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**IT as a Social and Learning Tool for International Students:
A Case Study in ICT Education**

**A thesis presented in a partial fulfilment of the requirements for
Masters of Information Science (IT)**

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By

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IT as a social and learning tool for International students: A case study in ICT (NZQA Level 5) education

ABSTRACT

Internationalisation of education industry has increased the international student intake amongst private and public funded education providers in western countries. However, international students face many challenges in different educational and societal settings of the host country. This study examines a case (PlayIT) which is a non-university education provider involved in the information and communication technology (ICT) education sector in Auckland, New Zealand. In the first stage, study has identified some of the learning and social issues faced by international students. Learning issues relate to understanding of the host country's education framework structure and to application of subject related concepts to real world practice. Social issues relate to linguistic difficulties and cultural diversity in foreign countries. The first stage proposes to enhance the student' socio-learning experience by using a game based learning (GBL) strategy aligned with the ICT course structure, to encourage student interactions by having more learning and social exchanges. In the second stage, GBL has been used alongside traditional teaching methods to engage students and to bring about active learning for a subject module in an introductory ICT course. A GBL approach has been applied to international students enrolled in an ICT course at PlayIT. The study has utilised a GBL approach to engage students in learning and enhance their programming skills sets. The study gives a detailed narrative of how an educational game were first mapped with the curriculum of a programming course, and then examines the socio-learning experience of two separate student cohorts pursuing an introductory ICT course who participated in this classroom game-based learning intervention. One student cohort had not yet started study of the programming module, while the second student cohort had recently completed the introductory module on programming. Effectiveness of GBL has been analysed through students' feedback and results of outcomes achieved in the final assessment of programming module. Findings reveal that educational games add to the fun element in learning, with students rating the game as an effective way to learn programming. The study contributes to ongoing development of innovative pedagogies in teaching and learning with use of gaming elements in ICT education.

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PUBLICATIONS AND PRESENTATIONS

Publications generated from this project so far:

1. Christian, S., & Mathrani, A. (2014). ICT Education: Socio-Learning Issues Faced by International Students. *Proceedings of the Thirty Fifth International Conference on Information Systems, Auckland, New Zealand.*
2. Christian, S., & Mathrani, A. (2014). Play2Learn: A Case of Game Based Learning Approach in ICT Education. *Proceedings of the 25th Australasian Conference on Information Systems, Auckland, New Zealand.*

Presentations given from this project so far:

1. Christian, S., & Mathrani, A. (2014). *ICT Education: Socio-Learning Issues Faced by International Students*. Poster session presented at the Thirty Fifth International Conference on Information Systems, Auckland, New Zealand.
2. Christian, S., & Mathrani, A. (2014). *Play2Learn: A Case of Game Based Learning Approach in ICT Education*. Oral presentation at the 25th Australasian Conference on Information Systems, Auckland, New Zealand.
3. Christian, S. (2014). *ICT Education: Using Game Based Learning Approach with International Students*. Seminar presentation at Massey University, Auckland, on 21st November, 2014.

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