

## Online tutorial support in open and distance learning: students' perceptions

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### **Abstract**

The Open University of Hong Kong (OUHK) offers 199 courses with online features to enhance the distance learning environment. The university has arranged these courses to provide students with greater flexibility in interacting with tutors, classmates, and the content itself. Integral to learner flexibility online is access, valuing computers and online learning, endorsement, and language proficiency. The current investigation attempts to explore these issues by examining the perceptions of OUHK students enrolled in courses with online tutorial supports. The methods of questionnaire survey and semi-structured interview were employed. Surveyed using multistage stratified sampling technique were 449 OUHK students enrolled in 18 upper level courses (9 English, 9 Chinese) at the OUHK. Forty-two students were randomly selected for a follow-up interview. Five major topics were explored including: (1) accessing the Internet; (2) perceptions of technology; (3) rationale for using the Internet in course work; (4) learning strategies used by the tutor online; and (5) perceptions of the online tutorial support.

### **Introduction**

With the exponential growth in information and communication technology, online tutorial support has become an increasingly popular method for student learning in open and distance education. This presents numerous opportunities for the continued growth of distance education by providing current and prospective students with greater flexibility and opportunity for receiving quality tertiary education. The integration of Internet technologies will potentially enhance student connectivity in distance education and strengthen the learning environment.

The literature has explored the benefits of online learning in depth and is suggestive of how Internet technologies integrate well with open and distance education. Most

reporting has been on the way in which email, newsgroups, bulletin boards, and listservs may be used (Boehmer & Waugh, 1996; Burke, 1996; Duin & Archee, 1996; Laaser, 1998; Meyen & Lian, 1997). They address issues such as involving all students in discussions (Meyen & Lian, 1997) and using hypermedia and the Internet to move from “delivery” to “interactivity” (Brown & Duguid, 1996). There has also been a considerable amount of literature describing the advantages of online tutorials. One of these is the opportunity they create for students, particularly those who are working in isolation, to promote more active learning (Idris, 1993). Learner isolation has been revealed as a common problem in distance education and is often perceived as a contributing factor in student attrition (Woodely, de Lange & Tanewski, 2001). Other scholars report that online tutorials promote an environment where individuals readily learn from each other, discover that others share common problems, and discuss topical issues in depth (Brown & Duguid, 1996). Another advantage is the flexibility arising by minimising time constraints and the opportunity to get assistance without having to wait for set class times or office hours (Burke, 1996, Laaser, 1998). Burke has also suggested that the use of electronic tutorials may be advantageous for students who are uncomfortable to speak up in class, whereas Laaser (1998) has reported that online tutorials have enhanced communication between students in a situation where attendance at tutorials was low.

The Open University of Hong Kong (OUHK) plays a leading role in the region for designing and offering online courses. In 1997, the university commenced its first online initiatives with several courses. Since then, 199 courses, which account for the majority of all courses offered, have been converted into completely or partially integrated online courses. With the increasing investment in online teaching and learning, it is imperative to identify appropriate ways of providing tutorial support to deliver flexible and autonomous learning and ultimately, successful student outcomes.

To date, little research has been done on how online tutorial support *does* support a flexible and rich learning environment to deliver high quality and cost-effective distance education in the context of Hong Kong. Furthermore, there is minimal reporting on how to establish or refine tutorial support using online technologies. The purpose of this investigation is to explore how educators can implement or improve online tutorial support to deliver meaningful distance education in the tertiary setting by way of examining the perceptions of OUHK students enrolled in courses with various tutorial supports with an emphasis on online support. The following questions will be addressed: What are students’ perceptions of using the Internet for distance learning in the Hong Kong context? How does this compare to students’ perceptions of more conventional methods of student support? How comfortable are students using technology for course purposes? What differences exist between students enrolled in English or Chinese online courses? It is expected that the findings of this investigation will be useful to all institutions planning or currently engaged in providing online learning support and also to those institutions that use English as a teaching medium in non-native English-speaking settings.

**Methodology**

The methods of questionnaire survey (first stage) and semi-structured interview (second stage) were employed in this investigation.

*Sample*

Using a multistaged stratified sampling technique, students enrolled in courses from the four schools [Arts & Social Science (A&SS), Business & Administration (B&A), Education & Languages (E&L), and Science & Technology (S&T)] and the institute for continuing education (LiPACE) at the OUHK were selected to participate in this investigation.

