

NEGOTIATING CULTURES IN CYBERSPACE: PARTICIPATION PATTERNS AND PROBLEMATICS¹

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ABSTRACT

In this paper we report findings of a multidisciplinary study of online participation by culturally diverse participants in a distance adult education course offered in Canada and examine in detail three of the study's findings. First, we explore both the historical and cultural origins of "cyberculture values" as manifested in our findings, using the notions of explicit and implicit enforcement of those values and challenging the assumption that cyberspace is a culture free zone. Second, we examine the notion of cultural gaps between participants in the course and the potential consequences for online communication successes and difficulties. Third, the analysis describes variations in participation frequency as a function of broad cultural groupings in our data. We identify the need for additional research, primarily in the form of larger scale comparisons across cultural groups of patterns of participation and interaction, but also in the form of case studies that can be submitted to microanalyses of the form as well as the content of communicator's participation and interaction online.

INTRODUCTION AND BACKGROUND

The preconditions of cyberculture usually involve the linguistic and communication norms of Anglo-American societies in which the aggressive, competitive individual is enshrined. (Jordan, 2001, p. 13)

Intercultural communication is always a challenge, but even more so when it happens online in the absence of visual and oral cues or well-developed relationships. In computer-mediated courses, participants are involved in building learning communities. Culturally diverse individuals may hold widely different expectations of how to establish credibility, exchange information, motivate others, give and receive feedback, or critique or evaluate information.

In our recent study (Chase, Macfadyen, Reeder, & Roche, 2002), we began to explore the impact of cultural differences upon participation in a computer-mediated course offered by the University of British Columbia to a culturally diverse group of learners across Canada. The overall goal of the study was to test critically the widely held assumption that the use of standardized communications technology, implemented with competent professional pedagogy, will constitute sufficient conditions for successful communications and learning for culturally diverse cohorts participating in a distance learning program. Ascertaining the preconditions for successful online learning has potential significance for both policy and practice in distance learning. Recent studies of second language learning have begun to delineate in some detail the critical role of intercultural variables in mediated learning exchanges. Thorne (2003) for example develops the notions of *medium as cultural artifact* and *electronic cultures-of-use*, both of which we make extensive use of in our problematization of ostensibly culturally neutral e-learning tools in this study.

Phase One of our analysis, reported in Chase et al. (2002), described the differing ways in which cultural experiences, values, and influences were revealed in the online postings of the study's participants. The analysis also provided evidence of differing communication patterns and instances of miscommunication in online exchanges between culturally diverse learners and online facilitators. In addition, we constructed a taxonomy of nine major themes or clusters of communication difficulties encountered by our participants. Foremost in that taxonomy was the revelation that cyberspace itself came to constitute a cultural space in the course, so that cultural gaps could emerge not only between individuals but also between individuals and the dominant cyberculture inherent in the course.

In Phase Two, we now report on an exploratory case study of a single online course that investigates three main observations. First, we discuss both the historical and intercultural background for the emergence of cyberculture values as a social construct, introducing the theoretical notions of explicit and implicit enforcement of those values to describe potential mechanisms underlying patterns of communication. Second, we examine the idea of "cultural gap" between participants in our course in terms of the consequences for online communication successes and difficulties, in the light of Gudykunst's (1995) theory of the correlation between communication anxiety and perceived differences between communication partners. Third, we offer descriptive statistics suggesting that participation frequency differs as a function of cultural group, broadly defined. We consider these participation patterns in the light of current thought in a variety of social sciences that deal with issues in language, culture, and communication. Finally, after we identify some of the limitations of the present case study's approach, we urge further study of the patterns we describe, given the implications for future design, policy, and implementation of online distance learning courses for culturally diverse clientele who increasingly comprise the global educational mainstream (Cummins & Cameron, 1994).

For the purposes of the study a definition of culture was used that moves beyond "essentialist" views of culture as values, beliefs, and patterns of behaviour that are learned through our experience and environment (Hofstede, 1980; Hall & Hall, 1990). Rather, we tend toward the social constructivist view espoused by Scollon & Wong-Scollon (1995) in which culture is viewed as "shared ways of symbolic meaning making among members of a social community." We treat the nexus of cultural production as discourse, in the present case, the online discussions amongst participants in an emerging online community. We further suggest that in online communications, as in face-to-face communications, culture is negotiated, not given.

It appears in our study that the complexity and dynamism of such cultural negotiation can place learners at considerable odds with the best plans and unexamined communicative assumptions of online distance course developers. The sorts of cultural assumptions about effective communication held by designers of online discourse platforms, course assignments, and threaded discussions might match poorly with those of the adult learners that they target. In a stunning display of naïveté and smugness, Canada's leading agency for the promotion of e-learning stated recently,

Our position as a bilingual and multicultural country, as a Pacific nation with a neighbour's view of the American experience, makes it easier for our post-secondary institutions to develop online course offerings with appeal to learners in the United States, Europe and Asia. Canada also has an excellent reputation for high-quality, culturally neutral content. ([Industry Canada, 2003](#))

Our study contests the notion that culturally neutral content is even conceivable, let alone attainable in online settings.

