc</i>)</li> <li><input type="checkbox"/> Icebreaker discussion forum (<i>opportunity for students to meet each other, ideally a topic aligned with the subject</i>)</li> </ul>

**Figure 4: Checklist of subject home page components**

## Conclusions

This paper describes the development of a simple Word document template to capture the learning design of fully online subjects, improving the processes involved in a rapid curriculum development project. At this stage, the learning design template works well, but does not accommodate complex learning designs (for example, multiple pathways or branching of pathways). It was always the intention that this template would evolve as required, and it is anticipated that more complex designs will drive further development of this document.

## Acknowledgements

The authors wish to thank Robyn Yugel for insightful suggestions on improving our paper, Dr. Jennifer Spoor for permission to use screenshots of her subject learning design, and our colleagues for constructive suggestions during our template design phase. We also wish to thank the anonymous reviewers who provided thoughtful feedback on our earlier submission.

## References

- Agostinho, S. (2006). The use of a visual learning design representation to document and communicate teaching ideas [online], *Who's Learning? Whose Technology?* Proceedings of the 23rd Annual Ascilite Conference, Sydney 2006, [http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf\\_papers/p173.pdf](http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf_papers/p173.pdf). [viewed 18 Jun 2015].
- Agostinho, S., Oliver, R., Harper, B., Hedberg, H., & Wills, S. (2002). A tool to evaluate the potential for an ICT-based learning design to foster "high-quality learning". In A. Williamson, C. Gunn, A. Young., & T. Clear (eds.), *Winds of change in the sea of learning. Proceedings of the 19th Annual Ascilite conference*. (pp. 29-38). Auckland, New Zealand: UNITEC Institute of Technology. <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1128&context=edupapers> [viewed 18 Jun 2015].

