Motivating Dialogue with Web-based Instruction Tools

Felker, Greg B

sofelker@ust.hk
Division of Social Science,
Hong Kong University of Science and Technology

INTRODUCTION

A major complaint among university teachers in Hong Kong concerns the difficulty in eliciting student participation in the classroom. Many students seem highly averse to responding to lecturers' questions, raising their hands to ask for clarification, or volunteering ideas or opinions. The absence of dialogue in the classroom has several important drawbacks. Instructors find it difficult to assess students' learning on a continuous basis and to identify which parts of the course material are confusing or unclear. They may find lecturing more boring and draining, as they must inject energy into the lectures while the students remain silent and impassive. Both students and instructors may grow tired of hearing the same voice talking for the entire class period.

Students' "code of silence" reflects a deeper problem in Hong Kong's educational culture, namely the entrenched practice of unilateral instruction, as described in the recent consultative paper on education reform. This impoverished pedagogy has instructors dictating information to students who are merely passive recipients of "officially approved" knowledge items. Changing the pattern of unilateral instruction is difficult, however, because it asks students (and often instructors) to re-think their assumptions about teaching and learning, and to change their habituated roles within the educational experience. In the old model, students are expected to do little besides simple memorization and repetition / replication. In a more interactive pedagogy, students must take greater responsibility for formulating questions, suggesting answers, and solving problems. By engaging in dialogue, students develop and sharpen their reasoning skills. Yet, along with responsibility and reward comes risk— students must assume greater risk of making mistakes or losing face, and most are extremely reluctant to do so.

Several common techniques for dealing with this problem suffer from important drawbacks. For example, students often approach the instructor after the lecture, or during office hours, with basic queries that could have been raised when the instructor invited questions in class. These students may receive needed clarification, but their colleagues fail to benefit from the exchange between teacher and student, and the instructor must engage in individualized teaching to convey basic points that are appropriately discussed in the classroom. In another approach, instructors assign student presentations or other exercises that make class participation a mandatory grade component. While useful, these techniques typically lack spontaneity and, if

organized as group assignments, allow weaker students to avoid thinking for and expressing themselves. Moreover, they usually involve pre-set questions or problems, rather than requiring students to form their own questions and answers based on the course material.

Web-based instructional software offers one tool with potential utility for stimulating interactive teaching and learning. Web-based tools (WBTs) provide an alternative environment, extending within and beyond the classroom, in which dialogue may take place. Standard WBTs have several features that may be used to promote dialogue between instructor and students (both bilateral and multilateral) and between students themselves (peer-assisted education). As with all tools, WBTs have important limitations. Relying on the web may foreclose other opportunities for achieving core educational goals, such as promoting dialogue. Yet a careful weighing of benefits and drawbacks may still recommend WBTs as an important element of a dialogue-based teaching practice.

This paper presents a case study of the use of WebCT, a popular web-based course software package, in fostering dialogue in a large undergraduate class. It first outlines the teaching philosophy and goals that shaped my use of the Web, and then describes the features of WebCT employed in the course. The third section discusses the successes and drawbacks encountered in using the Web to stimulate dialogue-based teaching and learning. Some success factors are reiterated in the conclusion.

WEB TECHNOLOGY AND DIALOGUE-BASED TEACHING AND LEARNING

Most discussions of WBTs or the Internet in education begin with a statement affirming that such technologies are merely tools. Technology can *enhance* the educational experience, but they cannot *replace* instructors' creativity and personal interaction with students. This raises an important prior question: If WBTs are only an instrument, then what specific goals should they aim to serve? The advent of a new technology like WBTs must prompt us to re-think very basic issues in our teaching practice. Failure to do so means that we will fail to exploit the technology's full potential benefits, and we may even see unintended negative effects on our teaching and on students' learning. For example, the Web's obvious technical efficiency may cause us to relax or defer confronting difficult problems in the classroom. Access to course information on the web may lead some students to feel that they may more easily skip lectures and still pass the course.