METHODS

Setting

An introductory course for a university certificate program in Intercultural Studies was offered in a mixed mode consisting of 2 days of face to face meetings followed by 6 weeks of facilitated online assignments and discussion. WebCT served as the software platform for the online component. The face-to-face component of the course was delivered in parallel meetings held in Toronto and in Vancouver. The two cohorts were then blended for the online introductions, assignments, and discussions that comprised the remainder of the course proceedings.

For the purposes of the present case study, we decided to employ an intact group despite its lack of representativeness of some larger populations. We believe that the authenticity of an intact group located in the field and our case study method offset, to some extent, the limitations upon our ability to generalize findings to a broader universe of online courses in an unambiguous and immediate manner. We therefore decided against constructing an experimental sample for study under laboratory conditions. Nonetheless, on the basis of the authors' widespread collective experience as adult educators, we judged that members of a certificate program in intercultural communications would bring reasonably well developed skills and positive dispositions toward effective interpersonal communication. This self-selection provided us with a degree of control over basic interpersonal communicative skill level, offering us the advantage of being able to reduce its potentially confounding effect upon our examination of the respective roles of computer mediation and cultural group, in a case fairly representative of those in which "hard technology meets soft skills" (Macfadyen, Chase, Reeder, & Roche, 2003).

Participants

The community of 24 participants that embarked upon this course included 17 students, 5 course facilitators, and 2 moderators. Three learners failed to complete all the requirements of the course. In our descriptions below, both facilitators and moderators will be described for convenience as "Facilitators" despite their somewhat differing roles in the leadership of the course. There were 17 female and 7 male participants, ranging in age from 25 to 55 years, and participants in this course appeared to be representative socially of the population normally recruited for the certificate program, including individuals with high school, college, university, and post-graduate education. In the initial personal introductions posted online, participants used the following categories to identify their cultural heritages: Canadian, British Columbia First Nations (aboriginal), Middle Eastern, Southeast Asian, Southern European, German, African, South Asian, Italian, Chinese, and UK South Asian. Nine of the 24 participants were born and educated outside of Canada.

Table 1 divides participants into three broad groups that we compared for purposes of descriptive analysis of participation. While the cultural diversity of this cohort did not allow us to categorize it into easily identifiable ethno-cultural groups, we believed that this demographic grouping, employing participants' Canadian citizenship status, is relevant from the perspective of the participant's exposure to mainstream North American cultural values in early life and education. As first suggested by Tannen (1984) in research among North American populations, men and women can be socialized linguistically quite differently, which will be reflected in contrasting male and female communication patterns. For a recent social constructivist reanalysis of that observation, see Cameron (2003). We therefore also compared online course participation of male and female participants. Because the course was carried out in English, we conducted a preliminary survey of the full corpus to determine whether there was any evidence of differential written English proficiency across these three broad groupings. We found no evidence of systematic errors, and only normal performance slips found in the population at large. These errors were distributed roughly evenly across all groups. Moreover, a survey of educational backgrounds revealed that the three aboriginal participants had attended, as expected, and succeeded in, English-

medium schools and postsecondary institutions, and were clearly native speakers of English. This allowed us to eliminate differential written English proficiency as a potential confounding variable in our subsequent discourse analyses.

Procedures

Our data set consisted of printed transcripts of all 453 online contributions to the WebCT public bulletin board tool over the 6-week facilitated online component. All messages were arranged in order of date sent and superficially reformatted (e.g., extraneous headings reduced) for ease of analysis. However, within each electronic message all the original formatting, spelling, use of alternative characters, emoticons, and so forth, were left as written by the course participant. Pseudonyms were assigned to participants to protect confidentiality and to mask cultural membership prior to the analysis of the printed transcripts of the online contributions to the bulletin boards. After reading through the postings individually, the four investigators came together and, using a variant of grounded theory research methodology (Strauss & Corbin, 1998) exchanged observations relating to categories of postings, text, frequency, style, interactions, and patterns, with the aim of identifying themes that emerged in the data. Descriptive statistical techniques were applied to the corpus in order to identify patterns of participation by group, but because of the case study method we employed, no inferential, hypothesis-testing statistics were appropriate.

Preliminary descriptions of the corpus of postings revealed the broad dimensions of the course's communicative component. Table 1 summarizes the distribution of postings by group, role in the course, and gender.

Table 1. Total Number of Postings by Citizenship Group, Role, and Gender

	Role				Total	Group <i>M</i> , <i>SD</i>
	Learners		Facilitators			
	male	female	male	female		
Aboriginal Canadians	12 (2)*	9 (1)	0 (0)	0 (0)	21 (3)	7.0 3.5
Adult immigrants to Canada	27 (2)	61 (3)	28 (2)	106 (3)	222 (10)	22.2 6.9
Non-aboriginal Canadians	0 (1)	153 (8)	0 (0)	57 (2)	210 (11)	19.1 11.7
Total	39 (5)	223 (12)	28 (2)	163 (5)	453 (24)	18.9

*Total number of postings is indicated; number of individuals is indicated in parentheses.

