

Chapter Seven

Supporting Teachers in Masters Degree Research

Introduction

In this chapter, I explore my own learning as a supervisor of research enquiries in the context of the M.Sc. in Computer Applications for Education programme. I explore the challenges involved in bringing a ‘living educational theory’ approach into the academy as I support a participant (participant A) in carrying out research into his practice. Then, I explore my influence in the learning of a participant, Chris Garvey, as he carries out research into his use of an online learning environments in a post-primary Science class. My influence is seen in the opportunities I provide to participants to critically reflect on their learning through peer validation meetings. Evidence of my influence on the education of wider social formations is shown by the fact that research using a ‘living educational theory’ is now firmly established as an accepted form of research in DCU.

My learning as supervisor of masters research

In this section, I will document the process of my own learning as a first time supervisor of practice-based research. For the purpose of confidentiality, I refer to this student as Student A. I had not long joined the Centre for Teaching Computing in the School of Computer Applications DCU when I was asked to supervise one of the participants on the M.Sc. in Computer Applications for Education programme. During our first supervision meeting, the student talked through possible ideas for his

dissertation. From this discussion it became evident that he was interested in exploring ways of improving his own teaching through the use of ICT. During the discussion, it emerged that during the taught part of the Masters degree programme he had encountered only a positivist approach to research. He was not familiar with interpretive or action research approaches. During the first meeting, it became clear that student A's research question did not fit within a positivist framework. His research intentions seemed to be more suited to a qualitative approach. At the end of the meeting, I suggested that he look at other forms of research before our next meeting.

He talked about how the Masters programme had mainly focused on the technical aspects of technology in education while his focus was on how he could improve his use of technology in the classroom. He expressed an interest in using a more qualitative form of research that might more effectively enable him to study how he could improve his own teaching through the use of ICT. He eventually decided to use an action research approach as it seemed to be the most appropriate form of research in such a context. Denzin and Lincoln (1998, p. 3) point out that "*the choice of research practice depends on the questions that are asked, and the questions that are asked depend on the context*". The student was apprehensive about having to learn a new methodology at the same time as carrying out his research. As this was the first time, I had supervised Masters degree research, I was also placed in the position of a learner. We agreed that we should have weekly meetings in order to work through the action research approach and the actual research.

Between these meetings, I engaged with literature in the field of educational research and action research in particular. During our meetings I shared my insights into action research with the student. I was learning that rigour and validity were prominent among the criteria used to judge an action research enquiry. This differed from a positivist approach that paid more attention to criteria, such as, reliability and generalisability. I advised the student to engage with relevant literature on educational research. During the meetings, we discussed Winter's six criteria of rigour for action research enquires and ways to ensure the validity of action research. During this time, I was corresponding through email with Jack Whitehead, an international expert on action research who is based at the University of Bath and I also took part in the Action Research and Evaluation on line (Aerol), run by Bob Dick at Southern Cross University, Australia.

I was also searching and evaluating online action research resources and making these resources available through my own website. I was beginning to see how ICT was supporting my learning and enabling me to engage with a wider community of practice. Through ICT, I was connecting with experts in the field of action research and engaging in ongoing debates in this emerging research field. Jean McNiff, an action research authority, was based in Ireland and involved in the supervision of teachers who were using an action research approach for their Masters degree dissertations. Jean was organising weekly meetings for her students at a primary school in North Dublin. During my supervision of Student A, we attended these validation meetings that provided an opportunity for me to share accounts of my supervision and for student A to validate his own action research. The validation meetings drew on Habermas' four criteria of social validity, that is, comprehensibility

of the account, evidential support for knowledge claims, exposition and justification of educational values and evidence of the educational influence in the learning of others. Thus I was engaging student A with a wider community of learners and providing him with opportunities to present evidence of practice to a validation group, that was an integral part of a 'living educational theory' approach to action research.

