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Interprofessional Learning Research Programme: Pre-qualifying curriculum evaluation

Study 2 Learning together on-line: student and staff experience of interprofessional on-line groups

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Summary

- Researchers analysed data from 48 students participating in 10 on-line groups undertaking Interprofessional Module 3 during Autumn 2003 and Spring 2004. Data included student communications on discussion boards, interviews and responses to e-mailed questions.
- Student and facilitator participation in groups varied. Facilitators contributed from 7.7% - 18.4% of group communications on the discussion board. The 48 students made between 9 and 67 individual contributions.
- In most groups students generated a supportive group climate. Leadership could be seen in varied ways, including taking initiative in completing tasks.
- Many students were apprehensive about studying on-line and as a result the majority of postings on the discussion board were about the IT process.
- Advantages of on-line learning were identified as gaining IT skills, flexibility, having time to respond and avoiding intimidating aspects of face-to-face groups.
- Disadvantages were identified as lack of social 'cues', isolation and costs.
- Students appreciated the well designed assessment but found critiquing each others' work difficult. Although students valued the peer review process as a learning experience, there were few examples of providing constructive criticism.
- Students' professional background rarely featured in on-line discussions. Students learned about other professions through reading each others' assignments.
- Facilitators structured the work of the group by creating forums but facilitators' practices varied considerably in providing support and direction. Facilitators' encouragement was important to all groups.

Introduction

The Faculty of Health and Social Care introduced a pre-qualifying interprofessional curriculum for all ten of its professional programmes in September 2000. A research programme evaluating the curriculum (with a focus on the interprofessional modules) began in September 2001, involving two cohorts of students (September 2001 intake and January 2002 intake). One study in the research programme (study 2) explores the student experience of learning in interprofessional groups. In years one and two, the students learned together in face-to-face interprofessional groups. In year 3 students worked together on-line, sharing and discussing their work through a discussion board. Students worked in groups of seven to nine and the on-line environment provided Hartpury based students the opportunity to work with students from the range of professional disciplines based on the Glenside campus. Six professional groups were represented in the groups following the module in the autumn of 2003 (adult nursing, children's nursing, learning disabilities nursing, mental health nursing, physiotherapy and midwifery, from the September 2001 intake). Five professions were represented in the module delivery in Spring 2004 (adult nursing, mental health nursing and children's nursing from the January 2002 intake and radiotherapy and diagnostic imaging from the September 2001 intake). At the time the research was conducted social work students completed their diploma level professional preparation after two years and hence their programme did not include the level 3 on-line interprofessional module. Occupational therapy students followed a four year part-time programme. These students were not taking the module at the time of the research.

The module team have published a paper explaining the rationale for and organization of the module (Hughes et al 2004). The design of the level 3 module aimed for congruence with the earlier face-to-face modules, and therefore incorporated the ideals of Enquiry Based Learning (EBL), in which students are presented with a trigger to stimulate learning and encouraged to bring evidence of this learning to the group for wider discussion (Barrett et al 2003). This process ideally generates further learning, so that an iterative process is established in which individual student learning contributes to and arises from group discussion. An obvious factor essential for the success of this process is the engagement of individuals in the group process. Students were required to post two briefing papers concerning user involvement and protection of the public within health and social care services on their group on-line discussion board. After the posting of the first paper, the facilitator steered discussion towards academic criteria for level 3 work; the group was then

required to formulate criteria for critiquing briefing papers. After the posting of the second paper, each individual had to critique another student's paper following the group's critiquing framework. All student responses had to be posted on the group discussion board, necessitating individual input into the group activity. This process comprised part of the formal assessment requirements, a feature which ensured individuals' active participation in the module (Hughes et al 2004).

The research team sought and gained ethical approval for the study of student learning in on-line groups from the Faculty and University ethics committees in September 2003. Recruitment difficulties necessitated a reapplication in December 2003 to approve a change in the sampling method and the consent process. The recruitment of groups and students into the study began with the research team providing facilitators with information about the study and asking facilitators if they would be willing for their groups to be approached with a view to participating in the research. One of the aims of the study of student experience of the interprofessional module is to explore the experience of some students during their three years of study. The module team generously supported the research aims by organizing the student groups so that students who had participated in the face-to-face research groups were included in groups supported by facilitators who were willing to participate in the research. Students were invited to participate in the research during the face-to-face module induction sessions held at Glenside and Hartpury and via information posted on each group's discussion board. Students willing to participate in the study were asked to complete an on-line consent form. The research team had hoped all students in some of the groups would consent to participate but students consenting to participate came from across the groups. In none of the groups did all students agree to be part of the research. Groups were therefore selected into the study if at least half of the students consented. All contributions to the group discussions from the non-consenting students were deleted from the discussion board by the research administrator before researchers began analysing the discussion board data.

The research team gathered data from 48 students participating in 10 on-line groups. Seven of these groups undertook the module in Autumn 2003 and 3 in Spring 2004. In this report, groups are identified by the letters Q-Z. Students are referred to by their group and their profession. Students interviewed about their experience in face to face groups are also identified by the face to face group code.

The research team, Brenda Clarke, Caroline Laphorn, Margaret Miers, Katherine Pollard, Judith Thomas and Ann Turtle shared the varied tasks of data collection, organization and analysis.

Methodology

The overall research programme adopts the principles of realistic evaluation (Pawson and Tilley 1997), an approach which draws on realism's generative approach to causation. In realism causation is seen as acting internally as well as externally. Interventions (such as interprofessional learning opportunities) have transformative potential within certain contexts (or social structures). The effect of an intervention depends on context and hence the context of an intervention must also be an object of study. Realist explanation, therefore, is based on the proposition that causal outcomes follow from mechanisms acting in contexts. A realist approach to evaluation has to study mechanisms, contexts and outcomes. The realist evaluation cycle involves framing theories which identify and explain regularities, deriving hypotheses concerning what might work for whom in what circumstances, testing these through multi method data collection and analysis, which can then inform further generalisations and lead to revision of theory and new hypotheses. Within this approach the research team adopted a case study methodology to explore student experience of learning in interprofessional groups. The case studies will give us opportunities to ask what works for whom in what circumstances. This report, however, draws from data from all 10 groups to explore the main themes. As with the study of face-to-face groups not all the groups will be able to be used in a case study analysis as data sets are incomplete.

Data Collection

The aim was to collect data as follows:

- From the discussion boards. The discussion boards for the duration of the module were downloaded as Word documents. Contributions from non consenting students were removed and all student and facilitator contributions were anonymised by assigning each individual a code.

- Interviews: Interviews with 1-3 students from each group, 20 in total. Students who were interviewed about their experience of learning on-line and had already been interviewed about their face-to-face interprofessional learning experience are identified in this report by both their on-line code and their face-to-face code. Facilitators were interviewed after the module ended. Interviews were recorded and transcribed.
- Responses to e-mailed questions sent to all participating students at the end of the module delivery: The initial plan was to attempt to organise an on-line focus group at the end of the module, but this proved to be too time consuming to arrange for both the research team and the learning technologists supporting the module.
- Questionnaire data: The majority of the students completed the UWE Interprofessional Questionnaire. Data from the relevant groups have not been analysed for this report, but may be included in subsequent analysis of groups selected as case studies.
- Students assignments and Briefing Papers: Analysis of assignments completed by students in the research groups will be included in the analysis of case studies.

Analysis

The core group of researchers (BC, MM, KP, JT) developed a framework for analysis after thematic analysis of data collected from four of the groups taking the module in Autumn 2003. The four main identified themes were the same as the themes that emerged from the face-to-face group data. A set of sub themes under each broad area were identified and the themes and sub themes provided the framework for analysis for all groups. Caroline Laphorn and Ann Turtle joined the core team in preparing reports about each group. In addition to the thematic analysis, the level of participation from each group member, students' pattern of logging on over the day, during the week and over the duration of the module were all summarised using descriptive statistics and graphs. The four main themes structure this report.

Group environment and interaction

Participation and pattern of logging on

The 48 students across the 10 groups made between 9 and 67 individual contributions to the discussion board (see Figure 1).