RESULTS AND DISCUSSION

Observation One: The Internet Has a Culture

Our first observation, and perhaps the observation with the most wide-reaching implications for the success of electronic intercultural communications, is that the communicative space or platform created by the Internet is not a culturally neutral or value-free space in which culturally diverse individuals communicate with equal ease. Like all technologies, the Internet was and is socially produced -- and all social productions are informed by the cultural values of their producers (Castells, 2001).

The creators of the Internet were predominantly Anglo-American engineers and scientists "seeking quick and open access to others like themselves" (Anderson, 1995, p. 13). Their ethnic and professional cultures value aggressive/competitive individualistic behaviours. In addition, these cultures value communications

characterized by speed, reach, openness, quick response, questions/debate and informality. Schein (1992) attributes similar values to the information technology community in general.

We observed that these communicative cultural values are embedded in the design of WebCT and similar Internet-based communications platforms. Layered over this foundational but "invisible" culture of the Internet, the culture of the online modular courses under study here is similarly the product of its creators, all of whom were known to (and in several cases, colleagues of) the researchers: predominantly university-educated Canadians, who are Western, English-speaking, and female. Within the course environment, communicative cultural values are enforced both explicitly and implicitly. Implicit enforcement is due to features such as the technical infrastructure of the course (a discussion board which requires public postings and responses), and by unspoken assumptions and expectations about how communications should proceed. Meanwhile, the communicative culture of cyberspace and of this online course is explicitly enforced through overt statements, instructions and requests made by course facilitators and by some of the learners (Table 2).

Table 2. Explicit and Implicit Enforcement of Cyberculture Values

Cyberspace Values	Implicit Enforcement	Explicit Enforcement
<i>speed</i> <i>quick response</i>	Course design requires a minimum number of learner postings per assignment, including responses to each others work, made on time.	"I found also that I was anxiously awaiting a facilitator reply I realize the facilitators have other commitments and obligations, but it would be of greater benefit to me if I were able to see a response at an earlier time." (Learner) "This online course really works when postings come in on time and allow us all to get involved in the discussion." (Facilitator)
<i>debate / questions</i>	The underlying objective of requiring learners to respond to each other is to promote debate and discussion between multiple participants.	"We continue the conversations, even when it's difficult for us ... We accept the questions others ask us -- asking questions is okay." (Facilitator)
<i>informality</i>	The current version of WebCT has no spell-checking facility. There is a limited capacity to include special message formatting (which might indicate a formal communication) in postings unless participants have an extensive knowledge of html. Course guidelines make no recommendations regarding structure of postings, and no assessment is made of posting format, spelling, style or presentation. Course design includes a "Café" intended to promote social and informal participant interaction.	"hey you all ... I hope you are doing well ... it seems as though you have had a wonderful time, you have gotten to know each other better -- at least you have an idea of each other's faces ... but not mine (oh yeah, I have an "image" in cyberspace"... check me on my website ... Anyway, my name is Michal chilion ... I look forward to learning with you in this track of the journey. take care, Michal (oh, I forgot, I am the mother of two teenagers -- a challenge)" (Facilitator)

<i>reach openness</i>	Discussion board platform makes all postings "public."	"feel free to share thoughts and feelings openly" (Facilitator)
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Observation Two: The Greater the Cultural Gap Between Online Participants, the Greater the Possibility for Miscommunication

Understanding that there exists a real and enforced Internet culture, and that this culture embodies communicative values drawn from North American, English-speaking, and academic cultures, one might expect that participants from certain (formally educated, Western, English-speaking) cultures to have the least difficulty in communicating successfully in greatest affinity with the online course environment, whereas individuals from cultures with very different communicative values and strategies might be less successful communicators according to cyberculture standards. We find that this prediction is supported by our analysis of participation patterns. In our study group, non-aboriginal Canadians (individuals born and educated in Canada, within the predominantly English-speaking Euro-Canadian culture) posted a significantly higher number of messages than, for example, aboriginal Canadian participants (Table 1). It appears then, that one important cultural "gap," which may function as a predictor of online communicative success, is the gap between the communicative culture of an individual and the communication culture of the Internet itself.

Cultural gaps can also exist between individual communicators from different backgrounds, and we find evidence of these cultural gaps in the communications of our online course participants. For example, we observe in participants' "self-introduction" postings some large differences in their approaches to online self-revelation, and, indeed, in their notions of how identity is established.

One South Asian Canadian learner wrote,

This is Sara Nitzan from Montréal, Quebec. I have lived here since 1971, but was born and raised in Bombay, India. My family comes from the former Portuguese colony of Goa in India. I am married with 2 children who are now young adults.

