

## Online Repositories of Learning Designs: Pipedreams and Possibilities

ARV 2013 Workshop on Teacher-led Inquiry and Learning Design: The Virtuous Circle

Susan McKenney, OUNL & UT

### About online repositories of learning designs

Around the globe both country-specific and international organizations have been exploring the potential of sharing digital resources for education. Reusable digital resources that are encapsulated in a lesson or assemblage of lessons grouped in units, modules, courses, and even programs are referred to as learning objects (McGreal, 2004). When a learning object represents the learning and support activities that contribute to the teaching-learning processes, it may be referred to as a learning design (cf. Koper, 2006). While many online repositories of learning designs exist to primarily serve the needs of educational researcher-developers (e.g. the design principles database: <http://www.edu-design-principles.org>), this paper focuses on practitioner-oriented repositories of learning designs.

Practitioner-oriented learning design repositories frequently contain lesson or unit plans, but sometimes also individual activities and/or materials. Teachers are involved, to varying degrees, in creating repository contents. In principle, if not in fact, teachers are also the main group accessing and using the content. Such learning design repositories may be free, pay-per-use, subscription-based, or available to participants in professional development programs. Unless they are offered by academic publishers, these repositories are rarely tied explicitly to any particular curriculum. The learning designs are sometimes connected to learning standards, though usually more in a relational sense, not explicitly structured to meet them.

The explosive growth in learning design repositories as well as literature about sharing resources indicates resounding endorsement for the concept - in principle. However, the equally stunning proportion of sites gone dormant and expert skepticism demonstrate that we have not figured out how to do it well (enough). This paper presents observations and critical reflections with the goal of stimulating research that can help bring the repository vision to life in ways not yet achieved.

### Repository goals: Why repositories are created

There are different motives for practitioners to create and share learning designs through repositories. A key motive for the exchange of educational resources is efficiency: teachers re-use learning designs for course construction and synthesis (cf. Polsani, 2003). Such exchange can also spark experimentation and innovation, consistent with Ben-Peretz' (1990, 1994) classic notion of 'curriculum potential'. Aiming to support efficiency, experimentation and innovation are most often goals of open access repositories. Some repositories are also highly-attuned to the exchange of knowledge, as can be the case when teachers conduct inquiry that yields certain designs. These repositories can contain more than learning designs alone, such as the stories that led to them. Finally, commercial repositories also exist (e.g. <http://www.TeachersPayTeachers.com>) and while they may embrace the aforementioned goals, they are also driven by financial motives.

### Reasons for engaging with repositories

Some online repositories make their ultimate goals highly transparent, while others hardly do so at all. These can be highly or minimally aligned with the needs and wishes of the users. Practitioners tend to create and share their learning designs for one or more of the following reasons: a desire to contributing to the quality of education; recognition and appreciation; one's own learning; or financial gain. Those accessing and using learning designs made available from repositories tend to do so with the aim of: filling gaps in the school curriculum; experimentation and innovation; contributing to one's own learning; or saving time.

### **Factors affecting repository use**

The degree to which online repositories are (implicitly or explicitly) attuned to their own motives as well as the personal (and sometimes institutional) motivations at play certainly affects how they are used. In addition, other factors affect repository use, such as:

- *Curricular autonomy*: The degree to which practitioners are free or even encouraged to develop/obtain learning designs that are not part of the standard curriculum.
- *Quality*: The quality of the resources as well as reliable indicators hereof (e.g. user ratings), and mechanisms for assessing the relevance of specific resources to a user's particular context (cf. Conole, 2008).
- *Accessibility*: How easily one can find what is sought; this includes the required level of familiarity with metadata and vocabularies to identify relevant learning activities (cf. Conole, 2008).
- *Volume*: Sufficiently filled with possibilities such that users can regularly find what they seek, as well as the critical mass at which use becomes contagious.
- *Customizability*: The degree to which repositories themselves support customization of components to provide a tailored learning experience (cf. Kellogg, et al. ) or to support teachers in learning activity sharing and sequencing (cf. Paquette, et al. 2008).

McKinsey management experts (Lawson and Price, 2003) identified five key prerequisites for accelerating and establishing change. These include: a purpose to believe in ("I will change if I believe I should"); reinforcement systems ("I will change if I have something to win"); overcoming barriers and obstacles ("I would change if there wasn't this first step"); the skills required for change ("I will change if I have the right skills"); and consistent role models ("I will change if other people change"). Because the use of new materials often involves change, each of these is likely to be relevant when it comes to engaging with online repositories for learning designs.

