

## Chapter 7

# Design and Development of Personalized Learning Environments

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### ABSTRACT

*This chapter describes a pedagogical approach to engage students in online learning environments, using XNAMEX Becta's model for personalized learning and student engagement (PLEaSE). PLEaSE maximizes learning outcomes by supporting students at times and in places that are appropriate to their needs and in ways that suit their personal dispositions. In this study, students are encouraged to explore, develop, reflect and construct their own knowledge and create their own learning content, while the instructor plays the role of coach and facilitator. This study is part of an ongoing action research project on the Scholarship of Teaching and Learning (SoTL) in Higher Education, whose purpose is to design and develop the Pedagogy of Engagement Integrating Technology (PoEIT) model. PoEIT engages learners in the use of online tools such as forums and blogs while developing their soft skills using Moodle platform. This study shows that with the right integration of pedagogy and technology students can be transformed to become independent learners.*

### INTRODUCTION

Preparation of students for the 21<sup>st</sup> century requires changes in curriculum and pedagogy. Preparation is to ensure that students are ready and able to meet the Malaysian Qualification Standard (MQS) and similar standards as set by the National Educational Technology Standards for Students. The

categories of skills (ISTE, 2007) required by the students in this preparation are listed as follows: (1) creativity and innovation; (2) communication and collaboration; (3) research and information retrieval; (4) critical thinking, problem solving, and decision making; (5) digital citizenship; and (6) technology operations and concepts.

The onus is on teachers and instructors to interest students in researching for creative strategies. More collaborative techniques and innovative

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technologies are required to engage students with 21<sup>st</sup> century skills. Students can only be trained through a total immersion in a technology-based learning environment, while solving real problems, using new tools to reflect, to develop content and to engage in social interactions. The emphasis is on the skills and knowledge required by students to learn and live productively in a digital society, and on creativity and innovation in technology.

Technology allows students to personalize their learning. Personalized learning has the purpose of encouraging students to become more involved in making decisions about what and how they want to learn (Campbell, et al., 2007). According to Leadbeater (cited in Campbell, et al. 2007) personalization is a socially oriented idea which could operate at five deeply structured levels:

1. Providing more customer friendly services
2. Giving people more say in navigating their way through services
3. Giving users more say over how money is spent
4. Users becoming co-designers and co-producers of services
5. Self-organization by individuals working with the support and advisory systems provided by professionals

Leadbeater (2003) believes that personalized learning is the promotion of self-realization, with students construed as active and responsible co-authors of their educational scripts. This will result in deep learning whereby students set their own learning targets, adopt continuous self-assessment for learning and develop the flexibility in learning beyond the classrooms. In this environment the technology tools such as Moodle allow for continual support by the professionals (instructors and tutors) and an advisory system to take place anytime and anyplace. Moodle as a learning management system (LMS) enables the students to navigate the learning journey while developing

various skills in self-organization and life-long learning.

## **TRANSFORMING TO PLEaSE**

Personalized learning requires redesigning of courses to allow for active and reflective learning to take place. In this chapter the author shares her experience in transforming her teaching in an undergraduate course for teacher trainees. It involves a reexamination of her beliefs and approach to teaching and learning in a technology-based learning environment. She believes that to learn about ICT, students should be immersed in ICT where learning is face to face and further supported online. The objectives of the Personalized Learning and Student Engagement (PLEaSE) are to: (1) engage learners in active learning; (2) encourage learners in collaborative and critical learning; (3) reinforce the development of soft skills; (4) facilitate construction of learners' own knowledge; and (5) explore projects based on the real-world environment.

Personalized learning can develop independence in students. Students learn to be co-producers and managers of their learning. Managing learning involves managing the given tasks related to course projects, managing the content of what they are learning, and managing the peers who are co-producers and co-learners in the team. In PLEaSE, students can co-author their educational scripts, thus allowing for individual interpretations of goals and values of education. As an innovation, personalized learning environment is a change that has to be managed. Transforming the traditional learning environment to a personalized learning environment requires scaffolding from the instructors who can provide guidance through mature thinking, patience and intentional support.

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