- Arbaugh, J. B., Cleveland-Innes, M. Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P., (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *The Internet and Higher Education*, 11 (3-4), 133-136. <https://doi.org/10.1016/j.iheduc.2008.06.003>
- Armellini, A., & Aiyegbayo, O. (2010). Learning design and assessment with e-tivities. *British Journal of Educational Technology*, 41 (6), 922–935. <https://doi.org/10.1111/j.1467-8535.2009.01013.x>
- Benfield, G. (2008). E-Learning course design intensives: disrupting the norms of curriculum design. *Educational Developments*, 9 (4). 20-22.
- Biggs, J., & Tang, C. (2007). *Teaching for Quality Learning at University* (3<sup>rd</sup> ed), Buckingham: SRHE and Open University Press.
- Britain, S. (2004). *A Review of Learning Design: Concept, specifications and tools*, JISC Project Report. Online.: [www.edtechpost.ca/wordpress/files/2004/07/ACF83C.doc](http://www.edtechpost.ca/wordpress/files/2004/07/ACF83C.doc) [viewed 18 Jun 2015].
- Conole, G. (2013a). *Designing for Learning in an Open World*, New York: Springer.
- Conole, G. (2013b). 'Tools and Resources to Guide Practice' in Beetham, H. and Sharpe, R. (eds) *Rethinking Pedagogy for a Digital Age 2<sup>nd</sup> Edition*, pp.113–130, Oxford, Routledge Falmer
- Dalziel, J. (2003). Implementing Learning Design: the Learning Activity Management System (LAMS). In G.Crisp, D.Thiele, I.Scholten, S.Barker and J.Baron (Eds), *Interact, Integrate, Impact: Proceedings of the 20th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education*. Adelaide, 7-10 December 2003. <http://www.ascilite.org.au/conferences/adelaide03/docs/pdf/593.pdf> [viewed 18 Jun 2015].
- Drouin, M. (2008). The relationship between students' perceived sense of community and satisfaction, achievement, and retention in an online course. *Quarterly Review of Distance Education*, 9 (3), 267-284.
- Great Schools Partnership (2013) Glossary of Education Reform. <http://edglossary.org/backward-design/>. [viewed 18 Jun 2015].
- International Consultants for Education and Fairs (ICEF) (2012). 8 countries leading the way in online education. (2012, June 28). <http://monitor.icef.com/2012/06/8-countries-leading-the-way-in-online-education/> [viewed 18 Jun 2015].
- Jones, K.A., Jones, J., Vermette, P. J. (2011). Six Common Lesson Planning Pitfalls- Recommendations for Novice Educators, *Education*, 131 (4), 845-864.
- Ke, F. (2010). Examining online teaching, cognitive, and social presence of adult students. *Computers & Education*, 55, 808-820.
- LAMS Foundation. <http://lamsfoundation.org/> [viewed 18 Jun 2015].
- Laurillard, D. (2013). "Forward" in Beetham, H. and Sharpe, R. (eds) *Rethinking Pedagogy for a Digital Age 2<sup>nd</sup> Edition*, 26–30, Oxford, Routledge Falmer
- Lockyer, L., Heathcote, E., & Dawson, S. (2013). Informing pedagogical action: Aligning learning analytics with learning design. *American Behavioral Scientist*, 57(10), 1439-1459.
- Lyons, J., Hannon, J., & Macken, C. (2013). Sustainable Practice In Embedding Learning Technologies: Curriculum renewal through course design intensives. In Maree Gosper & Dirk Ifenthaler (eds.), *Curriculum Models for the 21st Century: Using Learning Technologies in Higher Education* (pp. 423-442). Springer, New York [https://doi.org/10.1007/978-1-4614-7366-4\\_22](https://doi.org/10.1007/978-1-4614-7366-4_22)
- McAndrew, P. & Goodyear, P. (2013). 'Representing Practitioner Experiences through Learning Design and Patterns' in Beetham, H. and Sharpe, R. (eds) *Rethinking Pedagogy for a Digital Age 2<sup>nd</sup> Edition*, pp.226–255, Oxford, Routledge Falmer
- Oliver, R., & Herrington, J. (2001). *Teaching and Learning Online: A beginner's guide to e-learning and e-teaching in higher education*, Perth: Edith Cowan.
- Oliver, R., Harper, B., Wills, S., Agostinho, S., & Hedberg, J. G. (2013). 'Describing ICT-Based Learning Designs that Promote Quality Learning Outcomes' in Beetham, H. and Sharpe, R. (eds) *Rethinking Pedagogy for a Digital Age 2<sup>nd</sup> Edition*, pp.226–255, Oxford, Routledge Falmer
- Online Learning Consortium (2015) OLC Quality Scorecard. <http://onlinelearningconsortium.org/consult/quality-scorecard/> [viewed 18 Jun 2015].
- Oxford Centre for Staff and Learning Development (OCSLD). (2009). *Course design intensives*. Oxford, UK: Oxford-Brookes University. <https://wiki.brookes.ac.uk/display/CDIs/Home> [viewed 18 Jun 2015].
- Salmon, G., Jones, S. & Armellini, A. (2008). Building institutional capability in e-learning design. *Research in Learning Technology*, 16, 2, 95–109. <http://www.researchinlearningtechnology.net/index.php/rlt/article/view/10889> [viewed 18 Jun 2015].

Weaver, D, Robbie, D, Kokonis, S & Miceli, L (2013) Collaborative scholarship as a means of improving both university teaching practice and research capability, *International Journal for Academic Development*, 18(3), 237-250, DOI:10.1080/1360144X.2012.718993.

Weaver, D. & Duque, S. (2015). Standing on the shoulders of others: creating sharable learning designs. In T. Reiners, B.R. von Kinsky, D. Gibson, V. Chang, L. Irving, & K. Clarke (Eds.), *Globally connected, digitally enabled*. Proceedings ascilite 2015 in Perth (pp. 297-307).

<https://doi.org/10.14742/apubs.2015.963>

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