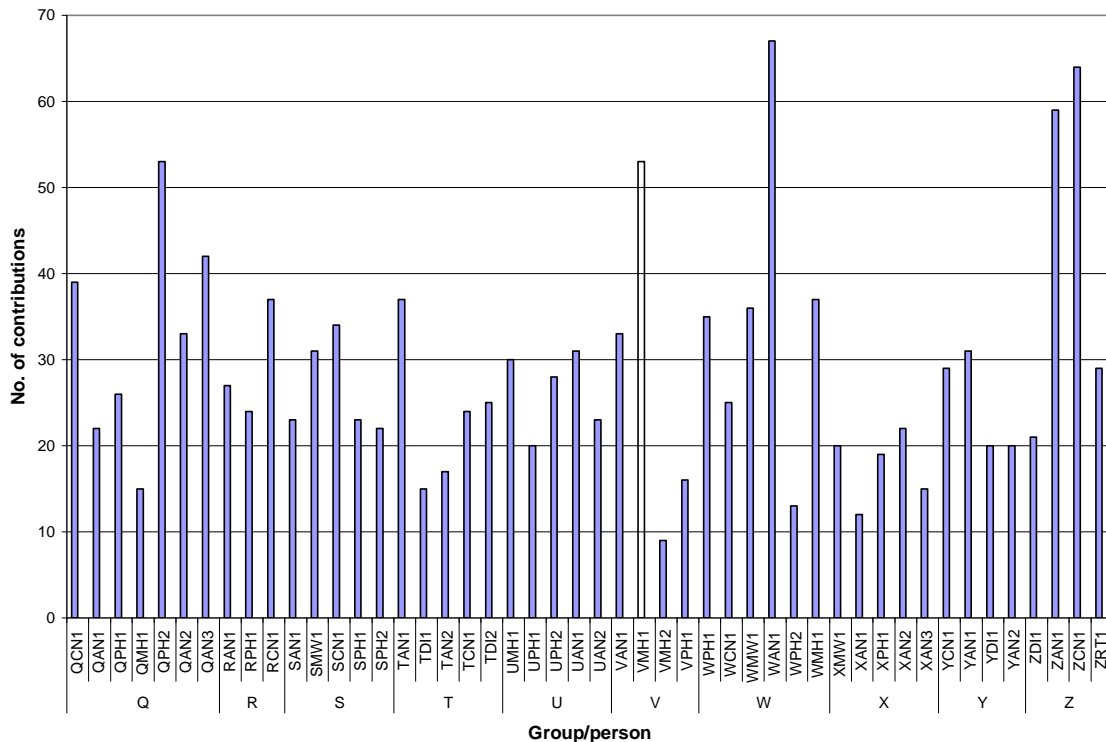


Figure 1 – Number of individual contributions by students

Facilitators also varied in their level of participation, making between 19-54 contributions to the discussion board (19; 20; 28; 31; 39; 41; 41; 42; 46; 54). Facilitators contributed from 7.7% - 18.4% of group interactions on the discussion board. It is important to note that a simple count of contributions does not indicate the quality and significance of the contributions but only the number of times group participants actively engaged with other students by indicating their presence on-line.

Overall students who did not consent to the researchers viewing their contributions were less participative than students who consented. In group W, for example, the two non-consenting students contributed only 13% of the discussion board entries and in group Q those not consenting contributed only 9.8%. In group X, one non consenting student contributed only 3 messages. In groups Y, V and T, however, non consenting students made more than half of the discussion board contributions (54%, 55.8% and 50.6% respectively). In group V one of the students who did not consent to involvement in the research was a particularly active group member. Across the 10 groups the percentage of the contributions from consenting students and facilitators ranged from 52.2% to 91.6%.

The overall activity of the groups (as measured by number of contributions) varied considerably, with one group (X) posting only 172 messages and another (group Z) posting 339, almost twice as many (see figure 2).

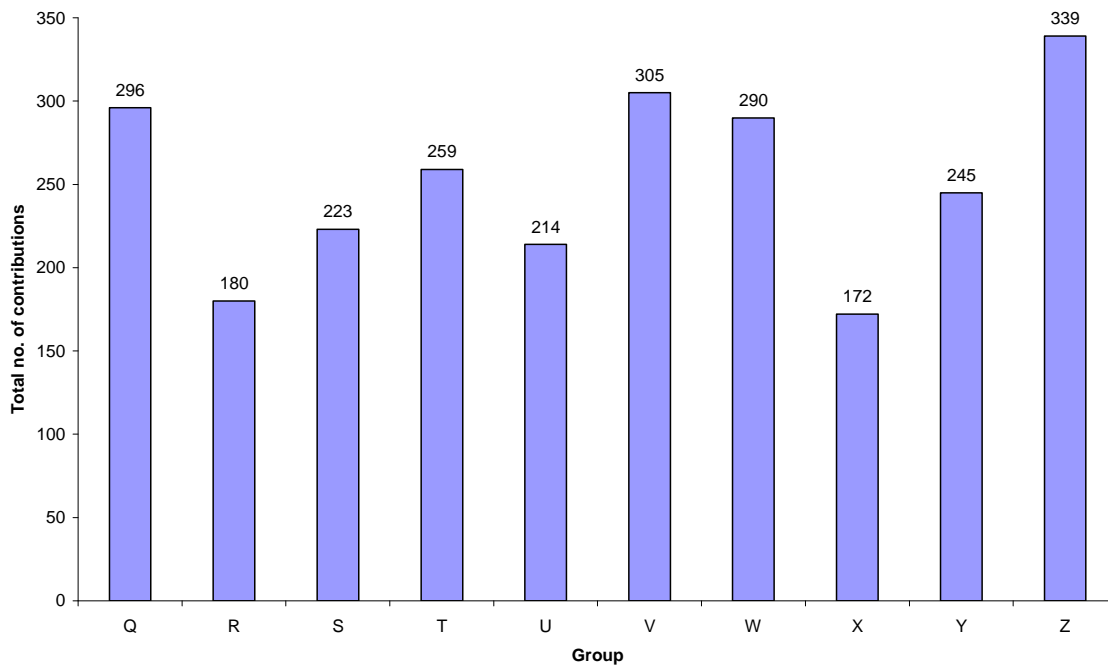


Figure 2 – Number of group contributions in each group

In group X, only 3 students made 20 or more contributions and the maximum number of contributions from a student was 22. (The facilitator posted 31 messages). In contrast, in group Z, 3 students (two research participants) posted more than 50 messages.

Eight of the research participants were male, 40 female. In two groups (R and W) a male student posted the most messages and in U two male students ranked 2nd and 3rd in terms of

number of contributions. In contrast, in 2 groups (T and Q) the sole male student in the group made fewest contributions. (There are similarities here with the face-to-face groups where male students played lead roles in some groups and participated little in others.)

Analysis of contributions by age suggests, perhaps surprisingly given frequent concerns about IT literacy amongst older age groups, that the oldest students were the most participative. Whereas only 9 of the 48 consenting students were 41+ years of age, 6 of these students were in the list of the top 10 contributors amongst the 'research' students, ranked by % contribution to their group. These 10 students contributed between 17% and 23% of their groups' messages.

For all groups, interaction took place over a 10 week period with some groups getting going earlier than others and all groups sustaining active discussions over approximately six weeks. The pattern of interaction throughout the week was varied, with Friday being the most popular day for logging on in the majority of the groups. Few participants used the flexibility of study time to log on at the weekend (see figure 3). Logging on in the evenings, however, was popular.

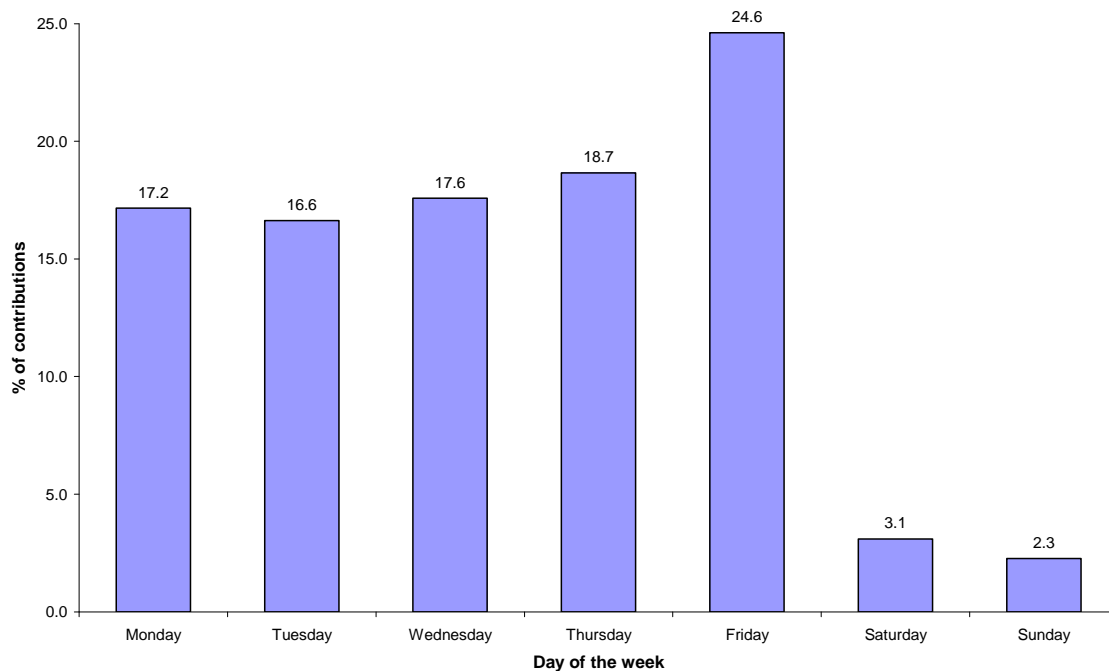


Figure 3 – Percentage of contributions made by consenting students and facilitators by day of the week

Ground rules

Facilitators usually prompted the groups to set ground rules. The groups were accustomed to setting ground rules and hence the process seemed to be effectively accomplished and generated little debate. Some groups discussed ground rules at the face to face meeting which took place at Glenside at the module induction prior to the group interacting on-line. In group V the facilitator asked a student how they saw 'punctuality' applying in an on-line environment, suggesting that some students needed prompting to think about the difference between working together on-line and face to face. As with the face to face groups there was little mention of ground rules as the discussions developed and the ground rules were not referred to in order to support group functioning. In one group a student suggested adherence to ground rules was more difficult to support in an on-line environment.