The selection of courses was based on course level and use of online tools in the course curriculum. Students in foundation level (LiPACE) and middle to upper level undergraduate and graduate courses were sought, based on the rationale that they would likely have had previous exposure to online learning at the OUHK and thus provide informed data on its efficacy in their learning (students are offered a nonmandatory orientation workshop on how to use online learning platforms prior to commencing studies at the OUHK. Tutors receive mandatory training.). Each course used the online learning environment (OLE) or the Chinese online learning environment (COLE) as the web-based platform. These tools were designed using WebCT (OLE) and Lotus Notes (COLE) and supported such functions as email, discussion boards and news, and course materials.

The investigation required the approval of participation by course coordinators and suitable tutorial times to fill out the questionnaire for this first stage. In total, 18 courses representing the spectrum of those on offer at the OUHK were selected (Table 1). Of these 18 courses, 9 were English and 9 were Chinese.

In the second stage a stratified sampling technique was employed. A cohort of 42 students was selected for the follow-up interview (9.4% of returned questionnaires). Of this sample, 26 students were enrolled in English courses and 16 students were enrolled in Chinese courses.

Table 1: Distribution of courses

|         | English courses              |          |                            | Chinese courses              |          |                            | Total |
|---------|------------------------------|----------|----------------------------|------------------------------|----------|----------------------------|-------|
|         | Undergraduate/<br>Foundation | Graduate | Returned<br>questionnaires | Undergraduate/<br>Foundation | Graduate | Returned<br>questionnaires |       |
| A&SS    | 2                            | —        | 71                         | 4                            | —        | 105                        | 176   |
| B&A     | 1                            | 1        | 78                         | —                            | 2        | 78                         | 156   |
| E&L     | 1                            | 1        | 12                         | —                            | 1        | 12                         | 24    |
| S&T     | —                            | 1        | 48                         | —                            | —        | —                          | 48    |
| LiPACE  | 2                            | —        | 22                         | 2                            | —        | 23                         | 45    |
| Totals: | 6                            | 3        | 231                        | 6                            | 3        | 218                        | 449   |

### *Instruments*

The instrument used in the first stage was a questionnaire designed by project team members. In total, 118 items were constructed and were measured on a 5-point Likert scale. A score of 5 indicated that a participant *strongly agreed* with a particular item, whereas a score of 1 indicated that a participant *strongly disagreed* with a particular item. Major topics included: access to the Internet, perceptions of using computers and the Internet; rationale for using the Internet and email in course work; learning strategies used by the tutor online and students' perceptions of the online tutorial support. Both English and Chinese versions of the questionnaire were prepared and administered to courses based on language of instruction.

Team members also designed the interview guide for the second stage of the investigation. This comprised of four main areas including: using tutorial supports, using online technologies for tutorial support, learning strategies, and learning preferences. The intent of this second stage was to delve deeper into students' perceptions of using tutorial supports in their courses.

### *Procedures*

The investigation commenced in September 2001 and concluded in February 2003.

Once drafted, the questionnaire instrument underwent a stringent validation process by two local and three international experts in the field of online learning. Thereafter, a pilot study was conducted to test the suitability of the questionnaire items for the English and Chinese versions. The sample included 90 students. In total, 20 students returned a completed and valid questionnaire (14 Chinese, 6 English—22% return rate). Based on these results, subsequent refinements were made.

For the main study in the first stage, questionnaires were mailed to the students' home addresses and also distributed during tutorials to maximise questionnaire return. Following this procedure, telephone reminders and a second round of mailings were carried out two weeks and six weeks, respectively, after the first mailings. In total, 1135 students were surveyed. The number of returned valid questionnaires was 449 (39.6%). Of this population, 50.6% were female and 49.4% were male.

Statistical analysis using SPSS version 11, was carried out on the returned data. Based on these results, the interview guide was drafted for the second stage. Students were interviewed over the telephone and the recorded data was transcribed and then analysed using QSR NUD\*IST version 6.

### **Results**

The OUHK has introduced educational Internet tools called the online learning environment (OLE) and Chinese online learning environment (COLE), and other networked technologies, as adjuncts to conventional student support. The purpose of integrating Internet technologies in courses is to impart students and tutors with an enhanced communicative medium to collaborate with one another, submit tutor-marked assign-

ments (TMAs), and provide alternative avenues and resources to seek course related information.

