

Abstract

This paper reports on research that has taken place with trainee teachers using web blogs for reflective practice at Sheffield Hallam University and Nottingham Trent University, in the United Kingdom. The research identifies how reflective blogs provided trainee teachers with an opportunity to develop as reflective practitioners in a more evolutionary way – something we might term '*e-flection*' encompassing as it does reflections that are both evolutionary and online. This is in line with Schon's ideas of reflection on action (Schon, 1983) as the research indicates that trainees were using the blog after teaching, to reflect on their teaching and learning as a past experience. The research also explores how reflecting as part of a community can benefit students in developing the reflective aspect of their professional identity.

Keywords: teacher training; reflection; blogs; community.

Introduction

Developments in initial teacher training over the last decade have seen an increased focus on improving skills in becoming a reflective practitioner. As Web 2.0 technologies are emerging these are providing alternatives to reflective journals, (Bain, Mills, Ballantyne, & Packer, 2002) and are proving to engage some students more than the traditional methods of keeping reflective journals. At Nottingham Trent University (NTU) and Sheffield Hallam University (SHU) in the United Kingdom (UK) longitudinal research has taken place into the use of reflective diaries with Initial Teacher Education (ITE) trainees using a web log (blog) (Hramiak, Boulton, & Irwin, 2009). [This research was developed from a common interest in researching into whether a community blog enabling the sharing of reflections might lead to deeper level reflections by trainee teachers.](#) The trainee teachers involved in the research were all on a one-year post-graduate teacher training (PGCE) course for secondary education (11-18). The term blogs is defined as allowing 'individuals to chronologically record their writing and reflections' using online digital media (Sharma, 2010, p129).

Learning to reflect on practice is an important aspect of becoming a teacher. Trainee teachers are taught how to reflect both at university and while on practice but in reality this is a skill that is often hard to acquire. Reflections are rarely shared within a cohort of trainees, or with the university tutor, as much of the teacher training programme takes place in schools, with tutors visiting infrequently. Development of the use of web blogs for online reflection during practice has provided a vehicle through which these reflections can be shared by trainees, thus developing a community of reflective practice. Tutors can also provide more frequent support in developing reflective skills as part of a formative process by accessing the blog entries and sharing their expertise with the cohorts.

This paper investigates the responses of trainee teachers to the provision of a community blog as a tool through which to share their professional development as reflective practitioners, and to do so in an evolutionary way that we have termed '*e-flection*', to reflect the steady progress of reflections over the duration of the course,

and the fact that reflecting was done online using a blog. The paper seeks to illustrate how reflection can be encouraged and enhanced by supporting trainee teachers through the auspices of an online learning community created specifically for reflection. The theory behind the use of blogs with the trainee teachers in this study was to determine if blogs could provide a setting for reflective practice – a '*practicum*' (Moon, 1999) where, in a risk free environment, that of the virtual blog, trainees could be encouraged to reflect on their professional development over a sustained period of time. By developing reflection through blogs, which were opened to their peers, we believed that this would enable a greater sharing of experiences and perspectives because, 'When we write and reflect with others we can gain multiple perspectives' (Alterio, 2004, p322).

High quality reflection is a crucial element of effective teaching. Trainee teachers are not exempt from this, and must learn to self reflect on their own practice and also on the practice of others by comparison, if they are to progress as teachers. In the authors' view this is an essential aspect of their training. The intention of the blog was to provide an easily accessible, limitless space where this might be done in private, but with the opportunity to open it to their peers, tutor, or school-based mentor, thus developing a community of reflective practice. It was intended that the trainees would be encouraged to reflect on their work and show progressive development as reflective practitioners over the duration of the course. The process of opening their reflective blogs to others links to research by Rocco who found that 'Making reflection public seems to have had a positive impact on the quality and style of reflection and interactions' (Rocco, 2010, p137). This is something we explored as part of this research.