Previous research (e.g. Clements and Pawlowski, 2011) has explored the barriers to using open educational resources in general, and these likely apply to learning design repositories as well. For individuals, they relate to: lack of time due to heavy teaching schedules; lack of innovation in pedagogy; lack of capacity and knowledge leading to fear of loss of control; lack of reward and incentives; little management or peer support; and lack of appropriate tools. At the institutional level they revolve around: lack of clear policies for use; lack of capacity and financial resources; fear of competitors and loss of competitive advantage; difficulty in acquiring or implementing eLearning resources; constraints of school culture; constraints of existing production tools; legal issues around creation and use of web based materials; and access issues, typically technical, cultural or capacity related.

### **Problem statement**

The state-of-the-art of online learning design repositories is indicative of both practical and scientific problems. Particularly in non-commercial sites, practical problems can be summarized as: huge resources invested with disappointing yields; and repository designs which seems insufficiently aligned with: the naturally occurring motives for engagement with resources; practitioner realities and constraints; and the needs and wishes of target users. Such scientific understanding as that summarized above helps us understand *what* to avoid (barriers to use) and pursue (pre-requisites for change), respectively. But current research literature provides limited guidance on *how* to tackle the challenge of realizing the vision of online repositories. *Specifically, we severely lack sufficient insight into how to design and launch for sustainable repository use that is consistent with the initiative's goals.*

## Call to action

Innovation, such as creating and sharing new learning designs, is a high risk activity for teachers and the incentives are few (Hannon, 2009). If teacher engagement in creating and sharing learning designs through repositories is to thrive, we must study and understand the determinants of use and especially describe how promising design work is conducted better than we do now. We may do this by undertaking studies on repository design best practices – this could include both the best practices for design processes and for designed products. We might also fuel design thinking by a better understanding of offline resource sharing: What initiates and sustains that? Under which conditions? Why? We may seek out contexts in which teachers have established and maintained the much-needed but infrequently feasible ‘experimental space’ (cf. The Young Foundation, 2006) necessary to try on new ways of thinking, seeing and doing. Finally, we may want to explore research collaborations that bring in multiple cultural and resource contexts, as well as practitioners whose voice can help identify the range of needs, wishes and constraints of potential users. It is hoped that this ARV workshop will set the stage for further exploration of these ideas, and possible collaborative action that, eventually, can help realize the enormous potential of online learning design repositories.

## References

- Ben-Peretz, M. (1990). *The teacher-curriculum encounter*. Albany: State University of New York Press.
- Ben-Peretz, M. (1994). Teachers as curriculum makers. In T. Husén & T. Postlethwaite (Eds.), *The international encyclopedia of education* (pp. 6089-6092). Oxford: Pergamon Press.
- Clements, K., Pawlowski, J.M. (2011). User-oriented quality for OER: Understanding teachers' views on re-use, quality and trust. *Journal of Computer Assisted Learning*.
- Conole, G. (2008). Capturing practice: The role of mediating artefacts in learning design. In L. Lockyer, S. Bennett, S. Agostinho and B. Harper, Hershey (Eds.), *Handbook of Research on Learning Design and Learning Objects: Issues, Applications, and Technologies* (pp. 187-207). Hershey.
- Hannon, V. (2009) ‘Next Practice’ in education: a disciplined approach to innovation. *Innovation Next Practice*. See the Innovation Unit website: [www.innovation-unit.co.uk](http://www.innovation-unit.co.uk).
- Koper, R. (2006). Current Research in Learning Design. *Educational Technology & Society*, 9 (1), 13-22.
- Lawson, E. & Price C. (2003). The psychology of change management. *The McKinsey Quarterly 2003 Special Edition: The Value in Organization*, p. 30- 41.
- McGreal, R. (2004). Learning objects: A practical definition. *International Journal of Instructional Technology and Distance Learning*, 9(1).
- Oliver, K., Kellogg, S., Townsend, L. & Brady, K. (2010). Needs of elementary and middle school teachers developing online courses for a virtual school. *Distance Education*, 31(1), 55-75.
- Paquette, G., Marino, O., Lundgren-Cayrol, K., Leonard, M. (2008). Principled construction and reuse of learning designs, in L. Lockyer, S. Bennett, S. Agostinho and B. Harper (Eds.) *Handbook of Research on Learning Design and Learning Objects: Issues, Applications, and Technologies*, pp. 869–890.
- Polsani, P. R. (2003). Use and abuse of reusable learning objects. *Journal of Digital Information*, 3(4).
- The Young Foundation (2006). *Social Innovation: What it is, why it matters and how it can be accelerated*. The Young Foundation.