The results from the questionnaire data examine how students used this medium for such purposes and later in this section, provide comparisons between students enrolled in English- and Chinese-medium courses. As referred to in the Methodology section, questionnaire items were scored on a 5-point Likert scale. For analytical purposes, the data below is presented in percentages and a mean score. Percentages are collapsed into three columns and listed under the following headings: *Agree* (combined *Strongly agree* and *Agree*), *Neutral* and *Disagree* (combined *Disagree* and *Strongly disagree*).

Throughout this section, analyses are also made from interview data to provide deeper insight into the questionnaire data and raise other issues regarding the tutor–student relationship and students' perceptions of communicating in a communal online workspace (eg, discussion board).

#### *Students' access to the Internet*

Provided first is a summary of where students access the Internet for course purposes. Thereafter, the analysis combines the quantitative and qualitative data to furnish the reader with an in-depth perspective of the opinions and experiences of the online distance learner at the OUHK.

Table 2 indicates that students access the Internet most often from home (82%), followed by their workplace (62%). To a lesser extent, students access the Internet at the OUHK (32%), and public library (11%).

Of the student population that returned questionnaires ( $n = 449$ ), only 20% chose not to access the Internet for course purposes (Item 6), or alternatively, 80% likely did

Table 2: *Students' access to the Internet*

|  | <i>Agree (%)</i> | <i>Neutral (%)</i> | <i>Disagree (%)</i> | <i>Mean<sup>a</sup></i> | <i>SD<sup>b</sup></i> |
|--|------------------|--------------------|---------------------|-------------------------|-----------------------|
| 1. I access the Internet from home.                  | 82.0             | 9.6                | 8.4                 | 4.16                    | 1.02                  |
| 2. I access the Internet from work.                  | 61.8             | 18.5               | 19.7                | 3.60                    | 1.29                  |
| 3. Not having Internet access is a problem for me.   | 53.4             | 18.4               | 28.2                | 3.32                    | 1.44                  |
| 4. I access the Internet from OUHK (eg, PC lab).     | 32.0             | 24.5               | 43.6                | 2.72                    | 1.36                  |
| 5. I access the Internet from a public library.      | 11.4             | 31.4               | 57.2                | 2.21                    | 1.10                  |
| 6. I do not access the Internet for course purposes. | 19.4             | 17.3               | 63.3                | 2.19                    | 1.26                  |

<sup>a</sup> Mean is based on a 5-point Likert scale: 5 = *Strongly agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, 1 = *Strongly disagree*

<sup>b</sup> SD = Standard deviation

choose to access the Internet for course purposes. Although not cited in this table, only 21% of the students surveyed were in courses where Internet access was compulsory. Assuming that those students complied with the Internet requirements in their course, this implies that approximately 60% of the student sample population had an intrinsic interest to use the Internet for course purposes, as use of this medium was noncompulsory in their courses. Knowing this, it is worthy to explore students' perceptions of computers and factors that may influence this interest in their course work. This is the focus of Table 3 below.

*Students' perceptions of using computers and the Internet*

Arguably, some of the main factors in why students use computers are their comfort level with the technology and the intended purpose of using the technology. Table 3 lists students' perceived comfort levels for using computers for various purposes.

It can be seen from Table 3 that nearly 80% of students agreed to be comfortable using computers independently to complete course work (Item 1), but their comfort level decreased when they used email (72%), followed by discussion boards (50%), and chat rooms (32%). While email is usually a one-to-one exchange, discussion boards and chat rooms are open forums where one's ideas and identity may be fully disclosed, thus a likely cause for lower comfort levels. For example, one interviewed student noted,

I rather like asking questions to the course co-ordinator [on email] instead of asking [questions] in the discussion boards... we have to give out our personal information such as name, etc. to participate... in that case I have to prepare beforehand in order to comment... I don't want to ask silly questions... furthermore [my contributions] are kept in there for a while... it is different from asking a tutor or course co-ordinator [on email].

This quote is exemplary of concerns brought up by other students. Educators should be explicit in telling students that their ideas carry much weight. Furthermore, students

*Table 3: Students' perceptions of using computers and the Internet*

|   | <i>Agree (%)</i> | <i>Neutral (%)</i> | <i>Disagree (%)</i> | <i>Mean<sup>a</sup></i> | <i>SD<sup>b</sup></i> |
|---|------------------|--------------------|---------------------|-------------------------|-----------------------|
| 1. I am comfortable using computers to complete course assignments. | 78.6             | 12.6               | 8.8                 | 4.10                    | 1.01                  |
| 2. I am comfortable communicating via email.                        | 72.0             | 18.9               | 9.1                 | 3.95                    | 1.06                  |
| 3. I am comfortable communicating via discussion boards.            | 50.1             | 33.5               | 16.3                | 3.49                    | 1.10                  |
| 4. I am comfortable communicating via chat rooms.                   | 31.5             | 39.5               | 29.1                | 3.03                    | 1.17                  |
| 5. I have difficulty typing in the language of instruction.         | 17.5             | 26.4               | 56.2                | 2.37                    | 1.13                  |

