On-line student support developing a reflective approach to Supported Open Learning based provision; developing an interactive approach aimed at promoting deep learning.

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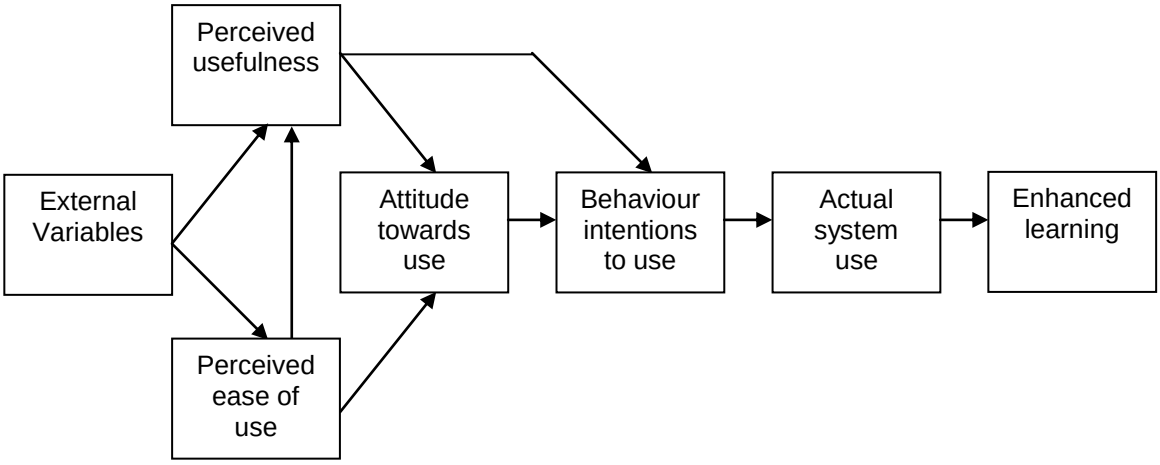
Teaching Philosophy and Background.

A principle aim within teaching is to integrate information and communication technology (ICT) in such a way as to encourage the development of the following components consequently facilitating understanding – acquisition, application, assessment, analysis and presentation of subject specific information and knowledge. Adopting the frameworks suggested by Vygotski (1978) and other current ICT literature each learning experience maintains a variety of ICT and non ICT learning strategies that are provided in recognition of the fact that ICT should be used to enhance student understanding not dominate it. Through such integration and engagement as part of the learning process the Sport and Exercise Science programme has tried to establish ICT as a central part of the teaching and learning process.

Drawing from constructivist learning theories and their role in the delivery and integration of ICT it is postulated that the position of the lecturer has to change from transferring knowledge to guiding the learning process (Jager & Lokman 1999) as the students themselves progress. The teaching and learning model currently employed within SPY can be seen to reflect this concept, by having a contact time to SOL ratio of approximately 1:1.

However, vital as it is the learning that occurs in the classroom constitutes only a small fraction of all the total learning occurring during an undergraduate programme. The guidance of the learning process described by Jager and Lokman (1999) is facilitated substantially through utilisation of electronically based resources, specifically WebCT. Davis et al. (1989) identified a range of confounding variables effecting use of electronic resources and resultant development of understanding and learning.



Adapted from Davis et al. (1989)

The current use of WebCT to facilitate additional learning in the absence of obvious specific structure, in depth support and evaluation or assessment is an area that needs to be addressed to enable practitioners to best facilitate the provision of a positive and comprehensive learning environment. Effective management of WebCT resources will influence perceived usefulness, attitudes and behaviour consequently influencing actual use and subsequent learning opportunities.

Proposed Project

Aims

Develop and refine online student assessment (Diagnostic & Formative) that provides effective guidance enabling student advancement, a reflective approach to learning, sustained self development and engagement in deep learning.

To develop the use of video to provide the online “support “ aspect of SOL. Promoting increased engagement, appreciation of task and application of knowledge at minimal time cost to tutors.

Objectives

Identify high-achieving e-learning environments – their frameworks, resource provision and assessment philosophies

Facilitate technologically mediated learning at all levels in many subject areas and in a variety of contexts

Examine the role of online supported open learning provision developing an effective e-learning environment.

Examine the role of online assessment and feedback on developing effective teaching and learning environments.

Identify ways of improving students’ academic success though interaction with WebCT, video direction and assessment.

Explore the differing formats in which video could be employed to provide guidance and support within the e-learning environment.

Investigate the most appropriate use of video to facilitate methodological competence within sports research.

Develop a framework for effective electronically based and supported SOL based tasks.

Monitor student engagement with SOL based activities and associated assessment modalities.

