

Teaching and Learning has always been a highly social activity. Technology hasn't changed this. Or has it?

Denise Morgan
Manager, Teaching and Learning Innovation
Wide Bay TAFE Queensland
denise.morgan@deta.qld.gov.au

In the 21st century “change is a constant companion of education and the larger governmental and even global system in which education functions” (Lynch, 2002, p.2). As a global learning society where technology is fast becoming a major contributor in changing the way the world does business, it is also evident that education and training organisations need to be part of this change. E-learning and the growth of technology that supports it has seen a new era not only in distance learning but also in workplace training and classroom based learning (Garrison & Anderson, 2003). As teachers adjust to this new era it is important to remember that teaching and learning has always been a highly social activity and technology hasn't changed this. Or has it? Some would have you believe that all teachers need to do is provide access to the resources and the technology will take care of the rest. This paper challenges that notion but also acknowledges that considering the ubiquitous nature of e-learning, being a teacher in this context does require change. Making the shift from traditional teaching modes to e-learning can pose immense challenges for teachers but the change is achievable.

Teaching and learning has always been a highly social activity and technology hasn't changed this. Or has it? Many learners studying in online environments will tell you they have very little if any contact with teachers. They are expected to be solitary, self-motivated and autonomous learners and learn everything they need to know by interacting with the resources. Just imagine studying in a classroom but not being able to ask the teacher questions during class time or seek assistance from the teacher outside formal class times. Or not having any contact, discussion or interaction with your fellow learners. If this seems laughable consider how learners must feel when they never get to see or communicate with their teacher or get to know or interact with other learners in their 'classes'. This is the reality for some learners. Although technology has offered learners and educators exciting possibilities for communication, collaboration and the exchange of information (Kalay, 2004; Westera & Sloep, 2001) it is not always being used to its best advantage. However it is also important to remember that technology is merely the enabling factor and that access to technology alone will not guarantee that learning will occur. So what is the key?

The key ingredient of a successful e-learning environment is interaction. Furthermore the need to create active e-learning environments that involve learners in interacting with the interface, the technology, the content, educators and their fellow learners is paramount to successful e-learning. “The vehicle that allows you to bring life into online learning is interactivity” (Iverson, 2005, p.5) and creating, facilitating and guiding interactivity is a key role of the teacher. Neither the interface nor the technology facilitate the interaction but rather provide the platform and supports for this to occur. The content needs to be presented in such a way that the learner is engaged and actively interacts with it while the interaction between the learners and the teacher as well as the design of the collaborative activities are what make the

content come alive (Iverson, 2005; Stephenson & Coomey, 2001). But how does learning occur?

Constructivist learning theory and more recently transformative learning proposes that learners have the ability to construct their understanding by drawing on their past and present experiences and reflecting on these. A constructivist approach to e-learning emphasises the process of learning where the design of the activities shapes the learning. Whereas a transformative learning approach also includes learning based on engagement and reflection (Palloff & Pratt, 1999). Despite some views that constructivism “dismisses the active role of the teacher or the value of expert knowledge” (“Concept to Classroom” 2004, p.1) the reality is that rather than being the font of all knowledge the teacher becomes the coach, guide and facilitator of learning. Playing an active role in assisting learners to construct new knowledge the teacher provides an engaging and motivating environment conducive to learning, tools for the learner to explore, and opportunities to interact on a range of levels (“Concept to Classroom,” 2004; Nelson, 2008; Stephenson & Coomey, 2001; Westera & Sloep, 2001). Although this doesn’t seem any different to the role of the teacher in the classroom environment there is a key difference. This is the learners control over their learning and therefore the opportunity to self-direct their journey through the content and self-select which of the activities and additional sources of information they wish to interact with. In other words in the e-learning environment where the teacher acts as guide and the learner is actively responsible for their own learning “online learning promotes student-centred, active learning in which the individual becomes largely responsible for his or her own learning while the teacher is responsible for presenting multiple opportunities for processing information and assisting students in the creation of new knowledge” (Burd & Buchanan, 2004, p.411). So how is this achieved?

