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Face-to-face versus online tutoring support in distance education

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The experiences of students taking the same course by distance learning were compared when tutorial support was provided conventionally (using limited face-to-face sessions with some contact by telephone and email) or online (using a combination of computer-mediated conferencing and email). Study 1 was a quantitative survey using an adapted version of the Course Experience Questionnaire and the Revised Approaches to Studying Inventory. Study 2 was another quantitative survey using the Academic Engagement Form. Study 3 was an interview-based examination of the students' conceptions of tutoring and tuition. In all three studies, the students receiving online tuition reported poorer experiences than those receiving face-to-face tuition. Study 3 showed that tutoring was seen not only as an academic activity but also as a highly valued pastoral activity. To make online tuition successful both tutors and students need training in how to communicate online in the absence of paralinguistic cues.

Introduction

There is an increasing use of information technology in higher education (Alexander *et al.*, 1998). On the one hand, there is a move from paper-based to electronic materials; on the other hand, there is a move from face-to-face support to online support (see 'Working towards e-quality', 2002). In campus-based programmes, both kinds of development may be happening simultaneously, and so it is difficult to disentangle their respective consequences for the students' experience. In distance education, there is often a clearer separation between the central design and production of instructional materials and the provision of tutorial support at a local level, and so it becomes feasible to evaluate the impact of technological innovations on each aspect of the curriculum in a quasi-experimental manner.

The Open University was founded in 1969 to offer degree programmes by distance learning across the United Kingdom. It accepts all applicants over the

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normal minimum age of 18 without imposing formal entrance requirements, subject only to limitations of numbers on specific courses. Originally, nearly all of its courses were delivered by specially prepared correspondence materials, combined with television and radio broadcasts, video and audio recordings, tutorial support at a local level and (in some cases) week-long residential schools. In more recent years, however, the University has made increasing use of computer-based support, particularly CD-ROMs, dedicated websites and conferencing links.

In the present investigation, we compared the experiences of students taking the same course by distance education when tutoring support was delivered either conventionally (using limited face-to-face sessions with some contact by telephone and email) or online (using a combination of computer-mediated conferencing and email). Participation in tutorials is not compulsory and is regarded as supplementary rather than prescribed. Most of the tuition is student-driven through contact that they initiate via telephone or email. There may only be eight face-to-face tutorials, and online tutorial support is at a commensurable level (in both cases, students are additionally encouraged to initiate contact with one another).

Since the aims, content and assessment demands were held constant, we were able to evaluate the impact of online tutoring support on the students' experience. In Study 1, we carried out a quantitative survey to compare students receiving face-to-face and online tuition with regard to their perceptions of the academic quality of their courses (as monitored by an adapted version of the Course Experience Questionnaire), and with regard to their approaches to studying (as monitored by the Revised Approaches to Studying Inventory). In Study 2, we carried out another quantitative survey to compare the students with regard to their academic engagement with the course (as monitored by the Academic Engagement Form). Finally, in Study 3, we carried out an interview-based investigation to examine the students' conceptions of tuition and tutoring when these were delivered either conventionally or online.

Study 1

Method

The course chosen for study was U213, 'International development: challenges for a world in transition'. This is a multidisciplinary course at an intermediate undergraduate level, and runs from February to October. It is worth 60 credit accumulation transfer (CAT) points in the UK, and hence equates to 50% of one year's full-time study. It is assessed by six tutor-marked assignments and an unseen final examination taken at a regional assessment centre. In 2002, the course was offered with conventional tutorial support, consisting of face-to-face tutorials with telephone and email support, or online support provided by email and computer conferencing. Students were free to choose either version of the course (for instance, because they preferred a particular mode of tuition, or because their personal circumstances made it difficult for them to attend face-to-face tutorials). A postal survey was distributed to all 52

students who had completed the course with online tutorial support, and also to a random sample of 102 students who had completed the course with face-to-face tutorial support (the remaining 400 students received a separate survey carried out for internal quality-assurance purposes).

The Course Experience Questionnaire (CEQ) was devised by Ramsden (1991) as a measure of the academic quality of degree programmes. Since 1993, an adapted version of the CEQ has been administered to all students graduating from Australian universities. An extended version of the CEQ was evaluated as a research instrument by Wilson *et al.* (1997), and was found to be psychometrically robust. Lawless and Richardson (2002) adapted this version of the CEQ for students who were taking courses by distance learning. This yielded an instrument containing 36 statements in seven subscales, and respondents indicate their level of agreement with each statement on a scale from 1 to 5. The defining items (i.e. those that showed the highest loadings) on the seven subscales are shown in Table 1.

The Revised Approaches to Studying Inventory (RASI) was developed by Entwistle *et al.* (2000). It consists of 52 statements in 13 subscales that measure different aspects of studying. Once again, respondents indicate their level of agreement with each statement on a scale from 1 to 5. A deep approach is defined by four subscales: seeking meaning, relating ideas, use of evidence, and interest in ideas. A strategic approach is defined by five subscales: organised studying, time management, alertness to assessment demands, achieving, and monitoring effectiveness. A surface approach is defined by four subscales: lack of purpose, unrelated memorising, syllabus-boundness, and fear of failure.

