

## EDITORIAL

Mehmet Aydeniz, Lynn Hodge

*The University of Tennessee, Knoxville, USA*

We are excited to let you know that our second issue is now published. In the second issue of the Journal of Research in STEM Education, J-STEM, we publish five articles, each focusing on different aspects of STEM education and making unique contributions to the ongoing discussion on how to best make sense of and teach STEM.

Harrison (2016) in her article “Assessment for Learning in Science Classrooms” draws ideas from a number of studies about classroom talk to make a case for and propose some of the preconditions for effective feedback in science classrooms. She provides the theoretical basis for formative assessment pedagogy and the opportunities such pedagogy creates for teachers to attend and respond to student learning.

The second article, Explicit Teaching and Scaffolding to Enhance Concept Learning by Design Challenges” by Van Breukelen, Smeets and De Vries (2016) builds on two previous studies and provides insight into how using design-based challenges promotes pre-service science teachers’ conceptual understanding of science ideas in addition to their performance in design and investigative skills. Moreover, they elaborate on the role of scaffolding in reported improvements in students’ concept learning and performance in investigative tasks.

The third article on this issue, Developing Effective STEM Animations: Application of a Multimedia Learning Theoretical Framework” by Adetunji and Levine (2016) introduces a Multimedia Learning Environments theoretical framework for developing effective STEM animations. They present both the process employed in the development of these animations along with data on the wide-spread dissemination of Sci-Toons, its impact on viewers, and its impact on students involved in their production.

The fourth article, “A “Scientist” on the radio: Understanding the framing of STEM to the public,” focuses on STEM communication, Bowen, Zurawski, and Bartley (2016) document the processes by which listener interests ultimately end up discussed in a radio broadcast and what influences the “science” that is presented on-air. They discuss the ways in which the STEM topics and content are mediated by radio station personnel, often times distorting the factual content available to the public and misrepresenting the practices of the research fields. They discuss how “the interests of the commercial radio station around “entertainment” provides a distorted view of science.

Finally, Mueller, Hall and Miro (2016), in their article entitled, “Testing an Adapted Model of Social Cognitive Career Theory: Findings and Implications for a Self-Selected, Diverse Middle-School Sample” provides the results of a research study in which they tested how SCCT predicts a sample of middle school girls’ career choices. Their study has implications for cultivating students’ interests in STEM-related careers.

Collectively these articles bring out interesting points on how to best promote and teach STEM in both formal and informal learning contexts. In doing so, they draw attention to resources, discourse, and instructional practices that support STEM learning and the interaction of contextual aspects that inform individual’s perspectives of STEM fields and professions. These ideas contribute to ongoing efforts to further make sense of STEM as an integrated concept and as distinct content areas that share common dispositions and practices.