

Student perspectives on videoconferencing in teacher education at a distance

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This article reports the findings of a small-scale study exploring student views of the videoconference as a teaching and learning tool in teacher education. The context of this study is a distance education course, run primarily through videoconferencing, for prospective primary school teachers. The use of videoconferencing in this area has not yet been the subject of significant research and so the study aims to make a contribution to the field.

The study is part of an ongoing action research project, aimed at improving the quality of the course in question. Taking account of literature on the videoconference format in distance education, the project used a questionnaire to gather student views of the perceived effectiveness and value of videoconferencing, with a particular emphasis on issues relating to teaching approaches and the active engagement of the learner. The article highlights some key findings regarding the efficacy of the format from a student perspective and raises some issues for future pedagogical practice.

Keywords: engagement; interaction; pedagogy; teacher education; videoconferencing

Introduction

Videoconferencing is a well-known facility, used in business and now increasingly in education, for bringing together – synchronously, visually, aurally – parties otherwise separated geographically. In the study reported in this article, it has been used as part of a distance education pathway, in an initial teacher (graduate) education course, which allows students to live, study, and undergo school placements in their home areas, while accessing teaching input primarily via videoconference from the campus centre. It is thus considered to be of benefit for those students who have personal circumstances which would make spending time (a full academic year) away from home on campus impossible or extremely complicated. In the Scottish context which is the focus of this article, it is also useful for those undertaking a Gaelic-medium initial teacher education course as it means they can remain closer to a range of suitable schools for placement in the Gaidhealtacht (main Gaelic-speaking area), and close to Gaelic-speaking teachers or others who carry out placement visits and classroom assessments.

The course in question required that, apart from school placement and classroom experience, all other elements – normally lectures and tutorials for the on-campus cohort of around 500 students – should be offered separately by videoconferencing to these off-campus students.

The nature of the medium, however, creates certain challenges for the teacher and the learner, not the least of which centres on the question of the most appropriate pedagogy for the context. The lack of physical contact between the parties, the absence of shared space, the lack of, or

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limited prospects for, alternative supportive learning contexts, all contribute to challenges for pedagogy. However, distance education also involves crucial affective elements. Relationships between teacher and learner, and between learners from disparate sites, can be important issues. This aspect of videoconferencing involves ‘social presence,’ which is ‘the degree to which individuals perceive intimacy, immediacy, and their particular role in a relationship’ (Belderrain, 2006, p. 149). When more than one participant is involved in an educational interaction there is the potential to produce this social presence: the sense of being together with others and having a sense of engagement with them (Biocca, Harms, & Gregg, 2001; Hills, 2005). Face-to-face interaction is judged to be the supreme example of social presence, while mediated relationships – such as in videoconferencing – can be diminished through the absence, or impairment, of vital aspects such as body language and facial expression (Short, Williams, & Christie, 1976).

This study, therefore, sought to examine both pedagogical and social issues pertinent to videoconferencing, as seen from the student perspective. The motivation for the study was the desire to improve practice and provide a better quality of learning experience for students.

By combining student views, as expressed in this study, with evidence from research in this area, it was hoped that improvements could be effected.

Benefits of videoconferencing

The introduction of the videoconference facility to the education system some 20 years ago was quickly recognised as having the potential to address a number of issues facing higher education. Its perceived benefits can be summarised in terms of access, cost, and interaction.

Access

Videoconferencing became a popular method with campus-based universities who were previously unable to reach their students effectively in far-flung areas. Where geographical isolation had been a problem, the videoconference promised to bring new opportunities and options. More generally, recent changes in the nature and size of the university population will necessarily create a wider range of particular circumstances and so greater flexibility of provision – away from a simple campus-based model – may need to be investigated (Knipe & Lee, 2002). Videoconferencing, in so far as it supports distance education, may be an important factor to consider in alternative patterns of teaching and learning.

Remote access to expert input or opinion has also been cited as a benefit of the videoconference (Laurillard, 2002, p. 156). This is not only academically advantageous for learners but is also an economically efficient way for institutions to provide quality staff–student contact.

Cost

Videoconferencing not only allowed US state universities to address their ‘mandate for equal access to citizens wherever they were located in the state,’ but it also provided them with a cost-effective way of doing so (Bates, 2005, p. 180). This is particularly true of medical or scientific courses, where distant students can access by videoconference laboratory or clinical experiences which would otherwise be hard for them to witness or take part in without expensive duplication.