Sara identified herself primarily by membership in a national/cultural group, and in relation to her family. In response to the same request for self-introduction, a non-aboriginal English-speaking Canadian-born Canadian contributed a more individual focused introduction:

My name is Batsheva Carmela My job is Program Coordinator of the International programs Office in the Faculty of commerce at [a Canadian University]. We run training programs for government officials, managers, administrative personnel, etc. from (mostly) China, take care of visiting scholars who come to study for shorter periods of time, help organize summer programs to other countries for undergraduate students On a personal side, I have a degree in History (Business minor) from ... University.

This learner identified herself primarily by her professional role and experience, and by her academic qualifications and achievements. We noted that such an option was available equally to Sara, who was also an experienced professional with significant educational attainment.²

Why might such divergent perceptions of personal culture, role, and identity contribute to communicative challenges in an online setting? We suggest that Gudykunst's Anxiety/Uncertainty Management Theory (1995) may be useful here. Gudykunst suggests that all communicators (including online communicators) encounter each other as strangers -- and the wider the cultural gap that exists between them, the greater the degree of uncertainty and anxiety. As anxiety increases, the potential for miscommunication increases. Anxiety must be "managed" in order for successful communication to take place.

Individuals from different cultural backgrounds will employ different anxiety management strategies, with varying degrees of success. For example, in the self-introduction exchanges above, individuals are

giving information about themselves in ways that reflect their experience, the influences of their educational and group cultural "programming." The likelihood is, however, that neither is providing the other with the kind of culturally-expected and familiar personal information that would serve to reduce anxiety and promote better communications. The door is opened to hasty assumptions on both sides about the others' cultures.

There is a second perspective that we found useful in accounting for the very different responses to the request to introduce themselves to the rest of the online group. Sara chose to outline her heritage in a traditional manner as member of national and family groups, while Batsheva delivers her professional resumé or CV, in what we would argue is an equally traditional manner of communicating. *Genre theory* (Gee, 1999; Halliday, 1994; Halliday & Martin, 1993) shows that cultures apprentice their members in preferred genres of realizing everyday communicative acts (introductions, apologies, jokes, and the like). The contrast between Sara's and Batsheva's chosen genres (genealogy and resumé, respectively) for introducing themselves may create anything from very minor irritation to outright misunderstandings amongst members of a group if they expect their own preferred genres to express important communicative acts. Equally unfortunate would be negative evaluations from instructors who, on the basis of their cultural expectations and professional training, might not be prepared to accept a job resumé or a traditional genealogy as an adequate approach to performing a personal introduction.

Genre seems to play a somewhat similar role in another instance of communicative shortfall we found in the online discourse. In this case, a participant is discussing some rather difficult experiences of human difference and personal acceptance, going quite a long way in revealing his/her individual beliefs:

It is not an easy thing to accept people and things that are different from us, and it is a day to day struggle to just relate in a personal, professional, and social level. It is human nature to question what you don't know or understand, but in questioning we might be able to learn and accept what we perceive as "not normal or right."

One course facilitator replies, rather oddly in our view, with an effort at a Shakespearean quotation:

"Aye and there's the rub" (some quote left over from my schoolhood days -- roughly [sic] translated - yes, that's it.) It is human nature to question what we don't know or understand. The biggest challenge in building respectful and productive relationships across cultures is recognizing when we think we know and we actually don't.

The communication gaps illustrated here can also be illuminated by studies of second language acquisition. Cummins (1984) found that the (heavily contextualized) speech genre Basic Interpersonal Communicative Skill (BICS) was acquired earlier, and more quickly by young immigrant learners than the less contextually-supported Cognitive Academic Language Performance (CALP) which took immigrant students up to a further 5 years to acquire to a native-like degree. It could well be that our data reveal something more than an ability gap: As noted earlier, all of our participants could have been expected by virtue of their professional and academic backgrounds to possess good levels of basic communication skills. Rather, these participants, regardless of their first or second-language learner status, may have experienced confusion or doubts as to whether basic interpersonal communication, academic language, or perhaps something in between was expected in the online situation. What are the rules of the game, from a genre standpoint, for effective online participation?

