KNOWLEDGE, SKILLS AND SUSTAINABLE VALUES IN LEARNING ORGANIZATIONS: SOME IMPLICATIONS FROM THE MULTICULTURAL VIRTUAL CLASSROOM

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ABSTRACT

The global diffusion of communication technology imposes major pressures on learning organisations that are exacerbated by the wide range of cultures within which those learning organisations must participate. Business education has responded by adopting/adapting the new communications technologies to the traditional classroom delivery method by pursuing elearning, but the development of communication technology, and the development of elearning techniques have been driven by a small number of dominant cultures. Increasingly, individual elearning participants are coming from cultures other than the dominant cultures – a shift which has major implications for learning organisations, elearners, and edelivered education providers. Using a multicultural environment as a background, this paper addresses the issues of the impact of elearner culture on learning in the virtual environment.

INTRODUCTION

Proliferation of cross border communication nodes and advances in the speed and convenience of international transportation has coincided with the rapid growth of international trade in the past several decades. As the international environment increasingly turns to electronic communication technologies, experience in manipulating such technologies is a critical experiential learning objective for the 21st century (Hill, 2000). Some of these changes have been reflected in the curriculum, with increasing group work, and team building exercises as integral components of course requirements. In response to international "best practice" business education has responded by adopting/adapting the new communications technologies to traditional classroom delivery method by pursuing elearning. But both the development of communication technology, and the development of elearning techniques have been driven by a small number of dominant, primarily English speaking cultures (Gupta, 2001). Increasingly however, individual elearning participants emanate from cultures other than those dominant cultures – a shift which has major implications for learning organisations, elearners, and edelivered education providers.

LITERATURE BACKGROUND

A team is "…a group of people who interact through interdependent tasks guided by a common purpose." (Lipnack & Stamps, 1997, 6). Key characteristics of effective teams include: complementary skills that together are equal to the assigned task; established goals and individual and collective accountability for achieving these goals; an agreed approach to getting the necessary work done (Katzebach & Smith, 1993). These are the essential aspects of the "project" itself – the technical and corporate characteristics that must be developed to achieve the goal initially established for the team/project, which is the final hurdle in developing an effective team. The group must first develop a sense of community for sharing their skills, experiences and motivations, often referred to as the development of "teamwork" which is the essential "people" precursor hurdle of teambuilding. As with any team, a virtual team is a group of discrete individuals assigned to achieve a common goal or purpose. However, a virtual team employs electronic communication to enhance mobility and the speed of information sharing by operating both asynchronously and without collocation (Lipnack & Stamps, 1997),which is the "virtual environment" hurdle associated with virtual teamwork. While each of these hurdles requires their own dynamics that result in team performance, it is clear that the "project" aspects are dependant on the "people" aspects of team performance, and that the nature of the "virtual environment" is yet another precursor hurdle to effective virtual teamwork.

Cultures clearly differ, behaviours differ, and responses to technology differ by ethnicity. Ethnic group (cultural) differences are reflected in learning styles that are based on the modal behaviours of societal learned values (Parhizgar, 1998). These are influenced by both communication behaviour (Korac-Kakabadse *et. al*., 2001) and education systems (Makepeace, 1996). Participant culture – their learned rules of behaviour in a group setting – are therefore important to the development of learning interaction and learning achievement. Specifically, ethnicity may be differentiated along a continuum between low context and high context cultures. On one end, in a low context culture

low levels of programmed (mutually understood) information provide context, therefore communication requires a large amount of explicit information to convey meaning. On the other end of that continuum is a high context culture in which high levels of programmed (mutually understood) information provide context, which requires a longer time to program and interpret in order to convey meaning (Korac-Kakabadse *et al.*, 2001: Hall & Hall, 1990).