'It's been more difficult to abide by them online instead of face to face as it's up to everyone's conscience to bide by them as there is no one to check up on them officially' (R-PH-1 24/11/03)

One of the students interviewed in that group felt that lack of attention to ground rules at the outset was a cause for regret at a time when she wished to challenge others' non-participation:

'Only five of us put suggestions forward; it didn't really seem important and at that point, nobody collated them and posted them as our set of ground rules. We were really concentrating on our first briefing paper. They were never really agreed, and I think they should have been. In hindsight, and if I was ever in that situation again, I would make sure that we did have proper ground rules, something you can refer to as backup in a similar situation.'

(Interview with R-AN-1, K-AN-1)

Across all groups the students identified similar ground rules:

*'confidentiality to be upheld within the group
– critiques should be honest but respectful and -constructive and include positive points as well as negative.*

-everyone should stick to deadlines set by the group.

-people should self nominate for posting and other tasks.' (Q-AN-2; 5.11.2003)

".....no bad language appreciating everyones attempts and efforts." (X-PH-1)

“.....not passing on to other groups information from individuals in ours, respect for others in the language used in communication.” (X-AN-3)

“.....support each other as a group.” (X-MW-1)

“.....respect for all members of the group and anti discriminatory practice.” (X-AN-1,E-AN-1)

“we all need to put in optimum effort because this module means that we all have to rely on each other's work!!“ (X-AN-2)

Some groups raised additional points aimed to encourage participation and group understanding. For example in U one student suggested:

‘telling the group when we next hope to add some work or comments onto the discussion board. This way we have a rough idea of how everyone is doing and what they are aiming to do. Does that make sense?’ (U-MH-1,B-MH-1 05/11/03)

This suggestion was incorporated into the list and the group generally adhered to the ground rules although some members were more specific than others in saying when they would next return to the discussion board.

Some groups tried to negotiate a minimum level of contribution, for example a minimum of 3 times a week (group T), however groups were wary of becoming too prescriptive in their expectations. Group Y raised the possibility of trying to adhere to a set day, but this was not seen as possible at all:

‘It would be good to meet at the same time each week but for me personally this can be hard as my job outside of uni gives me random shifts which are mainly afternoon and evening so morning would be better for me’ (Y-CN-1; 9.3.2004)

Emotional climate

In most groups students generated a consistently supportive climate through their discussion board messages. A supportive approach was developed through introductory comments; ‘sign-off’ messages; sharing of personal information and offering each other personal support for life events; humour; praise and encouragement; and caution about displaying negative emotions or a critical stance in relation to peers. Whereas many groups demonstrated considerable care with language, there was some use of texting notations. In one group (U) use of informal language, spelling and grammar was common, although when sharing

information regarding the task/trigger students reverted to a more formal academic style. The informality may have been encouraged by a message:

"Speling, an Gramer" is not of concern when communicating here, as long as we understand each other.' (U-PH-2, 06.11.2003)

In one group (T) students were particularly solicitous in welcoming Hartpury students to the discussion board, mindful that only the Glenside students had met each other face-to face.

There was surprisingly little use of emotioicons amongst the groups. The facilitator for group U (who reported that she missed the body language cues in on line groups) frequently used symbols, posting ☺ at the end of most of her messages.

Many facilitators provided some personal information in their first posting and some students responded in kind, including some personal information, which helped establish a friendly approach:

'I am married with four children (three at home) and one grandson (Hxxxxx). I have a lucky black cat and a beautiful "big" dog called "Axx" he is a Leonburger. I enjoy plenty of long walks and general socialising' (Y-AN-1; 1.3.2004)

'I enjoy a few moments with my pet snake, he is such a charmer, he is all green except for a few spots of yellow around his neck' (Y-AN-2; 4.3.2004)

Valedictory messages also supported a positive emotional climate, with 'talk to you soon', 'take care', 'good luck' appearing as ending comments in most groups, usually by the same students. Some students ended with 'x' or 'xx', although this convention was rarely used by older students. This rarely happened in one group, prompting a comment:

'Just a small complaint. My friend is recieving kiss crosses at the end of most of his messages from the ladies within the group and i was wondering why this hasnt been established in ours yet!!!! W-PH-1 XXXX (just kiddin' (W-PH-1; 217.11.200)

But not all students were careful to engender a supportive climate through their personal messages. Y-DI-1,C-DI-1 was a remarkable exception. The only male student in the group, his contributions could be seen as inappropriate from the start:

'I'm a diagnostic radiographer ...super and hard-working (as opposed to) the lazy chocolate eating therapist side..... And NAME, you really shouldn't worry about moaning about ip as no one listens to your constant complaining anyway.... I like contact and blood sports and I've never been convicted of touching children... or in fact charged of touching children' (Y-DI-1,C-DI-1, C-DI-1; 2.3.2004)

Nevertheless, the other students in his group continued to make a determined attempt to maintain a co-operative and supportive approach.

Similarly, not all groups were able to generate a positive emotional climate. Group R appeared to interact with each other with more caution than many groups. The facilitator may have unintentionally inhibited the group with an admonition to observe web etiquette in the first posting:

'Can I also remind you of the value of considering web etiquette when you are submitting comments online e.g. careful consideration of what you are saying before you post it, to avoid unnecessary offence occurring. It is also considered to be shouting if you type everything in capital letters, so I would like to think that no one will find it necessary to shout during this module.' (RFAC; 28.10.2003)

In some groups, sharing of personal stresses and life events added to a sense of group cohesion and students sent each other messages of congratulations and condolence as appropriate:

'Sorry to hear about your grandmother NAME, please accept my condolences.'
(Z-RT-1; 22.3.2004)

'Welcome back NAME, congratulations, trust you had a fantastic honeymoon'
(Z-AN-1,O-AN-4; 27.4.2004)

In group V, one student shares personal information alongside sharing stress:

'I have a mouth full of ulcers and cold sores' (V-MH-1 2/12/03)

In response to another student who shares personal details with the group in an e mail entitled 'not doing so well':

'HELP!!! I've been trying to do this BP2 for two weeks – I can't concentrate and I am totally uninspired. I keep catching every cold around and I am tired. Time is rapidly decreasing. I've been reading articles on the nature of public involvement – and some on involving those with mental illness. I think I want to talk about how the public are involved and whether it is effective/achieved – with specific regard to those with mental illness. But like I said, I can't concentrate and it all seem so pointless. Can anyone help? Sorry to be panicky' (V-AN-1,I-AN-2 date...)

Group T provides an example of using humour to raise the spirits of the group:

'my mate wants to know what your stats my single ip buddy' (T-DI-1, 10 03 04)

This was met with:

'your mate wants to know what T-DI-1 i know anyone would think this was the topic "dating". thats a mans comment for you'. (T-AN-2 11 03 04)

'Hey if they will put web access in the student union were there is drink readily on tap..... sorry but if people will put interests and marital status on this board then hey we can have fun and work and the same time he he he ha ha harock on dudes' (T-DI-1 11 03 04)

It should be noted that not all students would appreciate these comments; such comments seem unlikely in face-to-face groups. However praise, encouragement and expressions of gratitude were the main methods of demonstrating support:

'Well done S-MW-1 and S-PH-2 for compiling our ideas' (S-AN-1: 24.11.2003)

'I like what you have done S-CN-1,A-CN-2.' (S-MW-1 25.11.2003)

'Thanx everyone for finishing is all off...thanx for submitting it.' (S-PH-2: 27.11.2003)

All groups were careful to manage their negative emotions:

'P.s. Apologies if I have come across as somewhat grumpy through this message epsecially you U-PH-2 if you feel you have copped it from me. That was not the intention.' (U-MH-1,B-MH-1, 24.11.2003)

This received a positive response from the student concerned:

'Ta for the feedback ch1. I fully understand your explanation for your any appearance of "grumpyness," and rest assured I don't take it personally.' (U-PH-2, 24.11.2003)

Students showed considerable concern about the possibility of giving offence when critiquing each other's work. As a result, some groups were inhibited by their own politeness, which caused some students frustration:

'They were very, very polite, and it just got annoying in the end.....I suppose I was expecting people to become a bit more relaxed as time went on, but it was just hyper-polite, every little thing was congratulated and thanked for, to me it just came across as insincere, and it just irritated me.'
(Interview with R-AN-1,K-AN-1)

However the same student quickly challenged unjustified criticism of her own work, in an exchange that illustrates the importance of care in communicating on line:

'BTW, I am little concerned that you found spelling and grammar mistakes – I couldn't find any and neither did Spell check, so I'd be grateful if you could give me some examples if you have time..... I have a degree in English and always thought I knew where to put commas'
(R-AN-1,K-AN-1; 10.12.2003)

though she also included a caveat and a smiley to mitigate the impact of this:

'(just to put my mind at rest, cos I'm a perfectionist) 😊' (R-AN-1,K-AN-1; 10.12.2003).

R-PH-1 immediately backed down:

'I'm really sorry to have upset you R-AN-1,K-AN-1 it seems it was all a misunderstanding on my part anyway, i was thinking of the of the other NAME'S paper not yours!! Sorry to be such a muppet!! couldn't find any in yours so don't worry i think your English is marvellous!! R-PH-1xx'
(R-PH-1; 11.12.2003)

R-AN-1,K-AN-1 accepted the proffered apology:

'Thanks R-PH-1, B-PH-1 I'll sleep tonight now 😊 R-AN-1,K-AN-1 x' (R-AN-1,K-AN-1; 11.12.2003)

Leadership

Most groups had a few students who could be seen as taking lead roles in the group. These roles generally related to 'posting' the ground rules, and arranging and posting the guidelines for critiquing. In one group, (with a shared leadership) one student (S-CN-1,A-CN-2) seemed to take on the role of group chair, regulating the ethos and timetable:

'S-PH-2 thanks for working out a new forum, I was fed up with list as well, no-one sounds bossy or rude and I don't think we should worry as we are all supporting each other very well so far. Thank you for putting our ideas together S-MW-1, you have covered the suggestion so far, I think the final list will have to shorter. Perhaps some points that are similar put together as a first suggestion 10 points may be enough what do others think. I could meet in the virtual classroom early next week 12.30 one day would be fine if that suits anyone.' (S-CN-1,A-CN-2: 20.11.2003.)