Finally, the linguistic distinction from literacy theory (Olson, 1994; Ong, 1982; Reeder, Shapiro, Watson, & Goelman, 1996; Scribner & Cole, 1981) between oral and literate uses of language could prove a rich source of understanding of online communication corpora such as the present material, and raises the fundamental question of whether online participation of the sort we have considered here is a variant of oral language, or of literate language, or a new hybrid of the two. This question has given rise to a spate of investigations and fruitful theoretical work. For instance, Dudfield (1999) agrees that students are

increasingly engaging in what she calls "hybrid forms of literate behaviour." Gibbs (2000) extends this to suggest that new forms of communication are actually constructing "new forms of thinking, perceiving and recording" (p. 25). Essays in Gibson & Oviedo's (2000) anthology offer a range of perspectives on the ways in which literacy is shifting in relation to new technologies. Thurstun (2000) examines "perceptual difficulties posed by the new technology" (p. 62) and, together with Harpold (2000) discusses challenges of reading electronic texts. Kramarae (1999) similarly discusses the new "visual literacy" required of Internet communicators, while Williams & Meredith (1996) attempt to track development of electronic literacy in new Internet users. Discourse studies of online communications such as Crystal (2001) lend weight to the conclusion that corpora such as ours represent some intermediate stage between oral and written discourse. We might speculate however that our corpus and others like it represent a new genre, neither spoken nor written, yet drawing upon conventions of both. In any case, distance educators need to be cognizant of the relative "fit" between their participants' origins in oral or literate cultures and the distinct genre requirements of online communication in e-learning.

Observation Three: Patterns of Online Participation Differ Amongst Groups

We observed differences amongst communication patterns of participants from the different groups described in this study -- evidence, we believe, of the different patterns of communicative exchanges which cultural groups may employ. These differences coalesced around two general questions:

- 1) Who posts contributions to the bulletin board?
- 2) Who responds to whom?

The evidence for variation in contribution as a function of cultural group is summarized in [Figure 1](#). These descriptive findings are worth validating with larger scale studies in order to determine whether our preliminary findings in one course could begin to be generalized to multicultural members of online adult education courses more broadly conceived.

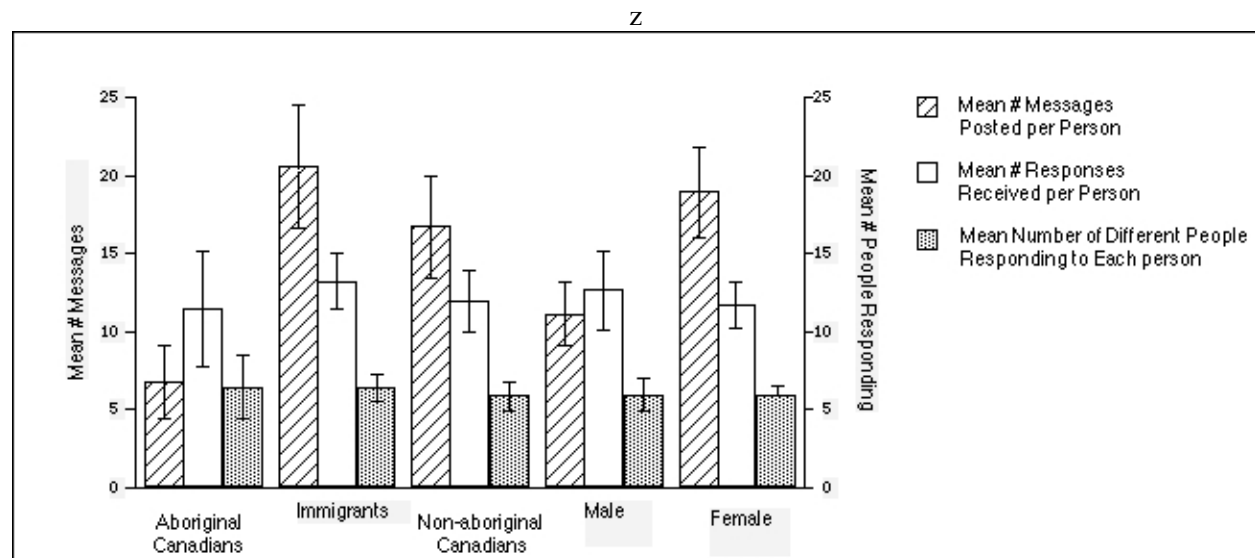


Figure 1. Online discussion participation rates, by citizenship and gender groups.

Who Posts? Most apparent is the finding that the average number of postings made by our sample of aboriginal Canadians was disproportionately lower than that of either the Canadian-born Canadian group, or the adult immigrants to Canada. On average, individuals received about the same number of responses from about the same number of people, when comparing these sub-groupings. What this does tell us is that in spite of receiving the same number of postings from a similar array of people, certain subgroups of

participants were more likely to interact (or re-post beyond the required minimum) than others. Put another way, we could argue that certain groups were more likely to continue an online conversation.

Another interesting contrast is between the proportion of responses in relation to the aboriginal Canadians' postings compared to proportions of responses to postings of all other groups in the sample. Only the aboriginal Canadian group got more responses on average than they produced postings. This difference should be interpreted with caution given the smaller number of postings (averages per participant as well as in absolute numbers) this group contributed to the course compared to those of the other two cultural groups.

Moreover, we observed that aboriginal learners never directly addressed facilitators (the "teachers"), while members of other groups did. We also noticed an apparent "drop-off" in participation by aboriginal learners over time, and aboriginal Canadians posted fewer long messages than members of other groups.