Table 1. Defining items of the seven subscales in Lawless and Richardson's (2002) version of the CEQ

Subscale	Defining item
Appropriate Assessment	Assessment on OU [Open University] courses seems to be more to do with testing what you've memorised than with testing what you've understood.*
Appropriate Workload	The sheer volume of work to be got through in OU courses means that you can't comprehend it all thoroughly.*
Clear Goals and Standards	On [course], it is always easy to know the standard of work that is expected of you.
Generic Skills	As a result of taking OU courses, I feel more confident about tackling unfamiliar problems.
Good Materials	The teaching materials for OU courses are extremely good at explaining things.
Good Tutoring	Tutors make a real effort to understand the difficulties that students may be having with their work.
Student Choice	The students on OU courses are given a lot of choice in the work they have to do.

Note: items indicated with asterisks are coded in reverse.

The CEQ and the RASI were combined in a questionnaire. The students were asked to think about their course as a whole rather than about individual units, topics or tutors. When considering their relations with tutors, they were asked to 'think about tutorial contacts of all kinds: e.g. face-to-face, phone calls, email or computer conferencing'. The survey was distributed after the final examination for the course, and a reminder was sent two weeks later.

Results

Completed copies of the questionnaire were received from 99 students, representing a response rate of 64%. This would be considered to be good for a postal survey (Kidder, 1981, pp. 150–151; Babbie, 1990, p. 182). Of these 99 students, 66 had received face-to-face tuition, and 33 had received online tuition; the respective response rates were 65% and 64%, which were not significantly different from each other (X^2 = 0.02; d.f. = 1; p = .88). Of the 99 students, 41 were male and 58 were female. The proportion of female respondents was somewhat greater on the online version of the course (70%) than on the face-to-face version of the course (53%), but the difference was not statistically significant (X^2 = 2.52; d.f. = 1; p = .11). The respondents' ages ranged from 22 to 69, with a mean of 40.6 years. The students taking the online version of the course had a mean age (40.7 years) that was very similar to that of the students taking the face-to-face version (40.5 years).

CEQ scores

The scores on each subscale of the CEQ are obtained by averaging the responses to the items in question, and an overall measure of perceived quality is obtained by averaging the scores on the seven subscales. There is a 37th item concerned with students' general satisfaction. Table 2 shows the mean scores obtained by students taking the two versions of the course.

A multivariate analysis of variance showed that the difference between the two groups in their scores on the seven scales approached statistical significance (F = 1.85; d.f. = 7, 91; p = .09). However, univariate analyses showed that this was associated with a significant difference only on the good tutoring scale (F = 7.97; d.f. = 1, 97; p = .01). There was also no difference between the two groups in their overall perceptions of quality (F = 1.07; d.f. = 1, 97; p = .31), or in their general satisfaction with the course (F = 0.00; d.f. = 1, 97; p = .95). Table 2 shows that the students who received online tuition gave lower scores on the good tutoring subscale than those who received face-to-face tuition. The size of the relevant difference equated to 0.59 of a standard deviation, which would be regarded as being at least a moderate effect (Cohen, 1969, pp. 22–24). The differences on the remaining subscales, on their overall perceptions of quality and on their general satisfaction were small and non-significant.

The good tutoring scale is composed of nine items, and it is possible that the pattern of scores obtained by students taking the two different versions of the course was determined by differences on just one or two of these items. Table 3 shows that

Table 2. Study 1: mean scores on the Course Experience Questionnaire

	Face-to-face tuition		Online tuition		
Subscale	M	SD	M	SD	Effect size[a]
Appropriate Assessment	3.93	0.85	3.84	0.80	0.10
Appropriate Workload	2.20	0.93	2.18	1.00	0.02
Clear Goals and Standards	3.11	0.87	2.84	0.96	0.29
Generic Skills	3.37	0.84	3.24	0.84	0.16
Good Materials	3.64	0.93	3.60	0.88	0.04
Good Tutoring	3.62	0.77	3.13	0.92	0.59*
Student Choice	3.10	0.73	3.27	0.71	−0.24
Overall Perceived Quality	3.28	0.54	3.16	0.62	0.22
General Satisfaction	3.77	1.16	3.76	1.32	0.01

[a]Standardised mean difference. According to Cohen (1969, pp. 22–24), a standardised mean difference of 0.2, 0.5 and 0.8 constitute 'small', 'medium' and 'large' effects, respectively.
*$p < .05$ (two-tailed test).