In this context, it is important to distinguish the use of web technologies to enhance *existing* teaching goals and practices from *web-based education per se*, in which teaching practices and objectives are themselves formulated to suit web-based delivery. HKUST's Center for Enhanced Learning and Teaching (CELT) offers a four-level framework to categorize the use of WBTs in teaching. Model 1 involves using the Web simply for distributing information and administering a course. Model 2 uses online activities to complement in-class teaching and learning. In Model 3, most learning activities are conducted online, and face-to-face interaction is only used

to supplement or clarify online activities. In Model 4 all teaching and learning activities are conducted online. Underlying this continuum is a design question—to what extent are teaching and learning activities *designed* with the Web in mind? Or are WBTs used selectively in order to enhance existing teaching practices or address specific existing problems and goals?

My use of WBTs has mostly been limited to enhancing existing teaching practices, and corresponds to Model 2 in the framework mentioned above. In fact, my decision to adopt WebCT was primarily a response to my *failure* to achieve a key teaching goal. In several semesters of teaching at HKUST, I was unable to stimulate dialogue as a key element of my teaching and learning strategy. Previous efforts to create a lively interaction in class had met with unsatisfactory results. Providing students with study and discussion questions in advance did not result in any enhanced student participation, even when I posed the exact same questions again verbatim in class. Making student answers mandatory usually elicited scripted responses that often failed to reveal students' own thoughts or understanding. In exploring the use of WebCT to conduct dialogue, I have been conscious of the fact that I may be letting my students and myself "off the hook" for correcting the limited interaction in the classroom. I might thereby close the door on other solutions that would improve the classroom learning experience to an even greater degree. For example, while online dialogue is a definite improvement over the prior situation, it does little or nothing to develop students' public speaking and spontaneous reasoning skills. Yet, as the case will show, WBTs did facilitate an overall increase in the volume and quality of dialogue in my course. Thus, I offer my experience as at least a partial success.

WBTs offer various possible advantages for teaching. Above all, they provide *flexibility* in location, time, and content management. Teaching and learning activities may be carried out in a wider range of places, and at different times of the day and week. Instructors and students may approach the course material selectively, working with different elements in whatever order or combination is most helpful to them. This flexibility offers numerous well-known advantages. It is far easier, or more efficient, to disseminate information to a large number of students than with hard-copy text. Students access course material at their own convenience, and thereby become responsible for the quality of their own understanding. Since there is no fixed requirement for time spent online, by implication they must engage with the course material until they have mastered it, rather than simply enduring pre-set lecture times or scanning a fixed number of pages. An equally important benefit of self-access is that it makes the course design and structure more transparent to the students. With self-access, students are responsible for actively selecting which material they will study at any given time, rather than simply absorbing what is laid before them in each lecture.

As noted above, however, my core goal in adopting WebCT was to stimulate dialogue between my students and myself as well as among students at large. Dialogues can involve the exchange of information, but equally important is the exchange of *questions*. In pure Socratic teaching, of course, dialogue involves the teacher posing questions and students formulating answers. This approach is very difficult to

implement in Hong Kong, since many students seem habituated to multiple choice questions or other instructional formats in which the possible answers are pre-formulated, and their sole job is to select the correct answer. The opposite sequence, in which students ask questions and instructors answer, is equally valuable, since asking good questions is fundamental to critical thinking. Only by understanding the structure of a theory or argument can students identify an inconsistent pattern, non sequitur, or other gaps in the material or in their understanding. Forming and posing questions is a skill that is probably underdeveloped among Hong Kong students, who usually feel that the instructor is solely responsible for identifying what information is important to learn.

A final benefit of dialogue-based teaching and learning is *iteration*. Dialogue-based teaching demonstrates that learning is a *process* of pursuing the truth through successive insights, rather than a *state* of knowing / not knowing, or a one-off determination of correct / incorrect. Iterative (or cumulative) learning naturally develops critical thinking, since the student must identify what is wrong or lacking with the existing information, what might be a better answer, and how s/he would evaluate different possible answers to choose the better one.