The research into the use of blogs across the two universities has been in two phases. Phase 1 of this research focused on determining if blogs could provide a setting for reflective practice (Hramiak, Boulton, & Irwin, 2008). Phase two of this research builds on this previous research and seeks to determine whether or not blogging within an online community can actually enhance the reflective practice of developing trainee teachers. The researchers believe that this research has relevance to a diversity of subjects in Higher Education, particularly those that involve reflection on and in practice.

Background and context

As stated above the process of developing as a reflective practitioner is an essential aspect of becoming a teacher. At both the institutions involved in this research, reflection has previously taken place in a private area which has made sharing the development of professional identity through reflection time-consuming and difficult to co-ordinate. Through the use of a blogging tool trainee teachers can open their reflection to their peers and tutor and experience a greater sharing. The purpose for the trainee teachers sharing their blogs was for them to share multiple perspectives, through reading each ~~others' reflections~~ [others' reflections](#), thus promoting professional development.

While some feel that much of the responsibility for developing teachers as reflective practitioners is with the school mentor (Moran & Dallat, 1995), the authors of this paper would argue that this is only partly the case, and that much of the training in becoming a reflective practitioner has to take place in university sessions, with peers and tutors. However, due to the nature of post-graduate teacher training courses in the UK, where two thirds of the year is spent in secondary schools, the authors knew that a great deal of reflection was not being shared; we wanted to research whether it would be beneficial to share reflections and whether a blog tool would facilitate this.

An initial literature review was undertaken looking at the way blogs have been used in educational settings, specifically, the way in which they may have been used in teacher education. From this review, we identified that some research into the use of blogs as a means by which the isolation of pre service trainee teachers can be alleviated has taken place (Dickey, 2004). This type of research links with previous research done by one of the authors in this field looking at the use of virtual learning environments and the discussion tools within them, to reduce the isolation and loneliness felt by trainee teachers on placement (Hramiak, 2007).

Following on from this, as part of the above mentioned literature review, we widened the search to include blogging as a tool within higher educational settings. Catalano (2005) reports that blogs allow a broad spectrum of non-technical users to publish easily to a wide audience, giving examples of educational uses that include communication from the classroom/school to parents and the community, students practicing writing online, and students communicating with students in different cultures. However, Catalano only looks at the uses of public blogs in education, rather than the use of blogs for private reflective journals, the topic of this study (Catalano, 2005).

Martindale and Wiley used blogs as ~~non-private~~non-private spaces with their students and had some success, reporting that students' writing became more thoughtful and longer as the course progressed (Martindale & Wiley, 2005). Research by Divintini et al (2005) on supporting teacher education learning in the field using blogs reports limited use of blogs by students, and even more limited use of the blog as a reflective diary (Divintini, Haugalokken, & Morken, 2005). There appeared to be little if any research published to date on the use of community blogs in teacher training, such as the ones used for this research. Oti and Clarke (2007) investigated the use of blogs as public reflective journals, which resulted in concerns from students around privacy and confidentiality in their evaluation (Oti & Clarke, 2007). They also reported online reflective journals as being more time consuming for some students who reported problems with setting up and accessing the blog software online. It was also found that the use of tools such as wikis and blogs to foster student interaction online was of value to trainees (Beldarrain, 2006).

Kerawalla et al (2008) identified six factors that influenced blogging, in terms of the way students approached it, and their learning experience because of it, by distance learning masters level students in their study. These were perceptions of, and the need for community, perceptions of and the need for audience, the utility of, and need for comments, presentational style of the blog content, overarching factors related to the technological context and the pedagogical context of the course. The researchers also found that the blogging behaviours of their students were varied and depended on the way in which they addressed the factors identified, for example, some students chose not to blog at all, preferring to communicate with others via other means, while others used their blog simply because it was a convenient tool for making notes and so on, while others found the blogs increased their awareness of the technology and enabled them to devise strategies for using blogs in their own teaching, (Kerawalla, Minocha, Kirkup, & Conole, 2008). This latter finding supports the data from this study, which also examined the differences in blogging behaviour and the effect of community in the development of reflective practice.