Table 3. Study 1: mean scores obtained on items constituting the Good Tutoring scale

	Face-to-face tuition	Online tuition
Items that yielded significant differences		
Tutors make a real effort to understand the difficulties that U213 students may be having with their work.	3.88	3.09
Tutors on U213 normally give helpful feedback on how well you are doing.	4.14	3.61
I have often discussed with my tutors how I was going to learn in U213.	2.27	1.67
Tutors on U213 show no interest in what students have to say.[a]	1.73	2.21
Tutors on U213 make clear right from the start what they expect from students.	3.14	2.55
Items that did not yield significant differences		
Tutors on U213 motivate the students to do their best work.	3.74	3.39
Tutors on U213 often give the impression that they have nothing to learn from students.[a]	2.26	2.67
Tutors on U213 give a lot of time to commenting on students' work.	3.55	3.09
On U213, feedback on students' work is usually only provided in the form of marks or grades.[a]	2.12	2.36

Note. The scores in this table reflect the level of agreement with each item on a scale from 5 (strongly agree) to 1 (strongly disagree). Mean scores greater than 3 indicate broad agreement, whereas mean scores less than 3 indicate broad disagreement.

[a]These items have a negative meaning, and students' responses to these items are reversed before calculating the total score on the Good Tutoring scale.

statistically significant differences arose on five of the nine items. In each case, students who received face-to-face tuition gave more positive responses than those who received online tuition. Indeed, the same pattern is evident even on the items that did not yield a statistically significant difference.

RASI scores

The scores on each scale and subscale of the RASI are obtained by summing the responses to the relevant items. Table 4 shows the mean scores obtained by students taking the two versions of the course.

A multivariate analysis of variance showed that the difference between the two groups in their scores on the 13 subscales was not statistically significant ($F = 0.59$; d.f. = 13, 85; $p = .86$), and univariate analyses revealed no significant differences on any of the 13 subscales. Another multivariate analysis of variance showed that the difference between the two groups in their scores on the three main scales was not statistically significant ($F = 0.03$; d.f. = 3, 95; $p = .99$), and once again univariate analyses revealed no significant differences on any of the three scales. All of the differences were small in Cohen's (1969) terms.

Table 4. Study 1: mean scores on the Revised Approaches to Studying Inventory

	Face-to-face tuition		Online tuition		
Subscale	M	SD	M	SD	Effect size[a]
Deep Approach					
Seeking Meaning	16.15	2.37	16.03	2.72	0.05
Relating Ideas	15.29	2.69	15.18	2.62	0.03
Use of Evidence	16.48	2.25	16.09	2.32	0.17
Interest in Ideas	16.21	2.89	17.12	2.47	−0.33
Total	64.14	8.12	64.42	7.62	−0.04
Strategic Approach					
Organised Studying	12.15	3.35	12.33	3.44	−0.05
Time Management	14.30	4.07	14.12	3.45	0.05
Alertness to Assessment Demands	13.68	3.06	13.64	2.91	0.02
Achieving	15.89	2.61	16.06	2.56	−0.06
Monitoring Effectiveness	16.56	2.46	16.94	2.18	−0.16
Total	72.59	11.74	73.09	10.62	−0.04
Surface Approach					
Lack of Purpose	7.15	3.48	6.36	3.00	0.24
Unrelated Memorising	10.30	2.92	10.48	2.48	−0.07
Syllabus-Boundness	11.64	3.81	11.67	3.36	−0.01
Fear of Failure	13.62	3.88	13.61	4.26	0.00
Total	42.71	9.56	42.12	9.05	0.06

[a]Standardised mean difference.

Coursework and examination marks

The students were assessed by coursework and an unseen examination. Both the coursework marks and the examination marks were significantly correlated with their scores on perceived quality (r = +0.40 and +0.29, respectively) and their ratings of general satisfaction (r = +0.33 and +0.25). They were also significantly (and negatively) correlated with their scores on surface approach (r = –0.34 and –0.31), but not with their scores on deep approach (r = +0.15 and +0.12) or strategic approach (r = +0.10 and +0.10). In other words, the assessment regime tended to discourage a surface approach, but it did not encourage deep and strategic approaches.

The students who received face-to-face tuition obtained a mean coursework mark of 70.95, whereas those who received online tuition obtained a mean coursework mark of 64.30, a difference of 6.65. The students who received face-to-face tuition obtained a mean examination mark of 62.06, whereas those who received online tuition obtained a mean examination mark of 55.12, a difference of 6.94. The former difference was statistically significant (F = 4.44; d.f. = 1, 97; p = .04), but the latter difference was not (F = 2.71; d.f. = 1, 97; p = .10). This was not because the difference was smaller for the examination marks than for the coursework marks, but because the examination marks were subject to greater variability than the coursework marks.

Discussion

This study has compared students taking two versions of the same distance-learning course. In one version, support was provided through face-to-face tutorials, with telephone and email support; in the other, support was provided by electronic mail and computer conferencing. The profile of scores on the CEQ and the RASI was virtually identical in students taking the two versions of the course except in one respect: the students who received online support obtained lower scores on the good tutoring scale of the CEQ. The size of the difference was significant in both statistical and practical terms. The difference was more pronounced on some of the items constituting the good tutoring scale than on others, but there was a consistent pattern for students who received online support to rate their tutors less favourably across all of the items.

One possibility is that the tutors who provided online support were less competent or less well trained than the tutors who provided face-to-face support. Staff in higher education need specific advice and training on how to use electronic facilities to provide tutorial support. Even staff who are very experienced in face-to-face tuition can encounter problems when working online (Kitto & Higgins, 2003). In the present case, however, the course team had gone to considerable lengths to identify experienced tutors for the online version of the course (two tutors were already experienced in online tutoring), and to provide them with appropriate training and support in their role. On the face of it, then, it is unlikely that the results are due to characteristics of the tutors.