Leadership, however, could be seen in varied ways, for example through refocusing a group's attention:

'I was just reading through the handbook and came across the idea of the Briefing papers showing an element of multidisciplinary work. Can this be incorporated in our critique guidelines? What does everybody say?' (X-AN-3.25.11.03)

There were differing views about leadership amongst participants in many groups, with some students identifying a clear leader and others identifying several students taking a leadership role, or none at all. In group W, for example, one student (W-AN-1,C-AN-2) made the greatest number of contributions and tended to be the pivot as far as group action was concerned but two other students also took the lead at times. W-AN-1,C-AN-2's role was acknowledged by other members of the group:

'W-AN-1,C-AN-2 your an absolute legend and you continue to be a tower of strength within the group. Cheers for all you help and hard work with regard to the guidelines.' (W-PH-1; 27.11.2003)

However, W-MH-1 did not think that there had been one overall leader:

'There was a certain amount of assuming of roles. I don't think there was a leader as such, but some individuals initiated more. It is difficult to lead in that environment. What I wrote about in my essay

which I am sure fits quite well is that no one can march off and 'all follow me!' It is quite a democratising space.' (Interview with W-MH-1)

Students playing a lead role often did not identify themselves as group leader, perceiving the leadership as shared. In R, two students posted 40% of all the student originated messages, but one of these students, in interview, considered the issues of leadership but identified a distributed willingness to take the lead:

'...I thought about it on a couple of occasions cos there's one or two people that kind of, I wouldn't say took the lead but, say put something in before timing wise like the guidelines, and throughout the whole module there was about four of us, five of us who actually put in quite a lot compared to the others, which goes back to sort of, about the people who didn't have the ability to access the actual internet, and I guess it was down to individuals how much work they put into it as well. There wasn't issues of leadership, there was a few people that kind of took the lead but I wouldn't say there was one or particularly one person.' (Interview with R-CN-1)

In one group, the facilitator played an active role and many students kept seeking her help/confirmation *rather than trying to figure it out for themselves or discuss amongst the students and see how it all goes'* (V-MH-1, interview)

The importance of the group completing tasks to a timetable meant that awareness of the schedule and pace of work strongly affected leadership within the group. In one group a particularly participative student was seen as driving the agenda in a dominant way, which forced others to conform to an individual's demands:

*'We did have one quite dominant person who was trying to push everyone to get things done earlier than we had to and there's not much control you have over that'.
(Interview with V-AN-1, I-AN-2)*

This was perceived as:

'.... a little bit kind of irritating to people, but it didn't really get dealt with in the sense that we could just ignore her...and you've got to get the work done and everybody's under so much pressure you just think I can't be bothered to argue about this' (V-MH-1 interview)

In other groups, students saw the link between time orientation and leadership in a more positive light:

'There were a definite couple of leaders within our group who were very time orientated, as in we had to do such and such, by such a date and get it in by such a dateperhaps if the module had gone on longer, it might have been negative, but for the period of time that it was, I think it suited the group to have people motivating the rest of the group.' (Interview with Q-AN-2)

In group U the two male members (U-MH-1,B-MH-1 – mental health and U-PH-2 - physio) took on the lead roles:

'It was definitely the physiotherapist and mental health nurse that led...even when we met for our first session, they were definitely the leaders.' (Interview with U-AN-2,A-AN-2)

U-MH-1,B-MH-1 was the first to post suggestions for ground rules as well as his thoughts on the trigger. U-PH-2 was the next to add his ideas to the discussion board. U-MH-1,B-MH-1 also appeared to initiate discussions about the mini critiques. Although it was U-AN-1,C-AN-1 who initially took the lead with regards to formulating the critiquing guidelines, U-PH-2 later appeared to take over this role. He posted his own list of possible criteria and suggested that the group meet in the virtual classroom to discuss the final group criteria:

'we were struggling to meet and nothing was happening and everyone else was waiting for someone else to stick their head up first, and in the end I did, I blinked first if you like, and sort of put the group into action and arranged this meeting' (Interview with U-PH-2)

Group Y had to deal with the highly unusual behaviour of Y-DI-1,C-DI-1, who made several attempts to take on the leadership of the group, first by setting tasks for the others before four of the eight students had even logged on to introduce themselves, next by setting the date for a meeting in the virtual classroom

'Spending ages discussing it and not doing it, means nothing gets done, and there's not long till the critique guidelines are due, so for god's sake let just get a date sorted. Wednesday seems good for a lot of people...18.00 hrs seems to be a winner as well ...so, any complaints?' (Y-DI-1,C-DI-1; 15.3.2004)

and later, appearing to signal his own superiority by setting the group tests

'Here's something else for you all to have fun with:

$6H_2O + 6CO_2 = C_6H_{12}O_6 + 6O_2$. This is a balancing equation, don't worry....try working out

1. what is it's use
2. where in nature would this reaction occur.
3. what is the catalyst.

'Some of you may find it simple....I'll get a harder one for next time.' (Y-DI-1,C-DI-1; 1.4.2004)

Despite his attempts to lead, another student made far more postings and a third took on the role of group encourager and co-ordinator

'Hi NAME, Glad you're feeling better now, what a thing to happen at this time'
(Y-AN-1; 24.3.2004)

'Hi, NAME, Please would you submit the guidelines for us when you can, before the dateline'
Y-AN-1; 24.3.2004)

The group were able to discuss Y-DI-1,C-DI-1's behaviour in fairly forthright terms, which eventually led to an apology from Y-DI-1,C-DI-1:

'I would like to apologise to anyone who my comments may have offended, I retract my comments totally and unreservedly. I acknowledge that my comments have been out of place and that my jokes are out of context and without humour.

'I would like to think that you are forgiving enough to look past my inadequacies and rise above my previously perceived petty comments. Please accept my apologies and continue on with your work without being hindered by me.' (Y-DI-1,C-DI-1; 5.7.2004)

Despite the difficulties around his interactions, the group perceived themselves as working well together. Y-DI-1,C-DI-1 was able to reflect on his own behaviour:

'I did think I went over the top.....I have a very domineering personality in groups, and umm, I tend to take the lead and maybe talk over other people whose opinions would be valued, which is unfortunate, but because of the online situation, it gave everyone the same voice.....which is fantastic, really, because I think some people's opinions, who I might not have heard because I was talking too loud myself, I actually did get to hear, and sometimes they were quite useful.' (Interview with Y-DI-1,C-DI-1)

Student learning

Managing the technology

Many students were apprehensive about studying on-line and expressed concern about their own IT skills. Others had heard worrying reports from previous cohorts, explaining:

'we'd heard from previous cohorts about this horrendous IP3 where you had to do it online' (interview with Q-AN-3)

Unsurprisingly in many groups the majority of the postings on the discussion board were about the IT process. There were difficulties around posting work on file exchange, whether a file should be posted on the discussion board, how to change the forum thread and how to gain access to the interactive classroom (chatroom). One facilitator acknowledged difficulties with file exchange:

'if students put stuff on file exchange and then override they can lose work. Final submission is difficult – can override. I have had to look for copies. Went to programmes for hard copies' (Xfac interview)

and another facilitator summarised difficulties in relation to gaining access to the chatroom as follows:

'They found that a real barrier, a real hurdle...sometimes spending an hour actually downloading the software to make it work and then got pxxed off because other people didn't arrive and didn't join in the conversations....Some of it was resentment about other people in the group, most of it was resentment about the technology' (Zfac interview)

Students' software on their home computers could be incompatible with the university software, which caused difficulties if they were not aware of this. However groups supported each other in sorting out difficulties and for many, having to overcome their difficulties developed their IT skills:

'Blimey! Just taught myself to copy and paste to discussion board. Wonders will never cease! This module is certainly expanding my computer skills' (Z-CN-1,F-CN-1 15/3/04)

Although some students who found the technical aspects difficult acknowledged their own responsibility for improving their skills:

'I could have done more to address it, but I didn't. I just assumed I could work my way through it' (U-AN-2,A-AN-2 interview)

others were very negative about the experience and critical of the technical support and technical difficulties they encountered:

'I am so annoyed with this module. I have just tried to access everyone's BP2 but it is not letting me. I have also tried to submit mine, but again it wouldn't let me open my disc, whereas it did last time.....'
(V-PH-14/12/05)

A second student joins in:

'yes, I feel exactly the same...I feel that if a course is being run online then it should be running absolutely smoothly. It should not be our responsibility to sort out the technicalities of it, when there are obvious errors...I am seriously thinking of making a complaint' (V-MH-1 4/12/05)

However this level of annoyance was only evident in one group. The more common response was to recognise the value of the experience gained:

'before I did this module I didn't go on the university websites. I didn't even know there was like this Blackboard thing. I didn't do any of that, and so from doing this I did actually go onto the UWE sites and learnt how to use them really, so it was good in that aspect.' (X-AN-1 Interview)