Specifying clear educational goals is an essential first step in effective teaching, but the greater challenge lies in finding effective techniques to realize those goals. Dialogue-based educational practice confronts formidable obstacles. Students are deeply accustomed to the unilateral instructional model in which they play a passive role, and are confused or even actively resistant to a different approach.[1] Many students do not ask questions because they fear they will look stupid. They avoid responding to questions because they may appear foolish if they give the wrong answer. Or they may dislike public speaking, either because they are not confident in their English fluency or simply because of shyness. Lastly, spontaneous dialogue is difficult to achieve when students gear their efforts overly closely to the course assessment scheme. Course credit (marks) can indeed be allocated to encourage dialogue activities, but if students view participation only in formal, extrinsic terms (i.e., seeking only to do what is needed to win the marks), then their participation will lack spontaneity, and the intrinsic learning benefits of dialogue are greatly diluted. As described below, WBTs offer some advantages in overcoming these challenges, at least partly.

THE COURSE, WEBCT, AND DISCUSSION FORUMS

My course (SOSC125) is an introductory survey of International Relations, which is a sub-field of political science. I use a textbook in the course, which provides a

---

[1] I have had some students express frustration that I am "playing games" with them by not identifying which aspects of the material are most important to study (read "memorize"). In particular, my refusal to furnish my full lecture notes was considered by some students to be "unfair". Discussions with colleagues, however, indicate that many students view the memorization of lecture notes as a substitute for, and more important than, doing the assigned readings and attempting to develop their own understanding.

standardized format for much of the course material, but I also assign several current journal articles to introduce current issues and debates in the field. In addition to quizzes and examinations, the course also includes a simulation exercise in which teams of students represent specific countries. They assume the role of diplomats and, acting in character, negotiate solutions to fictional international crisis scenarios.

I first adopted WebCT when I offered SOSC125 as an intensive summer course in June and July, 2000, and used it once again in the Fall 2001 semester.[2] The course enrollment was large, with two hundred undergraduates taught in a large lecture theatre during the Summer 2000 course and 120 students in the Fall 2001 session. One of my motives for using WebCT was to ease the distribution of course information to such a large class. With the help of CELT, I adapted several course elements for distribution through the web site, including the course syllabus, lecture outlines, and other course information, such as that related to the simulation game. I also kept students updated on the course schedule through WebCT's calendar feature, as well as via a separate Latest Announcements icon. Students also accessed their marks and other records through the web site.

The feature of WebCT most relevant to promoting dialogue was the Discussion Forum. In technical terms, this feature is very simple. It operates like an ordinary electronic bulletin board. I used forums in three course aspects, hoping that this format would transform these course elements into dialogue-based learning activities. First, I set up two forums for ordinary question-and-answer (Q&A) discussion; one forum was devoted to questions about *course administration*, and the other was reserved for questions about the *course material*. The course administration forum served a straightforward purpose. Rather than answering student queries individually, I gave only one response to each type of question. I then referred students asking similar questions to my original answer on the bulletin board. The other Q&A forum was devoted to questions about the course material proper. Here, students were free to raise questions about the readings and lectures, as well as to offer positive comments or responses. Once again, I deflected any questions sent by private e-mail to this forum. When students approached me after lecture, I often suggested that they post their questions to the discussion board so that other students could benefit from the question and answer.

The second course element involved a group homework assignment. I used a discussion forum to accept and comment on students' answers to pre-designated questions. In previous courses, I always wrote comments in the margins of my students' short writing assignments. Yet I suspected that many students gave my comments at most only a cursory review after noting their grade. In any case, they would receive my comments only several days, at best, after they submitted their assignments. Lastly, they had no convenient opportunity to reply in turn. By using a web-based discussion forum, I could transform the homework assignment into a real-time conversation, in which students would receive rapid feedback and have a chance to ask further questions or add further comments to reflect what they had learned in carrying out the assignment.

---

[2] WebCT is one of two major web-based instructional software packages supported at HKUST.