I had due regard for the marking criteria for the M.Sc. in Computer Applications for Education dissertations at DCU. Although the student did not follow the typical control/experimental group study approach expected of positivist research work, the action research study method used was within the terms of the examination guidelines laid down for the M.Sc. in Computer Applications for Education. The marking procedure recommended that two internal members of academic staff in Computer Applications mark the dissertation. Supervisors are not involved in marking the dissertations that they supervise. After internal assessment dissertations are sent to an external examiner for comments and marking. In submitting student A's action research enquiry for marking to the internal markers, I included the criteria required to ensure the validity and rigour of an action research enquiry. These guidelines outlined Winter's six criteria of rigour and the criteria related to social validity. The internal examiners returned student's A dissertation to me with a simple pass mark. I felt an injustice had been done, as I was surprised when I noted from the comments made by the two internal examiners that this action research enquiry had been appraised within a behaviourist framework without reference to recognised action research criteria. This predicament reminded me of Dadds' (1998) observation that dominant research cultures have tended to belittle the relevance and quality of practitioner research as a legitimate methodology. After taking time to reflect on the best way to proceed, I

decided to ask that the dissertation be marked by someone who was familiar with an action research approach. This was agreed and a third marker was asked to comment on the dissertation. This time an honours grade was returned with full written comments justifying the mark. The dissertation was then forwarded to the external examiner with comments from each of the three internal examiners and recommended marks attached. The external examiner agreed with the honours grade which was duly awarded.

A few years later, in 2002, I had once again to question a mark awarded to an action research enquiry carried out by a student on the MS.c. in Computer Applications for Education. As on the previous occasion, the criteria for carrying out action research enquiries were attached for the attention of the internal examiners. Again these criteria were ignored and comments were made from a behaviourist standpoint. Once again, those concerned had recourse to a third examiner (not the same third examiner as in 1998) who was familiar with an action research approach. Again, in this case, a higher mark was awarded. All three markers comments were sent to the External Examiner who agreed with the higher mark. It was clear to me that those cast in a radically different research mould would have difficulty in relating to, let alone appraising, studies based upon action research objectives and methodologies. Thankfully, the action research studies in Dublin City University enquiries were recognised by the academy as a legitimate form of research.

In my experience of supervising action research studies/enquiries from 1998 to 2002, in the School of Computer Applications at DCU, the following questions were raised

about these studies/enquiries despite the fact that action research is a recognised form of educational research:

- Should there not be a control and experimental group?
- Should teachers be doing this kind of research?
- Is it proper to use the first person singular in a dissertation?

These issues have been raised by other researchers. Sandelowski (1994) points to the need to educate ourselves (as practitioners, critics, and consumers of research) to recognize the difference and judge the genres accordingly using appropriate criteria.

My continuing commitment to supporting action research studies/enquiries was a consequence of the importance I attached to giving participants the opportunity to choose a research methodology that allowed them to ask, research and answer the question, 'how do I improve my practice?' For those engaged in a knowledge industry, incessantly working with ideas and perceptions, this question has almost primordial significance and wide implications. As a supervisor of action research studies/enquiries, I could see how vital it was for teachers to repeatedly question their own underlying assumptions and articulate the values that gave meaning and direction to their life and work in education.

My learning as supervisor of Chris Garvey's masters research

For the purpose of clarity, I provide a colour reference code to represent dialogues.

Colour Reference Codes

Margaret's dialogue in dark red
Chris' dialogue in dark blue
Jack Whitehead's contribution in violet
My reflection on the learning process in black

Network Information Management module (2001)

During the *Network Information Management* module that took place between October and December 2001, Chris started to experiment with Blackboard, an online learning environment. During the module, Chris posted the following online journal to WebCT.

Posted by Chris Garvey

Tue Nov 13, 2001 11:59am

Hi Margaret,

From the outset I wanted to do an assignment on using the internet for course delivery as a supplement to traditional face-to-face classroom teaching. The course material would have been delivered in the traditional classroom environment already. My interest in using web technology to complement traditional teaching methods comes from a belief that it can enhance both the teaching and the learning process. It would enable me to select and provide resources that would include assignments, course supplementary notes, simulations and answers to problems. I would be the filter for

the vast array of resources the web has to offer. The material I could put at the disposal of my students would be determined by me from the resources available on the internet. I am also interested in developing both synchronous and asynchronous collaborative learning methods for my students online and monitoring their effectiveness (the pressure of state examinations and restrictions on time does not generally permit such collaborative learning within class time). I would do the assignment in WebCT.

My Reflections on Chris' learning (MF)

In the following extract he can be seen to reflect upon and articulate his concerns about how he will carry out research for his Masters Degree dissertation, that was due to start in January 2002.