An alternative idea is that the results are due to characteristics of the students who opted for the online version of the course. This could not, of course, be controlled in

an experimental sense, and so the students who opted for the two versions of the course may have been different on a variety of background variables. They were similar in both age and gender, and in previous work students who opt for online tuition have been found to be similar to those who opt for face-to-face tuition in their broad attitudes to studying (Carswell *et al.*, 2000). Nevertheless, the pattern of marks obtained suggests that the students who received online tuition were academically weaker on average than the students who received face-to-face tuition. It is possible that the online students needed more guidance and support than they actually received. Again, there are anecdotal accounts of the problems encountered by students in attempting to access online tutorial support (Hara & Kling, 2000). Yet another possibility is that tutoring provided by face-to-face tutorials with telephone and email support is more effective in helping students to understand the materials.

Nevertheless, there was no sign of any difference between the two groups in their scores on the other scales of the CEQ, or in their ratings of their overall satisfaction with the course. This is of theoretical interest, because it suggests that variations in the mode of tutorial support do not affect students' perceptions of other aspects of academic quality. It is also of methodological interest, because it confirms that the individual scales of the CEQ are measuring distinct aspects of teaching quality. Moreover, there was no sign of any difference between the two groups in their scores on the various scales and subscales of the RASI. This implies that approaches to studying in distance education need not be influenced by whether tutorial support is delivered face-to-face or online.

Study 2

In studies of campus-based higher education, researchers have used the term 'engagement' to refer to 'the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes' (Hu & Kuh, 2002, p. 555). It is generally agreed that involvement in both the academic domain and the social domain is important for student engagement (Nora, 1993; Milem & Berger, 1997). Kember (1989, 1995) proposed that, in the context of distance education, 'academic integration' should encompass the different facets of course delivery, while 'social integration' depended on the extent to which students were able to reconcile the demands of their courses with their ongoing commitments in their work, their families and their social lives.

Foster *et al.* (1999) constructed the Academic Engagement Form (AEF), which is a questionnaire containing 114 items designed to assess the affective and behavioural aspects of engagement in campus-based higher education. Richardson *et al.* (2004) selected 36 items from the AEF as being particularly relevant for students in distance education. An analysis of responses given by 239 students with hearing loss and 166 students with no form of disability yielded the 12 subscales shown in Table 5. This version of the AEF was administered to the next cohort of students taking the course described earlier, and we also included the good tutoring subscale of the CEQ in an attempt to replicate the findings of Study 1.

Table 5. Defining items of the subscales in the Academic Engagement Form

Subscale	Defining item
Role of Peers	
Affiliation with Peers	The people on my course(s) are like a family.
Institutional Affiliation	I'm proud to be an Open University student.
Learning from Other Students	I learn most from other OU [Open University] students.
Participation in Tutorials	I participate in tutorial discussions.
Role of Self	
Learning from Materials	I learn most from the course materials.
Motivation to Learn	I care about learning new things.
Self-confidence	I can do well in my course(s) if I want to.
Student Autonomy	I can come up with my own solutions to problems.
Role of Tutors	
Communication	I wish I could communicate more with other OU students.[a]
Relations with Tutors	Tutors and students on OU courses respect each other.
Student Control	Tutors on OU courses let students decide things for themselves.
Tutor Pace	Tutors don't go on to new things before they know that we understand the old ones.

[a]Scored in reverse.

Method

In 2003, the course was again offered with face-to-face tutorials or with online support provided by electronic mail and computer conferencing. A postal survey was distributed to all of the 478 students who were available for sampling. The questionnaire consisted of the nine items constituting the good tutoring subscale from the CEQ and 35 of the 36 items in the version of the AEF used by Richardson *et al.* (2004) (one of the items in the communication subscale was accidentally omitted, and hence only results from the 11 remaining subscales will be reported). In responding to the AEF, students were asked to say how often each item had been true for them in their experience of studying with the Open University, using the AEF's original 6-point scale from 1 for 'never' to 6 for 'always'.

Results

Completed copies of the questionnaire were received from 209 students, representing a response rate of 44%, which would be considered adequate for a postal survey (Kidder, 1981, pp. 150–151; Babbie, 1990, p. 182). Of these 209 students, 175 had received face-to-face tuition, and 34 had received online tuition; the respective response rates were 46% and 36%, which were not significantly different from each other ($X^2 = 3.03$; d.f. = 1; $p = .08$). Of the 209 respondents, 98 were male and 111 were female. Once again, the proportion of female respondents was somewhat greater

on the online version of the course (56%) than on the face-to-face version of the course (53%), but the difference was not statistically significant ($X^2 = 0.13$; d.f. = 1; $p = .72$). The respondents' ages ranged from 22 to 75, with a mean of 42.6 years. On this occasion, the students who were taking the online version of the course tended to be slightly younger (mean age = 38.9 years) than the students who were taking the face-to-face version (mean age = 43.3 years) ($t = 2.02$; d.f. = 207; $p = .05$).

