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Reflections on Unexpected Outcomes: Learning From Student Collaboration in an Online Discussion Forum

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ABSTRACT
This paper reports the findings of the initial phase of an action research project involving the introduction of WebCT online discussion forums to facilitate reflection in undergraduate physiotherapy students. Students spend an introductory fifteen weeks away from University during which they gain hands on experience of professional practice in the workplace. This being a period of rapid development that is potentially stressful and challenging (Yuen, 1990; Mitchell & Kampfe, 1993; Clouder, 2001) the notion of providing an online collaborative space to develop reflective capabilities appeared sound. Findings suggest that certain assumptions were naïve. However, unforeseen benefits to such collaboration are discussed together with further ideas for encouraging critical reflection through online discussion.

Keywords
online collaboration, reflection, critical incident analysis, placement learning

INTRODUCTION
Online learning through WebCT has been an integral aspect of the teaching and learning strategy at Coventry University since the late 1990s, inspiring a variety of educational innovations across the spectrum of subject groups (see, for example, the 'WebCTwise' site). The usefulness of the online environment within the student community at Coventry University is generally acknowledged and students report that it is beneficial for their learning (Davidson & Orsini-Jones, 2002). From their first days at the University, all students are introduced to the online learning environment based on WebCT and there is an expectation that some, if not all of their modules will integrate online with face-to-face support for learning. How this is realised in the various programmes of study depends on the pedagogical models prevalent within each of the Subject Groups (a point that we return to later in this paper). Decisions on online interactions at the modular level are generally the responsibility of the module leader.
Within the Physiotherapy and Dietetics Subject Group, use of WebCT has been largely confined to posting lecture notes and creating hyperlinks to useful web sites. Critical incident analysis as a means of critical reflection has been embedded within the BSc (Hons) Physiotherapy programme for several years prior to the availability of educational technology that opens up possibilities for motivating students to share ideas even when at a distance from the university and one another. Underpinned by the perceived necessity to foster reflective capabilities in student healthcare professionals and acknowledgement of the potential for development through dialogical reflection (Clouder, 2000), the on-line discussion forums were introduced with the aim of enhancing both breadth and depth of students' critical incident analyses. The institutional context and the commonplace use of WebCT led to the assumption that students would be comfortable and well motivated to utilise the medium for sharing experiences.

RESEARCH CONTEXT AND APPROACH
Drawing on the principles implicit in social aspects of learning and intellectual and professional development the purpose of the project was to provide a tool for interaction through which learners could engage in a process of 'social negotiation or collaborative sense-making, mentoring and joint knowledge construction' (Zhu, 1998, 234). The overall

aim of the evaluation is to assess the impact of web-mediated discussion on students' reflective capabilities although the initial analysis presented here focuses largely on how students engaged with one another in the context of rapid personal and professional development.

The present paper reports on findings from a cohort of 127 students in their second year of a three-year undergraduate course in physiotherapy. The students were mainly campus-based up until their first fifteen-week placement block (comprising three separate 5-week placements) when they were distributed around the region in a variety of clinical locations, mostly on their own. On their return from placement, students were expected to submit an assessed reflective piece around a critical incident from each of their three placement sites. The course team's intentions in using online discussion were therefore to:

- maintain tutor-student contact
- provide a student-student communication channel
- encourage the writing of reflections (in preparation for assessed work).

Six online forums were created for existing seminar groups of approximately 22 students. The students had worked in these groups within the university for the previous sixteen months of the programme. The forums were private to the group with the addition of the module tutor and one other tutor. The remit of the module tutor was largely to fulfil a watching brief with the aim of encouraging the valuing of peer perspectives and avoiding reliance on tutor feedback. An additional social forum was constructed for each of the six groups. Data analysed included feedback from module evaluation forms, critical incident threads posted to the discussion forums and transcripts of focus groups conducted with each of the six seminar groups at the end of the fifteen-week placement period.

The textual data was analysed using a qualitative software analysis tool (ATLAS.ti) in order to ease the identification and marking-up of conceptual categories. For the purposes of the research project, further relational analysis of the categories has not been deemed necessary so far. Our main concern at this stage has been to determine the nature of the online interactions and how they can further enhance the placement as a learning context for developing critical reflection. Three overarching themes emerged from the data. These are: stability of group dynamics, knowledge-construction and support and challenge. Each of these themes will be explored in the following sections of the paper.