Chris (continued)

Looking further down the line (at a dissertation) my original idea was to do some sort of comparison between online delivery via WebCT and a teacher developed website and to maybe determine advantages/disadvantages in each method. I then revised that idea and decided that I would deliver online to students and determine the impact of doing so. Ideally, I would need to have two classes from the same year and for the same subject for making comparisons. I would also need adequate computer room access for one of these classes. Then the trouble started, as you know. The practicalities of my working situation and the extent to which I would be able to MEASURE or evaluate how effective my online delivery has been have been on my mind continually. The only feasible class for me to work with is a transition (4th) year chemistry class of 20 students. Splitting them up is not possible so I could not

perform any statistical comparisons based on class grades. From my readings of past research it appears to me that some standardized test (eg Drumcondra SAT) should be applied if you want to pre test and post test a class. However, these tests do not measure what my online course would set out to achieve, namely, improved understanding and increased knowledge of chemistry. Another possibility is to use the students interactions within the chatrooms to qualitatively assess the impact of online interactions, however, I am not fully confident in my ability to do this. It appears to me now that any future thesis will be decided by what I can measure. The theses that would interest me do not lend themselves to measurement under present circumstances. I have probably been too caught up in these 'down-the-line' problems.

Chris

My reflections on Chris' learning (MF)

I responded by confirming and clarifying issues in order to help move Chris' learning forward by suggesting that he perhaps read some books related to qualitative methods. The Masters degree in Computer Applications for Education programme included a module on Research Methods but only quantitative methods were treated. Thus participants on the programme were inevitably directed towards this particular method of carrying out and presenting their research regardless of the research question they might wish to pursue. I was concerned to ensure that participants' research questions were consonant with their command of relevant methodology, however secured.

Chris' email highlights his own concern in terms of the research design.

Posted by Margaret Farren

Wed Nov 14, 2001 22:54

Hi Chris

I note your concerns with regard to issues around the measurement of learning outcomes. You seem to be pointing to the need to use other forms of evaluation in order to evaluate the quality of the learning experience for the students. I think it is important to remember that you are not just using a ready-made package and evaluating its use in class. You are developing an online course and you will be building your own online learning material etc. You will need to consider design elements, types of learning/pedagogy which you believe are important for online learning environments and literature that confirms enhanced learning. In this case, it is very different to a dissertation which does not involve any element of design and development. Re: qualitative research, there are books on qualitative research and Online Learning work. Therefore I would see the measurement element as a small part of your overall dissertation.

Margaret

In this section, I explain the processes of my supervision of Chris Garvey, a student on the M.Sc. in Computer Applications for Education between 2000 and 2002. My educational values can be seen to emerge in my educational supervision with Chris as I support and challenge him through his practice-based research. I show how the values that emerge in the process of my supervision become communicable standards of judgement. My evidence includes dialogue between myself and Chris, i.e., face-to-face and through technology, in the form of email correspondences, video clips of

group validation meetings and videoconferencing. Learning is seen as a process that involves dialogue and participation rather than a purely individual experience.

Technology is used to support this collaborative and dialogic process. Chris' learning can be seen to develop in collaboration with me, as I support his enquiry into his practice aided by Odilla Finlayson, a lecturer in Chemical Sciences at DCU with particular interest in PBL in Science teaching, and also aided by Jack Whitehead, supervisor of my PhD research and an international expert in action research. Further relevant inputs came from other teachers, Fionnuala Flanagan, Mairéad Ryan and Bernie Tobin through group validation meetings.

I used the five categories for types of reflection-on-practice formulated by Ghaye, A. and Ghaye, K. (1998) to analyse the developing nature of Chris' learning. These are as follows:

1. Descriptive reflection-on-practice
2. Perceptive reflection-on-practice
3. Receptive reflection-on-practice
4. Interactive reflection-on-practice
5. Critical reflection-on-practice

I will refer to these categories as a way of helping to analysing his reflections and to show how action research helped him to develop his capacity for reflection.

For his Masters dissertation research, Chris decided to explore the potential of an online course management system (Blackboard) used as an optional supplement to

traditional classroom teaching and learning, in order to enhance the educational experience of second level Chemistry students in an all girls school. From this experience he decided to carry out an enquiry into the use of the system with a Transition Year Science class.

At the start of his Masters research, I suggested to Chris that he work through the material accompanying Blackboard, in order to find out what claims are made about Blackboard in terms of the nature of the learning that it was encouraging. I believed that this would help him to discover if the educational goals of the software were related to his own educational values. I also believed that it would help him focus on the learning that he was trying to promote using the online learning environment and the educational values he wanted to live in practice.

The following extract details how Chris relates the claims made by Blackboard to his own educational goals and values. At the start of his research enquiry, I asked Chris to write down his own educational values. Although I realize that a list of values is meaningless unless we can show how we are living these values in practice, I do believe that it is important to be able to articulate what is important to us in our educational practice.

