Book review

Bozalek, V., Ng'ambi, D., Wood, D., Herrington, J., Hardman, J. & Amory, A. (eds.) 2015. *Activity Theory, Authentic Learning and Emerging Technologies: Towards a Transformative Higher Education Pedagogy*. New York: Routledge.

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With so many financial and human resources invested in the increased use of learning technologies in higher education institutions, this edited collection is a very important publication in that it focuses on the potential transformative effect of emerging technologies on learning and teaching practices in higher education. This transformative effect has largely been unexplored in a systematic way and the potential transformative effect is often only described by means of anecdotes or in a hyped-up way, without any supporting theoretical frameworks. Furthermore, with emerging technologies there often is a tendency to focus on the trends and issues (Reiser & Dempsey, 2011), strategies for managing technology in higher education (Bates & Sangra, 2011) or models for implementation (Beetham & Sharpe, 2013; Reigeluth, 2013), sometimes with a very specific focus on just one case study utilising an emerging technology such as Web 2.0 (Bennett et al., 2012). Without taking away from the important contribution of all of these types of publications, this edited collection moves beyond mere description and addresses an important, unexplored aspect of emerging technologies, namely the relationship between their use and the potential transformative effect on higher education.

It does so by situating itself at the intersection of emerging technologies, authentic learning and activity theory, thereby filling the gap between activity theorists, pedagogical models and emerging technologies. To achieve this aim, innovative applications of emerging technologies, specifically in the southern hemisphere (South Africa, Australia and New Zealand), are investigated by using an authentic learning pedagogical approach through the methodological lens of activity systems theory. Although the case studies are drawn from the southern hemisphere

within a very specific context, the collection will have universal appeal because the case studies are analysed using internationally accepted theoretical perspectives.

This collection was developed as part of a South African national research project entitled Emerging ICTs in Higher Education. This project (2011-2013) focused on the use of emerging technologies to enhance teaching and learning in South African higher education institutions (HEIs), using Cultural-Historical Activity Theory (CHAT) as a theoretical framework. During the development of the project, Jan Herrington's authentic learning model was included as an important pedagogical model to evaluate the ways in which emerging technologies can be used to improve teaching and learning at higher education institutions. The collection therefore also includes an interesting mix of contributions from emerging researchers and more experienced scholars.

The collection is extremely well-structured and the logical organisation of the book according to the main themes supports the main objective of the collection. The first three parts of the book follow the same pattern. Each part starts with an introduction to one of the three main topics (CHAT, authentic learning and emerging technologies) respectively, followed by case studies drawing on examples from a variety of disciplines, year groups, contexts and higher education institutions. Part IV focuses on case studies in all three areas (CHAT, authentic learning and emerging technologies), and concludes with the development of a transformative pedagogical framework that could be used to analyse future situations in which emerging technologies are introduced.

Part I contains an excellent and concise introduction to CHAT by Joanne Hardman and Alan Amory. They motivate the use of the framework as a foundation for understanding pedagogical change as culturally and historically informed. They draw on Vygotsky's work, showing how learning and teaching are culturally and socially located, and include tool mediation, as well as Engeström's Activity Theory model. Engeström's model is then used as an analytical lens in the three subsequent chapters, which outline case studies on both undergraduate and postgraduate courses in South Africa and Australia, demonstrating the complexity of activity systems within which interventions that could lead to the transformation of the subject, object and community are situated. The three case studies are explained and motivated very well.

Jan Herrington provides a thorough overview of authentic learning as a pedagogical model and approach in Part II. She outlines the nine elements of authentic learning and authentic tasks, and problematises the design and implementation of authentic learning designs by focusing on the challenges and popular misconceptions. The three case studies that follow provide excellent examples of how lecturers have grappled with and overcome the challenges of implementation. In the first case study, focused on a postgraduate health education programme, the authors also use the nine elements of authentic learning to analyse the students' experiences of the module. They conclude that one of the advantages of authentic learning design is to promote a strong motivational impetus and multiple opportunities for depth of engagement, collaboration and learning. The remaining two case studies reveal both the value and the challenges of the implementation of authentic learning design. Some very valuable recommendations for future use and advice for practitioners are included.

In the first chapter of Part III of the collection, Dick Ng'ambi and Vivienne Bozalek provide a basic understanding of how emerging technologies (ETs) are conceptualised by elaborating on the context-specific characteristics of ETs, rather than relying on contested definitions. They also provide a very compelling argument for using Activity Theory to view technologies not only as tools, but also to include theories and approaches to teaching and learning. The first case study provides a very interesting South African perspective on what drives lecturers' innovative practices, specifically in terms of utilising emerging technologies, and it is interesting to note that the authors conclude that many of these practices can be linked to Jan Herrington's authentic learning framework, which again underlines the valuable contribution of this collection in that it situates the potential transformative effect of emerging technologies within a theoretical framework. The second case study, located in New Zealand, similarly uses authentic learning principles as theoretical foundation for designing mobile learning projects and argues that Activity Theory is not suited because of the complexities involved. Interestingly, Denise Wood manages to use CHAT – for both the analysis of the technology-enhanced learning activities, as well as the authentic learning approach – for the design of the course, thus providing an excellent example of the integration of the three themes of the collection.

Part IV of the collection contains three chapters outlining case studies using CHAT (six case studies), authentic learning (three case studies) and emerging technologies (four case studies). These practice-based case studies are situated in diverse contexts, including different levels of higher education (undergraduate, postgraduate and professional development), different disciplines, different emerging technologies (Wikis, blogs, Google drive, etc.), and at different higher education institutions. These short case studies succeed in demonstrating how the use of CHAT can elucidate learning as a complex activity, the practical implications of authentic learning environments, and how emerging technologies could be used to transform pedagogical practices. In the concluding chapter, titled "Towards a transformative higher education pedagogy", the editors of the collection reflect on their vision for the reconceptualisation of higher education pedagogy and propose an extremely beneficial transformative pedagogical framework that can be used as a tool for analysis to ascertain the transformative potential of emerging technologies.

This is an excellent collection of articles tightly focused on the main themes of the publication and expertly edited to ensure coherence between the individual chapters, as well as the four parts of the collection. This collection will be of great benefit to practitioners, researchers, decision makers as well as professional development specialists.

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