Special Issue:
Instructional Design in K-12 Online
and Blended Learning Environments

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Even today, one gets a puzzled look when you say, "I am an instructional designer." Smith and Ragan (2005) describe an instructional designer akin to being an engineer. They both design their work using their respective principles. An engineer using principles of physics, and the instructional designer is responsible for creating learning objects using principles of learning and instruction. Despite often quizzical reactions, the instructional designer profession is not new.

In the early 1940s, instructional technologists and instructional development teams emerged due to the need for training new military recruits. Soon afterward, the field of instructional design began from the introduction of program instruction and the development of instructional theories, stemming from the field of communication and systems theory in the mid-1970's. As digital media proliferated in the mid-1980s, computers began to offer multimedia presentations. Some interactive media was very complex, and there was concern that it may be difficult for learners to use, understand, or accept. Debates on the effectiveness of media on learning ensued

(Clark, 1994; Kozma, 1994). In the mid-1990s, web-based instruction offered instructional designers alternate media and environments in which to work. This resulted in additional pressure to create courses that were comparable or better than face-to-face courses.

Design of online and blended courses is more involved and differs greatly from face-to-face courses (Wray, Lowenthal, Bates, & Stevens, 2008; Siragusa, 2000). When creating online or blended courses, the designer might have a limited understanding of instructional design. This lack of understanding could include what motivates an elementary or high school student in online courses. Merrill (2008) noted that many online and blended courses include only information and are educationally ineffective. Moller, Robinson, and Huett (2012) also noted that online and blended learning should not only be driven by information presentations but should provide sound instructional approaches. Siragusa (2000) concluded that more research is required to distinguish instructional design principles with respect to online and blended learning and environments.

In addition, instructional design requires further exploration in the high school online and blended learning environments (Keeler & Horney, 2007). Academic research with respect to similar formats in higher education is abundant. However, according to Murphy, Rodriguez-Manzanares, and Barbour (2011), there exists a general need for research with respect to K-12 online and blended learning. More investigation is required regarding the design and implementation of courses for K-12 online and blended learners (Sadik, 2003). This special issue begins to fill that gap in K-12 online and blended instructional design research.

This special issue on Instructional Design in K-12 Online and Blended Learning Environments has four articles that examine the following: online standards, learning for students of color, student-centered blended learning environments, and an instructional design model for project-based online learning. Adelstein and Barbour's article field tested a revised iNACOL rubric. The authors demonstrate a method for validating standards and rubrics for K-12 online course design. Elrick, Yu, and Hargrave explore the needs of students of color that attend underfunded high schools with limited access to forensic science courses. They present the design, development, and evaluation of an online forensic science course created for high school students of color, as part of an informal science, technology, engineering, and mathematics educational development program. Huett's case study in a seventh-grade life science course examines the core values of student-centered science and design components in blended classrooms. Finally, Lokey-Vega, Williamson, and Bondeson use a design and development research method to co-develop two instructional design models for designing project-based learning experiences for fully online K-12 students.

The authors of these four articles have an abundance of knowledge and expertise when it comes to applying instructional design to online and blended settings. Their work begins to address the research gap with respect to learning in secondary online and blended environments. Any online or blended instructional designer, as well as educators looking to improve their practice, will benefit from reading and critiquing these articles. We hope that you find the focus of this special issue enlightening and helpful to your own work in this area.

References

Clark, R. E. (1994). Media will never influence learning. *Educational Technology Research and Development, 42*(2), 21-29.

Keeler, C. G., & Horney, M. (2007). Online course designs: Are special needs being met? *American Journal of Distance Education, 21*(2), 61-75. doi:10.1080/08923640701298985

Kozma, R. B. (1994). Will media influence learning? Reframing the debate. *Educational technology research and development, 42*(2), 7-19.

Merrill, D. (2008, August 11). Merrill on instructional design [Video file]. Retrieved from http://youtu.be/i_TKaO2-jXA

Moller, L., Robison, D., & Huett, J. B. (2012). Unconstrained learning: Principles for the next generation of distance education. In L. Moller & J. B. Huett (Eds.), *The next generation of distance education.* New York, NY: Springer.

Murphy, E., Rodríguez-Manzanares, M., & Barbour, M. (2011). Asynchronous and synchronous online teaching: Perspectives of Canadian high school distance education teachers. *British Journal of Educational Technology, 42*(4), 583-591. doi:10.1111/j.1467-8535.2010.01112.x

Sadik, A. (2003). Directions for future research in online distance education. *Turkish Online Journal of Distance Education, 4*(4), 1-16. Retrieved from https://tojde.anadolu.edu.tr/tojde12/articles/sadik.htm

Siragusa, L. (2000). Instructional design meets online learning in higher education. Paper presented at the Proceedings Western Australian Institute for Educational Research Forum 2000, Australia. Retrieved from http://www.waier.org.au/forums/2000/siragusa.html

Smith, P. L., & Ragan, T. J. (2005). Instructional design. Hoboken, NJ: Wily & Sons.

Wray, M., Lowenthal, P., Bates, B., & Stevens, E. (2008). Investigating perceptions of teaching online & F2F. *Academic Exchange Quarterly, 12*(4), 243-248. Retrieved from http://rapidintellect.com/AEQweb/