Male participants posted significantly fewer messages than female participants, consistent with findings of a larger study of gender-related patterns of online communication by Sussman & Tyson (2000), and contrary to their earlier prediction that as in spoken communications, male communicators would display "power behaviours" by posting more frequently. Further analysis will be necessary to determine whether or not, as in that study, our male participants offset this low frequency of posting by contributing longer or perhaps what Sussman & Tyson termed "more opinionated" messages than female participants.

The discovery of differential participation rates across cultural groups in this case study can be interpreted against the background of work in the ethnography of communication (e.g., Hymes, 1972). One dimension of the ethnography of speaking is quantity: How much talking is expected of members of a given cultural group? Such a predisposition could begin to explain why some groups, for example aboriginal Canadian and male groups in our study, were not as inclined to participate in extended and frequent postings to the same degree as the other groups, although we argue for a finer-grained analysis of our findings below. Further, length of turns might also be influenced by cultural predispositions, and an analysis of mean length of postings (using valid and probably multiple measures of this seemingly simple but actually complex construct) could determine whether such cultural factors are at work in that dimension of our corpus of online communications as well.

It was instructive for us to examine these participation findings in the light of detailed comparative studies of talk in discourse communities. Scollon & Wong-Scollon (1990) found contrasting communicative styles in two very distinct but neighboring cultures, North American speakers of English and North American speakers of the aboriginal language Athabaskan. Some of the things English speakers reported about their conversational experiences with Athabaskan speakers included,

- They do not speak.
- They avoid situations of talking.
- They only want to talk to close acquaintances.
- They deny planning.
- They avoid direct questions.
- They never start a conversation.
- They talk off the topic.
- They are slow to take a turn in talking.
- They ask questions in unusual places.
- They just leave without saying anything.

Conversely, Scollon & Wong-Scollon found that things Athabaskan speakers reported about English speakers included,

- They talk too much.
- They always talk first.

They talk to strangers or people they don't know.
 They always talk about what's going to happen later.
 They ask too many questions.
 They always interrupt.
 They only talk about what they are interested in.
 They don't give others a chance to talk.

Such comments might well express an aboriginal learner's views vis-à-vis their instructors or peers in e-learning contexts. Like many cultures, the Athabaskan communicative culture has been predominantly oral. E-learning and Internet communication by contrast are largely literate inventions. They are also largely realized by public spaces, whereas oral cultures tend to be structured by private communication (Roche, 2001). Therefore, publicity as it is often explicitly required or implicitly expected in e-learning (the "they avoid situation of talking" attitude) runs counter to students' cultural and educational expectations and traditions ("they talk to strangers"). And the same is probably true for Western values of efficiency and goal-orientedness of online education ("they deny planning/they are slow" vs. "they always talk about what's going to happen later"). Given that one of our course's aboriginal members dropped the course unannounced, the expression of bewilderment "they just leave without saying anything" may reflect our member's relatively low value placed on officially sanctioned credit or certificates compared to European heritage members of the course.

Who Responds to Whom? With respect to our second question about participation patterns, who responds to whom, similar between-group differences were evident in the descriptive analyses of our findings. We constructed an interaction matrix to help us detect patterns in postings of responses within the group, and to determine whether some participants were more likely than others to continue a communicative exchange (Figure 2). By reading down each column we can see how many participants *responded* to an individual, and who the responders were. By reading along each row, we can see how many different people an individual responded *to* (if any), and how often. In addition, by comparing the number of responses made by an individual to their total number of postings, conclusions can be drawn about the degree to which each individual simply posted messages and the degree to which they responded to others.

		MESSAGE POSTER																											
		FACILITATORS							LEARNERS																				
		AP	CP	KG	MC	NA	SB	SP	BC	CM	HN	EK	GB	GG	GH	IL	LT	MZ	NL	RD	RU	SN	SR	TY	VM				
RESPONDER	FACILITATORS	AP	15						•••		•••																		
	CP		37			•		•	•					••	••		•		•	••	••	•••							
	KG			34		•	•		•••			••								••	••	••	•••						
	MC				7											•••													
	NA	••	•			47		•	•••	••		•	•••		••	••	••	•	•••	•	•••		••	••					
	SB						23		•			•••			•			••				•					•••		
	SP							14	••	•		•						••											
	LEARNERS	BC	•••	••	•	•••		•••	38	••		•••				••	•	••										••	
	CM								••	14							••			••	••	•						••	
	DN										4																		
	EK								••				19			•													
	GB		•				•••							14		•		••		•	•	••		•			•		•
	GG														2														
	GH						••									24	•	•	••	•	••							•	
	IL				•		•				••		•				14	•						•			•		•
	LT										••			••		•		10	•	•		•			•				
	MZ			•		•	••	•••					•••			•			21		•								
	NL		•				••				•					•				12			•					••	
	RD									••	•		•								9								
	RU		•								•			•				••				9		•					
	SN		•••	•											•	•		•		•			15						
	SR				•••		•			•							•	•				••		16		•			
	TY					•																			6				
	VM							•••		•	••		•				•		•	•	•			•				19	

NOTE: Individuals are identified by initials; • represents a posted *response* message; numbers on the diagonal indicate total postings (initial messages + responses to others) made by each individual; "participation status" differentiates between course facilitators/moderators (FM) and learners.