Educational research, comparing asynchronous (not in real time) and synchronous (real time) discussions has also shown that asynchronous discussions, such as the ones that occur through blogging, as reported here, are more likely to allow for experience sharing than synchronous ones tend to (Schallert, Chiang, Jordan et al., 2009).

Sharma, in her use of blogs for reflection with post-graduate students integrated an 'initial orientation session' for using the software (Sharma, 2010, p130). This was not found to be necessary at SHU and NTU. Only one student had previously used blogs, but the software at both institutions was intuitive and simple to access and use. Sharma also reported that their participants valued finding that it helped them to think more deeply as well as articulate their ideas. Similar research by Churchill (2009) indicates that one of the main aspects of blogging that contributed most to students' learning was that of accessing and reading the blogs of others (Churchill, 2009).

Research indicates that for reflection and reflective practice to be effective, trainees have to engage with it at a deeper level. If reflection stays at a technical level, concerned mainly with their evaluation of teaching and learning strategies and classroom resources, it become less clear how to relate this to teacher development (Dymoke & Harrison, 2008). Roberts (2010) found that benefits identified by trainees included personal development, highlighting strengths and weaknesses and identifying where further development was required (Roberts, 2009). This concurs with our research, where trainees reported that they had gained much from both reading and writing the blogs.

Theoretical framework

The process of becoming a teacher centres upon the development of iterative, effective, reflective practice. [Some of the theories](#) of reflective practice in the professions are based on the earlier work of Schon (Schon, 1983). The theoretical underpinnings for this research are based on a combination of these reflective theories, and also on theory of social-constructivism, learning as social mediation of individual knowledge as purported by Vygotsky, (Vygotsky, 1978). It is the blend of these theories on which this research is grounded and which is described in the following section.

One could ask, what does it mean to be a critically reflective practitioner as a teacher trainee? Black and Plowright (2010, p245) state that the terms 'reflection' and 'critical reflection' are often used interchangeably and not clearly distinguished from each other (Black & Plowright, 2010). Our experience, totalling 15 years of training teachers, is that developing a professional level of reflection is often one of the hardest aspects of the training programme to become competent in. This may be as a result of coming, as the students often do, from undergraduate courses which focus on subject development rather than reflection (Rocco, 2010). Developing critically reflective skills and making the link between reflective theory and practice, can be equally as difficult for trainee teachers (Bain et al., 2002).

Reflection is not a new [concept/process](#). Its philosophical foundations can arguably be traced back to Aristotle in his writings in the Nicomachean Ethics, in which he writes about human deliberation. For deliberation on important questions, he writes that others are called on to aid us in this task, focussing our deliberations on the means and not the ends, and ultimately how to attain that end (Cahn, 2002). The links between Aristotle's ideas on deliberation and current ideas on reflection for teaching can easily be made, and it is through theoretical underpinnings such as this, that research seeks to show how deliberation and reflection, in this case through an online community setting provided by a blog, can truly enhance the development of trainees as reflective practitioners. This indicates that reflection is therefore a long-established and common form of learning. . If contemplation is done in a more social context or setting, such as communal contemplation (or reflection) online as part of a community of learning

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then it has more far reaching consequences as it involves the perspectives of others and as such can enable the contemplators (reflectors) to become more critical about their reflection (Jarvis, Holford, & Griffin, 2005).

For reflection and reflective practice to be effective, trainees have to engage with it at a deeper level and learn to apply the pedagogy of learning to their practice in a critical way. If reflection stays at a technical level, concerned mainly with their evaluation of teaching and learning strategies and classroom resources, it become less clear how to relate this to teacher development (Dymoke & Harrison, 2008). The definition by Black and Plowright (2010, p 246) is the closest definition to our experience:

'Reflection is the process of engaging with learning and/or professional practice that provides an opportunity to critically analyse and evaluate that learning or practice. The purpose is to develop professional knowledge, understanding and practice that incorporates a deeper form of learning which is transformational in nature and is empowering, enlightening and ultimately emancipatory.' (Black & Plowright, 2010).