On examination of the completed questionnaires, 64 (or 30.6%) of the respondents had failed to provide a response to one or more of the items, and so these students had to be dropped from our analyses. This left 120 students who had received face-to-face tuition and 25 students who had received online tuition. Table 6 shows the mean scores obtained by the two groups on the subscales of the questionnaire. A multivariate analysis of variance showed that the difference between the two groups in their scores on the 12 subscales (including the good tutoring scale) was statistically significant ($F = 2.88$; d.f. = 12, 132; $p = .001$). Univariate analyses showed that this was associated with significance differences on participation in tutorials, relations with tutors, tutor pace and good tutoring. Table 6 shows that the students who received online tuition produced much lower scores on all these subscales than those who received face-to-face tuition. These effects would be regarded as medium or large on Cohen's (1969, pp. 22–24) criteria. The differences on the remaining scales were all small and non-significant.

Table 6. Study 2: mean scores on the Academic Engagement Form and on Good Tutoring

	Face-to-face tuition		Online tuition		
Subscale	M	SD	M	SD	Effect size[a]
Role of Peers					
Affiliation with Peers	2.48	0.83	2.50	1.01	−0.02
Institutional Affiliation	4.08	0.75	3.98	0.88	+0.12
Learning from Other Students	2.12	0.95	2.22	0.93	−0.11
Participation in Tutorials	3.62	1.03	2.92	0.95	+0.70*
Role of Self					
Learning from Materials	4.45	0.56	4.50	0.43	−0.10
Motivation to Learn	4.74	0.36	4.58	0.49	+0.39
Self-confidence	3.98	0.70	4.08	0.73	−0.14
Student Autonomy	3.89	0.61	3.91	0.60	−0.03
Role of Tutors					
Relations with Tutors	4.06	0.56	3.59	0.62	+0.82*
Student Control	3.88	0.63	3.77	0.86	+0.15
Tutor Pace	3.28	0.84	2.72	0.75	+0.69*
Good Tutoring	3.76	0.70	3.33	0.89	+0.55*

[a]Standardised mean difference.
*$p < .05$ (two-tailed test).

Further univariate analyses showed that the two groups were significantly different in terms of their scores on seven of the 35 items in the AEF. These items are shown in Table 7; in each case the students who received online tuition produced lower scores than those who received face-to-face tuition. Table 8 similarly shows the mean scores obtained by the two groups of students on the nine items in the good tutoring scale. Statistically significant differences arose on four of the nine items; in each case, students who received face-to-face tuition gave more positive responses than those who received online tuition. Again, the same pattern is evident even on the items that did not yield a statistically significant difference.

Discussion

Like Study 1, this study compared students taking two versions of the same distance-learning course. In one version, support was provided by means of face-to-face tutorials; in the other, support was provided online. The findings regarding the good tutoring subscale of the CEQ replicated those of Study 1: the students who received online support obtained lower scores than the students who received face-to-face support. The two studies are thus consistent in showing that online tutoring is perceived to be of lower quality than conventional tutoring.

The students who received online support also obtained lower scores on the AEF than the students who received face-to-face support. Significant differences arose on the subscales concerned with relations with tutors and tutor pace, and also on the subscale concerned with participation in tutorials, which students seem to regard as a function of tutoring (see Table 5). Consistent with the results from the CEQ, variations in the mode of tutorial support affected students' experiences of tutoring but did not affect other aspects of their experience.

Table 7. Study 2: items yielding significant differences in the Academic Engagement Form

	Face-to-face tuition	Online tuition
Participation in Tutorials		
I participate in tutorials when new material is being discussed.	3.33	2.48
I participate in tutorial discussions.	3.55	2.48
Relations with Tutors		
Tutors on OU courses treat students fairly.	4.59	4.04
Tutors on OU courses make it clear what they expect of students.	3.92	3.52
Tutors and students on OU courses understand each other.	3.56	3.20
Tutors and students on OU courses respect each other.	4.18	3.60
Tutor Pace		
Tutors on OU courses make sure that they don't teach faster than we can learn.	3.52	2.68

Note. The scores in this table reflect how often the relevant statement has been true for the respondents on a scale from 6 ('always') to 1 ('never').

Table 8. Study 2: mean scores obtained on items constituting the Good Tutoring scale

	Face-to-face tuition	Online tuition
Items that yielded significant differences		
Tutors on U213 motivate the students to do their best work.	4.18	3.20
Tutors make a real effort to understand the difficulties that U213 students may be having with their work.	3.98	3.38
Tutors on U213 normally give helpful feedback on how well you are doing.	4.20	3.64
Tutors on U213 make clear right from the start what they expect from students.	3.63	2.88
Items that did not yield significant differences		
Tutors on U213 often give the impression that they have nothing to learn from students.[a]	2.20	2.44
Tutors on U213 give a lot of time to commenting on students' work.	3.81	3.64
On U213, feedback on students' work is usually only provided in the form of marks or grades.[a]	2.18	2.28
I have often discussed with my tutors how I was going to learn in U213.	2.18	1.88
Tutors on U213 show no interest in what students have to say.[a]	1.77	1.88

Note. The scores in this table reflect the level of agreement with each item on a scale from 5 (strongly agree) to 1 (strongly disagree). Mean scores greater than 3 indicate broad agreement, whereas mean scores less than 3 indicate broad disagreement.