Interaction

Compared to other methods of distance education, videoconferencing has promised benefits in terms of real-time interaction, immediacy, motivation, and collaborative learning (Bates, 2005;

Brown & Liedholm, 2002; Guri-Rosenblit, 1999; Rosen, 1996). The great improvements brought by bandwidth links mean that the quality of video is now such that it removes many of the issues of facial expression and body language which previously limited the degree of 'social presence' possible in the videoconference (Hills, 2005; Ryan, Scott, Freeman, & Patel, 2000; Smyth, 2005). Learners together at a remote site can experience particular social benefits to aid their learning. There is the sense of togetherness and shared experience, a camaraderie which can help offset the particular danger of attrition where students study both remotely and individually (Bates, 2005; Wheeler, 2005; Wheeler & Amiotte, 2004).

Further social advantages from interaction have often been claimed for the videoconference. This has been most marked at primary or secondary education levels where it has been used to bring together children and young people from very different linguistic, social, and cultural backgrounds. There is a considerable body of research evidence which points to the benefits of mutual understanding, broadened awareness, tolerance, and new insights, afforded by videoconference interaction of this kind (Abbott, Austin, Mulkeen, & Mecalfe, 2004; Austin, Smyth, Mallon, Mulkeen, & Metcalfe, 2004; Cifuentes & Murphy, 2002; Comber, Lawson, Gage, Cullum-Henshaw, & Allen, 2004; Jones & Sorenson, 2001; Lewental & Kress, 2005; Martin, 2005; Martinez & MacMillan, 1998; Payne, Gooday, Coutts, Duncan, & Wolfe, 2006).

Challenges of videoconferencing

Perceived problems of the videoconference in educational settings can be summarised as relating primarily to issues of flexibility and pedagogy. A fundamental problem of the videoconference is the inflexible reliance on technology so that in cases where 'live' technology fails there is often no obvious fall-back alternative which can be employed immediately. Videoconferencing also does not enhance the element of student flexibility which distance education traditionally is held to foster. This is because the technological logistics, currently at least, require that distant students have to be present at a site, at a set time, to access locally the programmes coming from a distant provider (Bates, 2005, p. 180) – unlike some online courses, which permit users to access materials whenever they wish. While this may have particular advantages – for example, in terms of peer support for distant learners – it does obviously restrict the autonomy of the learner.

One of the reputed pedagogical problems of the videoconference may stem from the limited way in which it can be perceived. Certainly, early evidence did point to videoconferencing being dominated by the lecture format (Dallat, Frazer, Livingston, & Robinson, 1992; Freeman, 1998; Mason, 1998; Oliver & Reeves, 1996). It is thus susceptible to all of the reputed drawbacks of that mode of teaching (Bates, 2005). Even a recent study suggested that the videoconference 'invites the delivery of lectures' but in an inferior way: 'videoconferencing as a medium offers less than the lecture in terms of pedagogy, and wins mainly on the logistical value of bringing people together across a distance' (Laurillard, 2002, p. 158). However, this very restricted view of videoconferencing has been challenged by demonstrating how the medium can be used in different ways to increase degrees of constructive pedagogy, interactivity, and learner-centredness (Smyth, 2005).

Issues about the limitations of the videoconference also need to be seen in the light of the wide literature base which points to the need for training tutors to make best use of it, and the need for them to adjust and plan for its strictures. The learner in a videoconference setting has needs, and faces challenges, of a distinct type. Simply transferring 'live' classroom approaches to the videoconference suite is seen as inadequate (Atkinson, 1999; Badenhorst & Axmann, 2002; Bates, 1992; Burns, 2002; Harry, 1999; Martin, 2005; Mehrotta, Hollister, & McGahey, 2001; Mortera-Gutierrez & Murphy, 2000; Ryan et al., 2000; Smyth, 2005).

Two decades ago, Garrison (1989) raised the fundamental point, questioning if distance education should be understood in the same terms as face-to-face classroom teaching, or if it required a wholly different conceptual model. With the developments in videoconferencing technology since, and its future potential, that question is as pertinent and demanding now as it was then. Nevertheless, any idea that some dramatic pedagogical revolution is necessary for the videoconference to be an effective medium is not supported by the extensive review conducted by Darabi, Sikorski, and Harvey (2006). They concluded that ‘pedagogical and logistical roles of distance education instructors are satisfactorily performed if they are technologically experienced and keenly aware of the significance of interaction as the building block of distance education’ (p. 115).

