

## **Digital Resources, Curriculum, and Learning Design for STEM**

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Digital resources for learning are best described as multimedia resources specifically designed to mediate educational activities. This presentation will examine design and engineering aspects of digital resources for learning, and explore their integration with curriculum and learning design frameworks. Furthermore, the presentation will discuss repositories and environments for use of digital resources for learning. Specific attention will be given to design and engineering of digital resources for STEM. STEM initiatives emphasize that relevant curricula and teaching must (a) incorporate concepts and methods from across the STEM disciplines, (b) be inquiry-, problem-, and activity-based, and (c) incorporate digital literacies. In this context, more attention will be given to design of so called 'concept representations' as a specific form of digital resources designed to mediate concept learning and/or support activities requiring specific conceptual knowledge. Finally, this presentation will explore digital resources for learning in context of proposed frameworks for curriculum and learning design for STEM.

### **About the presenter**

Daniel Churchill is an Associate Professor at the Faculty of Education, The University of Hong Kong. He has strong theoretical and practical interest in mobile and emerging learning technologies, educational media design, and concept learning. In 2016 he edited "Mobile Learning Theories and Applications" book. His latest authored book entitled "Digital Resources for Learning" is due to be released by Springer in April this year. Also, he is the Chair of the International Mobile Learning Festival (see <http://imlf.mobi>), an international conference attracting scholars with interest in mobile and emerging learning technologies and frameworks.