Figure 2. Response and interaction patterns between learners and facilitators.

The frequency of interactions back and forward between two individuals can be assessed by comparing the mirror-image "poster" and "responder" scores. By sorting participants according to their course role --

learner or facilitator/moderator -- it is clear that by far the most frequent response postings were from course facilitators/moderators to learners (shaded in grey). We have previously (Chase et al., 2002) identified cultural differences in learner expectations of, and attitudes towards, facilitators (whom they may view as "teachers") as a key thematic area of miscommunication or "mismatch" in online learning environments. Our observation here that facilitators are the most frequent respondents, even within a course carefully designed and structured to *require* learners to initiate communications with peers and with facilitators highlights the possibility that culturally-shaped perceptions of teacher-learner power dynamics influence learner interactions online.

The next most frequent group of responses was from learners responding to facilitators/moderators. Least frequent were responses between learners. Two learners *never* responded to any of their peers, and several more responded fewer than five times to others throughout the 6-week period. At first glance, this finding may seem to run contrary to the "euphoric" (Kreijns, Kirschner, & Jochems, 2002) early responses by researchers and educators to the potential for computer-mediated learning environments to facilitate online student collaboration. Our data agree, however, with other studies that have highlighted low participation rates, and "varying degrees of disappointing collaboration" in online learning environments (Hallet & Cummings, 1997; Heath, 1998). Similarly, while Enstrom & Feddersen (1995) agree that asynchronous discussion forums can allow greater student *expression*, they, too, note that many contributions to online discussions are actually ignored, and they question the popular notion that cyberspace discussion is "truly dialogic." Simple volume of postings may not necessarily imply that effective learner-learner interaction is occurring. As Kreijns, Kirschner, & Jochems (2002) point out, in online learning environments, group interaction is often assumed, but not facilitated.

A communicative style account of such patterns of differential participation as these runs the risk of masking additional, potentially relevant cultural factors that bear upon our working question about who responds to whom. This has been shown in the work of the sociolinguist Susan Philips (1972) in her studies of what she termed "participant structures" or contexts for verbal participation, and participation of aboriginal students in classroom instruction in the western USA. Philips discovered that it was not a general lack of inclination to communicate that explained aboriginal students' sustained silences in classrooms. In fact, Philips discovered that there were several classroom arrangements in which aboriginal learners communicated more, and more efficiently, than European-American students. Aboriginal American students participated better than Euro-American students in small, student-led groups, and in private conferences with their teacher. They participated least when asked to speak in front of the whole class, for example, answering the teacher's questions.

It could well be the case that the lower overall rate of participation as a group by our study's three aboriginal Canadian participants is explained by the context or structure of the online communications that were set up by the course planners, essentially writing personal messages in front of an audience of 24 relative strangers. For them, it might have been more culturally appropriate to have been discussing their own culture and values, and their work, with a small group (a chat group?) or privately with an individual teacher (private mail?). However, our finding that no aboriginal participant ever addressed a facilitator online during the course cannot be explained merely by the public context of the online participant structure (they did, after all, post to their peers), or by a general ability or cultural preference account, because Philips (1972) demonstrated aboriginal Americans' ability and ample willingness to confer with teachers privately. Rather, we propose that the interaction of communicative style with status and power relations in our course resulted in our aboriginal participants' unwillingness to confer specifically with authorities online because of the discussion forums' public nature. Although the WebCT course in our particular case study did not use the private mail or defined chat rooms that are available in that particular course management system, the more private structure of those online options would be well worth studying comparatively in the light of our findings.

CONCLUSION

Some researchers in the field of distance learning have argued that the socially constructed issues underlying the findings that we have just described are not subject to empirical enquiry, and hence are not explainable (Bates, 2001). We disagree, and take the position here that the real challenge in the study of online intercultural communication resides not in empirical methodology as much as in the need for adequate theoretical frameworks.

At the outset, we indicated that our work tries to problematize the notion of culture in the context of computer-mediated communication (CMC) and claimed that a less essentialist and more dynamic, discourse-based understanding of culture was needed for the sorts of analyses we wished to conduct. Ess (1998) argues that the lack of an adequate theory of culture prevents the analysis of the complexities of virtual cultures and virtual communities. Ess (1998) recognizes that theories of culture elaborated by Hofstede, Hall, Geertz (1973; see especially, Abdelnour-Nocera, 1998, 2002), and Carey (1989) are used frequently by intercultural educators, but asks,

Do these various definitions, enumerations, and observations give us an understanding of culture which is adequate for examining, much less predicting ... the complex interactions between culture and technology? ... Can we have an adequate theory about "culture" and CMC without considering religiously-shaped components of culture and worldview? ... Do CMC technologies necessarily result in the importation of specific cultural values (the issue of technological determinism)? ... Does the meaning of "embodiment" ... need elaboration if our theories are to be more complete? ... Are postmodern frames of reference, informed by McLuhan, Ong, etc. in communication theory ... fully adequate for understanding the interplay between culture and CMC? (pp. 12-14.)