Again and again the literature points to effective interaction as the key to successful videoconferencing in education, although only sometimes is the required theoretical underpinning for this aspect of constructivist thinking fully provided (Bates, 2005; Fardanesh, 2002; Mason, 1998, Offir & Lev, 2000; Ryan et al., 2000; Smyth, 2005). Yet interaction in the videoconferencing medium is not without its challenges. Even where there is only one remote site there are difficulties in establishing an effective teacher–learner relationship at a distance and in establishing effective interaction for learning. Multi-site videoconferences exacerbate these issues: even the addition of a third site has been found to add significantly to complications both technological and pedagogical (Payne et al., 2006). That said, it should be noted that some institutions have vast networks: the state of Georgia, USA, has a multi-site videoconferencing system consisting of 400 locations and multi-point bridging which can connect together up to 16 sites at a time (Bates, 2005, p. 184). Nevertheless, there is considerable evidence of problems. Where there are many individuals involved, the camera may not identify the speaker readily in an interactive setting and so others may need to rely on voice alone, which is limiting. Without a tutor present, the sense of interactivity at a remote site may be reduced, and while some students can be highly engaged and involved in their learning, it is possible for others, even at the same site, to be inactive and inattentive for long periods with impunity. Reticent students may find it easier to ‘disappear’ in the remote setting than in the normal classroom setting. The quality of interaction in videoconference settings is also questioned as it may often be of a social or didactic nature rather than cognitive interaction to promote higher order thinking. As has been noted, this social interaction is vital to *support* learning but it may not be enough to *promote* learning (Abbott et al., 2004; Bates, 2005; Knipe & Lee, 2002; MacKinnon, Walshe, Cummings, & Velonis, 1994).

Research questions

These pedagogical challenges are particularly acute for teacher education courses because there is an expectation, at least, that their quality of teaching should be a model of good practice, since the medium is also part of the message. Such courses have not been the subject of much attention in terms of videoconferencing research and it is this gap which partly motivated the study that is reported in this article.

Concern had been expressed, by tutors on the course at the centre of this study, that the student experience was not as enriching as it could be. This was based on an outlook that was sympathetic to a social constructivist view of learning and a consequent awareness that some of its key principles had not been greatly in evidence in the way videoconferencing was being utilised. Student evaluations from previous years had also indicated some dissatisfaction about videoconferences being dominated by teacher monologue, with students often remaining largely passive and inactive.

From the research literature, two main issues for videoconferencing were extracted as being of significance in the context of this study: teaching approaches and active student engagement.

If it is accepted that both of these factors are important for learning, then what do students think of this, and how do they think it could be best addressed within the videoconference format? As the motivation for the study was to improve videoconference practice generally, it was judged that these specific research questions should be probed in the questionnaire in a less direct way than might otherwise have been expected. There was a strong desire that matters of student concern and other pedagogical options, unforeseen by the researcher, should have the opportunity of being raised in participants' responses.

Methodology

This study focused on the experiences of students following a one-year graduate course in initial teacher education for the primary sector. The course had 30 students at three remote sites. In the course of the year three students withdrew, leaving a total cohort of 27: 14 at one site; seven at another; six at the third. A reply-paid questionnaire was used for data collection from the students. They had been told about the study during the videoconference sessions, it was the subject of an entry on their shared student website, and they were also collectively and individually emailed about it.

The questionnaire (see Appendix) comprised 15 open-ended questions, some with sub-headings. This method was chosen as 'live' interviews were not an option given the distance learning context. Telephone interviews could have been possible but were judged to be too difficult to manage given limited staffing. The more qualitative approach was important because more detailed views were sought and these could not have been provided by a closed questionnaire with structured tick-box type responses (Silverman, 1999, p. 10).

Of the 27 questionnaires issued, 15 were returned. All participants provided informed consent. Confidentiality was guaranteed as the questionnaires were completed anonymously, and any participant could withdraw at any point, although none did.

The questionnaire was in two main parts: the first part comprised five questions which probed the students' general experience of an off-campus, distance education course; their reasons for choosing such a course; and their perceptions of its advantages and disadvantages. The second, more extensive block of questions probed the students' experience of the videoconference itself and their perceptions of its strengths and weaknesses. Some questions probed a very limited number of named teaching approaches which had been suggested by tutors, but others were open enough to allow students more latitude in their answers. There was also a final section which encouraged participants to raise any other points not covered.

