A TALE OF TWO CITIES: COMPUTER MEDIATED TEACHING & LEARNING IN MELBOURNE AND SINGAPORE

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Abstract.
This paper examines the emergence of differing student behaviour in the use of ICT in Melbourne and Singapore. It seeks to explain the stark contrasts in intra-group communication and the use of online course materials in terms of cultural differences, drawing largely on Hofstede's framework for cultural analysis. Hofstede found Australians to be highly individualistic and to have both low power distance and low uncertainty avoidance. Singaporeans were found to be towards the other end of the scale in each of these dimensions. These differences appear to go a long way towards explaining the observed behaviour. It is argued that academics need to take culture into account in the design of learning materials, particularly when the use of ICT is discretionary.

Background

This paper seeks to explain the emergence of differing student behaviour in the use of ICT in the same subject but in different locales. The subject under the spotlight is offered in the final year of a Business Administration undergraduate degree. *Managing Strategically* is offered by RMIT's School of Management in Melbourne, Singapore, Hong Kong and Malaysia. The focus here is on developments in the last two years in Melbourne (about 200 students per year) and Singapore (about 600 per year).

The teaching of *Managing Strategically* involves a novel methodology based on what the designers dubbed a "live case". The central feature is a semester long, group based simulation of the strategic management processes of a real organisation chosen by the students. (See the recent ANZAM papers by Munro-Smith and Tracey for a more detailed discussion of methodology). The delivery of the subject in both Melbourne and Singapore is a mix of lectures and staff moderated group work supported by online resources (RMIT uses Blackboard 5.5). The teaching of management requires a constructivist rather than behaviourist approach to be effective. Students need to build on their current knowledge through discussion and negotiation (social constructivism) rather than learn by repetition and practice. As Kearney and Treagust (2001) demonstrate, this is not confined only to the teaching of management. *Managing Strategically's* constructivist nature makes a purely online methodology somewhat problematic.

Like most universities, RMIT has for some years been turning simultaneously to fee paying international students and computer mediated teaching and learning to mitigate the consequences of ever-diminishing government funding. Since the first modest intake in 1988, Singapore has grown into the University's largest market. RMIT's Business programs are delivered through a partnership with the Singapore Institute of Management. The presence of a local partner obviates the need for a distance education methodology.

The rollout of the other key element of the university's strategy, RMIT Online, is well advanced. Like most universities the delivery of computer mediated courses has gone through a process of refinement and

evolution as the class sizes grew rapidly and the teaching staff gained more experience. Each semester small incremental changes trying to better adapt the offerings to the needs and learning styles of the students has led over a few years to substantial change. After starting out with a subject design that mirrored the Melbourne practice, the Singapore offering diverged to the point that all they now share, apart from the same starting and end points, is a common set of lecture notes. The differences manifest themselves in a number of ways, not the least being assessment (this is beyond the scope of this paper), but the Melbourne and Singapore students differ quite starkly in their use of computers.

The teaching methodology requires the lecturers to be closely involved in the students' group work (but this is of necessity less in Singapore where the classes are much larger). What follows is based on the observations of those staff. It has been supplemented by analysis of the course evaluation forms each student returns to the lecturers at semester's end.

Student Behaviour in Melbourne and Singapore

The most stark contrasts in student behaviour were in intra-group communication and the use of course materials obtained from the online facility (what RMIT calls the 'learning hub'). Regarding the first of these differences, in Melbourne over the last two years the use of e-mail as a means of communicating with other group members has gone from, at best, patchy to universal. Increasingly student groups in Melbourne are setting up their own chatboards to manage their intra-group interactions. The incidence of dysfunctional teams has simultaneously dropped to virtually zero. However in Singapore the preference for face to face interactions remains very strong indeed; even to the point that exchanging contributions to the group reports is done by in person by giving the others the files on floppy disks. Editing is done by sitting around one group member's computer. In Melbourne most teams nominate one or two editors and each group member e-mails their work to the editor.

The second noticeable difference in student behaviour is in the use of the course materials available online. The overwhelming majority of students in Singapore remain keen on 'handouts'. Learning materials are downloaded en masse, printed and used as instructions to follow in preparing assessment tasks. The conformity to the frameworks available on the learning hub resulted in a tight distribution of grades - a very tall and narrow bell curve - unlike the much flatter Melbourne equivalent. This continues to occur despite the efforts of the staff to encourage them to "do their own thing". Melbourne students were far less likely to download the course materials and even less likely to conform to the approaches they suggested.

