The use of educational technology, or what can also be referred to as e-learning, can impact on teaching and learning beliefs and practices of teachers, as well as on staff development officers within universities, firms, and wider public or private sector institutions. For this reason, the views of teachers, as well as of senior management are important. Successful adoption and subsequent sustainability of educational applications is not merely dependent on the practicality and user-friendliness of e-learning systems and software, but also involves complicated social and political processes of organizational change. There are many studies that focus on the use of the internet and other information and communication technologies (ICTs) in stand-alone and relatively confined situations. However, there are comparatively fewer studies that present and discuss evidence related to e-learning applications as long-term solutions for a whole course, an entire programme, or as a university or institution-wide framework. Another factor is that many of these technologies have been developed in western contexts and there is limited research into their successful adoption in other cultural and cross-cultural contexts.

The overall issue that is central to the subject is how to ensure successful e-learning diffusion, a notion that goes beyond simple adoption or uptake of some application or strategy. In this context, two distinctions are made. The first concerns horizontal diffusion, which refers to whether e-learning strategies have influenced the practices of more teachers and students. The second concerns vertical diffusion, which concerns whether or not our teachers continue to use technology to provide richer learning activities in subsequent years.

This Special Issue focuses on the nature of, and processes for, the adoption and subsequent diffusion of technology-based educational innovations in higher education or other professional development contexts situated in the Asia-Pacific region. Articles contained within the issue are evidence-based studies that address the theme of e-learning adoption and diffusion from a variety of perspectives, school-based, as well as in higher education. Some of the following questions addressed by the authors include:

- To what extent is technology being adopted in higher education or in professional development in the Asia-Pacific region?
• What factors prompt change and what strategies are being used to facilitate organizational change?
• What is the rationale behind the design of infrastructure and support?
• How might institutions facilitate acceptance and adoption of e-learning strategies by teachers or staff development trainers and students?
• What are some implications for technical support and professional development?

As the first paper by Thomas, Lam and Ho points out, successful knowledge transfer or diffusion of e-learning practice goes beyond precursor incentives and anticipated rewards for the individual teacher. It also involves wider enabling of learning attributes and cultural capabilities in an organization, an issue that is examined using an organizational-learning model as a framework to enable diffusion of practices after initial design and development. The paper is based on a case study of eight course-level e-learning projects in a university based in Hong Kong, and highlights some challenges to wider uptake from the individual course to the programme and wider institution. The study also illustrates potential pathways to wider uptake at individual, team and organisational level.

The paper by Eijkman, Herrmann and Savage, explores the potentially powerful role that e-assessment practices can play in driving cultural change in learning and teaching. Using UNSW@ADFA as a case study, the paper highlights the value of applying Gibbs and Simpson’s seminal work on conditions under which assessment supports learning to institutional level e-assessment practices, while demonstrating the possibilities for new e-assessment practices and their potential to drive systemic change.

Highlighting the impact of e-learning on teaching and learning French as a second language, the paper by the French programme practitioners Joly and Iseli-Chan shows how new technologies can be used to modify in-class teaching, while the traditional face-to-face teaching and learning approach can influence choices in the use of different web tools that lead to blended models of education. As they reflect, while they were aware of the need for adjustment within the specific culture and context of predominately face-to-face teaching, they did not expect to observe such an interdependent relationship between new technologies and a conventional teaching approach.

Taking a ‘big-picture view’, the paper by Lam, Lo, Yeung and McNaught explores ‘horizontal’ and ‘vertical’ adoption of e-learning strategies as revealed through computer log records in the centrally supported learning management systems in a Hong Kong university. The overall findings are that while adoption of simple strategies is increasing, there is little evidence of horizontal and vertical diffusion of the more complex strategies. Indeed, the use of some of the more complex strategies (which may relate to greater potential learning benefits) actually decreased. The results have led to discussions about new focuses and strategies for the institutional eLearning Service.

The final paper, by Woodhead and Kennedy reports on ICT usage in a primary school in Hong Kong. The study focused on how the students used learning technologies when an outbreak of H1N1 infection closed the school for three weeks and teachers were required to use ICTs to support learning at home. This circumstance gave the researchers a unique opportunity to assess the capacity of young students to use Web 2.0 technologies to support their learning, and the impact the use of these tools had on teacher views and practice. In perhaps a precursor of the future for higher education, the authors provide evidence that young people, given the opportunities and resources, can engage with ICTs very effectively, demonstrating high levels of skills. However, the findings also show that teacher-provided resources and assessment tasks are often key drivers for initiating student engagement and learning.

In summary, the overall findings from the articles contained in this issue suggest that, while adoption of simple strategies is increasing, there is limited evidence of horizontal or vertical diffusion towards more complex strategies. However, to end on a positive note, several studies highlighted some clear ‘lessons’ for institutions wishing to enact desired changes. Perhaps the
The most important lesson is that a framework based on organizational-learning principles offers pathways and strategies to support wider diffusion of practices from initial design and development in an individual course to the programme and wider institution.

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