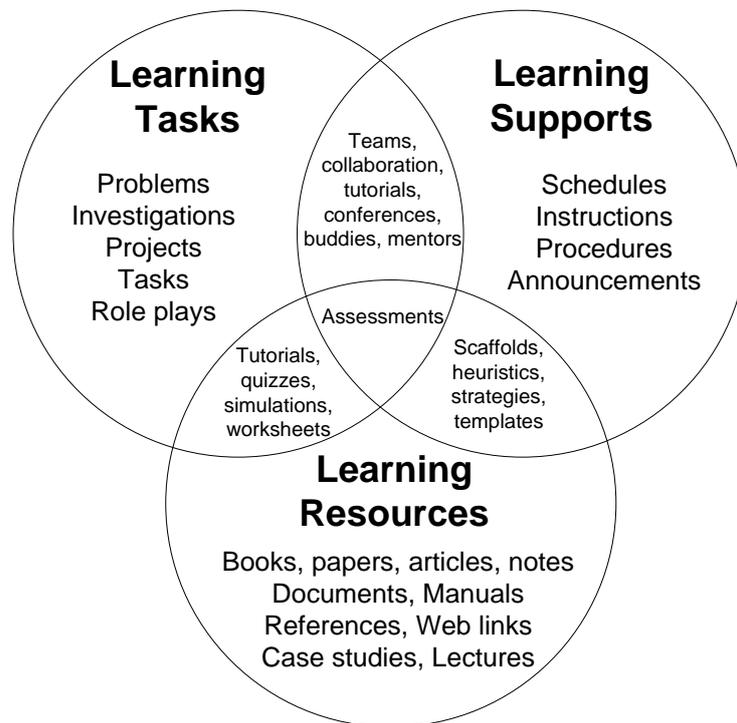
As a key objective is to enhance student learning, good planning and effective use of the technology is essential. Achieving this requires not only adequate knowledge of the features of the technology and skill and/or support in using technology for teaching and learning but also an understanding of learning styles and how best to cater for these in an e-learning environment (Burd & Buchanan, 2004; Lynch, 2002). As stated by Burd and Buchanan (2004) “...most effective learning occurs when courses are designed to appeal to various learning styles” (p.404) therefore considering different learning styles is best addressed in the planning stages. Even though e-learning provides an ideal opportunity and environment to cater for all learning styles it is not possible for teachers to know the learning styles of their learners at the planning stage. Therefore the fact that technology offers a whole new range of exciting possibilities to cater for all learning styles is an advantage. And herein is the role of technology.

Technology is the enabler that supports and enhances learning, provides new opportunities for interaction outside the classroom environment and fosters learning communities that are not restricted by time and place. Teachers need “to exploit the tools of the Internet to provide information and create interactivity” (Lynch, 2002, p.14). Merely providing access to information is passive and will not ensure learning. The teacher needs to make the learning active by using the available technology to “provide activities that require analysis, evaluation and application....to enhance learning...” (Lynch, 2002, p.12). Transformation and thus learning occurs when learners engage in new experiences, are empowered to experiment and explore and reflect on these experiences to make informed decisions (Burd & Buchanan, 2004; Palloff & Pratt, 1999)

E-learning requires new forms of teaching and learning when compared to traditional classroom delivery. Teachers need to endeavour to provide experiences that utilise the key characteristics of e-learning including collaboration, learner-centredness, exploration, and multimodal experiences (Kearsley, 2005). These characteristics as well as usability in terms of interface, navigation and overall design are closely linked to learner engagement, learner control, motivation and learner satisfaction (Sloan-C, 2008; Stephenson & Coomey, 2001). An intuitive navigation structure and design; a short introduction outlining the purpose, approach and components of the resource; clear, concise chunks of information; and links to all parts of the resource from the menu are all important features.

In understanding that technology has a role to play but that the learning process depends more on the relationship between the teacher and the learners and that the technology merely supports this relationship, the technology should “be used to foster interactive and collaborative engagement” (Bowles, 2004, p.4) as well as support the learning process. Learners should be encouraged to work together to share ideas and communicate thereby developing connections and relationships and acknowledging that humans learn from each other and by interacting not only with the technology but with fellow learners and teachers. So how do we plan to make this a reality?

The key to effective e-learning is good educational design (Garrison & Vaughan, 2008; Oliver & Herrington, 2001; Thorne, 2003). Oliver and Herrington (2001) describe an e-learning design framework that has three interconnecting elements. As can be seen in the diagram below (adapted from Oliver and Herrington, 2001, p.20)



each of these components is critical in the design of online environments that support knowledge construction. The **learning tasks**, that is, the way learners engage with the resources and participate in the collaborative activities are the key components. Hence the learning tasks should require the learner to act with, use and apply the content in a meaningful context. After all “[learners] will learn more if the theory is presented in relation to real-world applications” (Lynch, 2002, p. 126). Practical tasks need to be designed to not only make the

learning relevant but also engaging as “having students apply their learning to real-world situations...also helps to meet the...unarticulated outcome of continuing to use the [skills and knowledge] after the course” (Lynch, 2002, p. 126). And selection of **learning resources** should be based on an understanding of “how the learners will need to be supported to complete the activities” (Oliver & Herrington, 2001, p.28) acknowledging that the learning resources are resources for learning not the focus of the learning. As **learning supports** are also integral to the learning process the

teacher is actively involved to maintain the focus and motivation of the learners, to guide learners and to provide feedback which is responsive and sensitive to individual learners needs.