[a]These items have a negative meaning, and students' responses to these items are reversed before calculating the total score on the Good Tutoring scale.

Study 3

Studies 1 and 2 have shown that students taking the same course perceive online tutorial support less favourably than face-to-face tutorial support. This may well have to do with the extent to which the students' experience of online or face-to-face tutoring conforms or fails to conform to their own conceptions of tutoring and tuition. We therefore decided to explore this issue by conducting interviews with a sample of students who had returned completed copies of the questionnaire used in Study 2. Since the participants were studying on a part-time basis, had many competing commitments and were located at a geographical distance, the interviews were carried out by electronic mail. This provides an environment where participants can comfortably reflect and exchange their views (Mann & Stewart, 2000), offering the researcher a rich source of qualitative data (Kivits, 2005). It is particularly useful in situations where sensitive issues are being explored and where confidentiality is paramount (McAuliffe, 2003). The use of email enabled the interviews to be structured in an 'epistolary' manner (Debenham, 2001), so as to build up rapport and encourage disclosure.

Method

A random sample of 140 students drawn from the 209 who returned the questionnaire in Study 2 were contacted by email and invited to participate in follow-up interviews;

40 students responded but only 19 completed the entire interview schedule. They comprised six women and two men who had received face-to-face tuition and ten women and one man who had received online tuition. At the initial contact, the purpose of the research was explained, and the students were asked just two or three questions to begin the email exchange. The protocol for the interviews is shown in Table 9. This was used as a general guide, but at each stage the questioning continued until both parties had reached a common understanding.

Results

We initially adopted a phenomenographic approach to the analysis of these data (see Marton, 1994), but this has been criticised on both conceptual and methodological grounds (Ashworth & Lucas, 1998; Richardson, 1999), and for neglecting gender issues (Hazel *et al.*, 1997—this consideration is relevant, given the preponderance of female students on the course). A phenomenographic approach also assumes that different conceptions of a phenomenon must constitute a logical hierarchy, but this outcome was not evident from our preliminary results. The approach known as 'grounded theory' (see Strauss & Corbin, 1990, 1994) avoids such assumptions. We therefore employed this approach to address two broad issues. First, what were the students' conceptions of tutoring and did they view *tutoring* and *tuition* differently? Second, what was their experience of the tutorial support that they received on the course?

Most students made a clear distinction between tuition and tutoring. *Tuition* was the teaching of a syllabus of knowledge where instructional designers had the greatest influence on the nature of tutor–student interactions. It was conceived as a more objective, impersonal activity intended to meet the needs of a group, and involving interpretation and assessment of a subject. In contrast, *tutoring* was conceived as a

Table 9. Protocol for epistolary interviews

Question	Purpose
What does tutoring mean to you? What is tuition—is there any difference?	To establish students' general conceptions of tutoring and if they differed from tuition.
What kinds of things do you expect to happen in tutoring?	To establish the range of activities that students might conceive of as tutoring.
How would you prefer these activities to be provided? (prompt: email, face-to-face, online conferencing, telephone).	To establish students' preferences for what mode activities should take and why that might be.
What do you expect your tutor to do?	To establish students' conceptions of the role of tutors.
What do you expect to do?	To establish whether students perceive themselves as being active or passive learners in tuition.
Tell me about your experiences of the tutoring on this course?	To establish the variation of experience of tutoring on this course.

more subjective and personal activity that was intended to meet the needs of individuals, where the students themselves had the greatest influence on the nature of tutor–student interactions. It was pastoral and interactive, involving supporting, counselling and mentoring students aimed at helping them grasp the big picture.

The email exchanges were analysed in more detail to examine students' accounts of their beliefs about tutoring and tutorial support. We identified five distinct conceptions that are summarised in Table 10. These are similar to the four conceptions of tutoring found by Ashwin (2005) in his study of Oxford tutorials, but they include a fifth conception where students viewed tutoring as enabling them to become an expert in the relevant domain and thus to act as professionals. At this level of analysis the five conceptions could be construed as a developmental hierarchy reflecting increasingly sophisticated views about the academic nature of tutoring.

