

16-19 June 2002

University of Granada, Spain

Open and Distance Learning in Europe and Beyond Rethinking International Co-operation

STAYING THE COURSE: RETENTION AND PARTICIPATION IN ON-LINE LEARNING IN SINGAPORE AND THE UK

Clem Herman Dept of Telematics The Open University

Abstract

In 2001 the Singapore Institute of Management (SIM) in collaboration with the British Open University (OU) ran a successful presentation of the Level 1 Technology Course 'You, Your Computer and the Net'. The 30 point foundation level course was delivered to 9,000 students in 13 UK regions and simultaneously to a cohort of 200 students in Singapore. One of the striking factors about the results of this course was the difference in retention and ultimately the final pass rates of the two cohorts of students. This paper will describe the course and its delivery in the two countries, attempting to offer some explanations for this discrepancy in drop out rates using a cross cultural perspective.

Description of T171/TZS171

The course consisted of three modules: Module 1 - 'You: computing with confidence' aimed to introduce beginners to the 'wired world' and help develop the practical skills (word-processing and other office applications, web-browsing, email and conferencing) needed to work confidently within it. Module 2 'Your computer: the story of the PC' told the story of how the personal computer came to be one of the defining technologies of our age. It took a narrative approach to explaining how a PC works and the development of the PC industry. Module 3 'The Net: where it comes from and how it works' again took a narrative approach covering the evolution of the Internet from its origins in the inter-war years through to the explosive growth of the World Wide Web in the 1990s.

The course was not specifically designed for an international target group but in common with other OU teaching material was aimed at a wide audience of mature students who were returning to learning and studying. While it is true that "the design of software systems designed to support group activities is "often based on the customs of the particular culture in which it was developed" " (Collis 1999), T171 was designed, as OU courses all are, to ensure that all aspects of the course material including the tutor group activities did not provide any unintentional cultural barriers to students inside or outside the UK.

T171 was designed to be delivered primarily in an online environment. Each student is allocated to a tutor in their own region to whom they can turn for support and advice. For tutors of first year students their role includes not only academic tuition but also a wider role as 'tutor counsellor' offering students support in areas of study skills, additional tuition where necessary and personal counselling if required. Students allocated to the same tutor become part of a tutor group who in traditional Open University courses will meet at monthly face to face tutorials. In T171 these Tutor Groups are virtual and students meet using the First Class conferencing system. However, most regions organise an initial introductory meeting to enable students to meet their tutors before the course begins. Throughout the course material

there are activities and exercises that require the students to work together using the First Class conference. In some of the activities they form small groups or teams for collaborative working, in others they use the online forum for discussions and clarification of issues related to the course materials. All assignments including the final End of Course Assessment (ECA) are submitted electronically.

What were the difference in results?

The retention and completion rate for Singapore students was considerably higher than for UK students. Of the total percentage of those registered at the start of the T171 course, only 41% completed and passed the whole course (39% of male and 44% of female students). This consists mainly of those who withdrew from the course - only a very small percentage of those who completed the course actually 'failed' as a consequence of poor course assessments or exam results. In contrast 73% of the TZS171 students who registered for the course completed it and passed. (see Table 1)

	Started	Passed ⁽¹⁾	Passed ⁽²⁾	Exam ⁽³⁾
T171 2001 ALL STUDENTS				
Total	11519	41	49	96
New	8435	39	48	95
Continuing	3084	45	51	96
TZS171 2001 ALL STUDENTS				
Total	213	73	73	95
New	209	73	73	95
Continuing	4	75	75	100

Table 1: Comparison of results of TZS171 and T171 students 2001

⁽¹⁾ Percentage of students in each category who passed the course based on the number of students starting the course

⁽²⁾ Percentage of students in each category who passed the course based on the number of students still registered one third of the way through the course

⁽³⁾ Percentage of students in each category who passed the course based on the number of students who sat the exam/assessment.

As part of the cohort of students on T171, 589 were not resident in Britain and therefore may have differed slightly in their experience of the usual tutor support model outlined above. These include those living in and outside the EU (including those in the armed forces) who are supported by British based tutors and those in the Republic of Ireland who have their own local tutors. However the delivery of the course remained substantially the same as for students in the UK with one or often no face to face tutorial.

