

Supporting Flexible Learning Opportunities

Exploring Educational Design: a snapshot of eight case studies using e-learning in Australian VET

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Executive Summary

This research seeks to gauge the impact of educational design in the application of e-Learning in vocational education and training (VET). Eight case study sites in Australia were selected to help generate knowledge about a range of educational designs in four discrete VET contexts:

- VET in Schools
- Corporate training
- Accredited training provided by Registered Training Organisations
- English language learning for migrants

The following sites took part in the study:

- Bendigo Community College (Victoria)
- Box Hill Institute of TAFE (Victoria)
- Edith Cowan University/ITEC (WA)
- Joondalup Baptist College (WA)
- Curtin University of Technology, Kalgoorlie (WA)
- Riverina Institute of TAFE (NSW)
- Spherion (Victoria and WA)
- South West TAFE (Victoria)

The overall premise of the research was that educational design matters, and that appropriate educational design is a critical component in learner success

The research adopted a descriptive and interpretative stance, seeking to use qualitative methods to draw out key perceptions from learners and teachers for further analysis and discussion. Twelve teachers were interviewed to provide a sense of the e-Learning experience that was offered to learners. In addition, a total of 88 learners completed a questionnaire. Whilst quantitative data was collected using a student questionnaire, the number of respondents was small and the use of this data has been limited to basic arithmetic analysis to complement the qualitative data.

Generalisations drawn from eight case studies involving a relatively small number of learners are bound to be tenuous. A larger study, incorporating more case studies particularly from the corporate and small business sectors, would ensure a higher level of confidence in the data.

Despite limitations pertaining to the size and scope of the study, the research found that there are a range of educational designs currently applied in the VET sector. The research examined designs that exhibited best practice

characteristics delivered in distance education and classroom settings (e.g. Toolboxes), alongside “content-free” models (Curtin University of Technology, Kalgoorlie), and project-based models that are presented electronically (Spherion).

The research indicates educational design is an important factor in creating engaging learning environments. However, two other factors seemed to be more critical in the overall success of the teaching and learning experience:

The role of the teacher. When teachers were enthusiastic and motivated about their pedagogical approach, the model tended to be successful. It is interesting that designs set in authentic contexts with engaging activity-based content were sometimes used in quite structured settings. Conversely, designs heavily structured were sometimes used in innovative ways.

Communication and collaboration. The impact of learner-learner and learner-teacher communication appeared to be associated with high levels of learner motivation.

In summary, it is difficult to gauge the strengths and weaknesses of any particular design of learning materials without consideration of the context in which this design was implemented. Educational design is not just about content; it is about the way in which teachers combine learner support, on- and off-line activities and resources, and ideas to stimulate peer-to-peer communication.

This research is premised on the notion that students have particular learning needs and preferences, and that it is possible to design to suit to these needs and preferences. The outcomes of the research suggest that learning experiences can be shaped using a range of educational designs in a range of educational contexts. It is not an either/or in relation to when to use directed e-Learning materials (e.g. presentation of textual content followed by multiple choice and true/false questioning techniques) and when to create an environment that requires active construction of knowledge (e.g. posing ill-defined problems and providing learners with tools in which to solve these problems). Teachers that have the sensitivity and skills to provide highly tailored solutions that can blend degrees of direction and self-direction will be of most value to learners.

In acknowledging that teachers provide blends of direction and self-direction to their learners, the study suggests that learners were more engaged with environments that provided an authentic context. A cohort that was in a position to compare a design based upon an authentic context, with one that focused primarily on understanding content (Joondalup Baptist College), was unanimous in its support for the authentic setting. Other cohorts like Curtin University of Technology, Kalgoorlie, seemed to be motivated by the application of problems to workplaces, and the opportunities for community building via sharing common problems.

This study confirms that the integration of e-Learning content into face-to-face contexts is a legitimate teaching practice. The move to presenting smaller chunks of e-Learning content (e.g. learning objects through a repository) are

most likely to support the integration of e-Learning content with traditional delivery techniques. It may be timely to review the policy of developing online content for the Internet in an environment where its use is primarily in localised non-Internet settings. The notion that time-poor student do not necessarily want deep-learning experiences was not supported by the research. Those who were employed and/or had other priorities still sought to be deeply engaged by the e-Learning environment.

The study suggests that there is no relationship between constructivist design principles and AQF levels. It seemed that learners at Certificate I and Diploma levels equally benefit from undertaking authentic tasks that generate high levels of engagement (e.g. problem-solving, application of learning to real life situations). Activities and resources may be presented differently at various AQF levels, but the objective of actively engaging the learner remains constant, and constructivist pedagogy appears to be the best way of achieving this.

Recommendations

1. Professional development

The research suggests that *the* critical success factor in successful e-Learning is the skill of the teacher in creating environments that combine learner support, on- and off-line activities and resources, and ideas to stimulate peer to peer communication. If this is the case, then professional development focusing on teacher design and tailoring of on- and off-line learning environments is most crucial.

Encourage professional development that looks at means of integrating e-Learning into existing practices. This might include tailoring of e-Learning content and promotion of communication between learners. This may mean building onto the existing guidelines of national and state professional development initiatives to ensure that guidelines support such activities. It may also be appropriate to engage experienced e-Learning practitioners who focus on pedagogic strategies (e.g. Flexible Learning Leaders) to act as mentors.

2. e-Learning content development

e-Learning content in VET seems to be of more use to practitioners if it is delivered in small manageable chunks. This is particularly important when considering the ways in which the corporate and small business sectors may apply e-Learning content (e.g. within a broader knowledge management framework). Design guidelines may need to be re-visited to consider the learning object approach to content development.

Develop e-Learning content design specifications to reflect the need for small chunks of highly customisable and interoperable learning.

3. Target audience for e-Learning content development

The research indicates that e-Learning content in VET is primarily used in non-Internet environments (e.g. in classrooms, on CD and local area networks). Currently, design guidelines promote an approach of development only for Internet settings. This tends to limit the use of media-rich solutions in educational design and enslaves e-Learning to operate within tight bandwidth limitations.

Develop e-Learning content design specifications to recognise the non-Internet contexts in which e-Learning content is delivered.

4. Case studies

The practitioners contacted as part of this study were hungry for stories about how different models of e-Learning had been implemented. This curiosity stemmed from an interest in applying good practices to their teaching, and building on their own e-Learning pedagogy.

Disseminate the results of innovative learning designs at conferences, in the Australian Flexible Learning Community, and in journals/e-journals.

5. Promotion of e-Learning content

It was evident from the research that some organisations were not aware of the options available to them in terms of e-Learning content. Over the last four years, the AFL Framework has overseen the development of world-class content in the VET sector. Contacts developed through this project, particularly in the schools and corporate sectors, revealed that this e-Learning content was not widely acknowledged or understood.

Actively promote e-Learning content developed by the Australian Flexible Learning Framework, particularly in the schools and corporate sectors.