<sup>a</sup> Mean is based on a 5-point Likert scale: 5 = *Strongly agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, 1 = *Strongly disagree*

<sup>b</sup> SD = Standard deviation

must realise that others value their contributions and that it ignites a spark for others to contribute as well.

The indifference towards chat rooms may be attributed to the nature of the medium as the flow of text can be disjointed with several topics being discussed simultaneously and often dominated by the *fastest typist*. The consensus amongst those interviewed was simply, "I did not use [chatrooms]." As noted in the preceding paragraph, students may have concerns about collaborating in an open forum. Furthermore, the nature of chatrooms is that they are synchronous mediums where there is limited time for reflection and articulation.

Item 5 points to the issue of typing in the particular language of instruction. Although the mean score was relatively low (mean = 2.37), this translates into approximately 18% of the student population that returned questionnaires. Thus nearly 1 in 5 students may face a considerable obstacle when attempting, if at all, to communicate online. This is examined more closely in Table 7.

#### *Purpose of the Internet in distance education*

The following table shows results on students' rationale for using the Internet in general, for course work. Specifically, the items focus on interaction and efficiency.

In Table 4, students' rationale for using the Internet in course work decreased when interactivity included collaborating with others. The data points to students' perceived usefulness of the Internet for independent purposes, as evidenced by a high percentage of students (73%) who agreed with the ease of finding information on the Internet in comparison to Item 2, where students' preference dropped to 65% for the ease by which to contact the tutor or Item 3, which was approximately 64% for the ease to contact students. Although students had relatively high scores in their rationale for using the

Table 4: Students' rationale for using the Internet in course work

|   | Agree (%) | Neutral (%) | Disagree (%) | Mean <sup>a</sup> | SD <sup>b</sup> |
|---|-----------|-------------|--------------|-------------------|-----------------|
| 1. The Internet makes it easy to find course-related information. | 72.8      | 19.6        | 7.6          | 3.96              | 0.96            |
| 2. The Internet makes it easy to communicate with the tutor.      | 65.2      | 22.2        | 12.6         | 3.76              | 1.05            |
| 3. The Internet makes it easy to communicate with other students. | 63.5      | 26.8        | 9.6          | 3.76              | 0.99            |
| 4. The Internet is accessible and reflective.                     | 59.2      | 24.7        | 16.1         | 3.61              | 1.08            |
| 5. I am efficient in using the Internet.                          | 61.2      | 24.5        | 14.3         | 3.67              | 1.09            |
| 6. I enjoy working online.  | 59.2      | 27.6        | 13.2         | 3.63              | 1.08            |

<sup>a</sup> Mean is based on a 5-point Likert scale: 5 = *Strongly agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, 1 = *Strongly disagree*

<sup>b</sup> SD = Standard deviation

Table 5: Learning strategies used by the tutor online

|  | Agree (%) | Neutral (%) | Disagree (%) | Mean <sup>a</sup> | SD <sup>b</sup> |
|--|-----------|-------------|--------------|-------------------|-----------------|
| Email  |           |             |              |                   |                 |
| 1. The tutor answers questions in email.   | 55.2      | 30.1        | 14.7         | 3.48              | 1.03            |
| 2. The tutor guides my learning in email.  | 41.1      | 38.7        | 20.2         | 3.20              | 0.99            |
| 3. I am satisfied with the learning strategies used by the tutor in email.             | 43.2      | 41.8        | 15.1         | 3.31              | 0.96            |
| Discussion board   |           |             |              |                   |                 |
| 4. The tutor answers questions in discussion boards.                                   | 52.8      | 36.9        | 10.3         | 3.54              | 0.91            |
| 5. The tutor leads discussions in discussion boards.                                   | 42.6      | 39.2        | 18.2         | 3.27              | 0.98            |
| 6. The tutor is facilitative (oversees conversation, group work) in discussion boards. | 35.2      | 49.7        | 15.2         | 3.22              | 0.94            |
| 7. The tutor uses group work in discussion boards.                                     | 26.5      | 50.2        | 23.3         | 2.99              | 0.93            |
| 8. I am satisfied with the learning strategies used by the tutor in discussion boards. | 40.7      | 46.2        | 13.1         | 3.29              | 0.93            |