	Started	Passed ⁽¹⁾	Passed ⁽²⁾	Exam ⁽³⁾
NON-UK REGIONS				
European Union	222	50	59	96
Republic of Ireland	240	53	62	97
Outside European Union	11	45	56	100
BFPO	116	40	48	96
Total Non-UK	589	49	58	96

Table 2: Non UK students performance on T171 2001

Structural differences in the delivery of TZS171

More face to face tutorials:

While the content of the Singapore presentation of the course was entirely the same as that presented in Britain, the way in which the tutorials were organised differed, and may be one of the factors responsible for the lower withdrawal rates. The Singapore course

"had the one Introductory Lecture (for all the students). This was followed by 4 face-to-face tutorials which were arranged for the individual TGs. They were scheduled to help set the scene for the 3 modules and provide help to students in attempting the assignments and project." (Moorthy, 2002)

The face to face tutorials were often mentioned and referred to within the on-line tutor group conferences by students and tutors indicating that these were seen as an integral part of the course delivery.

Separate conferences and Notice Boards.

All T171 students have access to a set of computer conferences which provide information updates from the course team as well as the opportunity to discuss issues with other students outside of their own tutor group. The Singapore students were set up with an identical set of conferences which meant that initially they could communicate with each other but did not have contact with the UK students. About halfway through course, following requests from several students, all the SIM students were given access to a regional UK conference - however only a small number of them ended up participating in these discussions.

"it would be very interesting, exciting, rewarding and challenging to understand more from our peers over at UK how they would learn this module. it would really be very fun to be able to communicate with UK students and to participate in their cafe conferencing." Shook Han Low

"I did manage to get onto the chatroom and found it to be an enriching experience being able to chat with students doing the same course in different parts of the world." Wei P. Wong

Academic intentions

All students on the TZS171 course were expected to register as part of a named degree course programme, either BSc (Hons) IT and Computing or BA (Hons) Business Studies and were also studying another Maths Level 1 course - MSZS121. In contrast, less than 70% of British students stated their intention was to gain a named degree, and half of these were aiming for a wide range of degrees other than the BSc (Hons) IT and Computing. Feedback from students suggested a lower commitment to gaining a qualification may have been responsible for the increased 'drop out' rate.

About halfway through the T171 course it was noticed that some students had stopped participating in the tutor group conferences as the course progressed and failed to submit later assignments although had not formally withdrawn from the course. UK tutors were asked to contact these students and find out about their plans for continuing their studies. Anecdotal evidence from these tutors suggested that many students were studying the course for interest rather than the credit points and that many only really wanted the skills developed in the first Module. This was confirmed to some extent by the IET end of Course survey for 1999 (sample 400 - 194 respondents) pilot and 2000 (sample size 231 - 128 respondents) which revealed that 78% (1999) of respondents gave their reasons for taking T171 as 'to develop their subject interest' and 28.9%(2000) were 'not bothered about getting the credit points'.

Cultural differences

So far I have suggested that structural differences in the delivery of the course may have had some impact on the retention and subsequent pass rates of SIM students. However it is worth considering additional cultural factors which could have contributed to this differential and which would be interesting for further study. Using the Technology Acceptance Model (TAM) proposed by Davis (1986, 1989) and Hofstede's model of national cultural variation (Hofstede 1991), Veiga et al predict that "the likelihood of technology acceptance will be influenced by an individual's culturally induced belief system" (Veiga, 2001). Five dimensions of cultural variation (power distance, uncertainty avoidance, individualism, masculinity and long-term orientation) are used to analyse different national cultures and their implications for IT acceptance and implementation. Singapore culture can be seen communitarian rather than individualistic, with a strong authoritarian tradition of control and regulation that might inhibit the acceptance of technological change but "Singapore's small size, excellent telecommunications infrastructure, well-educated populace and societal proficiency in English all bode well for its effort to become an 'intelligent island' " (Warschauer 2001). More specifically there are three areas in which cultural differences may have had an effect on the differential retention rates of students.

Motivation or 'kiasu'

While retention of students is a high priority within the Open University and tutors are expected to support and encourage students to continue their studies, the ethos of the Open University is very much on self directed learning responding to the individual motivation and needs of students rather than any external expectations or pressures, which extends to respecting their 'right' to withdraw from a course at any point during its duration. Chen (1999) has identified the Singaporean concept of '*kiasu*' or fear of failure as an important factor in motivating students by causing them to over-compensate in order to achieve higher examination grades to the extent that "students from Singapore being .. *kiasu* (ie afraid if doing badly or losing out) showed more anxiety in not achieving their intended goals".. (Chen 1999). This difference in perception of what it means to withdraw from a course may be crucial in understanding the differential retention statistics outlined earlier.

