

Introduction to Issue 21:1

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This issue of OLJ explores several important themes related to online teaching and learning including faculty, student, and institutional concerns. The issue begins with four articles related to faculty, starting with a review of the literature by Nancy Pope Wingo, Nataliya V. Ivankova, Jacqueline A. Moss of The University of Alabama at Birmingham titled *Faculty Perceptions about Teaching Online: Exploring the Literature Using the Technology Acceptance Model as an Organizing Framework*. This study investigates an area of particular importance to faculty and institutional leaders – what are the factors that facilitate adoption of online teaching? Results to date in this area tend to be bleak: repeated studies indicate low level of acceptance of online learning by faculty and troubling faculty attitudes regarding learner outcomes in online coursework. This study provides a much needed, theoretically-framed approach to the issue. This paper is crucial reading for faculty developers, institutional leaders, and especially scholars seeking an updated and comprehensive resource for considering faculty attitudes toward online education.

The next article looks at a more specific dimension of faculty adoption of online education, willingness to attend training in the use of the institution's course management system. In *Course Management System's Compatibility with Teaching Style Influences Willingness to Complete Training*, Audrey Pereira, of Fitchburg State University, and Monika Wahi of Laboure College ground their study in Diffusion of Innovation theory to understand conditions under which faculty are more likely to participate in training necessary to use the CMS effectively. Using survey methods, the authors conclude that compatibility, defined as the degree to which instructors perceive the CMS as being consistent with their existing values, past experiences, and current or future teaching needs, was the only factors statistically significantly associated with willingness to complete online and in-person training. The study provides a useful set of recommendations for faculty development practices, theory and implications for future research.

Following the theme of faculty professional development and learning, Pamela Beach of Queen's University and Dale Willows of the Ontario Institute for Studies in Education, at the University of Toronto provide a related study titled *Understanding Teachers' Cognitive Processes during Online Professional Learning: A Methodological Comparison*. This paper used three think-aloud protocols as a lens to understand faculty learning that may lead to

adoption of online pedagogy, in this case among educators in pre-college settings. How do we know what people learn when they are involved in professional development activities? The most common approaches include survey questions after the experience. However, we may benefit more from understanding cognition through verbalization and think-aloud protocols can offer such a view. In this study the authors examined different approaches to studying verbalization and the underlying cognitive processes exhibited when educators are learning about online instruction. The paper is valuable for scholars seeking insight into the benefits and limitations to employing each type of think-aloud method in the context of online professional development.

Online educator learning is again the focus in *Moving Beyond Smile Sheets: A Case Study on the Evaluation and Iterative Improvement of an Online Faculty Development Program* by Ken-Zen Chen of National Chiao-Tung University and Patrick R. Lowenthal, Christine Bauer, Allan Heaps, and Crystal Nielsen of Boise State University. In this study the authors are also interested in what faculty derive from professional development and demonstrate their seriousness by employing a mixed methods approach to data collection. The study investigates not only faculty perceptions but also their participation, skills, dispositions, and concerns related to involvement in a sustained faculty development program. The paper is a vital resource for others seeking to understand the impact of professional training for online educators.

The next paper shifts away from faculty issues and takes on issues of access. If we are to provide equitable access to online education, instructional content needs to be available to all. For the deaf and hard of hearing (as well as other audiences) the use of a free service that automatically captions online video content would seem to be a nearly miraculous solution. In *Reading Between the Lines: Accessing Information via YouTube's Automatic Captioning System* Chad Smith and Tamby Allman of Texas Woman's University and Samantha Crocker of Weatherford Regional Day School Program for the Deaf analyze such a service. Automated captioning is far from perfect. In this paper, the authors identify 11 categories of different errors in the captioning of videos targeted to middle-school audiences and then assigned college students to interact with videos containing different error types. The authors conclude that, when automatic-captions contain significant numbers of errors, and when no audio content is available, even hearing, college-educated adult readers are unable to comprehend the messages being delivered. Clearly more work needs to be done before we use free captioning options to serve all students.

The next section, on online academic integrity, includes *Examining the Effect of Proctoring on Online Test Scores* by Helaine M. Alessio, Nancy Malay, Karsten Maurer, A. John Bailer, and Beth Rubin of Miami University. Numerous reports indicate that the majority of undergraduate students admit to some form of academic dishonesty in both classroom and online settings. In this paper the authors go beyond student self-reports to look at online students taking tests with and without a proctoring solution. They find both temporal differences and that students in proctored conditions scored lower on tests than students in un-proctored conditions. The finding strongly suggests that cheating occurs in the absence of monitoring. This paper is important in both its design and rigor and results indicate that either we need to develop instruction and assessment that avoids high-stakes tests or invest in proctoring to ensure students don't engage in academic dishonesty when confronted with high-stake tests.