Third, I set up a forum for student use in the simulation exercise. Students posting to this forum were required to write "in character" using the voice of the diplomatic personalities whose roles they had adopted. They could issue official communiqués, react to other countries' statements, and bargain in advance of the in-class negotiating session.

Overall evaluation of the usefulness of WebCT

The use of WebCT proved largely successful in achieving a greater level of instructor-student interaction. Data on the usefulness of WebCT in my course were derived from in-built measures in the software package, as well as a survey conducted by the Center for Enhanced Learning and Teaching (CELT) among the students following both courses.[3] For Summer 2000, the total hit count on the course web-site was 11,606 for the semester. For Fall 2001, the total hit count was 8,059. I monitored students' initial log in, and prompted those who had not yet logged in by the end of the first week.

Respondents to the 2000 survey spent an average of 2.4 hours per week logged on to the course web-site. They appreciated the ability to access course information on their own time, and 68% accessed the site from home. According to the survey results, students appreciated the various forms of online discussion. In Summer 2000, a total of 486 messages were posted to all the forums, including instructor postings (approximately 50%), whereas in Fall 2001, there were 336 postings. In the Summer 2000 course, a total of 54% of respondents posted messages on the forums asking for help, representing 15% of the total course enrollment. Significantly, 98% of respondents benefited from *reading* the discussion forums. In 2001, 45% of respondents "learnt a lot from participating (posting and responding to messages) in online discussion, and 69% learned from reading others' postings. These results underscore a key point: *the benefits of dialogue extend beyond those students who are directly engaged*. For every student who posted questions, it is likely that three or four others benefited from "listening in" to the questions, comments, and answers. While students were positive about the benefits of online learning activities, they suggested that face-to-face interactions and other traditional modes of learning were even more valuable. This finding may reflect my deliberate effort to ensure that the web-based activities would complement, but not replace, in-class teaching and learning.

Dialogue in the Forums - benefits and problems

Simulation Exercise forum

I anticipated that the simulation exercise forum would be the most eagerly used among the three types of online forum. In this case, there would be no right or wrong

---

[3] The 2000 survey asked a wide range of quantitative and qualitative questions relating to students' use and perceptions. It generated 54 responses out of 200 total enrolment or 28.5%. The 2001 class survey was less extensive, and was integrated into the normal student course evaluation procedure. 59 of 119 students responded, for a total response rate of 49.6%

answers, and students would merely conduct a dialogue based on their assigned acting roles. As diplomacy involves public and private statements of bargaining positions, the forum would lend itself easily to a back-and-forth dialogue that would allow the students to exercise their creativity and think critically about how to apply course concepts (such as national interest, bargaining strategy) to the simulation game. Moreover, the chance to post messages in character would, I hoped, simply be fun and entertaining.

In the event, there was only modest success in students using this forum to develop their roles in the game. There were four separate games in the Summer 2000 course and three in the Fall 2001 course, each game having ten groups of five students. In the Summer, the ten groups in one game generated thirty messages. In the other games, however, the frequency of use was limited. Moreover, only in the active game was there actual dialogue between student groups acting in character, i.e., responding to each others' messages and further developing the game through the Web forum. Use of this forum was even less in the Fall 2001 course. These limitations might be linked to students' uncertainty about the nature and purpose of the simulation game itself. When I encouraged postings to this forum, some groups made an initial, broad statement in character in order to fulfill this "requirement", but then did not follow up with further use. It might be possible to enhance the game further by making postings on the forum part of the evaluation for the overall exercise, although this would raise questions of assessment methodology. Another way of further stimulating the dialogue would be for me to inject new circumstances into the game's fictional scenario, i.e., in the form of "newsflashes" to which the various countries (represented by student teams) would be expected to react.

Q&A forums

My initial goal in setting up the course administration forum was simply to streamline communication with students on course administration. I had long been frustrated with having to answer many student questions individually by e-mail or after lecture. Often, many students would ask the same or similar questions, and often the questions pertained to information already supplied on the course syllabus, which students had failed to reference. In this case, I refused in most cases to answer course administration questions in any other setting, thus forcing the students to post the questions to the forum. This permitted me to answer each question once, or else refer the student to the syllabus.