The teacher also has a key role in modelling acceptable and appropriate ways to communicate and interact in the e-learning world. This is achieved by welcoming learners to the program, facilitating contact and connections among learners early in the program, providing support to all participants, encouraging mentoring among the learners and modelling the type of communication style expected (Garrison & Anderson, 2003; Garrison & Vaughan, 2008; Lynch, 2002). E-learning experiences should encourage active participation and reflection; foster a sense of community, and model 'safe' communication and ethical uses of the medium. As there needs to be "a balance between open dialogue and caution" (Palloff & Pratt, 1999, p.44) the teacher's role includes monitoring dialogue and using effective communication strategies to address problems and concerns should they arise.

To foster constructivist and collaborative learning the e-learning course should be designed as both a resource for the integration of information and skills and a tool for collaboration, discussion and sharing of ideas (Mehlenbacher et al., 2005). Independent learning can be fostered through tasks which require the learner to demonstrate the application of their new knowledge and skills as well as through reflection via personal blogs or learning journals; while text, audio, video, self-assessment quizzes, practical activities, web links, demonstrations and visual, podcasted and animated instructions integrated throughout the design enhance the process of constructivist learning. Each of these aspects should however be included with a specific purpose in mind to ensure their use enhances learning and understanding (Burd & Buchanan, 2004; Lynch, 2002; Mehlenbacher et al., 2005; Nelson, 2008).

An equally important use of technology, however, is in providing ready access to tools that allow users to interact with each other, participate in facilitated discussion and support each other in the learning process (AUTC, 2003; Garrison & Vaughan, 2008; Lynch, 2002; Westera & Sloep, 2001). As stated by Palloff and Platt (1999) "it is important to begin the course with introductions" (p.112) hence including a cybercafé where learners are invited to add their photo and podcast introductions will assist the learners to get to know each other and to begin to form relationships as part of a collaborative online community. However, establishing a collaborative community requires more than just having learners introduce themselves. Asynchronous communication can be used to assist the collaborative process while also acknowledging that the learners have busy lives and may not be online at the same time. To foster community building synchronous tools also have a role. The use of a chat room encourages bonding and peer tutoring among learners while video and web-conferencing add a personal touch and familiarity for learners who find seeing and hearing each other important. "Even one instance of audio makes a difference to the students' experience and perceptions of the presence of a 'personal touch' throughout the remainder of the text-based activities" (Lynch, 2002, p. 11). Collectively these communication tools promote interaction and networking between learners fostering collaboration and strengthening dialogue, involvement, active learning and connectivism in the e-learning community (Palloff & Pratt, 1999; Stephenson & Coomey, 2001). As stated by Oliver and Herrington (2001) "it is widely recognised...that learning is both supported and enhanced through learning settings which encourage and enable communication and interaction among learners" (p.62).

In summary, an effective e-learning course involves the purposeful design of learning tasks, resources, learning supports and opportunities to interact on a range of levels

("Concept to Classroom," 2004; Nelson, 2008; Oliver & Herrington, 2001; Stephenson & Coomey, 2001; Westera & Sloep, 2001). "The learning tasks chosen should be based on the intended learning outcomes and the resources and learning supports then selected" (Oliver Herrington, 2001, p.25). Remember technology supports and enhances the learning process while "a true educational innovation should start with pedagogy, technology being a mere...enabling factor" (Westera & Sloep, 2001, p.117). The selection of technology and media should be based on meeting the goals and objectives of the learning experience and the needs of the learners. As such, technology should be used to facilitate interaction and collaboration between learners and support constructivist and collaborative learning principles while the teacher's role is predominantly as a mentor, guide and facilitator (AUTC, 2003). Based on Oliver and Herrington's (2001) learning design principles, an e-learning course should include tasks that learners are required to do; content and resources that learners interact with to complete the tasks; and support mechanisms to assist the learners to engage with each other, the resources and tasks (Oliver & Herrington, 2001).

Without doubt technology and the ability to learn and work in a virtual environment have provided a wide range of opportunities for learners and teachers (Loveless & Ellis, 2001). However it is also evident that the success and quality of the learning that occurs is reliant upon the active relationships established and maintained within the e-learning environment. Equally evident is the importance of the role that teachers, learners and technology play and how the relationship between them achieves the desired outcome. The degree of interactivity has a strong impact on successful learning and creating, facilitating and guiding this interactivity is a key role of the teacher. You can adapt to this role and you can make a difference. And remember "technology doesn't change practice, people do" (Loveless et al, 2001, p.73). Teaching and learning continues to be a highly social activity and technology should be used to support this.

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