It is only when trainees use reflection to question their understanding, their underlying assumptions, and to make the links between teaching and learning theories and their own practice, which is not easy for beginning teachers to do, that true reflection can be made (Dymoke & Harrison, 2008). In doing so reflectors begin to critically explore why they do things, make links from theory to practice, and so make the leap from evaluation. Hence true reflection is where student teachers make links between learning theories they deployed and why they might or might not use them again. It is from here that trainees can build on their professional knowledge, adding to it as a result of such reflection, and in doing so, also build on their own understanding of teaching and learning, both as teachers and as learners themselves.

If we combine the concepts of reflection that include dialogue with others, then it is arguably not a big step from here to the constructivist learning theories of Vygotsky (Vygotsky, 1978). In his work, Vygotsky believed that individuals learn better if they do so with and through others such as their peers, or teachers (Tudge, 1990). The blog setting provided in this research enabled trainees to participate in such a style of learning, that they were able to reflect and discuss with their peers through the online medium provided, and in doing mediate their own learning and progression as individuals.

Vygotsky's ideas on the zone of proximal development (ZPD) also arguably align themselves with the idea of community reflection as described for this research, (Vygotsky, 1978). The ZPD is defined as 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving in collaboration with more capable peers' (Vygotsky, 1978, p86). Thus in relation to our research here, we would argue that by reflecting as part of a community, that is, with their peers, trainees were capable of achieving more in terms of their development as reflective practitioners than if they had reflected in private.

In this research reflection is mostly that of reflection on action as defined by Schon, (Moon, 1999; Pollard, 2002). Schon argued that our knowing is in our action (Pollard, 2002; Schon, 1983). If we argue that this action might in part be the trainees' participation in an online community built for reflection, as in the case of the blog used in this research, then those trainees who participated in this blog gained from it in two ways. Firstly they were able to reflect on their actions in the classroom through the blog

and, secondly, the actual participation of sharing their reflections in their community also enabled them to develop as practitioners, and to increase their knowledge of teaching and learning (Rocco, 2010) and this interceded by the type of social educational settings envisaged by Vygotsky (Vygotsky, 1987).

Critics of reflection in action (Carr & Kemmis, 1986; Day, 1993; Solomon, 1987) argue that it is too narrow in focus, and that reflection is also a social process that requires the expression of ideas for and with others in similar situations, such as a mentor or peer, in order to allow the development of a critical perspective. Reflection is also seen as requiring time to reflect on actions rather than the immediate response used by reflecting in action (Dymoke & Harrison, 2008). It is often the case that teachers need to take their experiences seriously, by reflecting on their actions, so that they can begin the process of problem solving with collaborative and critical reflection on such experiences (Jarvis et al., 2005).

Thus a combination of reflective theory, and socio-constructivist learning theory, provide a theoretical underpinning against which the findings and the analysis were then extracted. The means by which the data were collected for this analysis is detailed in the following section.

Methods and Methodology

A predominantly qualitative approach to data collection was taken for this study. Arguably, the research represents a small scale case study, (Bogdan & Biklen, 1998) investigating two sets of trainees at different institutions on similar training courses. As has been noted with other research, the collaboration between NTU and SHU focussed on collating similar data sets (Groom & Maunonen-Eskelinen, 2006) to identify how the blogs, were used to support the development of reflective practice.

Thirty two trainees across both institutions took part in the research (SHU=17, NTU=15) at the start of the research. All trainees had degrees in computer science related subjects. Each trainee had access to the blog tool via internet access which was seen as important by the trainees due to working in a range of schools during their course, and also requiring access from home. SHU trainees had a blog as part of their VLE, while NTU trainees had a blog tool which was external to their university.

At the start of the course the purpose of the research and the blogs was explained to the trainees. All trainees were asked if they wished to participate in the research, written permission was obtained from all those who agreed to take part. All members of each group agreed to participate. Complete data anonymity was assured, and the names of the trainees and their initials have been changed to ensure this. Students were given the opportunity to opt out of the research at any point over the year of the research.