Yet the use of a public dialogue forum for course administration questions proved to have importance far beyond simple communication efficiency. The forum gave me a very good platform from which to convey, in a very explicit way, my expectations and the different educational model (different from many students' prior experience) underlying them. Students' questions about course administration, or their complaints about the work load or assignments, gave me a valuable chance to offer advice on study techniques, describe the type of responsibilities I wished students to assume, and to underscore the purpose of various aspects of the course. In short, far from performing a simple administrative function, this dialogue served a meta-educational

purpose, in which I could communicate (and hopefully instill) the educational values that I wished to uphold in my teaching practice.

Once students discovered that their questions or complaints would be attended to promptly, participation in the forum became regular. The forum had a total of 84 posts (including my responses) by the end of the course in Summer 2000, and 100 posts in Fall 2001. Again, because the forum was public, a far greater number of students learned from this dialogue than the number of direct participants.

The course content forum was an even greater success in 2000, and modestly successful in 2001. I encouraged students to post any questions or requests for clarification about the course material (readings & lectures) there, and limited my after-class and office-hours interactions to more detailed or difficult issues. The majority of interactions were one-off, that is, they involved a single question and answer sequence. Yet, in several cases, my response to a question prompted a further question from the student, and an iterative dialogue was developed. Peer-assisted learning also was evident in a few cases. For the most part, this was evident when students referred to previous Q&A sequences in posing their own inquiries. In a few cases, students actually responded to other students' questions with their own suggestions and answers, representing the ideal-type case of peer-led instruction. Overall, the forum became an active setting for spontaneous communication about the course content. Most striking was the fact that no explicit credit was assigned to participation in the forum; all participation reflected students' motivation to develop a better understanding of the material. By the end of the Summer 2000 course, the forum had registered 112 postings (including my own), and 72 postings in Fall 2001. Again, many more students benefited from the dialogue than the number of active participants.

There were some evident drawbacks or dilemmas, however. First, the public nature of the forum, which was key to its wider benefit, meant that the issue of "shyness" or "face" was not completely overcome. Sometimes, students would e-mail me a question, and when I referred them to the forum, they would fail to post the question. Some students in the survey also responded that they failed to post to the discussion because of shyness. However, the extent of participation was far greater than in the face-to-face setting of the classroom, and thus the web-based environment seemed to go a long way towards overcoming this problem.[4] A second issue had to do with my concern that the forum should not become substitute for student effort in reading and attending lectures. I found myself often torn between wanting to encourage and reward students asking questions, and concern that they had not done the minimally expected work in reading and finding basic information for themselves. When a student would post a question that was very basic and easily answerable by reading or listening to lecture, I was reluctant to provide the answer straightaway, thus relieving the student of meeting the minimum expectations of understanding through traditional means. Often, I would affirm the value of the question, encourage the student to refer to the appropriate part of the text, make another posting of what s/he thought was the

---

[4] As noted above, this might be a mixed blessing, insofar as it fails to develop public speaking skills.

correct answer, and then promise to respond by confirming or correcting that understanding.

A third limitation was what I call the "shadow of the instructor". When the forum was launched, there were several instances of peer-led instruction, as a few students answered each other's questions online. Eventually, a student posted a more complex, detailed question, one that I could not reasonably expect other students to answer. I intervened to answer the question. Immediately thereafter, I noticed a marked decline in peer-led instruction. I realized that students were now waiting for me to provide the authoritative answers to all questions, rather than bothering or risking attempting their own answers. My efforts to re-start peer communication—by withholding or delaying my answers—were largely unsuccessful. One possible response in future would be to set up two separate course content forums, with one reserved purely for student communication. Yet, since students' chief motivation for posting questions is to receive greater clarification, I fear that a forum with the instructors' self-imposed absence would not be widely used.

