

PROTECTING KEY PEDAGOGICAL FEATURES IN THE PIVOT TO ONLINE HYDROLOGY LEARNING AT UWA

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ABSTRACT

The COVID-19 pandemic necessitated a rapid transition to online hydrology instruction at The University of Western Australia (UWA). Key requirements of this transition were to create supportive, inclusive online educational settings, and to maximize student engagement. Here, we draw on experiences in four hydrology units to illustrate how we used a holistic approach spanning course structure, content delivery, active learning experiences and authentic assessment to protect these key pedagogical features during the transition to online learning. Learning content that was streamlined, chunked and recorded facilitated effective student-paced learning. Structuring material to support a growth-mindset and providing varied active learning opportunities was also beneficial for establishing a constructive learning culture. Field and laboratory experiences were replaced with digital analogues and “virtual” site visits. While these have limitations for experiential learning, they are also able to span a broader range of conditions than can be physically visited or simulated in the lab. The outcomes in these units as measured by student engagement, enrolment and self-reported satisfaction were positive, with student evaluations remaining similar to those of pre-pandemic levels. Previous interest in running flipped classrooms and familiarity with technology among instructors and students were helpful in enabling the transition.

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