The research involved the implementation of virtual shared blogs for use by the trainee teachers in the two respective cohorts for the duration of their time on the PGCE course. The blogs were for personal reflections by the students on their professional development and experiences on placement. Trainees could open up [aH7all](#) or some (selected by them) to their peer community group. The blogs in each institution could only be seen by other members of the cohort and the tutor, and as such they were private to each cohort. The blogs had been specifically set up for use by trainees to reflect on their experiences with others in the group, thus facilitating the development of a learning community (McConnell, 2006) which would engender greater reflection

among the group and an enhancement of their development as learning practitioners alongside each other.

Details of the numbers of blog by each trainee were recorded alongside the number of blogs that were shared within the community. Professional judgements were made by the tutors of the level of reflection and records made for each individual student.

During the course of the year, tutors were able to access individual blogs and the community blog for their group to facilitate the development of reflective practice. Interventions by tutors were recorded to identify frequency of intervention required. Analysis of interventions indicated that these were more frequent at the start of the course, reducing in number as the trainees developed a greater level of skill in reflecting. The advantage of the blog in each case is that the trainees were able to share reflections which had not been possible previously when students kept their reflections private using an alternative tool such as a diary.

Group interviews were conducted with the trainees to elicit their feelings about the blogs as tools for reflective practice and the sharing of their reflections to develop a community of practice. The findings from the research are detailed in the following section. These interviews were conducted at three set times during their one year course: at the outset of the project (prior to their first school placement) to gain an understanding of their initial views on sharing reflections; approximately half way through the project to identify benefits and inhibitors of using a blog for reflections; at the end of the project again to identify the benefits and inhibitors and whether they found the provision of a community blog to enable a greater sharing of experiences and perspectives had help them to develop the level of their reflections.

Data and Analysis

As stated earlier this research represents a small scale case study investigating a particular set of trainees at different institutions on similar training courses – the PGCE for ICT teachers (Bogdan & Biklen, 1998). It was conducted at two separate higher education institutions, both of which have large, well established teacher training programmes.

As has been noted with other research, the collaboration between the two institutions focussed on collating similar data sets, (Groom & Maunonen-Eskelinen, 2006) to identify how the blogs, were used to support the development of the trainees. Although small in scale, the collaborative project was undertaken to evaluate and review current practice within the two institutions in this area of teacher training; as such it is interpretive and mostly qualitative in design. In addition interviews were carried out with focus groups at each institution. The use of multiple sources of evidence provided triangulation and added rigour to the conclusions drawn from the data (Cohen, Manion, & Morrison, 2007). Both methodological and space triangulation – the latter being a form of data triangulation – were used in this study. Blog entries across both institutions varied in quantity and quality, ranging from the very brief and descriptive, to more lengthy reflective entries. This is reflected by Sharma (2010) in her research into using blogs to support student reflections in post-graduate courses. Those trainees that used their blogs as a reflective tool, with regular entries, developed a greater level of critical reflection; one trainee commented that his blogs had *'started as descriptive, but then became more reflective with experience and developing practice helped by sharing blogs with my peer group'*.

When interviewed about the use of the blog in group interviews at the end of the course both groups of trainees were very positive about the blog and its use during the course. Data from the group interview with both cohorts indicated that the 'group blog'

was felt to be a strength of the course, with some trainees even requesting that a prize be given in future for the best blogger of the year. All said that the community element of the blog was useful as it gave them a place in which they realised that they were able to share perspectives and experiences through reflecting on their professional practice and the development of their professional identity.

Analysis and Discussion

The main focus for the research reported in this article was on the frequency and types of reflection and the need for community.

Frequency and types of reflection

The results from the blog entries indicate that for many of the trainees, across both institutions, this online medium gave them an essential community space where they could reflect on their progress over the whole year. It gave them an opportunity to develop as reflective practitioners in a more evolutionary way – something we might term ‘*e-flection*’ encompassing as it does the fact that reflection was both evolutionary and online. This is in line with Schon’s ideas of reflection on action (Schon, 1983) as the data indicated that trainees were using the blog after teaching, to reflect on their teaching and learning as a past experience. It also concurs with Vygotsky’s ideas on learning from others better than you can do alone, (Vygotsky, 1978). Nearly all the trainee teachers at both Universities made some blog entries. The extent to which entries were made, and the length and style of the entries, however, varied greatly between the trainees.

