Visual Learning Lab CETL contributions to SRHE 2009

Conference, Newport, Wales: 'Developing Student Voice and Creating and developing visual learning and learning spaces for tomorrow's universities'

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In December 2009, the Visual Learning Lab CETL presented an overview of its wide ranging research activities at the annual SRHE Conference. A group of VLL postgraduate interns presented research carried out by them on University of Nottingham students' perceptions of (visual) learning in Higher Education and how the research findings have been developed by the VLL interns into a video tool that is available from the University of Nottingham's YouTube channel. The presentation provoked a great deal of interest and illustrates how video can be used with students for critical feedback and development.

In the symposium, chaired by Professor Roger Murphy, VLL Director, the individual symposium contributions highlighted how visual learning and spaces for visual learning can make an important contribution to the development of tomorrow's universities, as they allow the presentation of complex phenomena and the development of an understanding of processes.

The VLL presented examples and case studies of visual learning settings based on a wide range of technologies and from various disciplines. The case studies presented provided examples of a variety of learning settings from small group learning to large group lectures and explored uses of visual learning technologies in different learning spaces and disciplines. The symposium drew on work done since 2005 by the VLL and other partners and colleagues. This symposium explored how visual technology uses support the increasing globalization of HE and the related internationalization of students and how these uses relate to more recent trends in the development of learning spaces in HE. Key topics explored as part of the symposium included the following:

Demonstration of ceiling visualiser

Evaluating Visual Learning Spaces

In recent years, there has been a strong emphasis on building imaginative new learning spaces in higher education. Some such spaces are designed to foster independent student learning, and many offer opportunities for various kinds of visual learning. The VLL has a well established interest in such developments and a particular concern to develop effective evaluation strategies, which can capture meaningful data concerning the behaviours and learning outcomes, which can be seen to occur in such spaces.

From comparative viewing to pervasive networking – non-linear teaching with pictures: Using simultaneous visual display systems in HE teaching

Archaeological and art historical teaching is directly linked to the technical means of visualizing the material cultures at the core of these disciplines. >>

Digital technologies have in recent years greatly democratized this process, and the means of visualization have become more pervasive in and outside the traditional classroom. Yet, the methodological frameworks of these picture disciplines, still primarily based on the strategy of vis-à-vis or comparative viewing as facilitated by the early 20th-century technology of double-projection, can so far hardly cater for these new ways of visualization and how to harness them for a deep learning experience. Drawing on data from a year-long teaching project at Nottingham, the VLL team analysed the impact of different forms of visualization on student learning, and explores how new forms of non-linear visualization as offered by visual technologies such as Thunder Wall™ force us to rethink current methodologies in picture disciplines.

Exploring the use of video conferencing

Using video conferencing for practice-based learning and teaching: developing Interactive Teaching and Learning Observatories

The concept of the interactive Teaching and Learning Observatory was originally developed in the University of Nottingham's School of Education as a means to allow large groups of teacher trainees to observe and discuss live classroom lessons in secondary schools throughout their teacher training year through video conferencing. The concept of the i-TLO has been transferred into the School of Nursing where the i-TLO is used as a means to link with nursing into healthcare practice settings and as a means to access experts more widely and easily. Overall, this presentation examined the benefits of video conferencing uses in HE, its limitations, and how video conferencing uses for teaching and learning purposes can be theorized using multi-dimensional frameworks of analysis.

Interactive Whiteboard Uses in HE: Visualising Complex Information and Processes

After being implemented primarily in primary and secondary schools, interactive whiteboards (IWB) are increasingly being used in HE settings. Whilst there is a wealth of research and publications on IWB uses in non-HE settings, to date there is relatively little research on IWB in HE. The VLL team presented a case study of IWB uses in a School of Pharmacy based on interviews conducted with 3 groups of Year 1 and Year 2 Pharmacy students. Using Laurillard's and Prosser's key arguments that HE should always be about 'deep learning' the VLL team examined how far IWB uses in HE support this process and whether transfer of IWB practices from secondary school settings might always be desirable or appropriate.

Exploring students' perceptions and preference of using visual technologies in innovative veterinary education

The School of Veterinary Medicine and Science at the University of Nottingham makes extensive uses of visual technologies for teaching and learning. All students are provided with laptops and wireless Internet connection is accessible throughout the whole School. In addition, facilities such as interactive whiteboards and ceiling visualisers are also employed to offer students with opportunities to enrich their learning. Based on a short system-based Reproduction module, a VLL-led study intended to review how extensively the different types of technologies are being used by students, and what the impacts are on their overall learning. The pros and cons of different visual technologies and how they can be integrated more effectively to encourage learner engagement and promote student-driven learning were discussed.

The impact of web-based lecturing technology on the processes and outcomes of lectures in HE

It is recognised that web-based lecture technology is creating new learning spaces for individual learners in HE and opening up new opportunities for the world-wide dissemination of knowledge. It remains unclear as to whether it is equipped to deliver the outcomes of face-to-face lectures, especially those that involve the use of interactive activities and technologies to enhance student learning. It has been suggested, for example, that the use of WBLT encourages a transmission model of lecturing rather than two-way communication between lecturers and students. It has also been suggested that the use of WBLT reduces the ability of lecturers to connect with students and to inspire and motivate them.

Overall, the VLL symposium provoked a great deal of interest and has led to requests for collaboration and VLL-led seminars by other HE institutions.