Based upon our descriptive observations in the present study, we propose that an adequate theoretical model of online intercultural communication must include at least the following elements. These are expressed in Figure 3 as preconditions to be satisfied in order for online communication to meet with success.

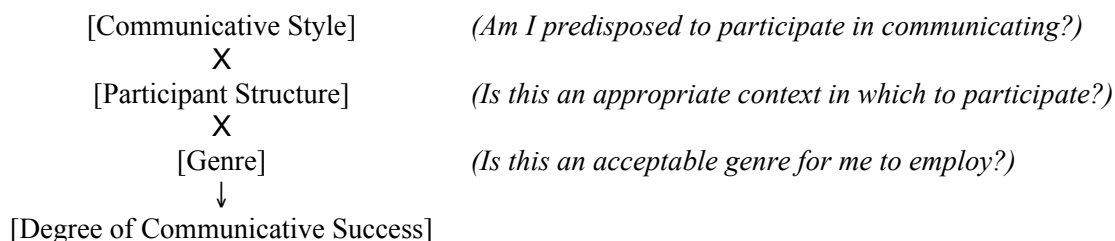


Figure 3. A model of components and relations contributing to the success of online communication

This would suggest that the kind of e-tools for communication and education such as bulletin boards, which cater to publicity, and learning platforms such as WebCT, which are based on the notion of Western-style efficiency, are not necessarily appropriate tools for international groups of learners, even though one of the main driving forces of Internet-based learning is internationalization of education.

In addition, some of our e-communication tools either miss crucial elements or fit poorly into traditional parameters of communication. Chat, for instance, carries the label and many features of a distinctly oral genre but it lacks important features of orality as well, and is largely founded in literacy. Missing elements in electronically mediated communication include: context perception, parallel visual channels, direct eye contact, gestural information, side talk, dynamic real-time repair mechanisms, avoidance mechanisms, and in general the flexibility we normally expect to obtain or emerge between conversational partners. It therefore remains to be shown whether and how the new media tools and genres are used by different groups of learners.

Even some of the most basic assumptions about electronically mediated communication and learning still have to be examined in the context of intercultural encounters. This, in turn, means that more consideration needs to be given to

- 1) micro-studies of intercultural communication features (including encounters of closely related communication cultures) (length of exchanges, depth, topics and taboo topics, initiation of talk and communicative roles, power distribution), as well as to
- 2) the problems of generic course designs.

With respect to the first concern, we intend to follow up the descriptive data we have developed in this phase of our study with microanalyses conducted with larger samples of participants from systematically varied cultural backgrounds. Parameters of interest in such microanalyses of online interactions would include interaction depth (as exemplified by depth of hierarchies in discussion threads), length as well as intercultural distribution of postings and exchanges, and textual coherence within exchanges. A fruitful proposal along somewhat similar lines is offered by Belz (2003) who outlines a Hallidayan approach to such microanalyses of online discourse, and argues that more detailed understanding of process rather than means is needed in the field of intercultural learning as it bears upon language learning.

Further, we are beginning a small set of case studies, not of individual participants in our sample, but of those participants in interaction with one another, employing as its unit of analysis what we term the "electronic exchange." An electronic exchange, like its counterpart in face to face discourse analysis (Sinclair & Coulthard, 1975) consists of a stretch of contiguous turns produced by a cluster of two or more members and bounded by a common topic of discussion, for instance "late assignments" or "balancing study with family responsibilities." A useful, early theoretical exploration of potential units of analysis for online communication research is found in December (1996), while a recent exemplar of the use of case study methods in the field of second language learning is found in Thorne (2003).

Our study has suggested that there are many more factors inherent in intercultural communication that can enhance or adversely affect the success of e-learning courses or programs. Those factors are not limited to inter-technical features such as different power supplies, varying keyboards or non-matching plugs. They touch on the very essence of the way we construct our worlds.

NOTES

1. Parts of this paper were presented at the Networked Learning Conference 2002, Berlin, 1-4 May (subsequently published as Chase, Macfadyen, Reeder, & Roche, 2002) and at the UNESCO Conference on International and Intercultural Education, Jyväskylä, Finland, June 2003 (subsequently published in that conference's *Proceedings* as Macfadyen, Chase, Reeder, & Roche, 2003).

2. At a later point in the course's corpus, Sara wrote, "I have a master's degree in Human Systems Intervention from [...] University in [...]. I am also a certified Family Life Educator. I work presently as Training Coordinator at the Black Community Resource Centre."

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