Another student noted more general advantages:

'in terms of every article you have has got an e-mail address for somebody that you could contact, and I think personally I would be more likely to do that in future and ask for information....unless you have to do an online module you don't necessarily pick up the skills do you, so its been really good' (T-AN-1,G-AN-1, 03/06/04)

Perceived advantages of on-line study

Students identified a range of advantages of on-line study. Some liked the asynchronous nature of the discussion board and suggested some students might have avoided the chatroom, choosing the asynchronous discussion board in preference:

'you've got time to respond...that's the beauty of it as well because you do have days between responses, if someone puts a question up on the discussion board, you've got a couple of days to answer it' (R-CN-1, interview)

One comment suggested that the asynchronous nature of the discussion may support participation from all members of the group:

'I think...people would not normally get their comments in because they were quieter. I think everyone was saying something and plus you had more time to think about what you were going to say so it wasn't like you could consider your response and put it whereas in the face to face group you're thinking on your feet and you can get lost in that and you don't maybe express what you mean' (X-AN-1, E-AN-1 interview)

Another student made a similar point, but also noted that a low level of participation is still possible:

'it allows you to gauge your involvement...you can hide away in the group more than you can in face-to-face work...but it also allows the quieter people to come forward' (Y-DI-1,C-DI-1 interview)

Comments reflected perceived difficulties with face-to-face groups:

'it was easier to put point across without the intimidation of doing it in front of a group' (Y-CN-1 7/5/04)

'you can always refer back, a lot easier to control' (Y-AN-1 30/04/04)

Students also appreciated the flexibility of the mode of study:

'I think the advantage is that you can do it when you're ready to do it. It's not like you have to turn up at University for a particular lecture. So I think that's a really good thing...' (interview U-AN-2,A-AN-2)

'It was very useful for somebody like me to be able to work from home and do what I needed to rather than come into UWE for two hours at the rear end of an afternoon, unable to park the car, this sort of thing, weekly for six weeks' (interview with Z-CN-1,F-CN-1)

Some students clearly identified the relevance of the experience for future health care:

'These kind of virtual team are being used a lot more, particularly in hospital environments for multi-disciplinary case conferences and so on' (R-AN-1,K-AN-1 interview)

'...there was a case the other day, somebody was giving a presentation, one of my peers, about a cystic fibrosis patient that she'd been treating and she was saying how they had to see two lads on the same ward and they were kept completely at the end of the ward with issues of cross-infection and things like that, with these people, and immediately you know, if you cant join those people in one real place she could work online to the group situation per se...' (U-PH-2 interview)

Perceived disadvantages

But for others the delay in response was frustrating:

'I just found it frustrating, because you put a message on to the Board and then you have to wait for somebody to get back to you if it's something you don't understand and although the other students were really good and it was a very supportive environment, it's not like being in class or when you meet for coffee before you have a class and you can go through things and you can say to people, "I don't understand that, and do you understand it?" and somebody will explain to you. You often understand it better from another student...' (Interview with U-AN-2,A-AN-2)

A common view was that getting to know each other was more difficult in an online environment. They missed the 'social information' that can be gained from face to face meetings:

'You cannot use your body language and expressions well, which if you have a sarcastic sense of humour could cause problems when tone of voice cannot be detected' (Q-PH-2 17/12/03).

Some preferred face to face contact:

'I still like the personal touch of being able to see someone face to face, to maintain eye contact and interpret non-verbal behaviour so that you gain a greater reassurance of acceptance into the group' (Q-AN-2 20/11/03)

Other students found on line study a lonely experience:

'I feel quite lonely working in this way. I need people around, might work in the library from now on' (U-AN-1,C-AN-1 20/11/03)

There were also criticisms about the cost:

'my internet bill seems unfeasibly large following this module, whilst I have gone through two ink cartridges on the printer. A cheap module for the university!' (U-MH-1,B-MH-1 22/12/03)

Difficulties with access could also bring costs. Those who had no access at home might:

'spend an extra £2.50 on the bus to go over to the campus to do it. If you're supposed to be accessing it every other day, that's a lot of money' (R-AN-1,K-AN-1 interview)

Responsibility for own learning

Students were accustomed to taking responsibility for their own learning and quickly settled into the pattern of work for the module. Although there was some concern expressed about students posting their work later than other students would have the opportunity to incorporate ideas from the briefing papers prepared by students who completed their work quickly, in practice there was no evidence of such a pattern. Nevertheless student contributions to the discussions varied considerably.

Assessment

The module assessment required students to generate a set of critiquing criteria as a group and then use the selected criteria to critique each other's work. Many students praised the design of the assessment. V-AN-1,I-AN-2 liked completing the different tasks and thought the approach encouraged independence. Other students agreed:

'I liked the way that it was structured....the fact that you're individually assessed means that you can almost ignore the group even though the essay kind of depends on how the group works. The fact that we did work better as a group, I think made a big difference' (R-CN-1 interview)

Many students found peer assessment aided their own self assessment and reflection. W-AN-1,C-AN-2 was particularly clear about how she had benefited from the critiquing process:

'when we went through that process, critiquing briefing paper1 and 2, I learned quite a lot from other people, saw their different styles, etc. I realised that academically possibly I'm not as bad as I think I am. It's an eye-opener, quite nerve wracking first of all – tough it'd probably be a lot harder face-to-face, over the computer people can be more honest. I think it was a benefit for me. I learned a lot,critiquing other people's work was really, really good, because when you start looking at the analysis, the evaluating, etc., you start to realize how markers see things, so you get an insight into things' (S-PH-2 interview)

Students expressed great discomfort about critiquing each other's work, however, and many reduced their discomfort by avoiding making any negative comments about colleagues' work. Those who did venture some gentle criticism sometimes sought feedback, perhaps seeking reassurance that no offence had been taken:

'I'd be interested to know if you agree with it or not!' (Q-AN-3 12/12/03)

'everytime I said something negative I felt that it applied to my work as well, so please don't any of you think I am a hypocrite...I know my work had many faults' (Q-CN-3 9/12/03)

'I just want to say that I did not feel at all comfortable doing this, or competent to do it. I hope I have not come across as being condescending in any way...If I have offended anyone it was not my intention' (V-MH-1 6/12/03)

Students commented negatively on their reluctance to offer criticism:

'everybody said I'd really like feedback on BP1 and nobody was giving it' (T-AN-1,G-AN-1 3/06/04)

and sometimes encouraged colleagues who did offer more critical comments than the rest of the group:

'I think that you were right to be more critical than the rest of us S-PH-2, it made me look at mine again, and think I could have included different things' (S-CN-1,A-CN-2 12/12/03)

Those who offered and received constructive criticism seemed to gain most from the experience. Some reflected on this at length:

'It was very hard to critique. I found that very difficult because you're critiquing your peers, and if you have anything negative to say you feel "what right have I got to say anything". And it was hard to take criticism from other people as well, I immediately felt very defensive. I wanted to send a message to this person saying "how dare you say that, there's absolutely nothing wrong with my spelling or my punctuation let alone my referencing, so I felt it was much harder to take criticism from peers than from a lecturer....I felt awful doing it to other people.....'

I get the feeling that they were perhaps tougher on people that they thought could take it, or the people they perceived as being more academic or something. Whereas I felt that the pieces of work which were the poorest academically received perhaps the kindest critique, that people didn't say "really, this is absolutely shocking, it's not even in English, what are you on about? You've only got five references and they're all ten years out of date!" That wasn't said. It was "Oh yes, very nice piece of work and I like the way it was presented and the paragraphs were good".....I think honesty was definitely an issue' (Interview with R-AN-1,K-AN-1)

The group facilitator did not intervene to model giving constructive criticism. However the student did feel that she had gained in terms of communication skills from the process:

'I thought it was really valuable, actually....because it gave you so much insight into your own behaviour and how other people interpret what you do and say.' (Interview with R-AN-1,K-AN-1)

One student (U-PH-2) demonstrated considerable perception about the strengths and limitations of the critiquing process. He noted that students' participation in the process of developing the critiquing guidelines for the group was not directly assessed, many students played no part in discussing and developing critique guidelines. This task fell to a few students. U-PH-2 thought the group should be 'careful to differentiate between critiquing research and briefing papers' and a lengthy discussion ensued, involving some misunderstanding and some conflict which one student commented on:

'...There was a little bit of conflict there. It's not like you're in class and you can have a little argument in class where there's no hard feelings. I found it a bit serious. In class you can laugh it off, and

there's no hard feelings, but on the screen it just comes across as..... it's very impersonal.' (Interview with U-AN-2,A-AN-2)

Despite, or perhaps because of these slight difficulties, in this group the mini-critiques were thorough and constructive, and were well received. Several followed the same pattern, beginning with a positive comment, moving on to less positive/suggestions for improvement and then finishing off with a positive summary (described elsewhere as a 'positive sandwich').