<sup>a</sup> Mean is based on a 5-point Likert scale: 5 = *Strongly agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, 1 = *Strongly disagree*

<sup>b</sup> SD = Standard deviation

Internet in general (all mean averages were above 3.5), and for information gathering in particular, Item 5 indicates that students' efficiency at such tasks was not as equal (61% *Agree*). In addition, in Item 6 students reported a lower level of agreement for working online (59%). Thus, students prioritise their Internet use primarily for information gathering and secondarily for interaction with others, but find that their efficiency in and enjoyment of these activities are not as high, suggesting that further training and/or exposure with Internet functions and uses are needed.

#### *Students' methods of learning and interaction online*

The following analyses explore the relationship between tutors and students online (Table 5) and students' specific perceptions of using the OLE & COLE for learning (Table 6).

When using email, students had an average level of satisfaction with the learning strategies used by the tutor, although 15% claimed they were not satisfied. Answering questions was quite common, as 55% of students agreed, although the student response was lower when asked if the tutor guided their learning in email (41%). To elaborate, this may suggest that tutors do not sufficiently challenge students online or in turn, ask questions of them to test their knowledge or understanding. Interviewed students often

Table 6: Students' perceptions of the online tutorial support

|  | Agree (%) | Neutral (%) | Disagree (%) | Mean <sup>a</sup> | SD <sup>b</sup> |
|--|-----------|-------------|--------------|-------------------|-----------------|
| 1. The online tutorial support is well structured and organized.               | 46.8      | 41.6        | 11.6         | 3.41              | 0.88            |
| 2. The tutor employs strategies to encourage dialogue amongst students online. | 35.0      | 46.9        | 18.1         | 3.17              | 0.88            |
| 3. The tutor is prompt in responding to my questions or insights.              | 45.5      | 43.0        | 11.5         | 3.39              | 0.88            |
| 4. I expect a response online within one day.                                  | 58.4      | 33.1        | 8.4          | 3.67              | 0.92            |
| 5. I would benefit from more interaction online.                               | 48.3      | 42.9        | 8.9          | 3.51              | 0.92            |
| 6. I would benefit from more training to communicate online.                   | 49.9      | 37.5        | 12.6         | 3.46              | 0.94            |

<sup>a</sup> Mean is based on a 5-point Likert scale: 5 = *Strongly agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, 1 = *Strongly disagree*

<sup>b</sup> SD = Standard deviation

stated that email was used mainly to receive updates from the tutor on topics covered during face-to-face tutorials, or simply for clarification with subject matter.

For discussion boards, students agreed that the learning strategy used by the tutor most often was answering questions (53%), followed by leading discussions online (43%). Only one-fourth of the students were involved with group work. Overall, students were lukewarm towards discussion boards with approximately 41% agreed with their level of satisfaction, in comparison to 13% who disagreed.

In Table 6, the data focuses on interaction with other students and the tutor online.

A near majority of students (47%) perceived the online support to be generally well structured and organised (Item 1); however, their satisfaction notably dropped in regard to how their tutor encouraged dialogue amongst them online with 18% of students disagreeing with Item 2. Not surprisingly, a majority of students claimed that they would benefit from more interaction online (48%) and the necessary training to do so (50%). Interviewed students generally commented on a "lack of promotion" on behalf of tutors with the online medium. One student in particular noted:

encouragement is needed so that more students will use [the online medium]... [more participation] would enrich the information contained in the discussion boards... with only a few users using it... it narrows down the areas for discussion... losing its effectiveness.

Thus it appears that with little encouragement from tutors, student participation is negatively effected and therefore the purpose for using the online medium becomes somewhat futile.

Table 7: English and Chinese courses: perceptions of using computers and the Internet for interactive purposes

|   | <i>English</i> | <i>Chinese</i> | p-value <sup>a</sup> |
|---|----------------|----------------|----------------------|
|   | <i>Mean</i>    | <i>Mean</i>    |                      |
| 1. I am comfortable using computers to complete course assignments. | 4.52           | 3.64           | 0.00                 |
| 2. I am comfortable communicating via email.                        | 4.28           | 3.57           | 0.00                 |
| 3. I am comfortable communicating via discussion boards.            | 3.69           | 3.27           | 0.00                 |
| 4. I have difficulty typing in the language of instruction.         | 2.13           | 2.62           | 0.00                 |

<sup>a</sup>  $p < 0.01$

Other noteworthy items in Table 6 pertain to understanding how students work online, including their preconceived expectations to online learning. Students were quite adamant about receiving a response online within one day (Item 4), as 58% of students agreed, in comparison to how prompt the tutor was in responding to their questions or insights (Item 3). This suggests that students were not entirely satisfied with the requisite time to receive a response from tutors and also sheds light on what general expectations students might have to working online and how their expectations are met.