Responses were collated and analysed using a hermeneutic spiral, an iterative process drawn from grounded theory where the data is repeatedly reviewed for key words, themes, and patterns (Brooker, Macpherson, & Aspland, 2001; Strauss & Corbin, 1990). No computer software was employed in this process. Although some common issues were identified, it was important to hear the individual student voice, a selection of which is included verbatim below. While the findings from this study are vulnerable to some degree of contextual skewing, this needs to be understood in terms of the study's place as part of an action research project in a particular place, for particular students, and for particular tutors. Despite that, however, there is no compelling reason as to why elements of the study should not have resonance beyond the local.

Findings

The distance education experience

Most students identified being able to remain at home for the year, and being better able to manage family and parental commitments, as their reasons for taking the course by the distance

education option. Despite the strain for some students of repeated ferry journeys and nights away to access the videoconference facilities, ease of travel was another factor commonly cited. In terms of anticipated and actual benefits of the distance education course, most again referred to the minimal disruption to family life and childcare arrangements. Another factor which students mentioned was that by having school placements in the area in which they wished to work they would have the opportunity to make contacts with future colleagues and gain familiarity with the local authority's positions on educational issues. Most respondents also referred to the benefits of the small group with whom they worked and the fact that a close-knit, supportive atmosphere developed over the year.

In terms of anticipated, and actual, disadvantages of the distance initial teacher education course there was consensus that they had fewer tutorials; less direct access to, and contact with, tutors; and less access to resources such as library and bookshop. The reduced time spent on some of the elements of the course was also mentioned, and the fact that choice of electives was often restricted for logistical reasons. Travelling time to videoconferencing facilities was also mentioned, as was the related issue of a 'hectic dash' between study centre and childcare facility. Attitudes were varied. Some suggested that they had not 'personally experienced any disadvantages' and 'couldn't think of anything that important as to qualify as a disadvantage, when weighed up against advantages.' However, others reported receiving 'less input,' feeling as if they were not 'a "real" student' and being frustrated by 'disruptions to videoconferencing including unavailability of links on several occasions.'

The benefits of an on-campus course, which the respondents felt they missed out on, were mainly focused on three aspects: access to library and related resources; experience of more lectures and tutorials particularly in some subject areas; and the ability to communicate directly with tutors. Students felt they had avoided certain drawbacks of the on-campus experience, however, such as attending large anonymous lectures lacking interaction, being subject to mass panic about assignments, being away from home and family, and, as one put it, 'being a face in the crowd, instead of tutors knowing your name.'

The videoconference format

The students' general impressions of the value and merit of the videoconference itself were wide-ranging. Some mentioned that without it they could not have undertaken the course – 'a Godsend for rural areas.' Others felt it was particularly suited to 'traditional lecturing purposes' but with more opportunity to ask questions of the lecturer than would be possible in a large lecture theatre. A number of students identified that its value was highly variable, very much dependent on its use by the tutor. Others made mention of poor videoconference suites, which were not conducive to learning, and of frustrations with technical hitches.

The strengths of the videoconference format could be summarised as being largely related to communication. Live interaction with a tutor, immediacy, and having the opportunity to have questions answered in 'real time,' were repeatedly mentioned. 'Having some experience of human contact with tutors which goes some way towards building a relationship within which you feel able to ask questions' was how one student summarised the point. Group interaction, sharing opinions across a small group in a similar situation, and the more personal feel, were also cited.

The perceived weaknesses of the videoconference medium were varied. Certain aspects of the technology were identified as drawbacks, such as the time delay, background noises from a site not on 'mute,' and other technical hitches. Although interaction was seen as a strength of the system, it was seen as limited: 'interaction could be slow and disjointed involving all four centres' and some found it hard to concentrate when the focus was on another site and where the

speaker may not have been visible. The approach of some tutors was also seen as problematic, particularly ‘poor quality speakers not familiar with the medium.’ Some students were irritated by the behaviour of their less dedicated peers: ‘students are very aware that they are not seen or heard by staff’ and so at a mute site some students had used the time not for following the presentation but for online shopping, emails, and social chat.

Pedagogy and the videoconference

When it comes to the pedagogy of the videoconference, students overall felt that while opportunities for interaction were important to promote engagement, there were definite limits to this. For example, as most students felt that the presence of the tutor was the key strength of the videoconference link, they were not keen on being asked to complete group or individual tasks during on-air time. This, they felt, was a waste of valuable contact time. On the other hand, a 90-minute session dominated by the tutor was deemed hard going, especially if it involved going over previously issued PowerPoint slides or other handouts. However, most students did value the opportunity to view conference material prior to the session.