What was also evident from the blog entries was the difference in criticality between the trainees – their differing abilities to reflect critically on their experiences in school. The more frequent bloggers showed a clear difference in the quality of their posts to the blog. The trainees who blogged less frequently than the others wrote mostly descriptive posts, which they reported in group interviews was of less long term use to the trainee in terms of development as a reflective practitioner and as a teaching professional. The frequent bloggers were able to develop their posts into a more reflective style. More frequent blogging was probably most beneficial because writing more posts gave those trainees a chance to review their previous posts, and become familiar with writing blogs (Martindale & Wiley, 2005).

For example, trainee AW (from SHU) who produced a large blog from 42 separate entries, made critical reflective comments such as:

"But I also know that classroom management, differentiation and occasionally discipline are my weaknesses", and:

"I still need to learn a bit more about the courses and the structure of how things work, and there will be challenges..."

In contrast to this, trainee AA (from SHU) whose blog totalled only five pages was making entries (eight in total) that consisted of descriptive text from the start of the course to the end of it:

"We started off with a morning briefing with all the teachers and then had a tour of the school" as their first entry, to:

"My first lesson went ok but my mentor kept telling me it was really good" their final reflective entry.

Research by Sung et al (2009) showed that most of her trainees did some reflection in their online journals, but only one third of them, in their research, showed the highest level of reflection (Sung, Chang, Yu, & Chang, 2009). This was a much lower figure than was found in this research, and thus it could be argued that their belonging to a community that was set up specifically for reflection, might have influenced the *type* of reflection being done. Out of 17 trainees at SHU, 12 of the blogs contained high level reflection, while at NTU out of the 15 students 13 of the blogs demonstrated the development of a high level of reflection. The higher level reflections generally involved the trainee critically appraising their own performance linking theory to practice, and that of others, and also often critically commenting on the more holistic view of education in schools as they saw it. This type of deep level reflection is arguably demonstrable evidence of trainees beginning to make links between theory and practice, a difficult task for many trainees, and recognisable as such in other research (Bain et al., 2002).

It is perhaps far easier to reflect at a higher level if you can read similar levels of reflection on a blog to see how it is done by others. This resonates with Vygotsky's ideas of the ZPD (Vygotsky, 1987). In this research each trainee is arguably learning more from reading the reflections of their peers, than they would have done by simply recording their own private reflections. This reflects the experiences of Black and Plowright (2010).

In this research the reflections indicated that analysis of their own teaching shifted from mere chronological descriptions of lessons, as and when they had taught them, to reflections that highlighted the key elements, both of their successes and their failures, as reported by the work of Lazerus and Olivero, (Lazerus & Olivero, 2009).

Other trainees showed a marked difference in their blogs from early on in the course to those entries made at the end. At the beginning of the course blog entries from trainee NF from SHU consisted of large descriptions of which lessons were observed and taught by whom and where. At the end of the course, their comments included much deeper reflections rather than mere descriptions. For example a trainee from NTU had initially started blogging by describing in detail the ICT facilities at the school vocalising his lack of confidence and questioning his career choice, as his confidence developed his entries became more developed and evidenced clarification of the problem and moving beyond this to elaborating initial tentative hypotheses and finally, acting on the hypothesis and reflecting on this development (Dewey, 1933):

"The last time I tried using group work with my Year 9 class it was not very successful. When I revisited my reflections from that lesson I remembered that I needed to have mixed ability groups for this class and that I would keep pupils AC, TS, and AJ in different groups to reduce their opportunity to disrupt. I spent more time in planning for group work this time and discussed my planned groupings with their form tutor who has better knowledge of the pupils. By putting the more disruptive pupils in separate groups, and making them responsible for feedback to the whole class for their group's findings they worked much harder and impressed the rest of the class with their level of engagement and level of presentation."