The foregoing clearly develops a linkage between culture (ethnicity), learning behaviour and communication modes. Low context individuals, acculturated toward environmentally related learning variables anticipate that their role in learning is to attain some minimum level of competence that sees these individuals competing on an individual basis against a standard that may grow or change rapidly over time, while also competing with their peers as well. On the other hand, high context individuals are acculturated to adjust their level of effort to a predetermined performance outcome, and therefore look inwardly at self-behaviour to achieve a socially acceptable level of excellence, taking the externally determined standard as a given. Thus, their perception is to look inwardly to change or develop the individual to meet the predetermined standard rather than competing to achieve changing standards (Goodfellow *et. al.*, 2001). This contextual framework has been applied to qualitative data collected from a cross-cultural virtual teamwork simulation.

THE CONTEXT

Over the course of the past three years, a term length simulation has been used to approximate the communication and learning organisation environment in which modern trans-national firms operate (Morse, 2002). Virtual teams composed of 3-5 members were only allowed to communicate via electronic means. Qualitative data provided by 103 participants (34 teams) was evaluated for major issues which were thought to impact on their ability to function in this virtual teamwork simulation. This data provides the basis for the following observations. All had been participants in at least one physical (F2F) team or group project prior to this simulation exercise. Cumulatively, the three most recent iterations of the simulation consisted of 56% low context participants and 44% high context participants. Low context participants represented Australia, Canada, Denmark, France, Germany, New Zealand, Sweden and the United States – the largest representative group of which were New Zealanders (46% of the total). High context participants represented China (Mainland, Taiwan and other overseas Chinese), Fiji, India, Indonesia, Japan, Korea, Malaysia, Malawi, Nigeria, Pakistan, the Philippines, Sri Lanka, and Vietnam, the largest representative group of which was Chinese (45% of the total). Thus, the group of participants was broadly multicultural in nature, but significantly weighted toward a clear high/low contextual dichotomy, thus allowing cross-cultural inferences to be drawn. Some general observations follow.

The vast majority of participants were initially reticent regarding the use of a virtual team simulation, but after completion reflected that it was an excellent learning tool, perceiving the simulation to be a more valuable learning device as a result of the "real life" application used as a simulation foundation. At the same time, however, they collectively suggested that the virtual team exercise was more difficult than a similar physical team exercise. The participant teams identified a series of technology issues that impacted on their performance in the virtual team simulation. These included hardware and software interconnectivity issues, Internet security issues, and reliability issues. Using computers with older generation operating systems, choices of software that were platform dependant and the textual language of specific software programs were detriments to early participation in the simulation. Interconnectivity – the ability to actually access the required intranet and software was a major irritant. Finally, the less than full reliability of the communication pathway, both intranet and Internet, was another irritant. Reflecting trans-national realities, technology itself is a hurdle that must be overcome for the effective operation of cross-cultural virtual teams. But technology issues are only part of the problem.

The demographic data indicates a very wide range of incoming ICT skills. While all low context participants were familiar with computer operations, and most were proficient in email and chat room participation, information searches, data retrieval, and post-retrieval compilation, many of the high context participants lacked most or all of these skills. Thus, incoming levels of ICT skills in a cross-cultural virtual team environment are an obvious problem. Another key difference between these two cultural groups was the ability to simply enter data into a data retrieval system – specifically, typing skills. While the low context participants thought nothing of the requirement to participate in an asynchronous discussion or a chat room while sitting at a keyboard, most of the high context participants regretted their poor typing skills. This was especially true of those participants from ideographic language groups, such as Japanese, Chinese, Thai or Hindi. These participants found their typing skills woefully inadequate at the beginning of the simulation, and many suggested that, though their skills had improved during the simulation, they still lacked confidence in their keyboarding skills. Of greater significance in this context was their impression of the "live chat" sessions, an issue of language itself. For participants for whom English was a second (or third) language, the ability to keep up with a live online chat was reported to be poor. A general comment from the high context participant group suggested that they failed to participate (or appeared to fail to participate) in online chat sessions simply because they could not keep up with the discussions. The insertion of tangential material (similar to a normal conversation) would break their train of thought, and by the time they had