EMERGING THEMES

Stability of group dynamics

Compared to lecture notes and tutorial material, the discussion forum provides a relatively unstructured space for students, even with carefully seeded prompts for responses, and therefore requires students to "move from the comfort to the challenge learning zone" (Hutchings, 2002). To achieve this move to a viable online learning community, there needs to be some perceived immediate or ongoing value in participating (Edwards, 2002). In our case, we felt that the students had sufficient motivation to engage with the communication medium since it would provide 'added value' in that the online reflections could be used in an impending summative assessment. Perhaps we were naïve on two counts. First, we assumed a good level of student interaction and transferability of interaction from the familiar classroom setting to the online environment, albeit recognising that established group dynamics would largely prevail. Second, we thought that the potential for enriching critical incident analysis, that would eventually contribute to level of success in the summative assessment for the programme, would be an explicit motivator.

However, focus group data revealed that for this cohort of students any face-to-face discussion that took place when they were together in the campus-based setting was largely confined to a very small circle of immediate friends. One group stated 'we don't have discussions as a whole group'. Another agreed saying, 'we discuss ideas with immediate friends but there is no real opportunity for group discussion'. Students' suggested that only during the one week prior to going out on placement had they been expected to discuss, debate and express opinion on issues related to their impending practice, an approach that reflects the pedagogical beliefs of the module leader. That students had enjoyed a more student-centred and discursive approach was evident in that they expressed the belief that it was a good way of developing ideas, which they felt was under utilised.

The previous lack of opportunity for discussion in the students' learning experience was surprising to us, although following reflection on the nature of the curriculum in the early part of the programme, could have been predicted. Much of the foundational teaching during Year 1 of the programme is factual; anatomy and physiology do not lend themselves to argument. Once students (and staff) become accustomed to a fairly didactic approach to teaching it seems that even the more applied modules preceding placements are delivered in a relatively teacher-led way. The teaching of concepts, techniques and application to practice can all be approached in a way that possibly does little to

elicit opinion or stimulate open debate. It could be argued that students as novice practitioners have scant insight into practice at this stage of their education therefore opinions have not yet been formed making discussion less easy to facilitate, although one could argue that learning to be critically reflective should begin on day one of the programme. We were clearly trying to foster something novel and therefore potentially uncomfortable to students. Obviously, debate was easier when students could relate their own experiences once out in practice but as this student suggests it seems to almost to have come as a surprise, '[c]rikey, heated debate about orthopaedics, who'd have thought it?'.

A handful of students (five to seven) reportedly account for the majority of interactions in any given classroom (Howard 2002). Therefore, perhaps predictably, those students who were generally quieter within their groups, some of whom expressed feelings of social exclusion and dissonance from the group, exhibited low participation rates. However, our focus group research confirms that 'there were people who posted messages who don't say much'. In one group in particular, participation in the forum shaped new relationships within the group members in that several students had engaged in dialogue with others to whom they did not normally talk. This occurrence highlights the potential for widening networks and therefore thinking, which might be more constrained in a face-to-face context.

Some students chose to cite technical and logistical difficulties in accessing the forum as a reason for non-participation. However, whilst the majority of students had accessed the forums and read messages on a regular basis they had not been moved to contribute by posting a message. One student admitted, 'I read them all. I didn't post up my feelings for all to see – it was interesting to read them. Helped to make me aware of what could happen'. This student suggests that she has benefited from the entries made by fellow students reinforcing Henri's (1995) notion that overt interaction with content is not necessary. Why some students are prepared to engage in interaction and others not is questionable. However, the above student might exhibit a trait common among the student group identified as 'evaluation apprehension' (Pennington, 2002), the concern that peers might evaluate their ideas, particularly if they are written down. In a face-to-face focus group, a student summed up the apprehension: 'I'd be happy to put my ideas across here in the group but not down on WebCT'. Another perspective on this is that the asynchronous nature of the medium gave the students 'the opportunity to make sure you get your whole point across; sometimes when you talk face to face you miss something out you want to bring out'. Notwithstanding anxieties, the benefit to developing ideas and insight was evident to the students who had engaged fully with the discussion. For example, one student suggested, '[i]t has a snowballing effect. The discussion can start quite superficially but then it will get more in-depth naturally'.