Attitudes towards education

Traditional Singaporean education has an excellent track record of producing students who score highly in international test results in mathematics and science subjects, but there has been increasing concern that the system relies too heavily on rote learning of facts with not enough emphasis on "thinking and leadership skills needed for scientific and entrepreneurial leadership" (Warschauer 2001). This has led to the launch of the "Thinking Schools, Learning Nation" initiative in 1997, a policy designed to "enhance information technology (IT) provision and emphasise learning/teaching through the use of IT and an emphasis on developing critical and creative thinking" (Chen 1999). However the legacy of the existing system means that adult T171 students would have been through their education with a "strong teacher led culture" (Chen 1999) where there is "a strong emphasis on order, discipline and uniformity" (Warschauer 2001). This again could have an effect on retention rates with students feeling reluctant to disappoint or act disrespectfully towards their tutors by dropping out of the course before completion. Moreover, since three-quarters of the Singaporean population is culturally Chinese in origin (Chen 1999) - and this is reflected in the T171 student population - it is worth considering the conclusion of a comparative study of British and Chinese students by Jin et al (Jin 1998) who found that "In terms of what characterises a good student, Chinese respondents were significantly more impressed than British students by students who respect the teacher, study independently, develop a good character, answer the teacher's questions, ask questions during and after class, and prepare for the class in advance. The British students in contrast saw a good student as someone who learns from others and pays attention to the teacher" (Jin 1998)

Previous educational attainment

While Internet usage figures have soared in Britain over the past two years, many of those who registered for the T171 course were new to computers and the Internet and when they registered in mid 2000. Furthermore, only 25% of T171 students had high level of previous educational achievement whereas all the Singaporean students had a professional or graduate qualification. Finally, Singapore is "known to have one of the highest density of Internet users in the world and boasts the biggest number of Internet messages and chat groups" (Teo, 1997) and although there is no data available on relative ICT skill levels of students who registered for the course it is possible this may have had some impact on the results.

Conclusion

For institutions thinking about implementing an international model of distance education there are a wide range of factors that should be considered which could alter the outcome and success of a learning programme. In the case outlined above, the Singapore cohort of students achieved relatively better results than their UK counterparts, the reasons for which are not entirely clear and require further research. What is clear however is that cultural and educational norms within partner countries can make a considerable difference to the acceptance and success of a course that in all other respects is structured and delivered in the same way.

References

Chen A, Mashhadi A, Ang D, Harkrider N (1999) *Cultural issues in the design of technology-enhanced learning systems* British Journal of Educational Technology Vol 30 No 3 pp 217-230

Collis, B. (1999) *Designing for differences: cultural issues in the design of WWW-based course support sites* British Journal of Educational Technology Vol 30 No 3 pp 201-215

Davis F (1989) *Perceived usefulness, perceived ease of use and user acceptance of information technology*. MIS Quarterly Vol 13 No3 pp319-40

Hofstede, G (1991) *Cultures and Organisations* (McGraw Hill London)

Jin L and Cortazzi M (1998) *Dimensions of Dialogue: large classes in China* International Journal of Educational Research Vol 29 pp739-761

Kuo E C Y and Low L, (2001) *Information Economy and Changing Occupational Structure in Singapore* The Information Society Vol 17 pp281-293

Moorthy, V. V. (2002) Singapore Institute of Management (personal communication via T171 First Class conference)

Teo, T.S.H and Lim, V.K.G (1997) *Usage patterns and perceptions of the Internet: The Gender Gap* Equal Opportunities International, Vol 16 No 6/7

Veiga, J F, Floyd S and Dechant K (2001) *Towards modelling the effects of national culture on IT implementation and acceptance* Journal of Information Technology Vol 16, pp145-158

Warschauer M (2001) *Singapore's Dilemma: Control versus Autonomy in IT-led Development* The Information Society Vol 17 pp305-311

Watson R T, Ho T H and Raman K S (1994) *Culture: a fourth dimension of group support systems* Communications of the ACM Vol 37 No 10 pp 45-55