Introduction to OLJ Section II

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In addition to the special issue on online learning in the age of AI, this issue also contains 12 articles from our regular submission process. These articles cover a broad range of topics including "bichronous" online learning, student satisfaction and engagement, three articles on online learning during the COVID pandemic, connectivist learning theory and more.

The first paper in this section is "Bichronous Online Learning: Perspectives, Best Practices, Benefits, and Challenges from Award-Winning Online Instructors" by Florence Martin of North Carolina State University, Swapna Kumar and Albert Ritzhaupt of the University of Florida, and Drew Polly of the University of North Carolina, Charlotte. As indicated by the title this paper investigates the intentional blended of synchronous (real-time) and asynchronous (time delayed) modes of learning in online environments. While students frequently seek out online degree programs prioritizing flexibility and convenience offered through asynchronous options, synchronous approaches can provide unique benefits. Meta-analytic evidence suggests that such integration improves student learning outcome relative to asynchronous only modes. This study offers effective instructional strategies, devised by award-winning faculty, for the mindful integration of the two modalities.

While the literature on online student satisfaction is voluminous and dates back decades, scholarly work on online program satisfaction is scarcer. In "A Framework for Evaluating Online Degree Programs through Student Satisfaction" authors Zikai Zhou and Sharon Rouse of the University of Southern Mississippi develop and test a new framework for understanding the factors that contribute to student satisfaction at the program level. Combining factors identified in the literature the authors propose six factors that significantly predict variance in student rating or online programs. The factors relate to the program, courses, instructors, technical considerations, student self-directedness and employment related concerns. The authors provide more detail on each of these and demonstrate the relationships using factor and regression analysis.

The next paper in section two is "Students' Expectations and Experiences About Engagement Strategies in Online Courses: A Mixed Methods Study", by Murat Turk and Ali Ceyhun Muftuoglu of the University of Oklahoma, Sinem Toraman Turk of the Yale School of Public Health, and Ozlem Karakaya and Kadir Karakaya of Iowa State University. What does it mean to be engaged in an online environment? This question has been explored by numerous scholars in recent years and the foundational understanding seems to include not only cognitive, behavioural and affective dimensions of engagement, but also asks with whom or what do students engage? Is there engagement with instructors, with peers, with multimodal content, and is this engagement appropriately self-directed? Using Bolliger and Martin's model of online engagement and modifying their questionnaire built on the model, this study used a mix method approach to develop visualizations to better illustrate how the framework applies in real world online settings. Quantitative results show that the participants overall perceived online

engagement strategies regarding peer engagement, instructor engagement, self-directed engagement, and multimodal engagement were important and necessary. The qualitative findings suggest that the participants' actual experiences of engagement strategies differed based on context. In combination these results established the importance of all four dimensions of engagement strategies. The central finding might be how relatively unimportant peer engagement was to students, given the last half decade in which researchers have focused on the design, facilitation and direction of collaborative learning activities in the service of activating the power of peer interaction and learning (and the last twenty+ years of urging this in online environments). We need to better understand these results and these authors call for additional research with different and larger samples.

The next three studies all take on learning during the COVID pandemic. In "Memorization and Performance During Pandemic Remote Instruction: Evidence of Shifts from an Interactive Textbook", Jose Salas, Mary Tucker and Ji Son of California State University, Los Angeles and Xinran Wang of Vanderbilt University, consider the problematic beliefs that many students hold about memorization and math learning. While many students endorse beliefs that memorization is the best way to learn math, the empirical evidence is that holding such beliefs is correlated with lower performance on math assessments. As a result of the pandemic, many colleges that had little experience with online learning were forced into emergency remote instruction resulting in a new educational context. In this context, the authors note that many longstanding policies were relaxed. For example, exams and assignments were now often open book, open note, open Internet, and sometimes untimed. In these circumstances, in which memorization might seem less advantageous, do students still hold these beliefs? The study also researched a large and complex system of education – the public higher education system of California, composed of the community colleges, four-year comprehensive colleges and universities offering graduate degrees. The authors note that previous research indicates that memorization beliefs among students at these different institution types would differ, with learners at open-enrollment community colleges more likely to endorse beliefs about the utility of memorization than learners at more selective graduate-level institutions – and that these beliefs would be reflected in lower performance among students who do hold them. The study uses data collected in an online interactive statistics textbook used by courses initially held in-person, which were moved to remote learning after the COVID-19 pandemic began. Collecting and analyzing data on more than 2500 students who used this textbook at these different institution types, the authors conclude that beliefs in the utility of memorization correspond with lower performance across institution types, but that students in more selective colleges are less likely to have these beliefs and more likely to demonstrate better performance. Interestingly, memorization beliefs did not change even as the context of study went online where open-book, open-note, open Internet assessments were more common. Some of these results are muddied by the differential impacts of the pandemic on students with fewer resources, who endured more responsibilities, difficulties, and higher levels of anxiety. It is also unclear to what extent the assumed contextual changes were actually present. Were the assessments actually unmonitored, open-book, and untimed? Data is not presented to support this assumption and many institutions around the US rushed to implement academic integrity assurances such as online proctoring

during emergency remote instruction. Clearly additional research is needed but this study does supply researchers with a strong multi-institutional and longitudinal foundation from which to begin.