#### *Comparative analyses*

In this portion of the results, further comparisons are made from the existing data. Select items from these tables are analysed below by language of instruction (English and Chinese courses). Statistically significant comparisons were found in various items between two topics, the students' perceptions of using technology (Table 7) and the students' rationale for using the Internet in course work (Table 8). It should be noted that no statistically significant differences were found between gender and age.

Table 7 examines students' perceptions of using computers and the Internet for course purposes. A comparison of means (*t*-test) was made amongst these items with students enrolled in English- and Chinese-medium courses.

Students' survey response to using computers in their course work was quite varied and there was a stark contrast in using computers between students in English- and Chinese-medium courses. The greatest difference was amongst students using computers to complete course assignments (Item 1) and communicating via email (Item 2).

In comparison to students enrolled in Chinese-language courses, those in English-language courses expressed a very high level of comfort for using computers: Item 1 (English courses, mean = 4.52; Chinese courses, mean = 3.64) and email: Item 2 (English courses, mean = 4.28; Chinese courses, mean = 3.57) in their course work. Although less variant, students in English-language courses also had higher prefer-

ences for communicating via discussion boards: Item 3 (English courses, mean = 3.69; Chinese courses, mean = 3.27). Another noteworthy finding was the difference between the two groups in typing in their respective course language (Item 4). Those individuals in Chinese-medium courses had a higher score, indicating they had more difficulty typing in Chinese (mean = 2.62) compared to their counterparts enrolled in English-medium courses (mean = 2.13).

The qualitative analysis revealed recurring themes in the interview data that suggested reasons for such discrepancies between the two groups. Two major themes that emerged from interviews were the following: confidence in collaborating online and awareness and ability using the online medium. One interesting finding was that students in Chinese-medium courses had a strong preference for using the telephone for support purposes versus email or discussion boards. With reference to email, one student stated:

I really don't like using e-mail... I rather like to use [the] telephone instead of e-mail... at least [the] telephone is more direct... with feedback immediately... some tutors wouldn't be able to reply right away if using email...

Other students enrolled in Chinese-medium courses made similar comments on their preference for communicating via telephone stating that email "wastes time." Another student admitted:

[I] didn't know how to type Chinese... No one [used email] at that time...

This comment raises two important issues. First, low-level computer skills and in this case, the inability to type adequately in Chinese, are obvious barriers to working online, especially if all course materials are in Chinese. Second, a low-user rate of the COLE will certainly influence others to refrain from using such a medium and negative sentiments will only be compounded if queries are ignored, or a response is deemed untimely, as alluded to by the student in the first quote above. Equally influential to low participation online is the indifference or lack of endorsement expressed by tutors or course coordinators. One student claimed:

Basically I seldom use it. I think [the tutor] needs to strengthen up the promotion [of the COLE] in the tutorial...

Thus, the absence of endorsement by the tutor or course coordinator had a telling affect on this particular student.

The low degree of endorsement or support from the tutor or course coordinator was not exclusive to those enrolled in Chinese-medium courses, however, when compounded with other factors, namely the difficulty in typing Chinese, it is understandable why such differences exist amongst the groups of learners in English- and Chinese-medium courses.

Table 8: *English and Chinese courses: comparisons in using the Internet for interactive purposes*

|   | <i>English</i> | <i>Chinese</i> | p-value <sup>a</sup> |
|---|----------------|----------------|----------------------|
|   | <i>Mean</i>    | <i>Mean</i>    |                      |
| 1. The Internet makes it easy to find course-related information  | 4.16           | 3.75           | 0.00                 |
| 2. The Internet makes it easy to communicate with the tutor.      | 4.00           | 3.49           | 0.00                 |
| 3. The Internet makes it easy to communicate with other students. | 3.96           | 3.54           | 0.00                 |
| 4. The Internet is accessible anytime and is reflective.          | 3.94           | 3.23           | 0.00                 |
| 5. I am efficient in using the Internet.                          | 3.95           | 3.39           | 0.00                 |

<sup>a</sup>  $p < 0.01$

In Table 8 further comparisons are made between students in English- and Chinese-medium courses. The items focus on the function and purpose of the Internet as a collaborative medium and as an information resource and medium readily accessible and independent of time and place. Similar to Table 7, statistically significant differences (*t*-test) were observed amongst these items.

