

been reduced through the introduction of short but frequent knowledge-based online quizzes.

- Technology for learning and teaching requires an evolutionary, scaffolded process of learning, and in some cases un-learning, in order for the technology to effectively support learning and teaching.
- The affirmation of face-to-face delivery over innovative instructional techniques might have been cohort specific, but affirms the need for establishing and maintaining strong relationships in learning and teaching built on one-to-one interactions.
- The value and role of the collective through collaborative learning was key in this program, and should be a feature of all curriculum design and delivery models.

4.2. Conclusion

When considering the outcomes of the program, which targeted building specific skill capacity in two cohorts of specialised staff, it is important to recognise that the use of technology was a facilitating factor rather than an objective. The inclusion of many geographically isolated teachers and teaching assistants in the program was only possible by the program being completed in mixed-mode delivery. The design included several intensive teaching periods to build a cohesive group and support the use of delivery technologies for learning. At the beginning of the program, participating staff indicated a moderate level of skill and capacity with using computer technologies. At the end of the program, data collection gave a positive picture of outcomes, moderated by a clear preference for the face-to-face environment. Further, a number of graduates demonstrated high quality learning outcomes that would support aspirations for further study. This endorsement by graduates was congruent with the satisfaction expressed by DET (program sponsor) and aligned with the University's expectation of advancing innovations in learning and teaching. Taken together, the approach utilised in this program highlights the pedagogical possibilities that delivery technologies for learning offered in Higher Education.

5. References

[1] Brown, A. L., & Campione, J. C. Psychological Theory and the Design of Innovative Learning Environments: On Procedures, Principles, And Systems. In L. Schauble, & R. Glaser (Eds.), *Innovations in Learning*. Mahwah, NJ: Erlbaum, 1996, pp. 289–325.

[2] Chen, D., Klein, M. D., & Minor, L. Interdisciplinary Perspectives in Early Intervention: Professional Development in Multiple Disabilities through Distance

Education. *Infants & Young Children*, 22, 2009, pp. 146-158.

[3] Conrad, M., & Munro, D. Relationships between Computer Self-efficacy, Technology, Attitudes and Anxiety: Development of the Computer Technology Use Scale (CTUS). *Journal of Educational Computing Research*, 39,1, 2008, pp. 51-73.

[4] Design-based Research Collective. Design-based Research: An Emerging Paradigm for Educational Inquiry. *Educational Researcher*. 32, 2003, pp. 5–8.

[5] Henard, F., and Roseveare, D. *Fostering Quality Teaching in Higher Education: Policies and Practices*. OECD Publishing, 2012.

[6] Johnston, T., & Schembri, A. *Australian Sign Language (Auslan): An Introduction To Sign Language Linguistics*. Cambridge University Press, London, 2007.

[7] Kaznowska, E., Rogers, J., and Usher, A. *The State of E-Learning in Canadian Universities, 2011: If Students Are Digital Natives, Why Don't They Like E-Learning?* Higher Education Strategy Associates, Toronto, 2011.

[8] Klopper, C., Gillet, A. & Ghada, S. Technology for learning: Something old, something borrowed, and something new. In C. Nygaard, J. Branch, P. Bartholomew, & A. Horsted, A. (Eds.) *Innovative Teaching and Learning in Higher Education*, Faringdon: Libri Publishing, 2017, pp. 177-187.

[9] Laurillard, D. E-Learning in Higher Education, in P. Ashwin (Ed.) *Changing Higher Education: The Development of Learning and Teaching*, Routledge Falmer, London, 2006.

[10] Lieb, S. Principles of Adult Learning. 1991, <http://www.petsalliance.org/sites/petsalliance.org/files/Lieb%201991%20Adult%20Learning%20Principles.pdf> (Access Date: 9 June, 2017).

[11] Popenici, S, and Millar, D. *Writing Learning Outcomes: A Practical Guide for Academics*. The University of Melbourne, 2015.

[12] Rakap, S., Jones, H. A., & Emery, A. Evaluation of a Web-based Professional Development Program (Project ACE) for Teachers of Children with Autism Spectrum Disorders. *Teacher Education and Special Education*, 38, 2015, pp. 221-239.

[13] Ramsden, P. *Learning to Teach in Higher Education* (2nd ed.). Routledge Falmer, New York, 2003.

[14] Tertiary Education Quality and Standards Agency Act 2011. No. 73, 2011. Compilation No. 8. Compilation date: 13 December 2014.

[15] Worthen, B.R., Sanders, J.R., & Fitzpatrick, J.L. *Educational Evaluation: Alternative Approaches and Practical Guidelines*. (3rd ed.). Boston: Allyn & Bacon, 2004.