decided what to say, the conversation had moved on to a next, or second, or even third topic. Coupled with the lower level of physical data entry skills, most of these participants reported that they simply gave up after a short period of time, and read the material posted in the chat room, but did not participate. Given that a key element of successful teamwork is an agreed approach to goal achievement, these participants felt as though they were simply left behind, told what to do, and then ignored. Of all the negative feedback, this was the most negative. At the same time, one of the key positive impacts of this virtual team simulation, as reported by the high context participants, was their impression of the improvement achieved in ICT skills during the simulation. Many reported developing new skills (information search, data manipulation, data analysis, report compilation), as well as improving existing skills – though by far the most noticeable improvement for these participants was their typing skills.

The forgoing indicates that not only is technology itself a hurdle that must be overcome for the effective operation of cross-cultural virtual teams, but the wide range of differences in cross-national ICT technical skills also presents a hurdle. The most obvious difficulty citied by participants was that of language. For example, the speed of English language communication can inhibit the comprehensibility of the communication to the non-native speaker. Further the use of slang, jargon, and idioms that are culturally based further complicate the communication stream. Finally, a number of high context participants complained that they knew what the words meant, but they simply misunderstood the English grammar and context, thus misunderstanding the virtual conversation. An additional complexity arose for high context communicators when the low context nature of communication precluded their use of their natural/cultural context interpretation skills. This led to a backlash from low context participants for whom language was less a problem. They saw this as a drawback to the virtual teamwork effort, as they were required to spend more time on explanation, and be clearer in their English language usage, as well as reduce the cultural nuances in their communication – an unnatural condition for them as well. This meant slower and less effective information sharing, and thus a detraction from their quest for a completed effort. From an academic standpoint, several low context participants were concerned they would be penalised as a result of this slowdown (lower grades) due to the need to "carry" their cross-cultural counterpart. Beyond language, cultural differences lead to differing group behaviour, which significantly affects the development of a virtual team. Low context participants perceived that high context team members were reticent, aloof, and passive, thus, they would devote extra effort to give precise instructions, explanations and guidance to their high context counterparts, in an effort to draw them further into the virtual team environment, while high context participants perceived their counterparts as driving, individualistic and overbearing in their quest for the final

objective resulting in reticence, withdrawal, and a resort to "lurking" behaviour. Thus, many (though not all) low context team members perceived their cross-cultural counterparts as "free riders".

IMPLICATIONS

Recent literature relative to virtual communication cites a large pool of difficulties that face participants in the virtual environment that were, by and large, replicated by the observations of this group of participants. These concerns were reiterated by all participants, who found the experience somewhat frustrating, especially when compared to their past experiences with face-to-face small team exercises. However, perhaps the perception of the relative priority of those difficulties differs by cultural group. In keeping with the literature (Hiltz, 1994), all participants recognized a series of benefits associated with the virtual environment. Flexibility in terms of time and location of participation was seen as a very positive benefit of virtual teamwork. Also, speed of communication was seen as a positive, from the instantaneous feedback of the live chat room to the speed of delivery of email attachments, to the simultaneous editing of team documents/presentations. Likewise, many of the low context participants, and all of the high context participants suggested the positive benefit of the off-line editing capability of the asynchronous virtual environment. Unlike a face-to-face team meeting, a participant can stop and gather their thoughts while the team meeting continues. However, as might be expected, the high context participants found this environment significantly more difficult than their low context counterparts, perhaps because of their relative timidity in the use and interpretation of the English language. Most disconcerting was the lack of visual cues, which meant that these participants needed to obtain meaning from the written word, a skill that few admitted to having developed prior to this simulation. As befits their lack of technical skills, high context participants generally agreed that any form of "chat" experience was simply too fast for them to follow. Many suggested that this would also be true in a non-virtual environment, though all suggested that in that environment at least they could make their presence felt. Also, in the virtual environment these participants expressed a great deal of concern for their lack of inclusion in group decision making, even when such group decision-making was an assigned task. Having prior experience in small group face-to-face exercises before this simulation, surprisingly both groups of participants suggested that their participation in the virtual team environment felt less organised, and therefore was a more stressful experience, than the equivalent face-to-face team project. There was less ability to influence the behaviour of team participants, less commitment to a fixed schedule, and less direct communication in the virtual team environment. Thus, their participation, though generally positive, was to some extent less than ideal – a similarity with the reported virtual team