In the next section of this issue a series of articles address issues around students, community, and online learning.

Large format online courses create challenges in enacting pedagogies, such as dialogic forms of teaching and learning that might deter academic dishonesty found in the previous study. However, enacting productive approaches that focus on quality interaction with hundreds of students is difficult to achieve. In *Creating a Community of Inquiry in Large- Enrollment Online Courses: An Exploratory Study on the Effect of Protocols within Online Discussions* Baiyun Chen and Aimee deNoyelles of the University of Central Florida with Kerry Patton and Janet Zydney of the University of Cincinnati explore how to use online discussion protocols to promote substantial learning in higher enrollment online courses. By using and iteratively redesigning these structured approaches to guiding online discussion the authors document improvements in both student perceptions of forms of presence and quality improvements in the nature of student discussion posts.

A second article in this section, *Exploring Small Group Analysis of Instructional Design Cases in Online Learning Environments* by Jesus Trespacios of Boise State University, also examines the use of student interaction with significant guidance to enhancing learning. In this study the author analyzes case-study teaching approaches and seek to determine the effectiveness of small group analysis of cases in instructional design when compared with experts' analysis and to understand students use of VoiceThread for engaging for analyzing these cases. Results indicate that creating a small group discussion and requiring students to develop a VoiceThread presentation following scaffolding guidelines to analyze ID case studies assisted learners to identify relevant issues about the cases.

The next paper in this section is *Utilization of an Educational Web-Based Mobile App for Acquisition and Transfer of Critical Anatomical Knowledge* by Kevin Hannon of the Department of Basic Medical Sciences in College of Veterinary Medicine at Purdue University. In this article the author addresses students' need for greater preparation in lab sections in anatomy courses. The paper analyzes two uses of a web application to prepare students in contrast to more traditional modes of content delivery. The paper concludes that in contrast to a traditional reading tasks, use of the app significantly enhanced initial learning of anatomy and the transfer of content learned to a related, but new area. The author proposes that students using the app were better prepared for lecture and lab than students reading a textbook. The app may increase opportunity for time on task or engage cognitive processes central to the assessment task more effectively than reading static text, but more research into underlying processes and theoretical framing are needed.

The next two studies examine or use Wenger's Community of Practice Framework. The first of these is *A Critical Review of the Use of Wenger's Community of Practice (CoP) Theoretical Framework in Online and Blended Learning Research, 2000-2014* by Sedef Uzuner Smith of the University of Houston Downtown and Suzanne Hayes and Peter Shea of the State University of New York at Albany. In this paper my colleagues and I provide an integrative research review to address three questions on this most influential of theories. We examine which studies make central use of the CoP framework, which of these establish strong linkages between the framework and their findings, and among this latter group, identify studies that provide productive opportunities for future CoP research in online and blended teaching and learning. We conclude that online/blended learning research employing the CoP theory should enter a new phase of development. There is a need for

studies that not only employ different aspects of Wenger's CoP theory but also extend the traditional practice of theory verification to provide more complex and nuanced understandings of online/blended learning environments.

A second paper in this issue, *Institutional Factors for Supporting Electronic Learning Communities* by Jayme N. Linton of Lenoir-Rhyne University attempts to provide such nuanced understanding through Wenger's CoP framework. This study explored how the electronic learning community process at a state virtual high school supported online high school teachers through dimensions of communities of practice (CoP) framework. To answer the study's research question, the author collected data related to five strategies identified by Wenger as effective methods for an organization to support and enhance the effectiveness of the work of CoPs. These include valuing the work, creating time and space, encouraging participation, removing barriers, and connecting to the organizational strategy. Results indicate that these strategies supported and increased the effectiveness of the electronic learning community (eLC) that was studied but also showed that the institutionally-driven nature of the eLC process could block alignment with the CoP framework.

This issue of OJL closes with an article by Amy Roberts of University of Nebraska and Jennifer LoCasale-Crouch, Bridget K. Hamre and Jordan M. Buckrop of the University of Virginia titled *Adapting for Scalability: Automating the Video Assessment of Instructional Learning*. The questions addressed in this study relate to enhancing efficiency of assessment processes in large scale online educational formats. The authors examine whether the assessment of teaching skills collected through videotaped observations (Video Assessment of Instructional Learning or VAIL) could be automated rather than manually scored. Results indicate relatively high correlations between the manually scored and auto-scored assessments and that the strength of the associations between automated and hand-scored systems varied by what was assessed. The paper holds promise in assisting efforts to deliver online education at greater scale, but additional research on other contexts is needed.

We invite you to read, share, and cite the high-quality papers in this issue and help us to continue to enhance the research and practice of online learning.

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