Chris' Educational Values:

In dialogue I was able to form the following view of Chris' educational values, as conceived at this stage of the course. This was ultimately used in his dissertation.

- I am unable to give my understanding of a subject to a student. Each student will develop their own unique understanding as a consequence of their interactions with knowledge, which I, in part, provide.
- I have a duty to try and create the best environment possible to facilitate learner-knowledge interaction and allow the students come to their own understanding of a subject. I have a duty to use my skills and experience to mould that environment in a manner that best suits their needs as learners.
- The learner is not always ready to learn at the time that I am scheduled to teach.
- Students can often learn better through peer-peer interaction and it is my duty to facilitate this.
- Students must learn how to learn and need to take responsibility for their own learning.

On the 14th April 2002, Chris asked if we could meet me to discuss the progress of his dissertation, which he had planned to complete in mid-June. The following day he came to my office and we discussed his research. He was optimistic about the use of online technology if employed in the correct manner, but he felt that the correct manner was somehow eluding him. He discussed his frustration at students' lack of

enthusiasm for the use of the online learning environment which did not correspond with the presumed benefits of online learning as extolled by the literature he was reading. He believed that he had reached the conclusion of his research enquiry which was that online learning technology would not work in second level schools in Ireland. We discussed the fact that he was teaching an all girls science class. I talked also about the use of problem based learning (PBL) by Dr. Odilla Finlayson in the School of Chemical Sciences. We also discussed the action research approach and I suggested that, in action research terms, Chris may have simply reached the end of his first cycle. I asked him how he would intend moving forward were he to take what he had learned from the first cycle of his research into a second cycle. I reminded Chris that one of his values was the importance of allowing students to take responsibility for their learning. I asked him how he was trying to enable them to take responsibility.

The following extract from Chris' dissertation explains Chris' interpretation of the meeting.

Chris (continued)

I would always have considered myself a firm-but-fair teacher who felt that maintaining classroom discipline was one of the more important requirements of my work. My classroom approach could be described as didactic; most of my class time spent delivering knowledge in the 'chalk and talk' manner. I felt that success in the online environment that I developed would depend on my setting the right tone for that environment and would mean implementing a more relaxed environment. I also felt that I was bound to make many mistakes during this first attempt. The new

medium/modality presented many challenges, just as classroom teaching had presented in my early teaching career, and mistakes were inevitable. Over the years I have tried to constantly assess my classroom teaching and modify it, as appropriate, according to the feedback received in order to achieve additional success.

It was becoming frustratingly obvious to me that my efforts at persuading the students to voluntarily adopt the online communications features of the course management system were not being very successful and that I needed to evaluate the situation and thus move on to another cycle. The educational values that I claimed earlier to hold were not being lived in practice. In particular my values concerning the fashioning of the right environment to promote peer-to-peer collaboration and encouraging responsibility in the students for their own learning were being contradicted by the reality of the situation. I became aware of a need to find a different approach in order for these new ideas about the educational opportunities presented by the technology to be accommodated.

My reflections on Chris learning (MF)

It was gratifying to note from the above extract that Chris was engaging in **critical reflection-on-practice**. Chris was beginning to question accepted routines, and classroom practice. This type of reflection is about the individual teacher, the individual as part of the whole school culture, and how his teaching might be transformed in order to improve the quality of his educational relationship with his students.

Chris (continued)

In discussion with my supervisor, I explained these frustrations and we talked through possible solutions to these difficulties. In a subsequent validation meeting with Dr. Jack Whitehead and other teacher researchers, he identified this period “as perhaps the most significant in the enquiry the fact that you negotiated with another partner in education, and gained some ideas, and tried them out, has clearly taken your own learning forward. We felt that the students needed more incentives to employ the technology and the online community was too enclosed. We then considered ways to open up the community.

In the discussion with my supervisor we also considered the focus of the research and discussed my readings on female participation in the physical sciences, in particular, the lack of successful role models available to them. In this context, my supervisor put me in contact with a faculty member of the School of Chemical Sciences in Dublin City University, Dr. Odilla Finlayson, who has a particular interest in education, especially in the area of PBL.

The Challenge of problem based learning

During the meeting I noticed that Chris was hesitant about incorporating PBL into this teaching. At the end of the meeting, Chris said that he would reflect on our discussions over the next few days.

On the 16th April, 2002, I received the following email from Chris.

