Book Review – The Architecture of Productive Learning Networks

Reviewer: Terry Anderson, Athabasca University, Canada

As I grow older, I come to realize that I shouldn't let principles always stand in the way of good ideas. Thus, though I've made a commitment to no longer contribute to closed scholarly works, I can't help but at least contribute a review of *The Architecture of Productive Learning Networks* by Lucila Carvalho and Peter Goodyear. A personal disclosure is that I count Goodyear as a friend and I was present when the book was being planned after the Networking Learning Conference in Maastricht in 2012.

Carvallo and Goodyear have been involved for some years in the interesting intersection between architecture and learning, positing that both the physical and networked spaces that we create have very important (but often unrecognized) effects on teaching and learning or as Winston Churchill aptly put it, "We shape our buildings; thereafter they shape us". I was initially attracted to their earlier work on patterns and pattern languages modelled in part on the architectural pattern work of Christopher Alexander, and have thereafter been trying to discern and better utilize both the created and emergent social patterns of effective formal and informal learning.

In this volume the authors set forth an initial set of architectural entities that describe and define a network of individuals associated together in order to collectively achieve some goal. As the title implies, these associations are focused on learning but in a very broad sense that includes formal education, informal and professional learning, and social action. The structures that we devise and sustain to support this learning are referred to as networks – aggregations based upon connections of people and resources, that in this context are focused on learning – and of course doing so productively. Networks imply a more defined aggregation than the nebulous "community" and a less structured form than a group where "everyone knows everyone". A network is emergent, bursty and defined more by connections and activities than by rules, memberships, or authority.

The book is structured around Goodyear and Carvalho's theoretical and architectural framing of an analysis structure by which subsequent chapters describe real life (and judged effective by the editors) learning networks. The architecture they proscribe is focused on "what it is that people are actually doing and the tools, and resources and interactions that become bound up in that activity". The analysis begins by identifying the structures and epistemic elements of each network. I had to look this one up as they define epistemic elements "as those most closely associated with learning tasks, and those that seem to reflect epistemic structuring" (p. 61), which is far too tautological a definition for me. In any case I understand epistemic as the structure and the activities of the network specifically designed to create and support productive learning. They then ask the authors of the case studies to describe the place and the set structure of the network – how the connections and resources are linked, stored, organized, and made available for use and the processes for creation and support of new connections, unlike the way that Jon Dron and I use the term *set*, as a non group and non network aggregation of learners. The authors attempt to extract the important lessons, patterns, and structures that they find most compelling from the case.

The bulk of the 294 page text is made up of these 14 case studies. The cases range from formal learning activities (both higher and elementary education), professional development (teachers leading curriculum change), social action (One Laptop per Child), school enrichment (iSpot sharing nature) to my favorite – a network focused on artistic creation (the Virtual Choir). The final case study chapter is not really a case study following the model of the others but is an interesting contribution as it describes an open source tool set that can be used for network analysis by researchers and more importantly by network participants to visualize and gain a meta overview of their own emergent networks.

In architectural parallel with the case studies, Carvalho and Goodyear end the book with a synthesis chapter of their own. They begin by reflecting on the relationships amongst the elements in their analytic design of effective networks. Pragmatically, they first instruct us to look to the users' perceptions of value and efficacy and ease of use as the most important measurements of effectiveness. The editors then dive into principles of knowledge construction using legitimation code theory which (fortunately) soon leads to discussion of six practical design principles – which I found to be (as likely designed) the more generalizable contribution of the text.

Despite the cost (US $44.95 in paper, $155.00 in hardback from Routledge), I found much of value in this text. I hope that at least parts of the work become available openly, as there is much for us to learn as educators, social activists, and human connectors from this timely tome!

Athabasca University