Even for those students who overcame inhibiting factors to post messages, unwritten rules and rules about interaction and participation that shape and are shaped by group dynamics impacted on discussion. Being an initiator of a discussion seemed to bring with it the risk of losing face in respect of peers as a student illustrates when he states, 'Ok I'll be a geek and start the messages'. This comment highlights the salience of self-image in the group context in which appearing too keen is likely to result in being labelled. Those groups who staff perceived to have better social climates in the classroom tended to have a greater number of participants and more in the way of dialogue. Nevertheless, dialogue, which Dysthe (2002) reminds us is more than turn-taking but rather reciprocity and engagement with ideas, was limited. Using Andrews and Baird's (1989) model for identifying communication functions within a group, it is possible to see that students engaged primarily as 'information givers' and 'information seekers' rather than 'opinion givers'. This finding suggests that if posting a message is hard, responding to a message seems to require even greater courage and self-confidence in the 'presence' of peers.

Stories are related often very descriptively and at times with limited analysis or reflection and are inevitably concluded by students asking peers for advice or alternative ideas. For example, 'I'd appreciate a reply to what you would have done in this situation'. In this specific posting, the incident that had been related was an emotional one that could have been expected to elicit a supportive response. In the absence of a response from fellow students it was eventually the tutor who felt the necessity to offer support. This example illustrates the reluctance of students on the whole to act as 'opinion givers' (Andrews & Baird, 1989). A minority of students could be said to have engaged in true dialogue, stating beliefs, attitudes and opinions. As a consequence some discussion threads comprise a series of monologues rather than a dialogue, each student relating their story, one after the other almost as though they cannot see or are ignoring the other postings. This perception comes across in a student statement, 'I have something I would appreciate a reply to if anyone is reading!!!!'

Tensions in Knowledge Construction

The second related theme that possibly partially explains the observed low levels of dialogue concerns the tensions created by the overnight switch from received knowledge within the university context to constructed knowledge

within the practice setting. Where connections between the two are evident this is affirming, for instance, a student reflects, 'I felt comfortable agreeing with this decision as I had recently read an article describing the benefits of prone lying'. However, inevitably students find that their theoretical knowledge base, in which they have variable levels of confidence, is challenged once out in practice.

A student reflecting on his educators approach to thinking of pain as a secondary consideration during treatment, which the student feels demonstrates lack of compassion, clearly feels attitudes instilled by lecturers are at odds with reality. He states, 'with quotes from lectures still whizzing around my head such as pain is a subject thing… who are we to question it?' However, through a process of reflection the message shows how the student comes to consider that at times patient recovery might be dependent on the physiotherapist carrying out treatment despite causing some additional pain. Another student follows up this message by expressing similar reservations about pushing patients but affirms the thinking of the first student by suggesting ' It's very important otherwise they go downhill very quick, and although pain is subjective they would be in even greater pain if they got complications. I think as students we're a bit too nice. I've toughened up a bit'.

This dialogue is a representation of knowledge construction that occurred between two students weighing up alternative perspectives and coming to their own understanding about compassion, effectiveness and professional responsibility. As such it is a major learning outcome, made possible by online contact, that could not have been 'taught' in a conventional sense but concomitantly cannot be valued by students until they have engaged in it and acknowledged how their learning impacts on their practice. Such learning we have come to realize poses a conundrum in terms of encouraging online discussions. Despite valuing highly the opportunities that practice and experiential learning brings it seems that students cannot see the value of sharing their own personal thoughts and ideas, because they do not acknowledge as valid the status of their experience as evidence. This devaluing of personal experience is evident in several postings to the discussion forums. For example, 'Hello! I'm going to try and keep my critical incidents short because I know they're not that interesting'. Another student opens her message by saying 'Hi Group [X] and whoever else reads this. I can't see that many people are going to take much notice of it'. A third student apologises for her message, 'I'm sorry if I've bored you'.

Lack of legitimacy of sharing and learning from personal experiences is a feature of previous research findings focusing on online interaction between Open University students (Roberts, 2002) so is clearly not unusual and possibly relates in the context of this research to the current emphasis on evidence based practice that has impacted on the health and social care professions. Evidence-based practice tends to favour 'hard', scientific fact generated through randomized controlled trials and published in eminent journals that forms the basis for much of the learning that occurs within the university. In this context, such knowledge is privileged over personal knowledge construction. Despite having been embraced as a concept throughout the health professions and its contribution to knowledge recognized as valid, reflective practice on the other hand is seen as 'woolly', 'too touchy feely' and of limited value by many physiotherapy students. Who can blame students for feeling confused when faced with the two such very different discourses? Furthermore, in the context of looking for 'right' answers or solutions to issues they encounter, which can be attributed to level of intellectual development, reflection is perceived as only clouding 'rational' judgment and decisive decision-making. Is it any surprise that students are tentative about sharing what they perceive to be uninformed opinions with their peers? Exposure to practice teaches students that there are very rarely right and wrong answers to any issue making them more amenable to considering a range of perspectives and seeing that each practitioner will approach an issue differently. The question is – how to convince students of the value of their opinions in contributing to co-constructed understandings before they have developed the cognitive maturity to recognise the value in doing so?