U-MH-1,B-MH-1 found the process a useful learning experience:

'It was useful in the sense of not being critical. You know, being constructive and not being critical, whereas the initial reaction might have been suggesting otherwise. And also I think there was a lot of social pressures there of not being the dissenter in the group and not being the one who seems to be very negative about everybody. As we were a group that could work together and maintaining that kind of momentum. And so, it was useful in that sense. And of course you learnt things, the style of the way people do things or the actual content of what they do. Because people were always going off on their little paths which was very interesting as well. So there were a lot of different elements that were of value. It was a difficult exercise otherwise.' (Interview with U-MH-1,B-MH-1)

Group Y students received some abrasive criticism from Y-DI-1,C-DI-1:

'Forcing collaboration? You said this concept and then never went near the idea again...'
(Y-DI-1,C-DI-1 on Y-CN-1's BP2: 29.4.2004)

'Where did the last paragraph come from, you were summing up another essay or something? It got put there by accident?it's just reference after reference, no evaluation, or anything, this is level three...evaluate and critically analyse.' (Y-DI-1,C-DI-1 on Y-AN-1's BP2; 29.4.2004)

'I had to read this paragraph once to work out what it was saying and then once more to realise that you'd not actually written a single work of it yourself...its all quotes.'
(Y-DI-1,C-DI-1 on Y-AN-1's BP2: 30.4.2004)

Y-DI-1,C-DI-1, challenged other members to criticise his own work, but Y-AN-1 responded with some dignity and restraint:

'I for one do not take offence at your "type" of humour. Thanks you for your feedbacks, very interesting. It has been difficult for me as being a Hartpury student, our cohort has had no other input

from other health care professions at all, for any of our IP modules. As I am the one doing the critique of your BP2, I am sure that you will be interested to see what I have to say when it is complete. Don't forget we should be using the group guidelines to give these constructive feedbacks and for the individual critiques. This is probably why some of the feedbacks may seem familiar! Anyway, thanks again, regards Y-AN-1.' (Y-AN-1; 30.4.2004)

The critiquing process prompted some interesting exchanges between students about group performance and group process, thus providing material for students to reflect on in their reflective essay, the final element of the assessment:

'Guys i would like to find out from you if it is alright to get in touc with a group member to ask them to clarify their critique of someone's work? Reason being that i have looked at some ork an realy feel it was done in a vy big rus because som people have actually said things like, 'she has defined key terms' whenthere actually is nothing of that sort in the briefing paper. That's just anexample, thre are loads more, i feel that this israthe unfair especially when i feel i spent so much time doing this and somebody just seems to have done something out of the spare of the moment.' (X-AN-3 17.12.03)

Interestingly this comment above brought a response from the physiotherapy student:

'I put alot of effort into my work and im sure other people have too, i don't think its really fair to asume that because you don't agree with their comment then they have rushed their work. I think you should just leave it and include it into your critique of the person that you didn't agree with it a certain persons comments and put why etc' (X-PH-1 17.12.03)

Interprofessional issues

Groups comprised 3-5 different professions. Students were not always aware of the professional identity of group members. In group W, for example, one student thought the group contained:

'adult nurses, there was mental health nursing, child nursing, we didn't have a physio or an OT, and there was a midwife' (interview with W-AN-1,C-AN-2)

whereas the group actually included two student physiotherapists. In contrast, students in group U all mentioned their professional background in their introductory comments about themselves and all three students interviewed had a clear view of which professions were

represented in the group. In this group students felt they gained from experiences introduced from specific professional backgrounds:

An adult nursing student in group X also felt part of an 'interprofessional learning group'. This was manifested by:

'reading other people's briefing papers some of them were probably more child orientated and physio, especially the physios talked more about clinical governance, children nurses talked about the Bristol inquiry reports and you kind of learnt their perspectives and look at things that I think I hadn't considered before, and just communicating with different professions I think it's quite good. When you do that you're more on their level aren't you in the discussions.'

(X-AN-1,E-AN-1.13.02.04)

Group S would certainly have been aware that the group included a midwifery student. Student midwives took the module whilst on placement, leading them to share experiences with their colleagues:

'Thought I would say hi whilst I'm on night shift (I've just had 2 lovely normal deliveries!)I'm shattered now' (S-MW-1 15/12/03)

Nevertheless in many groups the professional identity of the students barely featured in the online discussions. Students were often unclear about whether introducing information related to their own profession was expected or likely to be valuable. In group W, for example, students disagreed about the need to look at topics from the standpoint of their own professional areas. One student, when interviewed, was clear in the view that:

'we could look at one another's roles more' (interview W-AN-1,C-AN-2).

But a colleague posed an opposite view on the discussion board:

'I don't think that it is automatically necessary to include information (in the critiquing guidelines) from the viewpoint of our individual professional areas, surely whether information of this nature is included or not will depend on the exact area covered by our BP2s. If a broad concept is being discussed it may not be appropriate to bring it to the level of one isolated professional group within the NHS.' (W-PH-2; 26.11.2003)

Some students explained that they saw advantages in:

'not having a very high awareness of other people's professions so you were working much more with people as individuals rather than sticking a label on them'. (interview with R-AN-1, K-AN-2)

Key and missing professions

Students in Group U identified a range of professions they felt were missing from the group, namely radiographers, social workers, occupational therapists and medics:

'I think until you get the medics in, we can all try as best we can to learn inter-professionally, but you still have that barrier with the medics, because they don't take part and when you go out on the ward, adult nurses are always working with the doctors. Always. They're the closest profession that we work with. So that's quite difficult.' (Interview with U-AN-2,A-AN-2)

The absence of medical students was frequently mentioned as a disadvantage:

'A real pity that the medics are not included' (Q-AN-3 1/12/03)

Facilitators shared students' regret about the absence of medical students and some facilitators felt the involvement of social workers would broaden the discussions within the groups.

In one group the contributions from mental health students successfully supported group discussions around user involvement, introducing a user centred approach onto the discussion boards early in the module:

'I am thinking of discussing clinical governance with particular emphasis on clear guidelines on reporting concerns before patients are harmed in an environment where staff will not be labelled troublemakers and will be supported in this. I might then go on to discuss how interprofessional teams might work together to address concerns raised and construct local policies to deal with them. From a users perspective I might discuss that preoccupation with risk, might start to erode choices of treatment or what is best for the patient, especially within mental health work.'

(V-MH-1 11/11/03)

The following day an adult nurse in the group picks up a linked issue:

'...it interests me that vulnerable groups are mentioned as in need of protection, which seems to imply that they are not considered to be part of the public being encouraged to be involved in healthcare services. Does that make any sense?' (V-AN-1,I-AN-2)

Professional roles

Few groups explicitly discussed professional roles on the discussion boards. Nevertheless students reported learning about other professions through reading each others' briefing papers. Y-CN-1, for examples, noted to a student colleague that he/she had:

'learnt from your paper as was unaware at the difference in cpd between professions'
(Y-CN-1 30/4/04)

S-CN-1,A-CN-2 was particularly clear about the way learning took place through reading briefing papers rather than through the discussion board:

'Not once did we actually discuss well through clinical governance how would a physiotherapist put their input in or a social worker or a nurse...I learnt an awful lot by reading other people's briefing papers as much as doing my own really. So I thought that part of it was very good and that's the part that provided the structure that we actually learnt from' (S-CN-1,A-CN-2 interview)

Y-DI-1,C-DI-1 reported in his interview that he had learnt from:

'reading other people's work...I learnt stuff from that, mostly about nursing ideologies and their opinions...now having read their work, I don't have such low opinion of them...I know that there are some rosey ones out there, but..I've met a couple of them now who write better than I do which was strong for me to say' (Y-DI-1,C-DI-1 interview)

Y-DI-1,C-DI-1 was an unusual student (as will already be obvious in this report) but he recognised that the online module had been more successful than the two earlier interprofessional modules in challenging what he described as his:

'self-obsessed radiography attitude'

involving the view that radiographer students were distinct, special and better educated than other health students, a view he perceived he gained from his professional programme.

The topics discussed in the briefing papers, prompted by the trigger, supported some students in thinking in more depth about their own professional roles. A children's nurse commented:

'being a child nurse, I was thinking of looking at all these issues...such as aspects of clinical governance and standardisation of care (NSF for children, a bit on user involvement (young people) in planning care and interagency working in the light of Laming report based on child health' (R-CN-1 7/11/03)

But others were not sure about relevance to their own role:

'looking at The Patient's Charter and the new concept of the expert patient as ways in which the government is trying to promote user participation, the thing I have been finding quite difficult is linking it to my practice as a physio' (R-PH-1 29/11/03)

Perceptions of value of interprofessional education

Some students felt they had gained a greater understanding of interprofessional collaboration through working together on their assignments:

'It has given me a greater understanding of interprofessional collaboration and this will in turn help any future professional practice that I encounter...it has been great to see and actually read the group members work....the module might influence the future of ip by showing that it is possible to work effectively as a group over the net and possible provide a easier way to communicate with professionals n the future' (Y-AN-1; 30.4.2004)

'the module has enhanced my understanding of ip working as it enabled us to explore more individual issues that were not only relevant to our own professions but also to others.'
(Y-CN-1; 7.5.2004)

W-AN-1,C-AN-2 felt all health and social care professionals should undertake interprofessional learning:

'I think you should have ip at all levels, whether you're a consultant doctor or a health care assistant. I think everyone should have some form of training and train together' (W-AN-1,C-AN-2 interview)

W-MH-1 noted that it takes time for students to feel confident about collaborating

'But you have to start somewhere so perhaps you have to have a couple of years groping around a bit and then it comes together at the end....' (W-MH-1 interview)

T-AN-1,G-AN-1, a Hartpury based student, was particularly looking forward to the module:

'not having had the chance to study with, you know, other people from different cohorts, people from different specialisms, which was really interesting' (T-AN-1,G-AN-1, 03/06/04)