Nevertheless, on further analysis other conceptions became apparent that were neither hierarchical in organisation nor specifically academic in nature. These relate to the nature of the student's interactions with the tutor and with other students, and they are summarised in Table 11. This evidence suggests that the nature of the interactions among the members of a tutorial group is as important an aspect of tutorial

Table 10. Students' conceptions of tutoring

Conception	Explanation
Tutoring where the tutor explains materials the student doesn't understand.	Explaining concepts to the student in a different way; providing greater understanding, providing different examples applied to other scenarios, advice and guidance. Making tutorials relevant to the course material by 'teaching' the course material.
Tutoring where the tutor enables the student to see things as the tutor sees them.	Someone who is there to explain their perception and interpretation of the materials. Someone who enables the student to see things as the tutor sees them.
Tutoring where the tutor helps the student to see the bigger picture by building a wider context of the discipline.	Putting the course in a global context, complement the course by learning from media items. Student contributes their ideas and exchanges those with the tutor and other students, chance to get things wrong as well as right.
Tutoring where the students have a meaningful experience and where students and tutors collaborate to form a new understanding.	A learning experience that is meaningful in the context of the real world—broad and encompassing—with peers and other students as collaborators in the learning experience. Building on constructive thinking and learning together, engaging in academic discussions, coming to a new perspective or viewpoint.
Tutoring that enables the student to speak and think like a professional in the domain.	Enabling the student to express themselves as professionals in the domain, where they know the vocabulary of the domain and how to use it. The student knowing how to construct arguments and engage in academic discussions.

support as purely academic considerations about what tutoring is per se. In particular, personal support seems to be a key component of tutoring for students. One student commented:

> [The tutor should] be personally supportive—this is CRUCIAL for many students, on a level with academic ability, as because of the OU [Open University] ethos many people are new to studying and need confidence and support.
>
> *What kind of support are you talking about? … Can you say anything more about this?*
>
> Even if the OU put in place other areas of support (e.g. student groups, counselling services, online conference rooms) the academic and the personal will always be inextricably linked, and the main responsibility will inevitably fall on the tutor, particularly where students are new to study or returning after a long interval. The scale of course materials and the complexity of some issues may lead to a crisis in confidence, and tutors need not only to understand the course materials but also understand students. Some of this is just down to personality, but enlightened institutions would probably invest in other forms of interpersonal training for their tutors (I don't know whether the OU do this). (Male student, face-to-face tuition)

Table 11. Students' conceptions of the nature of the interactions in tutoring

Conception	Explanation
Pastoral care	The tutor offers support and encouragement, and provides the student with confidence. The tutor develops a personal relationship with the student where the student can talk freely. S/he listens to personal difficulties and provides support when difficult circumstances in the student's private life affect studies. The communication, between the tutor and the student, should be comfortable. The feedback between the tutor and the student should be personalised.
Tutor enthusiasm for the subject	The tutor is positive about the subject using facial and hand expressions to demonstrate their enthusiasm. Tutors use an enthusiastic tone of voice—this can even be detected on emails. They should provide animation and warmth to the subject.
Providing leadership	Tutors should lead the way forward and act as a guide.
Provide constructive feedback	The tutor's feedback must be of a developmental nature—i.e. tutors should provide constructive feedback by presenting conceptual or overarching criticisms as opposed to nit-picking. Prompt feedback on TMAs [tutor-marked assignments] is essential.
Learner autonomy	Tutors should enable the student to have some say in the tutorial content. Tutors should not be authority figures—students don't want an authoritarian tutor.
Initiate group learning/peer group support, initiating collaborative learning	Tutors should enable students to feel part of a group and share in a collective experience. They should encourage personal interaction with other students, setting up study groups (that 'meet' for years), working in groups, being part of a study group, and should enable students to feel part of a community.

The analysis of the students' accounts of their experiences of tutorial support pointed to a number of issues, particularly in online contexts. Many students stressed the importance of face-to-face contact:

> Online in general does not have the same feeling of personal focus/friendliness that email or telephone, or especially face-to-face can have. (Female student, online tuition)

> In my opinion there is no real substitute for face-to-face contact—and in between times, telephone conversation. For me, the personal and immediate feedback and interaction are important. I'm not adverse to any (or all) of the listed means of communication being used, but not as a substitute for personal contact. (Male student, online tuition)

> I found the tutor very supportive and when I was really battling invited me to come and see her or meet her somewhere and just talk. I stopped feeling like just another ID number. (Female student, face-to-face tuition)

The students who had received online tuition were more likely to report negative experiences of tuition than those who had received face-to-face tuition, which confirms the findings of Studies 1 and 2. We asked the chair of the course team for his views on the factors that might contribute to variations in the students' experiences. His view was that this was a combination of poor technical ability and unreliability on the part of a particular tutor (a student who had received online tuition reported feeling abandoned by a tutor who proved to be permanently elusive). However, any practical problems would be exacerbated in a medium where the nuances of paralinguistic communication (e.g. intonation, emphasis and non-verbal cues) were missing. A student's experience in a face-to-face context would probably be less frustrating as the physical presence of the tutor could compensate for any misunderstandings.

Further analysis of the students' perceptions of tutoring revealed that the students had chosen to tell us what they had expected as well as what they had received. The accounts that are summarised in Table 12 combine those aspects that both groups of students reported to be important in tutoring, whether or not these had actually occurred. For instance, some of the students who received online tuition via conferencing had expected tutorials to start and finish at specific times; this reflects their prior experience of face-to-face tutoring, but it negates the value of an asynchronous and collaborative online learning environment. Again, the students' conceptions were neither hierarchical in organisation nor particularly academic in nature: they focused on the nature and organisation of the interactions among the tutorial group and how these interactions contributed to the experience of distance education.