Another study investigating the impact of the pandemic is "Online Learning Anxiety and Academic Self-Efficacy During the COVID-19 Crisis", by Wisam Chaleila, Enas Qadan, Lena Gnaim-Abu Touma, Ibtihal Assaly, Usnat Atamna, Halah Habayib, and Areej Masarweh of Al-Qasemi Academic College, Baqa-El-Gharbia, Israel. These authors note that it is well established that the pandemic caused significant anxiety, but that the relationship between increased anxiety and other important psychological factors shaping learning, such as academic self-efficacy (ASE), have not been fully explored. The study used survey methods and analyses of statistical difference with 781 students from dozens of countries and found that academic self-efficacy was not significantly correlated with online learning anxiety (OLE). In fact, in some instances students with higher levels of anxiety about aspects of online learning (anxiety about academic assessment, technical problems, and communication problems) had higher levels of ASE. The study provides information about other aspects of OLE and recommendations related to students, faculty, institutions, and policies.

In "Towards Connectivism: Exploring Student Use of Online Learning Management Systems During the COVID-19 Pandemic", authors Dapeng Liu of Baylor University with Lemuria Carter and Jiesen Lin of the University of Sydney, Australia examined 129,567 activity logs in the institution's learning management system (LMS) to understand patterns of behaviour of 313 students with low, average, and high grades. Noting that connectivist theory posits that learning in online environments is a function of linkages between people, resources, and supports, the authors demonstrate clearly that students at varying levels of performance have significantly different profiles in terms of their behavioural engagement with resources such as course files, discussion forums, the gradebook, and online quizzes. Higher performing students engage significantly more with files, quizzes, and discussion forums, but not with the gradebook. While education research can frequently be considered a science of common sense, these results display a level of specificity that is quite stark and may point the way to the development of strategies to help lower performing students.

The next paper in section two, "Learner Perceptions of the Feedback Process in the Online Component of a Blended Course", by Anna Moni of Deree -The American College of Greece, Athens, Greece provides a critical review of research on feedback models in educational settings. The author notes that, despite the broad consensus on the importance of formative feedback to improving learning, there is little agreement on a single effective feedback approach across disciplinary contexts and learning modalities. However, context matters and in this paper the author focuses on the feedback model conceptualized in a Matrix of Feedback for Learning in the online component of an English for Academic Purposes (EAP) blended course. The study notes the importance of how feedback models are received by students and investigates the perceptions learners have of the feedback process used in the asynchronous part of the course. The model includes three kinds of feedback (feed-up, feed-back, feed-forward) at four levels (task, process, regulatory, and self). Aiming to sample the complete target population, the study

was conducted across three semesters (spring 2022 N=73, summer 2022 N=15, and fall 2022 N=121) with 13 course sections taught by seven different EAP instructors. The full paper provides detailed results of learner perceptions of the types and levels of feedback provided in the asynchronous component of the blended course including positive and negative attitudes. The study also provides some future directions for research on feedback in online and blended contexts.

In "The Effects of Short Online Pedagogical Courses on University Teachers' Conceptions of Learning and Engaging Students during Lectures," authors Trang Nguyen, Henna Vilppu, and Mari Murtonen of the University of Turku, and Ilona Södervik of the University of Helsinki, Finland explore the effects of faculty professional development on knowledge about teaching and learning. The paper discusses the high costs of providing professional development and the need to ensure faculty have a firm foundation in pedagogical knowledge. They developed an online course through which faculty gain better understanding of the importance of student prior knowledge and how to build that understanding into more engaging classwork. One goal was to reduce or eliminate the belief that "learning is remembering" and replace it with a more nuanced understanding of learning (e.g. as a constructive process). Through the short, online, pedagogical course they document growth in understanding (especially among the least knowledgeable) from pre-test to post-test. The authors conclude that short online pedagogical programs for university faculty can be an effective and efficient solution for the development of active learning of students in higher education.

The next paper in this section is Multifaceted Challenges and Opportunities: Concurrent Mixed Methods Research to Investigate Chinese Exchange Students' Experiences in the U.S. Transnational Online Learning Ecology" by Xinyue Ren of Old Dominion University and Yi Zhou of Guangxi University, China. International and transnational education has been used to enhance higher education in China for decades. In light of travel restrictions caused by the pandemic, many Chinese exchange students had to stay home and experience online and distance instruction in a transnational context, rather than in the conventional manner. This created a new educational context with its own opportunities and challenges. The purpose of this study was to investigate Chinese exchange students' perceptions and experiences in transnational distance education offered by a university in the United States. Specifically, the authors asked how the transnational online learning environment influenced Chinese exchange students' satisfaction with their learning satisfaction. Using regression analyses and qualitative exploration, the authors detect patterns in the data that predict and explain student satisfaction levels with their experiences.

The final paper in this issue is "A Systematic Literature Review of Online Academic Student Support in Higher Education," by Chris Walsh, Leicha A. Bragg, Marion Heyeres, Ana Yap, and Michael Ratcliff, of Victoria University, Melbourne, Australia. Student support for ensuring academic success is a significant component of classroom-based higher education. For decades institutions have been working to implement similar support for fully online students. This paper provides an updated account of these supports post COVID-19, when most of higher education had to at least experiment with forms of distance learning. Many institutions which were previously not deeply committed to online education have expanded their online curricular

options and now must consider how to support new populations of students attending the college. This systematic literature review provides an overview of research on online academic student support in higher education. The synthesis of the findings reported outcomes on students' improved engagement, access to support and usage patterns, satisfaction, academic performance, motivation, creativity, self-efficacy, retention or course completion, and social benefits. This suggests that institutions that are new to online education have a considerable range of options to think through, prioritize, implement, and assess.

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