The Homework Forum

Dialogue was most well developed in a mandatory course component that required student groups to provide short written answers to pre-designated questions. Each unit, several student groups (the same ones used to represent countries in the simulation game) were required to answer a "fact question" (concerning their assigned country) and an "opinion question", in which they could express their own reasoning and perspective. In part, the exercise was designed to encourage their research and writing skills. More importantly, it asked them to apply course concepts to specific real-world issues.

One important aspect of conducting the homework exercise online was that it allowed me to provide rapid feedback to students, independently of the marks assigned to each submission. Marks were posted on the students' records later, but the comments were clearly meant as substantive feedback for student consideration and counter-response. The public nature of the homework forum also influenced the work, since students knew that their peers would review their writings, as well as my responses. In fact, I occasionally projected the homework forum on a screen during class in order to highlight important ideas and involve other students in the discussion, thus extending the dialogue begun in the homework question and answer.

Initially, this format caused some confusion. Some students perceived that my comments in response to their homework indicated that they had answered "incorrectly". I had to reiterate, several times, that long comments were not necessarily positive or negative, but merely indicated that their answers had stimulated further thoughts on my part. This point seemed to eventually be appreciated, and students became less anxious about the fact that their homework effort was placed in the context of a to-and-fro discussion. Yet, this dialogue also manifested some weaknesses. In both semesters, the public nature of the forum led to escalation in the length of student submissions, as they feared they were in

competition with each other. A second major problem was plagiarism. I had warned the students against this, but found numerous instances early in the course. Rather than giving failing marks to those particular assignments (since they were not primarily compositional in nature), I used the forum to discuss the problem and to underscore the seriousness of the violation of academic integrity. In some cases, however, these reprimands, however much I tried to couch them in appropriately humorous or gentle language, upset some students precisely because this dialogue was public and therefore exposed them to shame or embarrassment.

This particular problem highlighted a larger issue in conducting online dialogue. Text-based communication, such as e-mail or electronic bulletin boards, has well-known dangers in terms of creating misunderstandings. As anyone who has inadvertently offended a co-worker with a joking e-mail knows, "text" lacks the "context" of non-verbal body language, connotations conveyed through tone of voice, and other important subtleties. Likewise, comments on students' work can easily be misunderstood as more critical or harsh than intended, even when explicit praise is also given. In one case, for example, one student construed my comments about his group's plagiarism as casting aspersions on the sophistication of Chinese language and Hong Kong students' intelligence! (The assignment was in English, and in response to a students' question as to how I had detected the plagiarism, I mentioned that the assignments' English usages were far too sophisticated even for most native speakers.) Thus, it is always crucial to bear in mind the need for careful review of the language used in web-based dialogue, even while ever effort is made to make the discussion lively and humorous.

Success factors in promoting online dialogue

The overall success of the online dialogue came as something of a surprise. Other colleagues have mentioned that they have set up similar forums, only to find that students have not used them very much at all. Thus, it is worthwhile to try to identify some general success factors in this case. It is my sense that no single factor is key to making online dialogue work, but rather a combination of factors. First, the nature of my course is probably particularly suited to online discussion. International Relations introduces many concepts and issues that students might need more "background" on, or else have some opinion or awareness. As compared to more technical courses, this subject lends itself to online discussion, rather than a need to demonstrate particular analytic techniques, which might require graphics, mathematical demonstrations, etc.[5] In broader terms, instructors must think about which aspects of their course lend themselves to dialogue (whether online or not), and which necessarily require a more traditional "transmission model" of instruction.