Cultural Explanations of Student Behaviour

While there are a number of factors that explain the divergence, the difference between student behaviour in Melbourne and Singapore is essentially due to cultural factors. Geert Hofstede, the most widely cited author on culture, defines it as the mental programming that controls behaviour or the brain's "operating system" (Hofstede, 1994). Hofstede's model originally used four dimensions to describe cultural difference, a fifth was added later as a result of research in Hong Kong and China. Of the five dimensions – individualism, power distance, masculinity, uncertainty avoidance, and long term orientation – three go a long way towards explaining the student behaviour. Hofstede found Australians to be highly individualistic and to have both low power distance and low uncertainty avoidance. Singaporeans were found to be towards the other end of the scale in each of these dimensions. Dunwoodie (1996) has largely confirmed this in more recent research.

How do these cultural differences impact on the students' use of ICT in their learning? Generally the individualistic students in Melbourne prefer to work on their contributions to the group report at a place and time that suits them. E-mail allows effective asynchronous collaboration and has been adopted with gusto. In Singapore, on the other hand, the more collectivistic culture results in a strong preference to work together face to face. This preference is so strong it can be seen in the way some educational institutions have been built. At Ngee Ann Polytechnic, for example, the seating area outside the food outlets and library has been set up with small tables and power outlets. The students can be seen sitting for hours around a notebook PC belonging to one of the group as they discuss their reports. (The Australians cannot wait for their team meetings to end.)

Two other cultural dimensions in Hofstede's model - uncertainty avoidance and power distance – help explain the differing usage of online course materials. People with high scores in uncertainty avoidance tend to be risk averse and bureaucratic. Those with high power distance scores tend to prefer hierarchies and show respect for people perceived to be of higher status. The Singaporean's scores in each of these dimensions suggest a quite strong attitude that they are obliged to show respect to their lecturers (and by proxy the lecture notes). By adhering closely to the frameworks and suggestions contained in the online resources the students also minimise the risk of poor grades. Australians are instinctively more adventurous and respect has to be earned so lecture notes are not seen as a set of instructions but merely a starting point. It is not unusual (but how many people do this is unclear) for Melbourne students not to access the online resources at all. The usage counters on the web site rarely approach the actual enrolment.

Hofstede's methodology and findings are not without their critics. Another useful framework has been provided by Fons Trompenaars. Trompenaars and Hampden-Turner (1997) define culture as the way in which a group of people solves problems. While it shares with Hofstede the individualism dimension, there are six others that may shed some light on student behaviour. Of these six – universal v particular, affective v neutral, specific v diffuse, achievement v ascription, sequential v synchronic and in control or controlled by – there are echoes of Hofstede's findings in achievement v ascription. In achievement oriented societies respect is earned whereas in those with an ascription orientation a position or title commands respect. In Singapore, like most of Asia, respect for teachers is automatic. Ignoring online resources would be seen as disrespectful. In Melbourne course materials are used if the students' own experience validates them.

It is important, however, not to explain the observed phenomena solely in terms of culture. One observation Melbourne staff have made strongly suggests that the explanation of the differences in student behaviour is more complex than first meets the eye. All RMIT students are automatically given a university e-mail account but, judging by the e-mail addresses they write on class lists, only one or two percent use them (Hotmail and Yahoo are preferred). This may be ascribed to their individualism but more likely it reflects factors like convenience and shortcomings with the university network. This explanation carries even more weight when the behaviour of Singaporean students in Melbourne is taken into account – they are no less likely to use Hotmail or similar services.

Implications

What are the implications of these observations for the design and implementation of computer mediated teaching and learning? In an environment when computers are discretionary tools, when students are not compelled to use them or to use them in a particular manner, it is important for academics to understand how they will be used. It is RMIT's experience that the answer to the question 'how will computers be used?' is not entirely predictable. What academics need to do is see the benefits of ICT through the eyes of students using a cultural lens. At the very least academics need to think about whether they are seeking conformity or diversity in learning outcomes. In management education creativity and innovation are valued but the current package of learning resources is only achieving that where it is culturally compatible.

Regarding the specifics of this case, one unanswered question remains. To what extend is the constructivist nature of management education a factor in explaining the student behaviour? More research will be conducted to throw light on not only the way students studying management adapt technology to their needs but also whether there are differences in behaviour between disciplines. As a next step RMIT staff will be including students from Malaysia and Hong Kong in their observational surveys.

Conclusion

This is not the first, nor (hopefully) will it be the last paper to focus on the impact of culture on teaching and learning. The importance of designing culturally sensitive learning environments is widely recognised but as McLoughlin and Oliver (2000) point out, there is still a lot to be learnt about the complexities of culture and the cognitive design of computer mediated teaching and learning. In this regard, models like those provided by Hofstede and Trompenaars have much to offer.

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