Hi Margaret

Before I met you on Friday I thought I had slipped into cruise mode and that the dissertation was starting to take shape. Now I feel like I am floundering again - back at square one almost. On the subject of PBL I would be very apprehensive about tackling something like PBL in the dissertation for several reasons - 1). I know very little about it, 2). from what I do know I would have to admit to being sceptical about it and how it would go down with the students (never mind their parents), 3). I don't see how I could incorporate it? with Blackboard in the time I have. That is not to say that I have completely ruled it out. I accept that I must pin my 'question' down and I am still puzzling over it. I came across definitions of learning and instruction in one of the articles I read recently. "Learning is a process of transformation of knowledge that occurs through interaction of an individual with information in that individual's environment" and "instruction is the fashioning of the learner's context to optimise information interaction, and hence learning". If these definitions are accepted then the educational potential of Blackboard is obvious. When you say that you notice I want students to take responsibility for their own learning you are correct. I suppose that I must accept that students don't always come to the trough when you want them to but when they themselves want to. As a teacher then I must try to "fashion" an appropriate environment for that time, whenever that might be, when they consider

some knowledge scaffolding is in order. Anyway, sorry about the long email but I am wrestling with a few things at the moment.

Chris

My reflections on Chris learning (MF)

I believe that this email reveals that Chris was coming to the view that learners should be offered choices to make concerning their learning. In his email there is a recognition by Chris that his task was to create an appropriate environment to enable the students to take responsibility. He was taking a considered approach with regard to the possible use of a PBL approach. He did not see PBL as some theory that could simply be applied to his practice. He realised that he needed to think through the issues and consider the use of PBL in light of his own teaching context.

On 18th April, 2002 as I was updating online resources for the M.Sc. in Computer Applications for Education programme, I came upon a website with online resources about Maths, Science and Technology programmes for girls in the United States. I emailed this link to Chris as I thought it would be useful in his research. A week later, on 25th April, I received an email from the Dean of Teaching and Learning, DCU inviting staff to a lunchtime seminar presented by Odilla Finlayson of the School of Chemical Sciences on the subject of current interest and debate: ‘Science Education - approaches to laboratory teaching.’ The email also included an attached document - Report of the Task Force on Physical Sciences.

I emailed this information to Chris as again it was directly related to his own research work. My role as supervisor involved me in living through the difficulties and

dilemmas Chris was undergoing, empathising with him, while at the same time acting as a critical friend.

On Wednesday 27th April, I received the following email from Chris:

Hi Margaret,

I am reading the report of the taskforce into the Physical Sciences and here are two quotes;-

"Resources are not pooled nationally to promote the study of Science at all stages of education. Promotion by science teachers and guidance counsellors [of science] is hampered by the lack of partnership between third level and industry".

And under recommendations

"Establish a virtual learning environment to support the teaching and learning of science

To include.....

-a system, populated by e-learning content for science, particularly the physical sciences; open-ended system protocols so that teachers and others can seek to add their own content;

-a framework allowing teachers and others to structure and manage learning resources, curriculum content, student access, collaboration and assessment."

I seem to be at the leading edge here!

Chris

My reflections on Chris' learning (MF)

From a trough of difficulties and growing disenchantment, suddenly Chris was becoming more self-confident and aware that he could be breaking new ground. I believe that this was a key moment in Chris' recognition of the value of his own practice-based research approach in enabling his appropriate use of online technology as a support for teaching and learning of Science. I had challenged Chris to show evidence of how he was providing opportunities for his students to take responsibilities for their own learning. However, I was also supporting him through that period and through dialogue and critical reflection, and he was now beginning to see the viability and importance of his research enquiry.

Chris expressed an interest in meeting with Dr. Finlayson and the three of us met to discuss the PBL approach and its potential use within Chris' research enquiry. Chris had the opportunity to listen to Dr. Finlayson as she discussed how she was using a PBL approach in her own teaching of Science to undergraduate students.

The following extract is from Chris' dissertation.

Dr. Finlayson explained to me the PBL techniques that were being deployed in some courses in her faculty and believed that they could just as successfully be deployed at second level. She generously volunteered to come and visit the school and engage the students in a PBL session. Towards the end of the research period Dr. Finlayson, and Ms. Farren visited the chemistry class and conducted an eighty-minute session using PBL techniques. The session involved the students splitting into groups of between three and five students after Dr. Finlayson had identified a suitable problem for them. Dr. Finlayson applied the problem to the real world experiences of the students' so