Tutor interventions are probably crucial in this regard although postings from tutors, their frequency and their nature, affect students' reliance on peers for knowledge-building. Research suggests that students want to be given the opportunity to engage in peer interaction but prefer this to be optional rather than a requirement and are less likely to participate when other interaction opportunities exist (Vrasidas and McIssac, 1999). While keen to avoid over-reliance on tutors we recognize that face-to-face interaction with clinical staff and other students in immediate contact will take precedence to posting messages online where students have to wait for a reply that might never come. In a few instances, where students have revealed emotionally-charged incidents, tutors allowed time for others in the group to respond before posting a supportive message. On one occasion, where the tutor was less reserved, the intervention did not have the desired effect and was taken by the student as an admonishment, "The first [incident] I put up, I got a reply from [the tutor] saying it was unprofessional because I'd mentioned the hospital I was at so that put me off." An alternative, and possibly less discouraging strategy here might have been for the tutor to send a private email to the student pointing out the norms of anonymzing locations, rather than a public reply. This leads us into the third theme

emerging from our analysis of the discussions, namely support and challenge.

Support and Challenge

The third theme builds on the two previous themes of group dynamics and the nature of knowledge in identifying the supportive function of the online discussion forums in the apparent context of insecurities and rapid personal and professional development briefly illustrated above. Students were unanimously agreed that accessing the forums whether or not they posted messages was beneficial as an alternative support mechanism. Some support is relatively superficial in the form of praise, encouragement and agreement, for example, 'I can sympathise with you', and '[w]ell done you. [It] sounds like you did what you needed and made the right decision'. Support also takes the form of sometimes quite detailed, often technical, advice that students appear to find relatively easy to give, 'dunno if this is going to be of use [student] but don't the exercises maintain the improvement made by accessory techniques since exercises are physiological? Just a thought. Have you tried ultrasound? Enjoy!'.

Emotional support involving some depth of analysis, although more rare, was at times very insightful. A student attempts to rationalise and advice on an incident posted by a fellow student who is worried that she may have upset a patient: 'I think the mixture of you running late and the fact that the patient had been left alone meant that you weren't concentrating fully. Everyone has those days. As soon as it's time to go home your brain kind of switches off. It's probably worth speaking to your clinical educator'.

During focus group discussions students agreed that 'reading everyone else's [messages] you seemed to think that you weren't on your own' highlighting perhaps the most powerful benefit of the discussion forums for this cohort – simply that everyone was in the same boat! The reassurance that students gained from logging onto the discussion forums, especially when placed in isolation from their peers, suggests that the forums provide a 'holding environment' (Winnicott, 1965) for the students while away from one another. However, we now realise that our expectation that students would feel able to critique and maybe challenge some of the assumptions explicit within the critical incidents posted to the forum would have involved a quantum leap for most of the students in this cohort at the particular stage of their development. This is not to suggest that critique was entirely absent although where challenge does occur it tends to be related to institutional policy or to a third party. For example, one incident generated the following response:

'I found it strange that the nurse had the final say in the treatment of this man. Surely, if those decisions are to be made then a more senior member of staff should have the last say. Has anyone put in a complaint or are they looking into the incident, and shouldn't there be some sort of protocol to follow?'

Hughes and Daykin (2002), who found undergraduate nursing students unwilling to be critical of other students work, question whether online communication inhibits constructive criticism between peers. While our findings concur to a large extent we suggest that our students are capable of offering constructive criticism, which we could nurture more effectively. For instance, in stating 'I agree with what you said but your patient may not look into it so deeply' one student makes a gentle challenge that is mollified by supportive agreement before going on to share a similar experience. During a focus group session one student highlights the nature of the problem in appearing challenging: 'It's difficult to challenge people when you are writing things down when it's cold. If an incident stands out for that person and you question them you don't know how they feel about the incident….they might be quite uncomfortable with what's happened. The danger is that they might feel even worse. It's too personal and we haven't got the knowledge to ask sensible questions'.

This perspective reinforces the notion that there is a need to impress on students the value of their own ideas and opinions. It also suggests a necessity to take away the comfort blanket that inhibits honest dialogue between students that has the potential to enhance personal as well as professional development. Similar to research focusing on distance education (Kirkup & Priimmer, 1990), narratives drawn from stories posted to the discussion forums over the fifteen-week period indicate a tendency for students to use this space for showing empathy and support of one another, thereby validating experiences possibly at the expense of developing greater insight. There is no reason why a mutually supportive atmosphere should preclude critical debate.