Discussion

This qualitative investigation has shown that Open University students exhibit a number of different conceptions of tutoring. These conceptions lead them to have particular expectations about tutoring, and these in turn affect how they evaluate their subsequent experiences of tutoring. Conceptions of tutoring were similar in students who had received face-to-face tutoring and in those who had received online tutoring.

Table 12. Students' perceptions of tutoring

Subcategory	Definition
	Overall conception: Group Bonding
Friendship	Tutoring support needs to facilitate the formation of friendships with other students. These friendships, whether academic or otherwise, are important for sustaining students throughout their studies. The tutor's role is to facilitate the formation of these friendships.
Interaction with others	Tutoring support needs to facilitate students' interactions with other students on the course. The tutor's role in this is seen as a facilitator who enables purposeful interactions.
Non-verbal communication	The use of non-verbal communication is an important factor in interpreting the tutor's comments and contributions about learning and how they are viewed by others. Additional support needs to be provided where this is missing to help interpret communications.
	Overall conception: Interaction with tutor
Personalised feedback	The tutor's feedback/comments (usually assignment related) to students needs to be personalised and specific to their requirements.
Motivation	The tutor is an important catalyst in sustaining student enthusiasm in a distance education course and needs to inspire the students to help them continue in their courses.
Matched learning and teaching approaches	The tutor's style of teaching should match with the student's approach to learning. Mismatches in these approaches caused poorer perceptions of the quality of the experience.
Learner autonomy	The tutor should provide an environment where students have some autonomy in tutoring. Tutors should not drive the 'teaching' with no input from students. Students want to participate in deciding what kinds of things would be addressed in tutoring sessions.
	Overall conception: Convenience
Travel	Travel time involved in attendance at tutorials should either be minimised or avoided. This has an impact on tutorial attendance and was a reason why some students opted for online tutoring.
Prompt replies	Tutors should respond promptly to student queries and to marking assignments. The speed with which queries and assignments are returned to affects the perceptions of the quality of tutoring support.
Set tutorial times	Tutorials should happen at set times (even for online tutoring sessions).

This is not surprising, since most students will have acquired those conceptions through the experience of face-to-face tutoring in other Open University courses or in programmes at other institutions. However, they may have acquired conceptions and expectations that are inappropriate to online tutoring.

Previous phenomenographic investigations of topics other than tutoring have yielded sets of conceptions that are claimed to represent a logical and developmental

hierarchy. These conceptions are purely cognitive abstractions divorced from a personal context or history. In contrast, our investigation identified conceptions of tutoring with both cognitive and affective components: our students were concerned not only with achieving intellectual goals but also with satisfying their emotional needs. It may be noted that 16 of the 19 students were women, as were both interviewers. Hazel *et al*. (1997) argued that women's voices had been lost from phenomenographic research, and emotions may be intrinsic to women's conceptions of *any* phenomenon. Equally, it may be that male participants are less willing to disclose emotional concerns or that male researchers are less willing to heed such concerns if they are disclosed.

Conclusion

Studies 1 and 2 employed the CEQ, the RASI and the AEF to compare students' experiences of face-to-face and online tuition in distance education. The aims, content and assessment demands of the course were held constant, and so it is perhaps unsurprising that there was no difference in the students' approaches to studying according to the RASI. Nevertheless, the students who received online tuition produced poorer ratings of the quality of tutorial support on the CEQ and the AEF. This was confirmed by the use of epistolary interviews in Study 3. More generally, the data suggested that tutoring was viewed not only as an academic activity but also as a pastoral responsibility that developed and supported students during their course.

Naturally, we need to conclude with the customary acknowledgement of the need for further research. One consideration is that a tutor's role may be crucial in a multidisciplinary course where the students have to grasp concepts, methods and theories drawn from two or more disciplines. The tutors' expertise is unlikely to match the particular mix of disciplines represented in such a course, and so they may be perceived as being less competent in areas with which they are less familiar. In a course that bridges technology and the social sciences, students and tutors with a background in one field may have conceptions and expectations that differ from those held by students and tutors with a background in the other field.

An issue that needs to be addressed is the nature and organisation of the interactions that occur in tutorial groups. This is especially important in the case of online contexts, which are severely impoverished from a communication perspective. Both tutors and students need to be trained to compensate for the lack of paralinguistic information through explicit verbal cues. Moreover, many students come to online tuition with inappropriate expectations that undermine their opportunity to exploit fully the advantages of working in an asynchronous and collaborative learning environment. The present findings suggest that students would benefit from prior supervised experience of an online tutoring environment.

A related issue is that of tutors' conceptions of tutoring and how they approach their role in an online environment. Some students certainly felt that there were problems with the interactions that they had with their tutors. In many institutions, staff

development activities focus on the technical aspects of online tuition rather than its communicative or pedagogical aspects. There need to be training opportunities concerning effective online communication and how students make sense of interactions in the absence of non-verbal, paralinguistic cues. In short, our results suggest that there is much work to be done in helping students and tutors to understand the nature of online communication and how to achieve effective online interaction before online tuition can be deemed to be as effective as face-to-face tuition.

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