Pre-conference tasks were found to be helpful in focusing attention on the subject matter of the conference. While individual tasks meant they could be more easily completed, this led to awkwardness during the conference as it was felt to be frustratingly wasteful of air time for the tutor to be checking over each individual’s responses. Group tasks were deemed to be preferable as it was more manageable to organise feedback but, again, there were drawbacks. Not all students participated to the same extent, it was sometimes hard for students to arrange time to work together off-air, and listening to feedback from other sites was often disengaging for a variety of reasons: poor sound quality; often no face to the voice because of microphone sensitivities; and often a lack of perceived need unless the feedback directly required attention from others.

While some viewed the idea of videostreamed lectures provided online, to be viewed privately, as beneficial, leaving the conference for dealing with related tasks, questions, and topics, others felt that viewing videostreamed lectures alone would be very unrewarding and doubted if personal computer facilities were of the required standard to allow home viewing.

Social presence and the videoconference

Most students valued the interaction and group cohesion that developed at their own site; in some cases this being the best thing about the course. As one student stated, ‘Videoconferencing was not to my liking at all but I wouldn’t have missed the closeness of our group for anything’ (Student V).

However, few students felt that videoconferencing allowed for much genuine interaction *between* sites and few felt any sense of togetherness with students at the other sites. Students had valued the opportunity to meet all the others during the induction week at the centre at the start of the course but with so much to take in and everything being new, it was not as socially integrating as it could have been. One student suggested that a further cohort gathering half way through the year would be beneficial to promote interaction and cohesion among sites.

The presence of the tutor at a site as opposed to being at the centre was universally applauded. Firstly, it reduced the number of sites to three and made interaction slightly more manageable, even although at times it was hard for students at the other sites to hear discussions at the site with the tutor. Students also sensed that tutors seemed more comfortable when they were at a student site and therefore better able to pitch their material and adapt it to need. To have a tutor present at their own site was deemed to be the optimal arrangement. Students’ comments on the difference such a situation made included ‘vastly improved’; ‘huge difference

– no comparison really’; ‘incredible difference – they are not a face on the screen and you get to ask questions that you may not have been able to on screen’; ‘vast – it is wonderful to have a tutor in the room with you, as you can ask lots more questions, or others at the site will.’

Students found the presence of the tutor extremely valuable but also mentioned that the off-air times before and after videoconference slots were great opportunities for discussing issues and interacting with the tutor. Students also mentioned that tutor presence kept other students, who may otherwise have indulged in off-task activities of various sorts, focused and engaged.

Student engagement and the videoconference

Overall, students felt most engaged during videoconference sessions which had an element of interaction, where they were actively participating to some degree, where the topic was deemed to be important and practical, where there had been prior tasks to open up the issue. Although PowerPoint slides provided in advance were seen to be valuable, their use as the exclusive focus of a videoconference was not seen as engaging. As one student explained, engagement was linked to the following:

When I know what the lecture is composed of; I have the hard copy of the lecture. When there was focus for learning prior to the lecture. When there is time for questions between PPT slides, when the material is interesting and presented in an interesting nature. When the PowerPoint/other presented material is a focus and not the sole content of the videoconference. (Student W)

Students expressed feelings of least engagement where there was tutor monologue, particularly if in the form of talking over PowerPoint slides already issued, and where interaction was minimal or lacking. Technical hitches and the lack of expertise of tutors new to videoconferencing also were detrimental to engagement. When other sites were giving feedback and where their views were not required to be used as part of another student activity, students found it hard to remain focused, especially if the technical link was impaired. Being sent off to do tasks which could have been done prior to the session or at home was not viewed positively by the students:

It is a waste of time to give students more than five minutes on a task during videoconferencing to feed back ... some video links left you to your own devices whilst still on air. The full use of the connection needs to be made. (Student X)

Timing was the worst aspect. Several tutors were cut off abruptly mid speech just because they did not keep an eye on the time. Being asked to complete tasks during videoconference time was useless. Much better use of time if we could complete any tasks pre-conference. (Student Y)

Conclusion

These findings confirm many of the issues raised in the literature, such as those relating to the benefits of access, immediacy, social presence, and social bonding; the risks of student disengagement; the need for staff training; technological limitations; and reduced flexibility. New perspectives, however, do seem to be offered on four main aspects of the topic: interaction, tutor contact, physical space, and teacher education.