experience of firms (Duarte & Snyder, 1999; Rosen & Weil, 1995).

The above observations, taken from active participation in a virtual team environment, indicate that beyond the requirements of successful virtual team experience, there are three additional hurdles that must be overcome for successful goal achievement in the multicultural virtual team environment. First and foremost is the need for reliable technology (the combination of hardware and software) to create the necessary "virtual space" within which the team may operate. Participants indicate that, cross-culturally, this is a significant hurdle for virtual teamwork. Second and following from the above, individual participants must have minimum technology related skills to function successfully in the created "virtual space. Thirdly, specific to the cross-cultural virtual team is the need for cultural accommodation. As evidenced by the experience of these participant teams, the greater the diversity of the virtual team, the higher the likelihood of difficulties in developing the participants sense of community, and therefore its resultant "teamwork". Finally, the virtual environment differs from the face-to-face environment – a difference that significantly disadvantages those from alternative culture groups. A growing body of research literature indicates that cultural behaviour patterns are unintentionally superimposed on individual participation in the virtual environment, including lurker behaviour in a chat room, alternate persona due to the anonymity of electronic communications, etc. (Goodfellow, *et. al*, 2001).

Using the feedback provided by the participants in this virtual teamwork simulation, there appear to be six successive keys to achieving effective cross-cultural virtual teamwork, unlike the normal teamwork environment where there are only two hurdles to effective teamwork, as follows:

- step 1 – be able to connect to the virtual environment;
- step 2 – be able to operate the equipment/software;
- step 3 – be able to communicate across cultures;
- step 4 – be able to communicate in the virtual environment;
- step 5 – be able to internally agree on processes, procedures, and work norms;
- step 6 – set a clearly defined, achievable objectives or goals.

These six successive steps, but especially step three, indicate much greater difficulty in reaching successful outcomes for virtual cross cultural teams than for their mono-cultural counterparts.

For eteaching institutions, the implications are significant. Though teaching institutions have clearly addressed, to a greater or lesser extent, the issues of hardware, interconnectivity, and software through development of campus computer labs, faculty, school and university intranets and in some cases the dissemination of individual student computers, these institutions have done less well in servicing the off-campus customer – student or faculty. The differing level of ICT skills across cultural groups is likewise problematic for eteaching institutions, and another potential great expense. This is all the more pressing an issue as eteaching becomes not a national, but a global phenomenon, as burgeoning education markets portend rapid potential expansion across national boundaries. Finally, the requirement for cultural accommodation is another major area of concern for eteaching institutions. While many campuses encourage international student participation, they do so with the expectation that the international student will adjust to the dominant cultural environment. This may not be the most appropriate solution for those institutions wishing to take advantage of trans-national education markets.

This research has suggested six hurdles to be overcome to address knowledge, skills and sustainable values in an increasingly multicultural virtual team environment. For eteaching institutions to efficiently use knowledge resources in a globalising economy, awareness of and response to the needs of individual knowledge holders increasingly means accommodation to alternative cultural backgrounds. As the global village shrinks, a rapidly rising cultural awareness will set the boundaries for learning organizations – a limitation which can be reduced by redressing the issue of cultural differences in the technology of learning, and as an integral component of the internal culture of the learning organization.

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