Supporting skill development through flexible task based design

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Tertiary institutions are motivated to offer greater flexibility in the delivery of their courses in order to increase student enrolments, retention and outcomes. The use of information and communication technologies (ICT) provide a means of delivering course content to learners who cannot be present on campus at specific class times. This poster will graphically demonstrate how the design of blended task-based learning environments offer flexibility of time, place, student learning style, and teaching and learning approach, all of which is more suitable to the needs of today's learners.

Overview

Most courses in higher education that incorporate some form of ICT continue to follow traditional forms of content delivery through variations of lectures and readings (Laurillard, 2005; Falconer and Littlejohn, 2007). Vocational institutions that are focused on training learners 'how to do' rather than 'about' a subject can benefit from creating a flexible task-based learning environment.

Flexible learning is a consideration of individual learner needs and preferred learning modes. This flexibility is operationalised by giving learners choices in relationship to time of course participation, course content, entry requirements, instructional approaches and learning materials, and course delivery and logistics (Collis & Moonen, 2003). A blended approach is the thoughtful mix of face-to-face instruction with various types of non-classroom technology-mediated delivery to achieve the above flexibility.

Using authentic tasks to assist learning is not new (Merrill, 2007; Herrington, Reeves and Oliver, 2006). A task-based approach to teaching and learning, however, uses tasks as the basis of curriculum design. This view of a task involves the design of a 'work plan' to encourage the completion of a real-world outcome. The purpose of which is to create the opportunity for learning and skill development through collaborative knowledge building (Ellis, 2003). A task as work plan recognizes that the activity that the learner engages in may vary from that intended by the designer according to any learner's given learning style and motivation.

This approach views learning as an implicit process that can be facilitated by explicit knowledge. The teaching of this explicit knowledge is supplementary and aids the process of noticing certain features. Explicit knowledge also serves to help the learner notice the gap between their own level of ability and that required to complete the tasks outcome.

Many learners require some assistance to complete task outcomes. Scaffolding is that process where a learner is assisted to perform a function that they cannot perform alone. They are able to co-construct an outcome that extends their current knowledge and ability. This support also serves to minimize the cognitive load on the learners working memory (Kirschner, Sweller and Clark, 2006).

Business course: An example

Learners at Wintec (Waikato Institute of Technology) wanting to complete a Business Certificate are required to pass a compulsory *Introduction to Computing* course. The course has traditionally had unmotivated learners at varying levels of ability. Attendance at class is not a course requirement and as

such is very low. In redeveloping the course, in line with a move to Microsoft Office 2007, a more flexible task-based approach was adopted.

The course is broken down into modules relating to different software applications. For each module learners are given a workbook that contains a real-world task, reflection question, and step by step notes on using the application. A Moodle site enables learners to access the task resources and submit their completed task to the tutor. It also has links to online tutorials related to the software application being studied.

All learners are encouraged to attempt the task before class. The more skilled learner can complete the task and submit it online. A learner who fails to complete the task identifies the areas they are struggling with (noticing the gap) in the reflective question and is able to seek solutions from the workbook or online tutorials. Upon completion of the task they too submit it online. Learners who successfully complete the task don't need to attend class while the learner who still struggles to complete the task can attend and get face to face tuition tailored to the areas they are unclear of. A final assessment at the end of the course integrates all the skills of the previous weekly tasks.

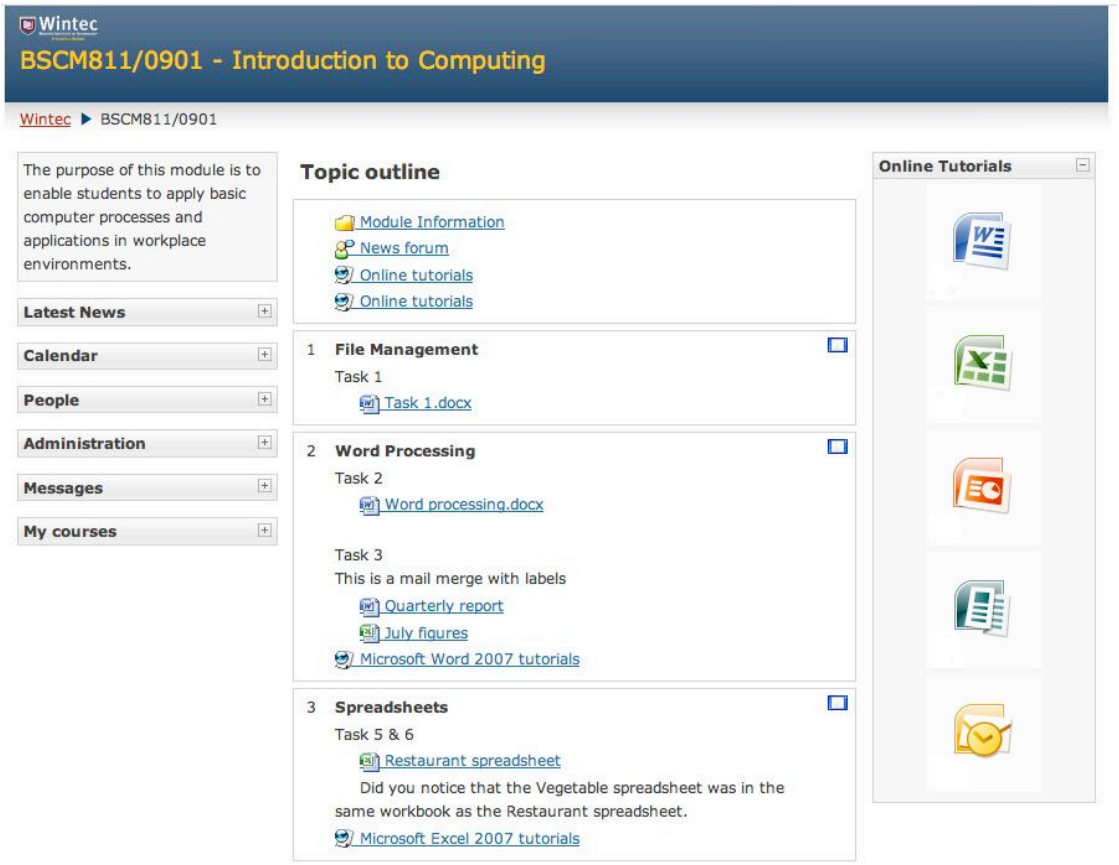

Figure 1: Course main page with task files and links to online tutorials

Further research

While the design of the *Introduction to Computing* course is grounded in sound theory, it has yet to be proven that it will benefit learners in this context. Further research needs to identify if the use of a real-world task encourages learner engagement and skill development. More specifically, do the online tutorials and workbook provide a supportive scaffold to assist students in developing skills? And, does the task as work plan enable learners to engage with the course content in different ways (or learning approaches)? The course design will be followed up with tutor and learner questionnaires relating to the above questions.

The design of flexible task-based learning environments offer learners flexibility in relation to the time and place they can engage with the course material (online access, paper-based workbook, face-to-face tutorial), the learning mode they prefer (face-to-face tutorial, online tutorial, workbook explanation), and the learning approach (task as a work plan that enables students to engage in a variety of ways). Tertiary

institutions, particularly vocational institutes, implementing flexible task-based learning environments can offer greater flexibility in supporting the skill development of today's learners.

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