that it presented authentic opportunities. for them. The subject matter was organised around the problem and not around the discipline of chemistry thereby giving the students responsibility for defining their learning experience and planning to solve the problem. Both Dr. Finlayson and I circulated through the room encouraging the students to collaborate together and guiding them in asking questions appropriate to finding a solution. The students were expected to demonstrate the results of their learning by presenting their solutions to their classmates at the end of the period. The problem concerned the viability of establishing a small balloon-selling business and they were expected to solve it using the information they already possessed about the gas laws and the chemical elements. This would lead them to a greater appreciation of what they already knew by engaging in investigation to better understand the problem and then resolve it. At the end of the session, Dr. Finlayson presented the students with another problem to be solved through collaboration in the same class groups. The students were instructed to give themselves a grade for their work and to briefly justify that grade. This, it was felt, would make the students take more responsibility for their learning as it would promote a sense of ownership of the learning process, in accordance with the educational values espoused earlier. The next class I had with the students was one week later and they were given twenty minutes at the end of that class to work in their groups on the problem. They were given a deadline five days later and were told they could go to the computer room, if they wished to do so at that time, to post their assignments. One group posted their assignment on the Sunday before the deadline, and the following day the other groups posted theirs from the computer room.

Here one may see a good example of what is meant by **receptive reflection-on-practice**. Ghaye & Ghaye (1998, p. 29) refers to this as ‘positioned’ knowledge in that it is positioned in terms of a broader frame of reference. Reflecting on practice in a receptive manner entails reconstructing practice in a way that allows for new possibilities for action arising from new insights. Chris showed an openness to a new approach to teaching. He was able to reconstruct his own teaching through use of a PBL approach. He engaged with the literature on PBL and, opened up the learning environment to include a link with third level. The inclusion of a problem based approach and the link with third level proved educationally beneficial to the students. Chris began to live his own values more fully in practice. The PBL approach has given students the opportunity to take responsibility for their own learning. This shows evidence of improvement in Chris’ practice and also improvement in students’ use of the online learning environment through Dr. Finlayson’s presence in the research enquiry.

Chris (continued)

Although PBL was not in my mind at the outset of the study, it became part of the enquiry as a consequence of my reflection on the failure of the students to mirror my enthusiasm for the systems features, an enthusiasm I foolishly assumed they would share. I discovered the students showed more enthusiasm for this new way of learning than they did for the communications features of the system, but this new means of learning, in turn, provided a reason to engage with those communications features and incorporate them into their learning processes.

It has been clear throughout this research that the students were not entirely enthusiastic about the system. Voluntary adoption of such a course management system by female Irish second level students, in a manner that utilises the system to its full potential, especially its potential to facilitate both student-student and student-teacher communication, is not a simple and straightforward matter. Perhaps students need to develop greater group communicating skills in a classroom first, before they go online. An obvious impediment to the usage of such a system is the issue of access. Until such time as home Internet access is as commonplace as home telephone access it is unlikely that implementation of such systems, on any basis other than voluntary, will occur. Without the prerogative to oblige usage of the system an opportunity may be lost to enable students to take more responsibility for the learning processes as members of a broader learning community.

In the following extract from Chris' dissertation, he reflects on the challenges that he faced in introducing PBL and online learning into his teaching.

Another possible reason, as shown by this study, for the students not fully adopting the system is that the actual geographical/physical edifice of second-level schooling in this country does not particularly lend itself to such systems. These systems are used mostly in larger third level institutions with student bodies often widely scattered and opportunities for communication often restricted by the scale of the educational operation. Second level education is generally of a smaller, more intimate scale, with greater opportunities for communication between students and teachers making the enhanced communications facilities somewhat superfluous.

Validation Group Meeting via Videoconferencing

While supervising Chris' masters research enquiry [WWW7] [DVD1]. I also supervised three other teacher-researchers, Fionnuala Flanagan, Mairéad Ryan and Bernie Tobin. Each was carrying out research into his/her own educational practice. In order to give them the opportunity to make their research public, I arranged a validation meeting through a videoconferencing link up with Dr. Jack Whitehead of the University of Bath. I believed that it was useful to bring in an international expert in action research who would listen and respond to their enquiries and provide constructive feedback on their research. This represented part of my own endeavour to live my values of collaboration and dialogue in the learning process. As for participants, the videoconferencing link up further challenged them to consider the data that they needed in order to present evidence that they had improved student learning. I believed that this would help them in presenting their final dissertation.

The following extract is the dialogue between Chris and Jack Whitehead during the videoconferencing link up: 'Chrisvideoconf' (**Video 4: DVD 2**) and 'Jackvideoconf' (**Video 5: DVD 2**).