Second, in order to succeed, the Web forum must become *the* authoritative, sole source of information about the course for the students. I often refuse to answer questions from students, e.g., when they approach me after class, and ask them to post the question on the forum. I do likewise with questions about exam format, grading

---

[5] On the other hand, it is possible to place such demonstrations online, as well. See CELT's IDEAS portal.

scheme, etc. In this way, even students who are only concerned about the administrative aspects of the course will be forced to refer to the forum, and at least will be exposed to the substantive questions and answers posted by other students. Of course, exceptions must be made for wholly personal or individualized questions, which I do take by private e-mail.[6]

Third, course assignments may be deliberately formatted in order to transform them into online dialogue-based activities. For example, the instructor would require some assignments to be posted online (i.e., with no option of submitting them in a different format). Instructor feedback can then also be posted online. Feedback must be posted rapidly, as close to 'real time' as possible, in order to have a maximum impact. This comment highlights a fourth success factor, namely that it is necessary for the instructor to be online frequently, and respond to all student postings quickly. The "online culture" involves real-time, or very swift, responses. It is imperative for the instructor to allocate specific, regular time slots on a daily basis to answering student communications. Instructors' time is limited, of course, yet regular daily communication, even if briefer, is preferable to a long block of time spent writing to students on a weekly basis. Without rapid response, web-based dialogue will lose considerable value to the students, and participation will likely drop off.

A final factor, also related to "online culture", is more speculative. Online communication typically involves informal language, especially as compared to other written or face-to-face communication, since the status differences between dialogue partners (here, between student and teacher) are not visible in the "anonymous" setting of the Internet. I have sought to emphasize this casual feeling by deliberately adopting a more informal and spontaneous tone in my online postings and responses. The purpose is to distinguish the communication from a situation where I am lecturing or "correcting" student questions or responses. If students know their language is being critiqued for marks, they will view the online forum as a "dangerous" place, rather than a place for spontaneous communication.

At the same time, however, there are limits to the informality since, after all, the roles are still those of instructor and pupils. Some times, for example, it is necessary to correct wrong information, or else point to weaknesses in student understanding. In a public forum, this can lead to embarrassment. For that reason, the instructor should make a careful calibration of the "tone" of his / her postings at the beginning, and stick to that consistently during the semester. While lively discussion and humor are helpful to encouraging participation in dialogue, instructors must also exercise caution so as to ensure their feedback does not alienate or shame students. Frequent affirmations of the value of student questions or ideas are essential.

---

[6] The WebCT program does have a private e-mail feature, also, for any communication that would not be appropriately made public.

CONCLUSIONS

In conclusion, this case indicates that web-based tools can be used to stimulate greater dialogue as a core element of teaching strategy. Hong Kong students seem well attuned to the use of WBTs and more willing to engage in dialogue, or at least observe and learn from dialogues, in a virtual environment than in a face-to-face classroom setting. Exploiting this potential requires bearing in mind the combination of success factors mentioned above, as well as some wider considerations. First, it seems useful to include a mix of mandatory course components (those resulting in assessment or grade components) and voluntary activities (e.g., Q&A) in web-based dialogues. Second, it seems important not to neglect traditional modes of learning, or to allow web-based dialogues to substitute for traditional modes of learning, such as reading the assigned texts and attending lecture. The very same convenience that makes the web an ideal medium for conducting dialogue may lead some students to seek to have very basic questions answered there, so as to minimize their investment in reading carefully and listening attentively in lectures. Moreover, students still tend to find face-to-face modes of learning equally, or even more, valuable than online communications.

Lastly, achieving peer-assisted or peer-led learning appears to be far more difficult than enhancing dialogue between the instructor and the students. The "shadow of the instructor" looms large in the virtual environment of a web-based dialogue, making students reluctant to communicate with each other in the presence of the authoritative voice of the instructor. A lively discussion among students would benefit all concerned, yet perhaps the dearth of explicit peer-to-peer dialogue does not signal that students are not learning from each other. As this case illustrates, the greatest benefit of web-based dialogues lies in their public nature, which allows more reticent students to learn from their peers' questions and comments even while they themselves remain silent. It is in this respect, above all others, that web-based dialogues replicate the benefits of in-class discussion that are so often missing in our classrooms.