V-AN-1,I-AN-2 emphasised the importance of interprofessional learning in her interview:

'I think there's more general awareness created, it made you think more when you were on placement and things. If nobody had talked about interprofessional learning you probably wouldn't be conscious or aware of it when you were there. Yeah you would be interacting with different professionals but you wouldn't be thinking of really wanting to get this right or what are the barriers to that happening.....a lot of staff we've been working with have been quite positive about getting our different viewpoints/ I might not have considered approaching, talking to the physios or the Ots if it had not been mentioned in the module' (V-AN-1,I-AN-2)

However others were more sceptical:

'So after all this IP work do I feel more closely allied to my fellow healthcare professionals. Er no. I don't think it has made the slightest bit of difference.' (U-MH-1,B-MH-1, 22.12.2003)

'I feel quite cynical about the whole process in that I don't feel that it's a logical or fair reflection of how professionals work together. It seemed to be much more of an issue of personalities and things than professions. And, so therefore a lot of its been based on a false premise really, a lot of the IP deliveries been based on a false premise.' (Interview with U-MH-1)

'I don't think it taught us about working together as different professions. I just think it taught us to work together as a group on-line. We had to do things, so we did them...'
(Interview with U-AN-2,A-AN-2)

U-AN-2,A-AN-2 noted in her interview that she had learnt more about IP issues from going out with an occupational therapist during her first placement than she had from the IP modules. U-MH-1,B-MH-1 also found placements to be a more useful IP learning experience:

'...once you're out on placement then you get to know some different placements and different areas and how different professionals interact in those areas; what are the expectations, what do they do and not do and how would that impact on your role if you were working with that professional. And therefore that's experience we're learning and that's much more about understanding how things are in the quote unquote real world, rather than trying to bring the real world into the classroom where it didn't quite work. And then you can pick up from people, the professionals, who have been doing it for 10 or 20 years, and you get their perceptions from their experiences, and get some idea of where they're coming from.' (Interview with U-MH-1,B-MH-1)

U-AN-2,A-AN-2 went on to say that she thought the IP modules had in fact reinforced stereotypes, and she didn't think that the IP3 experience had made her:

'feel better about working with physiotherapists.' (Interview with U-AN-2,A-AN-2):

'...I was reading some stuff when I was doing my assignment, saying how, when you get to University, you have stereotypes and what the social worker does But I think, having met people in those professions, that the stereotype is still there. I still say the physios take the lead and they're very sort of 'black and white' and that's the impression I got from working in groups with them. So from my point of view, it's definitely that they became more stereotypical, I think...' (Interview with U-AN-2,A-AN-2)

It is important to note, however, that group U included two male students who took the lead (one mental health student and one physiotherapist). U-AN-2,A-AN-2 does not reflect on the significance of gender in the group.

An adult nursing student from another group considered that a stereotype of nursing as being 'at the bottom of the pile' had derived from the interprofessional modules themselves, a situation she regretted. Despite these negative views, the same student noted on the discussion board:

'I certainly haven't felt any professional divisions but rather that we've all gelled as a team'
(Q-AN-3 1/12/03)

Students may work well together as a team on line but this does not mean they are consciously working as an interprofessional team. One student felt that the way the work for the module was structured inhibited interprofessionalism because:

'it was very much an individual thing. We all did our own thing, we didn't do it interprofessionally' (Z-AN-1, O-AN-4 interview).

Facilitation

Directive – non directive continuum

Facilitators all saw themselves as supporting the students to take control of group process and of their own learning. Nevertheless facilitators differed in their stated strategies and in their practices. One facilitator adopted a deliberate strategy of more active intervention in the early stages of the module than the later stages, explaining:

'the first time anybody posts I respond, so that they get an instant response...it gives them some feedback and says, yes, somebody is reading this, it's been noticed etc. After that it tends to be if there's a technical query...if it's about content...I try not to direct point or whatever. When they do their briefing paper 1 for instance, I try with each one to pick out a line or a sentence or a paragraph or something and say...what does this mean for somebody else?...it's about trying to get them going and then after the first couple of weeks I just monitor it' (interview with Zfac)

Other facilitators followed a similar pattern although few articulated a deliberate strategy. This facilitator also made a point of replying very quickly to queries. This was remarked on and appreciated by group members, even by a student who regarded his facilitation as:

'minimal, very minimal. But if we needed answers to questions then the facilitator got back to us straightaway. He was very good' (Z-RT-1 interview)

Students commented negatively if their queries were not answered promptly. In group V, although the facilitator played an active role in the group, providing quite a lot of prompts for discussion, and regularly viewing the discussion board *'every 2-3 days at minimum, every day except weekends'*, there was a downside to her active guidance combined with her flexibility:

'because people wanted her opinion she wasn't available as people wanted....it was a bit open ended – is she going to check or not. So that can cause you a lot of distress' (V-AN-1,I-AN-2 interview)

Facilitators' practices varied quite considerably in providing support and direction. At one end of the directive-non directive continuum, two facilitators (groups V and group X) offered prompts about relevant content for discussion in the early days of the module:

'could you think about public's involvement as well?' (Vfac 11/11/03)

'you just have to show how risk assessment comes out of the trigger, in other words you are justifying why you are looking at this topic...you can talk about healthcare pros in general and not specifically to BRI case' (Vfac 11/11/03)

'good, look on the DoH web-site for the new patient forum the PPF that has taken the place of the present CHC these are the user groups who receive pt complaints but also look round hospitals etc to check for standards' (Xfac 9/11/03)

Group V facilitator explained her strategy for playing an active role in the early stages as follows:

'I probably am directive but I think of it as challenging rather than directive. I use questions to get students to go deeper and sometimes I help them to make links to ip when I can't see that happening naturally e.g. prompting them to think about other professions. Hence I can be directive to some of the content but in a questioning format to encourage deeper thought about the topic'. (Vfac)

Indeed group V generated interesting discussions about ip issues (see page 31 – 32).

Other facilitators concentrate on prompting the group to take responsibility for the discussion:

'I tend to keep silent. I reflect questions back...sometimes students put in something saying. Look, I'm sick today. I am not going to do it. Is that alright?' And it is directed towards me and I say. What does the group think?' And I turn it back ...' (Interview with Qfac)

Nevertheless this facilitator, like all facilitators, structured the work of the group by creating separate forums:

'I put up a new forum called "Reflection" and I put it in each time, say "How did that feel?"...I'm trying to get them to see where they are during the time so that they have got their own map of how they've been during the time.' (interview with Qfac)

One facilitator (Group V) at the more 'directive' end of the continuum also provided comments on each student's briefing paper 1. These comments were intended to help students develop their work for briefing paper 2. Many of the comments related to level of academic writing, clarity in use of terms, use of references, increasing level of analysis of issues, but comments also suggested ways of elaborating discussion:

'how are vulnerable groups involved in decision making?' (Vfac 14/11/03)

'do all professions approach cpd in the same way? Who monitors cpd?' (Vfac 117/11/03)

This level of feedback, however was unusual and many facilitators would not have seen providing feedback on bp1 as part of their role, although some facilitators provided an overall list of comments back to the group after reading all the first briefing papers:

**Remember the focus of inter-professional collaborative working - I felt some of your reports were rather clinically orientated.*

**Do pay attention to presentation - poor spelling (eg 'except' instead of 'accept'), grammar (particular bugbears of mine are use of commas and apostrophes!) and lack of a logical flow (do proof-read - even perhaps get someone else to read it for you to check for sense.....?) spoil your efforts!*

**Some papers lacked reference to relevant literature, although you make good points - eg 'various papers' - which? - you need to reference them. You must support statements and claims with ref to appropriate literature.*

**Some of your papers concentrated on DoH publications - don't forget to go wider afield.*

**Only author surname and date of pub should be cited in the text, others details going in the Reference List at the end. You can use the organisation, eg DoH, if the author is not clear.*

**Be careful to explain anacronyms, eg CHC.*

**Use of bullets is OK for BP1, allowing you to raise many points relating to your issue(s), but they don't allow the fuller and deeper exploration of topics that is required at level 3, so I suggest you avoid them for future papers. (Ufac, 23.11.2003)*

This approach was appreciated by the students, one of whom commented:

'she didn't make it too easy for us, she tended to nudge us very slightly in the right direction, you know when she felt we needed it, or offered us a little bit of information where we needed it' (interview with U-PH-2)

T facilitator gave his group a lengthy explanation about why he did not provide individual feedback:

'I think it interferes with the intended processes and learning from the module and has the potential to hinder individual development and learning – remember part of the intention of the module is to help people develop and/or enhance independent learning skills and to work co-operatively with one another. To offer feed back at this stage would, in my mind, reduce opportunities for you to work independently of teachers and may also have a detrimental effect upon your opportunities to experience situations that could contribute to the final piece of work for the module, the reflective essay. If I leave you, as a group, to get on with the work it creates an opportunity for you to reflect upon the experience of group working independently of a teacher, and, perhaps, the role and functions of facilitators, which is something I guess each of you will in due course do when you become assessors/mentors. Sometimes facilitation demands a back seat role (and some of the discomforts, and possibly anxieties, that go with that, for both yourselves, myself and future students entrusted to your tender and merciful care!!!). However, should I become anxious for/about anything/anybody I will let you know what those anxieties are so they can be discussed and addressed.