Assessment

Luke (2003) identified that one of the fundamental roles of ICT in education is its use as a supplementary tool to learning through the use of collecting data, assessment, documentation, communication and application. Race (2002) suggests that the most important thing we do for students is carry out assessments and evaluations of their work, serving the purpose of promotion of learning (Wiliam 1998). Assessment is a procedure for eliciting evidence that can assist in curriculum-based decision-making, and ultimately provide a major indicator distinguishing effective from ineffective teaching practice (Sanders & Horn 1995).

Consequently one of the aims of curriculum design is to introduce and employ innovative approaches to assessment within the programme while maintaining academic standards. Diagnostic assessment will identify where the learners are making mistakes, providing specific information about a student's strengths and weaknesses. Formative will enable feedback to be given to support future learning, thus fulfilling its defined role of feeding back into the teaching and learning process (Stobart & Gipps 1997).

Last year WebCT based short tests were employed, allowing students to test their knowledge following lectures, labs and SOL based activity, this informed tutors of specific weaknesses according to the questions or topics that were answered relatively weakly. As a result of this process subsequent sessions were adapted to address appropriate issues. As module director it was felt such formative assessment and tutor response resulted in a greater success rate when comparing this year's summative assessment to last. In reality being able to carry out a detailed formative assessment of understanding covering the weeks work on the majority of the cohort, is not only useful but impressive. It is difficult to perceive other methods working as effectively on a week-by-week basis, with a big group while providing feedback as comprehensive as this and not imposing upon tutor's time significantly.

Although effective there is a tendency for such methods to emphasise quick, shallow reproductive learning, whereas the potential of electronic technology to engage learners at a deep level should be encouraged. The intention is to not only develop autonomous SOL based activities with associated supporting material in the form of pictures, video and text but set appropriate assessment related tasks, allowing detailed feedback to be provided to the student. Within the pantheon of learning few activities have the potential to develop deep learning and self efficacy resulting from a well managed, resourced and information rich independent learning experience.

Development of web based formative assessment strategies is consistent with the results from Black and William's (1998) meta analysis, which suggests increasing the quality of formative assessment practices has a significant effect on the overall achievement of students. A move away from simplistic examination based assessment to structured answers, lab reports and open

answer papers achieves the increased quality highlighted by Black and William. Employment of such techniques has to be combined with effective feedback to appropriately inform the student of their achievement. The goal is to develop strategies that will impact upon tutors' time minimally while maximising learning opportunities for the students engaged in the process.

The relationship between ICT and some forms of learning is held to be reciprocal. WebCT and associated software / technology create opportunities and compelling incentives for learning since they can be so versatile. The growing demands placed on production of an effective learning environment due to the increasing sophistication of learners has consequently resulted in development, expansion and refinement of technologies to satisfy these needs. Due to this reciprocity between learning activities and ICT employment and the central importance of assessment, evaluation and self directed learning, this project has sound basis for further development.

Creating effective on-line learning environments - Video Support for Online SOL activities

ICT in education has been identified as fulfilling the role as a medium for teaching and learning and as a supplementary tool to learning through communication and application (Luke 2003). Scott (2002) and Wang (2002) provide examples of how ICT is often used within education: through inquiry based learning and research and as a communication tool to promote learning. The traditional view of SOL is that of the facilitator / lecturer providing the guidance or support part of the SOL task. It is proposed that the use of video as the support mechanism is explored to create a truly online SOL activity, additionally releasing the practitioner from the potentially time consuming process of providing support for numerous individual groups with large cohorts (Cooper & Ogilvie 2003).

The key aim is to develop an exciting SOL based curricula with ICT and video based provision as a core element, providing a key component of the 'scaffolding' described by Vygotski (1978) to enhance learning experiences. The constructivism learning theory lends itself well to the use of video within e-learning situations as students are provided with opportunities to set their own goals, plan and develop their learning activities and monitor their understanding. A constructivist view of teaching and learning implies that knowledge is acquired through social interaction, discussion, cooperation and engagement, which research suggests has strong links to deep learning opportunities. All of these situations could be fostered by effective, appropriately supported SOL based activities.

Project Evaluation

Currently SOL provision is mixed and lacks consistent structure across the sports programme, engagement is optional and due to the perceived lack of value is often minimal and ultimately assessment of work rarely takes place consequently the effectiveness upon the ultimate marker of educational provision – what the students have learnt and summative assessment is effected negligibly at best. Tracking of students' engagement in the refined

and developed tasks will be used as a primary indicator of the effectiveness of the e-SOL provision, summative assessment comparisons will be made to establish the facilitation of learning and finally specific electronic feedback will be sought from participating cohorts, identifying strengths and weaknesses of the proposed new system.

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