Chris: My question is how a course management system (Blackboard) might improve the educational experience of students in an all girl's science class. The research that I am doing is running parallel to my own traditional class. I put a course online and tried to encourage the girls to use the different communication features of

the system. I could not oblige them to use it as some do not have internet access at home. I want to determine if there is an improvement in the educational experience of students. I have gathered data such as my own diary, detailed surveys, sample of work from their use of online system, and interviews.

Jack: What I would advise you to do is to focus on the nature of your own learning in this process. It is highly innovative, almost no one really knows how to use the communication techniques on the web to stimulate learning. You have established a forum, you have encouraged students to participate in the forum. You have already got data to show that you have achieved that participation. As you are reflecting on the issue of learning in relation to the students, bring that into your account of your learning of what it might be to strengthen this enquiry over time. I would not be disappointed that you do not have evidence of student learning at this point. The fact that you have been learning how this innovation can be established and work on how you could encourage the pupils to develop it in relation to their learning would be certainly as far as you could go with this current enquiry. You can now reflect on your own learning in relation to students, and bring this into an account of your own learning.

Chris: One thing I did not mention is I have been going through a cyclical process of action research. I have been trying to encourage the students to use the system but they did not show any enthusiasm. I realised that I may have to extend the learning environment beyond the school. Margaret put me in contact with Odilla Finlayson, a lecturer in Chemical Sciences in DCU, who is very interested in PBL. She came out to the school and did a PBL lesson with the students. She suggested I might try

introducing it to the school. We organised a second level third level link up and students. She did a PBL session and students replied to her via Blackboard. I did learn that if we want to use this I might have learned that I will have to extend the learning community. Ironically the only learning I can show is during the PBL session and the link up with third level. I have now learned that we would need to extend the online learning environment beyond the school to make use of such an online learning system such as Blackboard.

Jack: This is perhaps the most significant part of your enquiry. The fact that you have negotiated with another partner in the university and gained some ideas and then carried them out and brought your own learning forward. This is probably the most crucial part of the enquiry. The work with the students in comparison to your own learning, in working with partners, including suggestion and imagining possibilities through the action research process is the most significant contribution you are making through the enquiry.

Chris: It is ironic that the only place where there is evidence of learning is when the PBL was introduced by outsiders. PBL was nothing to do with my initial enquiry.

Jack: It is vital to acknowledge the importance of unanticipated outcomes in your enquiry. This is part of the creativity and originality of the enquiry. This is part of the exciting developments of new possibilities that you have taken up and engaged with and shown that you have integrated into your own practice. You have evidence of your own action research process and your own learning.

My reflections on Chris' learning (MF)

Thus Jack Whitehead provided a steer for Chris through this dialogue. His chief contribution was encouragement, support and reassurance based on his experience of iterative, cyclical, action research processes and their eventual outcomes. His indicative advice avoided prescriptive intervention that might have appeared to transfer ownership of the enquiry from supervisee to supervisor. This helped Chris to reflect on his own learning in the research enquiry. It also helped him to consider the data he had collected and determine whether he could show evidence of improvement in student learning. This was to be the focus of the next validation meeting between myself, Chris, Bernie, Mairéad and Fionnuala.

Peer Validation Meetings: providing opportunities for participants to work collaboratively

During the supervision period, I organised group validation meetings in order to encourage each participant to discuss his/her research and to provide evidence of how they were attempting to improve their own practice. The purpose of this validation was to give participants the opportunity to present evidence of their own learning and influence on the learning of others, through a peer validation meeting. With the permission of all, I videotaped this validation meeting.



Validation meeting, June 2002. From left: Chris Garvey, Bernie Tobin, Mairéad Ryan, Fionnula Flanagan and Margaret Farren
Photos 7.1

In guiding the deliberations of this peer validation meeting, I kept in mind the general aim of developing each participant's living educational theories, having regard also to Habermas' insistence on social validity. Habermas contends that validation entails ensuring that accounts of practitioner learning are comprehensible, that sufficient evidence is provided to justify any assertions, that the background of the account is made explicit, and that the accounts are authentic in that the writer shows over time and in interaction that his/her claims to be committed are turned into reality (Habermas, 1976).

In his book 'Communication and the Evolution of Society', Habermas (1976) states that "anyone acting communicatively must, in performing any speech action, raise universal validity claims and suppose that they can be vindicated (or redeemed).

Insofar as he wants to participate in a process of reaching and understanding, he cannot avoid raising the following – and indeed precisely the following – validity claims”.

He claims to be:

- *Uttering* something understandably;
- Giving [the hearer] *something* to understand;
- Making *himself* thereby understandable; and
- Coming to an understanding *with another person*.