The ease by which students could access course-related information (Item 1) was perceived as a greater advantage amongst students in English-language courses (mean = 4.16) than those in Chinese-language courses (mean = 3.75). As a collaborative medium, students enrolled in English-language courses perceived communication over the Internet with tutor; Item 2 (mean = 4.00) and student; Item 3 (mean = 3.96) to be easier than those students enrolled in Chinese-language courses (tutor, mean = 3.49; student, mean = 3.54). The greatest difference between these two groups was in Item 4, on how students perceived the Internet as an accessible and reflective medium for course work. Those in English-language courses had a mean score of 3.94 compared to students in Chinese-language courses, 3.23. Lastly, students' perceived efficiency in using the Internet (Item 5) was also substantially greater amongst students enrolled in English-language courses (mean = 3.95) compared to those in Chinese-language courses (mean = 3.39).

Despite the discrepancy between the two groups of learners, it should be noted that collectively, all scores were relatively high (above mean = 3). However, the apparent difference between the two groups does present a paradox, considering all students are native Chinese speakers, yet feel less comfortable communicating in Chinese online.

This issue, along with others raised earlier, such as interaction and collaboration online, training and preferred uses in online learning, will be explored further in the discussion.

## **Discussion**

This investigation has focused on students' overall perceptions of using online learning in terms of access, comfort, teaching, and language capabilities for course work at the

Open University of Hong Kong. The data has suggested numerous factors in how online learning may be used to enhance the distance learning environment in Asia. Based on the results of this investigation, further insight and suggestions will be provided on how to strengthen the efficacy of the online learning environment.

#### *Internet access and interest*

In unison with the ongoing integration of the OLE and COLE in OUHK courses, the university continuously upgrades its computer facilities, and student home-user rate in this investigation was a staggering 82%. The findings indicated that a clear majority of the student sample was enrolled in courses where Internet use was noncompulsory, although only 20% did not use these Internet tools for their courses. Whilst this is suggestive of the interest amongst students and educators and the progress and effort made by course teams to integrate online components into courses, using online learning at the OUHK is still in its infancy. The issues of interaction, participation, and language are existing obstacles that need to be improved for continued success with online learning.

#### *Interaction online*

An interesting finding was the inverse relationship between positive student perceptions of using computers and their degree of interaction with others. Students were most comfortable, and found the most purpose for using computers and the Internet, for independent work such as submitting assignments, conducting searches, and retrieving course content. Students' comfort levels decreased when use involved communicating via email and a further decrease was noted when use involved communicating via discussion boards and chat rooms. Collaborating in open forums, and in particular via asynchronous mediums such as discussion boards, has been widely accepted as a positive avenue for engaging in deeper understanding (Harasim, 1990) and knowledge building (Brown & Duguid, 1996; Scardamalia & Bereiter, 1996). Of utmost necessity in such environments is participant contribution. The findings in this investigation point to the conclusion that students are not enthusiastic about contributing publicly online. There are numerous reasons as to why such feelings exist. One is likely the absence of community, as argued by Brown & Duguid (1996). They suggest that whilst open and distance learning provides access to information, it denies access to community such as a physical campus and face-to-face communication, characteristics that students expect from past experiences in tertiary education, or that draws prospective students to tertiary education. Although the OUHK is an open and distance learning institute, its limited geographical boundaries permit it to, in certain respects, simulate a conventional education setting. The structure of its courses can be equated to hybrids found in conventional and distance education, offering face-to-face interaction and instruction coupled with independent learning that occurs separately from the physical institution. Thus the framework for community as suggested by Brown & Duguid (1996) exists within the OUHK, although it is arguable from the existing data, that this framework is not easily transferable to online learning. Two design features for strengthening community online is structure and purpose. If these instructional design features are lacking, participants will have little incentive for use and misunderstand-

ing for purpose. Whilst it was beyond the scope of this investigation to explore the structure and purpose of each course, individual practitioners should examine *what* they want to do with online learning and *how* they intend to meet their learning objectives.

