

Title - Groupwork - Collaboration at a Distance

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Activity - Collaboration across institutions in the joint development of a web-based learning environment for the teaching of information literacy skills, involving the application and operation of desktop videoconferencing by students in a simulated tele-working situation across two institutions.

Group - Over two years, 150 students studying Hospitality Management and Tourism Management (level 2) at GCU and Information Management (level 1) at QMUC collaborated on groupwork activities. Working in teams consisting of 1-2 students in Edinburgh and 3-4 students in Glasgow, they shared educational materials via the webspace (which we called Hospiweb) and communicated amongst themselves via desktop videoconferencing (dvc).

Aim - To establish the use of desktop videoconferencing (dvc) technology for student collaboration. Undergraduates from both institutions were able to tele-work as members of geographically distributed consulting teams.

Context / Background - Technology and the advances in the ability to communicate asynchronously (for example using email) and synchronously via video conferencing, desktop video conferencing and chat rooms has made collaboration across geographical distance more feasible.

In addition, more flexibility is being demanded from graduates as they enter their working careers. Students need to graduate with sufficient information and computer skills to be able to work and co-operate at a distance. Teleworking and tele-cooperating via diverse forms of GroupWare is a reality for innovative information intensive industries such as hospitality and tourism. It was felt that students needed to be aware of this new reality through their learning experience in HE. In other words, students needed to tele-learn in order for them to tele-cooperate and tele-work in their future working life

To that end the learning experience was centred on collaborative work related to information presented in a case study format. Students used both asynchronous (email) and synchronous technologies (desktop-videoconferencing), whilst role-playing as consultants in case-study groupwork activities. The case studies asked students at both institutions to interact as part of a team of consultants advising fictitious potential investors on the development of selected tourism ventures in Scotland. The cases involved investment decisions in a museum shop, a traditional teashop and in

a country park. Each consulting team had to write a report advising the potential investors on the most likely locations in Scotland for their business venture, supporting their decisions with appropriate data on a range of indicators.

A more detailed outline of the project and evaluations can be found on the Hospiweb website at:

http://webdb.ucs.ed.ac.uk/scotcit/search_proj.cfm?type=topic&string=videoconferencing

Example - The two modules used for the collaboration were Information Research (level 1 QMUC) and Quantitative Methods for the Service Sector (Level 2 GCU). A typical team consisted of 2 QMUC students contributing their newly acquired information research skills to the consulting team, interacting with 4-6 GCU students who provided the tourism investment expertise. The students could potentially tele-cooperate for a period of 12 weeks.

Team members consulted the website for factual information on information skills, data analysis, summarising skills and team-working skills. They communicated with their respective team members in the other University via email and dvc. The dvc facilities had to be pre-booked because the equipment was stored within a secure environment, but apart from booking the room the dvc experience was entirely student managed. In the second year of the project this was done using an on-line booking system.

Students were introduced to the dvc through 3 sessions of 1 hour face-to-face computer laboratory experiences supported by a printed Hospiweb manual for the website, a video illustrating NetMeeting and desktop-videoconferencing. Dvc lab-work was done through word games to illustrate the chat and whiteboard facilities.

Results / Feedback - The results of the evaluations suggested that the students adapted to the technology fairly easily. They reported no problems using the Hospiweb site, nor the dvc facilities. Their main problems were related to their own time management, their ability to work in teams and develop working agendas and to respect cultural and personal differences amongst team-members. In fact student problems were "people" related not "technology" related.

This result was somewhat surprising since technology-related problems such as fear of computers, difficulty of adapting to the video-conferencing environment and rejection to work with people located at a distance were expected. This suggests that student adaptation to learning in web-based environments is more related to the nature of the educational activities that they are required to do within the learning environment than to the peculiarities of the learning environment itself. The technology seems robust enough to allow for a multiplicity of pedagogical options. For example, we have learnt that the need to incorporate time management and conflict

resolution skills into to the design of the module is crucial to any learning experience that uses groupwork via synchronous technologies.

Other comments - The desktop videoconferencing was facilitated through NetMeeting.

50% of the students had access to the website from home. In one case a team conducted a dvc experience from a lap-top computer within the student dormitories.

Synchronous communication was supported through the use of 2 suites of 4 PCs equipped with desktop videoconferencing facilities (the network cards, cameras and speakers cost less than £120 per PC and NetMeeting is provided with most PCs using microsoft.) The suites were networked via a dedicated server connected to the East Metropolitan Area Network. Each group of students completed learning diaries of their experience and two groupwork evaluations assessing the effectiveness of the group.

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Further information -

http://webdb.ucs.ed.ac.uk/scotcit/search_proj.cfm?type=topic&string=videoconferencing or hlst@brookes.ac.uk for student case study brief.