'I am impressed with the way you, as a group, have decided to offer feed back - a very productive, helpful thing to do, particularly as it was a decision you have made for yourselves. It suggests to me that you, as a group, are working productively and supportively - independent of myself, something I support whole heartedly and applaud you for.' (Tfac 19 03 04)

Interestingly, and perhaps ironically, given the participation of Vfac, Vfac comments to one student about her BP1, *'level 3 work needs to demonstrate wide reading so some references are required in order to do this,'* were not perceived as very supportive by another group member, prompting the student to offer her own, more supportive feedback, bringing the response *'at least I know I have someone who cares'*(V-MH-2). Here it is facilitator's intervention, not lack of intervention, that encourages group support and cohesion. Vfac is unusual in the amount of interaction with individual students and in sharing her own experience of learning to prompt students to reflect. Whereas such sharing can often support group process, on-line facilitators rarely seemed to be part of the group. Q/Wfac, commented on this, and the 'external' status of the facilitators with the on-line groups may account for their lack of engagement with issues of dominance or conflict within the groups. Yfac, for

example, did not intervene to resolve tensions caused by Y-DI-1,C-DI-1, although he was aware of the difficulties with Y-DI-1,C-DI-1's behaviour. He noted:

'the better ones actually related that to, "OK, well, how would I deal with somebody in a practice setting who was awkward, destructive etc? and they were able to say, "Well, it wasn't very pleasant, but it was a learning experience' (interview with Z and Yfac)

Y-DI-1,C-DI-1 viewed the facilitation as minimal, perhaps recognizing that he gained insights into his own behaviour relatively late in the module delivery.

Praise and encouragement

Facilitators made a point of including supportive and encouraging comments such as:

'that's great. Everyone's in. Up and running. Let's go now. Here we go' and I do things like that. I call the threads "Here we go!" and exclamation marks and things like that. I try to create a sort of fun atmosphere' (interview with Wfac)

Facilitators were quick to praise groups working together well:

'Once again I would like to say how much I have enjoyed facilitating this group. You have been remarkable in your insight, teamwork and academic support for each other' (Wfac 18/12/03)

Vfac followed up praise with additional questions and prompts:

'I am very impressed by the inter-professional work which is going on – what do you think? Why is it being successful and does this mimic reality in your experience? What have you learnt from reading others work and feedback? How much sharing has taken place?....' (Vfac 17/11/03)

This facilitator deliberately used a questioning style to deepen discussion. Students appreciated encouragement and some saw this as the facilitator's main contribution:

'Quite a lot of positive praise but not a lot of input. But then I think that's the whole idea' (interview Q-AN-3)

Facilitators' background and experience

Facilitators were from a range of backgrounds: information technology; adult nursing; midwifery; learning disabilities nursing.

Facilitators had differing levels of experience with on-line learning and with interprofessional learning. One facilitator had not worked with ip groups before but had extensive on line experience. All others had experience of both ip modules and ip3. Some were particularly knowledgeable about IT and two of the three facilitators with the strongest IT backgrounds were proactive in offering guidance about possible IT difficulties students might encounter.

'When you have finished your BP1 please save it with a file name which include your name or student number NOT just bp1.doc otherwise files will be overwritten and may be lost. Please also copy your BP1 into the appropriate forum so that it is easy for everyone else to read and comment on & remember to keep a copy for yourself' (Yfac 9/3/04)

Ufac felt that:

'technical and practical issues needed to be very tutor led' (interview with Ufac).

Indeed she often posted helpful tips relating to these issues on the discussion board:

'Some people seem to be having difficulty using the virtual classroom - you may need to download some (??) software, so I suggest you have a trial entry to the v. classroom if you haven't already been there, before Thursday.

Good luck, and have fun...' (Ufac, 25.11.2003)

'Tip: When you want to collect all the mini-critiques for your partner, use the 'Search' button - see top RHS of discussion board listing. You can search for your partners name in the subject box (and useful also when you want to collect your contributions to the board to use as examples in your essay later).'

'You can then exapnd them, and print - or copy and paste into a Word document.

Hope that helps...' (Ufac, 12.12.2003)

A third facilitator with considerable IT experience tended to refer students to the module handbook which explained processes, thus reinforcing the importance of students' resolving their own issues.

Most staff had taken part in a staff development course for on-line delivery, or at minimum a support session for the interprofessional module team. Staff identified support mechanisms available, commenting favourably on the support of the module team. Only one facilitator referred to participating in discussions on the facilitators' discussion board, but were aware that it could be a helpful medium for new facilitators. The team of facilitators were committed to interprofessional learning. W/Q fac was particularly enthusiastic about the module:

'I love ip 3...this was my dream then, my vision, to see it realised and to see it working' (interview with Qfac)

Facilitators' views of module learning outcomes

Facilitators identified a range of learning outcomes supported by the module delivery. These include development of IT skills, learning about different views, including, but not necessarily learning about different professions, learning about the philosophy of health care and the role of collaboration in care delivery. Some were disappointed in the level of interprofessional interaction on the discussion boards and reflected on their own role in encouraging recognition of the links between their own teamwork and interprofessional working. Others commented on the complexity of supporting students to achieve at level 3 and the difficulties of articulating the expectations of achievement at different academic levels.

One facilitator's reflections reveal the potential for student learning. Whilst the facilitator indicated that he saw an opportunity to learn team working in IP3 he felt that the emphasis was on relationships within the group:

'I suppose it's important to understand other people's roles, but I would rather they thought about relationships, and I would rather they began thinking about it less from their own ?? professional perspective and more from the perspective of people who use or may use the service. And I think they have a real problem getting hold of that...' (Tfac 21 07 04)

This emphasis on relationships did however take on an interprofessional aspect:

'The relationships of people that join with clients or patients are different, social work relationships are different from mental health relationships, are different from learning disability, but they tend to be more enduring, certainly I guess on the whole than for instance a radiographer who may have interludes with the same person, radiotherapy clearly is different again, you know that it's a longer time interaction with certain people. But with nursing and occupations like that, well again it depends where you're nursing, cos it's not just one thing.' (Tfac 21 07 04)

When questioned about the outcomes for the student the facilitator commented:

'I think they gain the capacity certainly to appreciate one another and one another's roles a bit more. I think they get a much clearer insight into policy, policy processes and where this stuff maybe coming from and why, and many of them do actually say in the evaluations I feel much more confident now working with other people so...and that's quite good, although some will say well I've been working with these groups all my life, how much have you changed what impression ?? Probably none, so it's variable.' (Tfac 21 07 04)

There were also some skills learnt from the process of an on-line module:

'Well that they've got to learn the minimum skills necessary haven't they. How to access online, how to produce work, how to save it and then submit it as assessment.' (Tfac 21 07)

Conclusion

Following the logic of realistic evaluation (Pawson and Tilley 1997), we have grouped concluding points by identifying aspects of the context of the group (including group composition) and the group enquiry process (the mechanism) which seem to be particularly relevant for certain outcomes. Some points are expressed as tentative hypotheses. Our data sources provide some information about student enjoyment of the module, student learning, group cohesion, participation and effectiveness. Pawson and Tilley (1997) encourage researchers to formulate hypotheses, interrogate their hypotheses as data becomes available and reformulate further hypotheses to be tested. At the outset of the interprofessional research programme we adopted null hypotheses. We did not expect students to differ according to age, gender, ethnicity, experience or profession. Baseline data from the UWE Interprofessional Questionnaire in the study of student attitudes, views and self assessment of communication skills and data collected after the second module show

that demographic variables and professional programme do affect student outcomes. The study of student learning in face-to-face groups indicates some of the contextual factors and some of the features of the interprofessional group enquiry process which may differentially influence the outcomes for students (Miers et al 2005). The concluding comments here are informed by this information.

Context

On-line environment

- The difficulties of working in the on-line environment prompted considerable discussion but remained problematic for only a minority of students, for whom difficulties using and accessing computers reduced participation
- Students made good use of the flexibility of the mode of delivery by logging on in the evenings, but rarely 'logged on' at the weekends
- Students noted the expense of working on line
- The asynchronous nature of the discussion was perceived by many to support equality of participation although some students found the experience isolating and missed the non verbal cues present in face-to-face communication.

Group Composition

All students have experience of practice and independent learning by year 3. Hence, compared to face-to-face groups in years one and two, prior experience and higher education had a less obvious influence on pattern of participation.

Proportionately however:

- Male students had high levels of participation
- Students 41+ years of age had high levels of participation

Module characteristics

- The assessment task had a positive effect on group interaction, thus supporting achievement of the learning outcomes

Mechanism

- Requirement to co-operate to complete tasks to a timetable support group interaction
- Opportunity to read each others' written work supported learning about different professions and professional roles, skills, knowledge base and values
- Opportunity to read each others' work challenged some students misconceptions about other professions
- Requirement to critique each others' work raised concerns about criticising peers and led to an over-emphasis on politeness
- Facilitators vary in style, frequency of interaction and degree of participation in assessment process
- Student recognition of links between ip learning in faculty and ip working in practice has positive effect on group
- Discussion of user perspective deepened quality of debate
- Students communicated as individuals, rarely from the standpoint of their profession

Outcome

The desirable outcomes which occurred to a greater or lesser extent (depending on nature of context and process) included

- Cohesion of group and mutual support
- Participants' enjoyment
- Learning about self in group situations
- Improvement in IT skills
- Confidence through experiencing a new form of collaborative learning and working
- Learning to manage potentially destructive/difficult contributions

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