

## ***Introducing SOTEL***

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My colleague Rolando Marquez and I are pleased to release the first issue of IJSOTEL. This issue explores numerous challenges, issues, and inquiries in SOTEL. What is SOTEL? Since Ernest Boyer's seminal 1990 report, *Scholarship Reconsidered: Priorities of the Professoriate*, there has been a wealth of literature on what is termed the Scholarship of Teaching & Learning (SoTL). Another field of inquiry that has been rapidly developing in the last couple of decades is Technology Enhanced Learning (TEL). There are dozens of high quality peer-reviewed academic journals publishing TEL research, but there is a lack of literature examining how TEL might overlap, and be informed by, the theoretical and practical frameworks within SoTL. The Scholarship of Technology Enhanced Learning (SoTEL) is a new sub-branch of Boyer's model of scholarship (scholarship of discovery, scholarship of integration, scholarship of application, and scholarship of teaching and learning) which seeks to create dialogue between the findings of educational research and actual teaching in technology-enhanced learning contexts.

This issue contains articles and reports documenting completed SoTEL projects, theoretical or scholarly papers, and systematic reflections. A constant mantra in discussions of higher education and technology is that technology offers many teaching and learning affordances for instructors and learners. One affordance is supporting constructivist and social learning pedagogies. Ashok Goel and David Joyner at the Georgia Institute of Technology report that a project-based course design can scale learning to a couple hundred online students while maintaining strong learning outcomes in their CS 7637 Knowledge-Based Artificial Intelligence (KBAI) course. Darren H Iwamoto, Jace Hargis, and Ky Vuong at Chaminade University of Honolulu also use a form of standards-focused project-based learning (PBL) in college psychology classes to compare learning outcomes in technology mediated presentation projects. Ownership of learning in group work and projects is a perennial issue in education, and this research sheds light on the association between taking ownership of learning and learning outcomes. Relatedly, Greg Mayer at the Georgia Institute of Technology examines through a case study how students in synchronous web-conferencing environment complete group assignments. All three of these studies reveal how technology can support constructivist and social learning in a course.

With new technologies come new ways of interacting with human knowledge. Charles Dziuban et al. at the University of Central Florida investigates the way in which students today utilize the internet for conducting research, both in high stakes and low stakes conditions. What strategies do our students use when trying to search for information? What networked information emerges in the process? These and other questions are addressed.

Many SOTEL initiatives address a single pedagogical and technological innovation, but what happens when multiple innovative practices are combined in a technology enriched learning environment? Cognitive and learning sciences tell us that multi-modal forms of instruction do create stronger connections in the brain, and so Eva Kassens-Noor at Michigan State University investigates the combination of a flipped classroom model, movement, and Twitter on student learning gains in an

exploratory study. Keri Watson and Anastasia Salter at the University of Central Florida transform a traditional art history course into an alternate reality game called the “Secret Societies of the Avant-garde.” They probe whether the gamification format enhances the learning experience and knowledge base or whether it is a distraction.

Designing technologically enhanced learning experiences for students is often a challenging task for any instructor, whether they are teaching face-to-face, blended, hybrid, or online. John Raible, Luke Bennett, and Kathleen Bastedo at the University of Central Florida examine what needs faculty might have in writing effective and measurable learning objectives for online courses. Developing learning objectives and outcomes also requires that an instructor considers the situational factors of the students they teach. Richard Hill at Chaminade University of Honolulu shares how he developed a hybrid English course to align with the mission of the university to engage students in small classrooms with close student-instructor engagement.

Connected with the goals of Hill’s project, Richard Pennington at Georgia Gwinnett College designed targeted preparatory video tutorials to increase student engagement in his “flipped” organic chemistry course. Another element in designing and implementing technology enhanced learning environments is making sure that such real and virtual spaces are both engaging and inclusive. James M. DeVita, Christina Lanier, Michele Parker and Jess Boersma at the University of North Carolina Wilmington draw attention to the affective and social dimensions to student learning in hybrid and flipped courses.

Finally, Wanda Wade at the University of West Florida articulates the potential for web-conferencing technologies to support mentoring beginning teachers in urban classrooms. The emerging Virtual Coaching Model in the private sector offers new avenues for supporting students spread out over large geographical areas. From designing constructivist learning environments and effective learning outcomes to implementing various student engagement initiatives in technologically enhanced learning environments, the contributors in this issue engage with the frontline challenges and features of 21<sup>st</sup> century learning.