IDEAS FOR DISCUSSION AND FURTHER ACTION

The nature of student participants, the 'scientific' subject-based curriculum, familiarity with the technology and pedagogical approaches adopted early in the programme are all significant factors that have impacted on the potential of online discussion forums to facilitate reflection in undergraduate physiotherapy students. Acknowledging a potential cohort effect and differences between groups during the initial phase of the project, further action is planned on the

basis of findings. A cycle of design and redesign was always envisaged from the inception of the project although the enormity of some of the recently apparent influences might mean that progress is slower than anticipated. For instance, identification with the scientific medical dominated paradigm to the exclusion of constructivist philosophies that shape the reality of practice is untenable if students are to emerge from the programme 'fit for purpose'. However, achieving a balance of philosophies influencing course design and consequent approach to teaching might not be easy. Nevertheless, current approaches to teaching and learning within the physiotherapy programme appear to contribute to creating barriers for on-line collaboration that must be removed if we are to succeed in encouraging collaborative critical reflection. While major changes are not feasible for the next cohort of students, one of the primary objectives will be to share findings with the whole subject group (approximately thirty staff members) to explore existing epistemological and pedagogical assumptions that impact on the student experience.

Even though the online discussions had potential to feed into the summative assessment, students did not buy into interdependency probably because they did not believe that they could profit from it. Future students need to be convinced that between them they can construct knowledge that is valid and of value and that their collective thoughts potentially surpass those of the individual, emphasizing the power of collaborating with peers. This realization might be facilitated through reading the discussion threads generated by the previous years students. However, Wilke & Meertens (1994) suggest that 'profit interdependency', can be disrupted when members see themselves as competing for mutually exclusive goals, a factor that offers further clues to the analysis of interactions. Physiotherapy students tend to be highly competitive and competitiveness has been found to produce greater personal insecurity that impacts on personal relations (Deuttsch, 1949), therefore finding a means of reducing competitiveness and placing increased emphasis on collaboration must shape future development of the task and module assessment.

For this year at least, much more work will need to be done during the week preceding the fifteen week placement block in terms of facilitating face-to-face and online group discussion and fostering interdependency. Given that it is debatable whether students perceive themselves as anything other than a collection of independent individuals it seems that we are perhaps guilty of paying too little attention to the consequences of group dynamics. Bales (1975) identifies the importance of group members developing a psychological relationship, a sense of mutual awareness and interdependence. Inherent to committing to the online discussions as a means of contributing to their learning, students need to trust one another with their tentative ideas and such trust can only be developed through a sense of mutuality (Josselson, 1996). Mutuality involves responsiveness to others and according to Josselson requires development out of egocentrism. Although responsiveness to others was a very variable attribute within the student group studied, a sense of 'us' and 'we' was expressed by some students suggesting that some sense of mutuality had played a part in interactions.

Whereas we cannot hope to develop high levels of interdependency in the one week preceding placements our intention is to make some progress by setting group ground rules for online collaboration, working on collaborative tasks and initiating some focused discussion before students disperse. Providing theories, research data and journal articles as well as sharing experiences have been found to be successful in engaging participants in reflective activities (Sackville, 2002). Similar activities were identified as potentially helpful by students in the focus group research and would provide tangible material on which students could comment on prior to placement.

The online discussion forums provide a 'holding environment' for students while away from the university on professional practice placement, which is clearly beneficial in terms of support and validation. However, the potential for personal and professional development through development of a critical reflective dimension of discussion amongst peers has yet to be fully realised. Action is needed to increase student understanding of the difference between 'criticism' and 'critique'. Students might be happier to engage in critique if coached in how to question one another and offer constructive feedback online. If this can be achieved we might redress the balance between support and challenge and begin to help students develop their skills in critical reflection. Tutors play an important role in developing such skills and as we have learned fulfilling a 'watching brief' in an online context is inadequate for this student group. Therefore the role of the online tutors requires clarification and there is a clear indication of a need for the development of facilitator skills (Hughes and Daykin, 2002) in order to provide sufficient support without stifling the emergence of knowledge from practice. Perhaps the most important reminder that comes from the initial phase of this project is that it is easy to overlook the more affective elements of learning in an online context when one is so focused on promoting cognitive intellectual development. The two must go hand in hand especially for physiotherapy students new to practice.

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