Interaction

The literature points to interaction as the key to successful videoconferencing in education and yet the evidence emerging from this study suggests that students have reservations about its effective use. While the questionnaire did not attempt to probe in any detailed way the different

ways in which interaction can be structured and managed, some general points are clearly evident. Students did not find tasks undertaken, out of tutor contact, during on-air time, to be valuable or worthwhile. Some very brief tasks were recognised as having some worth but students seemed to value tutor–student interaction much more highly than local student–student interaction during on-air time. Periods prior to, or between, videoconferences seem to offer useful opportunities for students to undertake tasks either individually or in groups, which are then discussed or covered during the on-air slot with time for questions and discussion. The reviewing of such tasks needs to be managed carefully as students found this disengaging when there was a trawl through every student or group response. It may be that tutors need to use email or the shared website as ways to review such tasks, rather than taking up too much on-air time on them. Interaction is certainly problematic when there are several sites and it needs to be handled prudently.

The sort of interaction which involves groups independently reporting back to the centre does not seem to be viewed favourably by students. Activities of that sort need to be made inter-dependent or structured in such a way that the listeners have as much vested interest in engaging as the speakers do. Separate, discrete group presentations did not engage other students and were seen as some of the least valuable aspects of the videoconference experience.

Tutor contact

Students seemed to place a higher value on tutor contact during the videoconference, than on issues of pedagogy. It seems that this element of social presence is very important and should be maximised during videoconference sessions. The videoconference was valued most for the opportunities for tutor–student interaction and all students felt the most beneficial links were when the tutor was present at their site, albeit linked to the other two. Obviously, such a scenario undermines the concept of distance learning to some extent; on the other hand, these tutor visits were only occasional but certainly viewed as highly beneficial. The visits are, of course, expensive, but institutions need to balance budgetary concerns against these very strong messages from students.

The literature also points out the importance of social and academic support through such tutor contact for lowering rates of attrition and reducing student stress.

Physical environment

The fact that a site is used for the videoconference link does have other implications. Students felt that the physical environment needs to be conducive to learning and to studying. Drab surroundings and lack of natural light and facilities were all cited by some students as affecting their experience.

Teacher education

The distance education pathway allows students in initial teacher education to undertake placements in schools and with colleagues within the local authority area in which they intend to work. This was viewed as very important by students, and not just those undertaking the Gaelic-medium version of the course. It thus raises potential professional benefits which higher education institutions and local education authorities may wish to explore and develop in partnership further.

Not least because of the rapid pace of technological change, institutions and staff need to keep monitoring their use of the videoconference format to make sure that it is being used in an

optimum way to promote student learning and to enhance significantly the distance education experience. It is clear from these findings that improving videoconferencing may result in higher costs for staff training, student facilities, and travel for tutor visits.

Finally, as Bates (2005) suggested, perhaps for too long we have viewed the classroom as the default pedagogical environment, the standard against which all other innovations are measured. It may be, as technology develops and educational institutions evolve, that we find – in the videoconference and in other forms of communication technology – methods of working which will enhance teaching and learning in ways far superior to the traditional, classroom model.

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Appendix

Questionnaire: videoconferencing in initial teacher education

A. *The off-campus course*

1. What were your main reasons for opting for an off-campus course?
2. What benefits did you anticipate experiencing from an off-campus course? What benefits have you experienced in fact?
3. What disadvantages did you anticipate? What disadvantages have you experienced in fact?
4. What beneficial aspects of the on-campus experience do you imagine you have missed out on?
5. What disadvantageous aspects of the on-campus experience do you imagine you have avoided?

B. *The videoconference*

6. What is your general impression of the value and merit of this medium?
7. What would you say were the main strengths of the medium?
8. What would you say are the main weaknesses of the medium?
9. Comment on your view of the following teaching approaches to the videoconference medium:
 - a. Tutor-led presentation (with opportunities for questioning)
 - b. Pre-conference individual tasks discussed and checked by tutor during videoconference
 - c. Pre-conference group tasks with reporting back/discussion during videoconference
10. Would videostreamed lectures available for viewing on *First Class* be an improvement, with videoconferencing allowing any follow-up questions/discussion?
- 11(a). How well do you feel the videoconference allows for effective interaction with students at the other sites?
- 11(b). To what extent do you feel a sense of togetherness with students at the other sites?
- 12(a). What difference is there when the tutor is at a student site for the videoconference as opposed to on-campus?
- 12(b). What difference is there when the tutor is at your site for the videoconference?
13. In what circumstances are you most engaged during a videoconference?
14. In what circumstances are you least engaged during a videoconference?
15. Please add any other comments which have not yet been covered.

Note: Original spacing for answers removed.

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