#### *Contribution versus participation*

In terms of measuring the success of online use in courses, one quantitative method is to track students' patterns of participation. It should be noted that contribution and participation are two different actions. In referring to the data in the preceding paragraph, a majority of students agreed that they were not comfortable communicating, or *contributing*, in open online forums. However, interview data also revealed that there are many students who prefer to "lurk" online or as Taylor (2002) has coined, engage in "peripheral participation." Taylor (2002) conducted a study of learning outcomes amongst a group of online distance learners at the University of Southern Queensland. Based on students' degree of online participation, Taylor categorised the participants into three groups: the workers, the lurkers, and the shirkers. The first group regularly contributed notes online whilst also having a high readership. The lurkers were a group that contributed little but had an equally active readership to the workers. Lastly, the shirkers were those who contributed the least whilst also having the lowest readership. One conclusion was that the final grades were no different amongst the workers and the lurkers, suggesting that online participation is as fruitful as online communication, or *contribution*. Thus, when structuring, or evaluating an online environment, although all individuals should be encouraged to contribute online, there may be existing benefits to those who regularly "lurk" as opposed to those who regularly "work." Replicating Taylor's study is one means to assess the efficacy of one's online course.

#### *Language medium and online learning*

Perhaps the most significant result in this investigation was the paradox between students enrolled in English and Chinese courses. Although all students were non-native English speaking, it was found that students in English-medium courses were more comfortable with computers and in turn, were more comfortable using online learning tools in their courses. This included communicating with students and tutors via email and discussion boards. We propose several reasons for this paradox below.

#### *Course discipline*

More than half the respondents in Chinese-medium courses were enrolled in disciplines on Chinese history or Chinese language. In comparison to courses in business or technology, it is unlikely that computer use is central to these courses and is perceived as secondary to other methods of learning. However, instructional design for Internet integration in courses with less of a technological focus can be a fruitful way to discuss course topics, develop argument, and reflect on topical issues. Some design considerations may be addressed with the following queries: What are effective ways to communicate online? What are the strategies to encourage participation? What topics should be discussed? How should discussions be moderated? Is there an end point? While such

questions are applicable to participants in any course, those with less exposure to computers will find using them more difficult and less meaningful. Furthermore, the technological expertise of the tutor or course coordinator will impact how the Internet is used in the course. Fung and Carr (2000) argue that the tutor trained in a particular discipline will likely exhibit those learning strategies and learning experiences as teachers that they encountered as students. With this in mind, it is also worthy to explore how tutors perceive Internet use in distance education courses and how they perceive their role as online educators.

#### Language proficiency

Within the region, it is commonly known that both Hong Kong learners and educators have a low level of proficiency in English (Watkins & Biggs, 1996). Such claims are suggestive of the situation in the OUHK as well, as face-to-face tutorials are conducted mainly in Chinese, irrespective of course language. However, when communication is transformed online, those students enrolled in English-medium courses reported higher comfort for communicating in English compared to those students enrolled in Chinese-medium courses who communicated in Chinese. Thus it may be said that many OUHK students have a preference for oral communication in Chinese, but for written communication in English. As of 2002, nearly 68% of the OUHK student population was employed as a manager, professional, or clerical/secretarial staff (OUHK, 2002). In these occupations, the high dependency on computers and requisite competency in written English, likely make it habitual for these individuals to continue such practices for study purposes online. Alternatively, having to switch to Chinese for communicating online for these individuals can be problematic because of English terminology, limited skill in typing Chinese characters, or inadequate Chinese translation software.

#### **Conclusions**

The purpose of this investigation was to provide an analysis of tertiary students in the distance education context who are engaged in the use of online learning for course purposes in Hong Kong. Students were both surveyed on their perceptions and interviewed about their experiences online. Overall students held positive perceptions for using the Internet for distance learning in Hong Kong and most were able to access this tool from home. Whereas in the past the issue of online learning in Hong Kong mainly centred on access, this investigation suggests that it has now shifted to language and interaction. Surprisingly for Chinese students learning in their native tongue, issues online may stem from problems typing in Chinese, or the context, curriculum or instructor of the course. Whichever the case may be, online learning requires careful structure, purpose, and understanding. Understanding student expectations is perhaps the first step to integrating online learning in distance education and establishing a model that will nurture a powerful learning environment for all. It is hoped that this investigation will provide educators interested or currently involved in Internet applications, further insight into students' perceptions to online learning and avenues for future research and experimentation to grow their own online course initiatives to a level of habitual success.

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