(Habermas, 1976, p. 2).

Before the validation meeting, I asked teacher-researchers each to relate their presentations to the following questions. At the validation meeting, each teacher had 45 minutes to present his/her research within the framework of the following questions;

- 1 Are the descriptions and explanations of the teacher-researcher’s learning comprehensible?
- 2 Is there sufficient evidence to justify the claims being made?
- 3 Are the values that constitute the enquiry as ‘educational’ clearly revealed and justified?
- 4 Is there evidence of the teacher-researcher’s educational influence on the learning of others?

The ‘web of betweenness’(O’ Donohue, 2003) in the validation meeting is characterized by a process of democratic evaluation where the unforced presumption

of reasonable response holds sway in the conversation. ‘*Validatevalues*’ (**Video 6: DVD 2**) is meant to convey the relational dynamic of the various contributions in the validation discourse, i.e. the web of betweenness as well as the engaged and appreciative responses of each individual to the others’ contributions. The pedagogy of the unique is characterized in the recognition that each individual has a particular and different constellation of values that motivates his/her enquiry, as well as being situated in a distinctive context within which the enquiry develops ‘*Validatear*’ (**Video 7: DVD 2**) was taken at the end of the validation meeting, Chris asked for clarification on the action research cycles. The presence of the other participants helped Chris to see how his learning could relate to the action research cycles. The explosion of laughter, at the end of the meeting, reflected Chris’ acceptance of belonging to an action research community and the quality of empathy binding the community together. I believe that empathy among participants and between them and the teacher-educator is worth striving for.

Each of the participants evoked Winter’s six criteria of rigour in their educational enquiry in order to help them to articulate the educational significance of their work and to demonstrate the reliability of every aspect of their research.

I asked Chris for his comments on this chapter. The following is an extract from his email response. I modified my original text in the light of Chris’ feedback.

Chris's evaluation of his learning

From: "Chris Garvey" <chrisgarvey@eircom.net>

To: "Margaret Farren" <Margaret.Farren@dcu.ie>

Sent: Wed, 14 Jul 2004 09:05:02 +0100

Hi Margaret,

I've just finished reading the chapter. Your perceptions are mostly similar to my own, however, there is one instance where I would not be inclined to agree with you. You state that at the meeting of 14th April 2002 I was certain that online learning technologies would not be appropriate in the context of secondary schools in Ireland. I don't recall being that despondent about the technology. I certainly was sceptical about its possibilities and was downbeat about the direction my research was going but I think that I was also optimistic about the technology if employed in the correct manner. The "correct manner" at the time had, however, eluded me. Apart from that minor point I would agree with your perceptions of my action research during those months. They are an accurate account of how the 'living theory' enquiry unfolded

Initially I was somewhat doubtful of the benefits of qualitative research in general and action research in particular. Due to my science background I was uncomfortable and unfamiliar with this kind of research probably because my past research experiences had been of a more quantitative nature. Looking back on the process I consider it to have been a great opportunity to engage in and apply a new approach and methodology, some aspect of which I have carried through to my

professional life. Of particular value were the collaborative and consultative elements of the study. The video conferencing and peer validation meetings were worthwhile and meaningful and I found them extremely useful. They brought home to me the necessity to engage constantly in critical reflection and dialogue, not only in educational research itself but also within all areas of my educational practice.

Take care and best of luck.

Chris

Conclusion

In this chapter I have traced my own learning as a supervisor of teachers carrying out practice-based research and, where appropriate, introducing them to the action research methodology and the idea of developing a ‘living education theory’. I have highlighted debates round the acceptability of action research methodologies at DCU and I have shown the benefits of action research in practice. I hope that I have demonstrated in my report on these enquiries how I hold myself accountable in relation to my values and my educational influence on the learning of those that I engaged with in the process of developing their own pedagogies through the use of a ‘living educational theory’ approach. Through the supervision process, I clarified my values of collaboration and dialogue and I also showed the meanings of my own embodied values through use of video clips. These values were transformed into living epistemological standards of judgement of my practice. The use of ICT was not central to what happened in these enquiries. But at all points it offered challenges and opportunities. ICT encouraged participants to radically re-appraise their practice. Its meshing or failure to mesh with classroom activities and expectations offered measurable criteria of the success or otherwise of ICT, while of course leaving open

the question of its efficacy as an aid to learning. I have shown how I have been able to support participants in their learning. Finally, I briefly explored the social dimensions of the learning process, again in the context of what ICT had to offer.