No. hours per week on WebCT
(Summer 2000)

Less than 1 hour	5.3%
1-2 hours	19.3%
2-3 hours	42.1%
3-4 hours	12.3%
4-5 hours	5.3%
5 hours or more	14.0%
Mean	*2.42 hrs*

Source: HKUST Center for Enhanced Learning and Teaching (CELT) surveys.
Note: 2000 respondents (n= 57); total enrolment = 200; response rate = 28.5%
2001 respondents (n=59); total enrolment = 119; response rate = 49.6%

	The materials in WebCT help me to learn better in this course (Fall 2001)			
		Weight	Count	Percentage
A	Strongly agree	100	11	18%
B	Agree	75	29	49%
C	Neutral	50	17	28%
D	Disagree	25	2	3%
E	Strongly disagree	0	0	0%
NA	Not applicable	0	0	0%
	Total		59	100%

Frequency of Asking Help on Bulletin Board
(Summer 2000)

Yes, I frequently did.	10.5%
Yes, I sometimes did.	43.9%
I rarely did.	33.3%
No, I never did.	12.3%

If I need to ask the instructor a question in this course, I prefer

		Count	Percentage
A	ask the instructor in a face-to-face meeting.	17	28%
B	send a private email to the instructor	13	22%
C	post the question in the online forum (discussion).	29	49%
	Total	59	100%

Learning from participating in online discussion (2000)

Yes, I learnt a lot from discussing with others online.	36.8%
Yes, I learnt something from discussing with others online.	52.6%
No, I don't think I have learnt anything through online discussion.	5.3%
I don't know because I have rarely or never participated in online discussion.	5.3%

I learnt a lot from participating (i.e. posting and reponding to messages) in online discussion				
	Fall 2001	Weight	Count	Percentage
A	Strongly agree	100	11	18%
B	Agree	75	16	27%
C	Neutral	50	26	44%
D	Disagree	25	2	3%
E	Strongly disagree	0	0	0%
NA	Not applicable	0	4	6%
	Total		59	100%

Learning from reading others' messages (2000)

Yes, I learnt a lot.	26.8%
Yes, I learnt something.	71.4%
No, I don't think so.	1.8%
I don't know because I have rarely or never read those messages.	0%

I learnt something from reading others' messages in the online forum				
	Fall 2001	Weight	Count	Percentage
A	Strongly agree	100	9	15%
B	Agree	75	32	54%
C	Neutral	50	14	23%
D	Disagree	25	2	3%
E	Strongly disagree	0	0	0%
NA	Not applicable	0	2	3%
	Total		59	100%

Reasons rarely or never asked for help on bulletin board (Summer 2000)

Easier for me to ask one of my friends directly for help.	38.5%
Easier for me to ask the instructor or the TA directly for help.	34.6%
Difficult for me to explain my questions to others in writing.	23.1%
It will take a long time for me to get an answer.	23.1%
Too shy to post messages in a bulletin board.	19.2%
Posting my question on the bulletin takes too much of my time.	7.7%
I don't think I will get an answer.	3.9%
I am lazy	3.9%
I can get answer from book	38.5%

	If I need to ask the instrucor a question in this course, I prefer			
	Fall 2001	Weight	Count	Percentage
A	ask the instructor in a face-to-face meeting.	0	17	28%
B	send a private email to the instructor	0	13	22%
C	post the question in the online forum	0	29	49%
	Total		59	100%

Perceived usefulness of different learning methods
(Summer 2000)

	Useful	Neutral	Not	**Mean**
Face-to-face lectures	75.4%	15.8%	7.1%	**3.98**
Studying the textbook	66.7%	24.6%	7.0%	**3.89**
Studying the course notes	63.2%	28.1%	7.0%	**3.86**
Discussion with the instructor or the TA face-to-face	70.2%	19.3%	8.8%	**3.79**
The simulation exercises	45.6%	42.1%	10.5%	**3.55**
Discussion with other students face-to-face	56.2%	28.1%	14.0%	**3.52**
Discussion with the instructor or TA online	49.1%	31.6%	17.5%	**3.45**
The homework (an on-line component)	35.1%	50.9%	12.3%	**3.32**
Discussion with other students online	42.1%	33.3%	21.0%	**3.16**