The need for community

All trainees commented on the enormous benefit the community aspect of the blog tool. In an examination of online communities by Weller (2005) the online community

was seen as a natural conclusion in e-learning, driven by the expectations of a generation of learners who have been inculcated with the values of the internet (Weller, 2005). Certainly, as was shown by the study reported in this paper, it is an advantage for the trainees to be at the forefront of technology and its uses as they are going to be responsible for teaching tomorrow's specialists (Gaffney, 2010).

The development of a community of reflectors was the greatest benefit identified by the trainees in this research and had the greatest influence when it came to frequency and level of blogging. Data collected shows that while not all trainees wrote many blog entries, all trainees were reading the blogs of others on a regular basis, for such small groups (cohorts of 20 or less) thousands of views mean that reading was an essential part of their course. There would seem to be a need for trainee teachers to share their reflections with their peer group, tutor and possibly school mentor while still maintaining the privacy of their reflections beyond the community. Indeed our research indicated that the need for community was strong. This is also borne out by other research, such as Kerawalla (2008), Churchill (2009), and Sharma (2010).

Another positive aspect of the community being able to share and read each others' reflections was knowing when those in their community were feeling stressed or in need of support. An example of this was where one trainee at NTU reflected on a Year 10 lesson that had gone badly. The depth of his reflections enabled the community to provide support for him in terms of what had worked for them in their Year 10 lessons, ideas for engaging this age group, and suggestions for tasks for the next lesson as well as classroom management techniques that others had found helpful with Year 10. The following week the same trainee was far more positive in his reflection on the lesson with this same group; he had taken on board the advice from his community of reflectors. Without the community aspect of the reflective blogs this would not have been possible.

Conclusion

Overall, there is substantial evidence that the blogs were a useful tool for reflective practice, developing a deeper level of reflections and developing a community of reflective practitioners. This finding reflects that of Sharma (2010, p134) who found that using blogs for reflection 'helped reflection, learning and thinking', (Sharma, 2010). The research reported here demonstrates that the use of blogs on the PGCE had a positive impact on the trainees' development as reflective practitioners, and also provides concrete evidence of their development as professional teachers.

While it is important that trainee teachers reflect on lessons at the time of teaching them, this type of reflection in action, (Schon, 1983) does not provide a more holistic, progressive story of their development during the course. Black and Plowright make the point that developing reflective practice for 'professional development is complex and sophisticated' (2010, p 256). This is certainly our shared view. Developing the skills and knowledge associated with reflective practice is essential to the development of teachers, and it is this type of 'e-flection', as we have termed it here, that is vital to the development of a deeper, more developed, reflective practice in teachers.

The evidence from this research shows that reflection has occurred through the auspices of an online community blog set up for this purpose. Through this reflection, some learning has occurred in a formal way as trainees have developed through the year. What should also not be discounted is the informal learning that may have

occurred through being part of a learning community such as this one (Dymoke and Harrison, 2008; Roberts 2010).

The main benefit of using the blog for reflective practice in this research has been the support from their reflection community, enabled by the blog tool. The sharing of reflections and development of professional identity had not been observed by either researcher before. The blogs gave the tutors an added dimension in terms of effectiveness by being able to intervene to assist trainees with reflection and give guidance on this where necessary, something which has also been indicated as a positive element in other research of this nature (Churchill, 2009). If practice can be enhanced through the use of technology in this way, then it is surely worth investigating further.

Examination of the interactional practices of students could arguably be used by educators to reflect on the appropriateness of these practices for the educational aims of their courses, and to think how their own educational instructions and activities may be designed in order to either encourage or discourage particular sorts of practices (Gibson, 2009). In doing so with trainee teachers, such as the ones who participated in this study, we might better be able to facilitate their development as reflective practitioners.

Overall the community of reflective practice added [a richness](#) to their training and the development of their professional identity.

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