



Title : Pre-service teachers' social media usage to support professional development: a communities of practice analysis

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**PRE-SERVICE TEACHERS' SOCIAL MEDIA USAGE TO SUPPORT  
PROFESSIONAL DEVELOPMENT: A COMMUNITIES OF PRACTICE  
ANALYSIS**

by

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ABSTRACT

The current study was based in one higher education institution and examined pre-service teachers' use of social media to support their own professional development whilst on school placement, through a community of practice lens. The trainees were registered on a one year secondary course designed to lead to a Post Graduate Certificate in Education with 60 credits at Masters Level combined with Qualified Teacher Status (QTS) for England and Wales during which the researcher repeatedly interviewed a focus group sample from each subject cohort and analysed transcripts of these interviews through the lens of Wenger's (1998) concept of a community of practice.

The research took place in a national context of review and reform of teacher education in England. Some trainees, for example those studying at the higher education establishment at question, might experience considerable challenge in the school placement. Authentic self-reflection requires a safe place in which pre-service teachers can openly articulate with others what they might see as their own failures as well as successes in the classroom in order to develop a greater sense of self-efficacy and new ideas about teaching. In some instances, such as in the area of behaviour management, the national focus on maintaining good order means that it may become even more challenging and ultimately riskier to share the experience of failure because acknowledgement of this risks the possibility of failing to achieve the requisite standard for qualified teacher status. Besides, to gain qualified teacher status a trainee must attain the Teachers' Standards (DfE, 2013) which include a requirement that a professional teacher upholds the ethos of the school to which the trainee might not be sympathetic.

Findings from this research cannot be generalised. However, in this small-scale study it was found that pre-service teachers used private social media to

support each other on the course in a number of ways: to establish a group that might be viewed as a community of practice and then, as part of the core enterprise of becoming a qualified teacher, to offer or to receive shared practice or support from another pre-service teacher in the role of more knowledgeable other and to broker new ideas about teaching to each other and to schools themselves from the other communities to which they belonged. Those who networked socially as part of the community of practice were more organised around deadlines. They also more likely to manage risky and stressful situations collaboratively and present an enhanced image of "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp. 4-5) during their school placement which was unavailable to the trainee who did not participate within the online community.


The scope for openly sharing practice and the development of learning communities among pre-service teachers is potentially restricted by the current national and local context of teacher education. However, one conclusion from this study might be that social media can potentially enable pre-service teachers to communicate privately in important ways that support their professional development whilst undertaking their training.

## Declaration

I declare that this thesis is my own un-aided work. It is being submitted for the degree of Doctorate in Education at the University of Bedfordshire.

It has not been submitted before for any degree or examination in any other University.

Name of candidate: James Garfield Shea

Signature: 

Date: 12/09/2016

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## Chapter 1 Introduction

### 1.1 A Rationale for the Study

There have been a number of changes in recent years which have affected pre-service teacher education in England and Wales, but two have particular relevance to this study. The first is an ongoing major change to the context of pre-service teacher provision which can be termed New Public Management (Hall and McGinity, 2015) in which a marketised education system has affected the provision of pre-service teacher education in terms of reducing the amount of Higher Education pre-service teacher provision and creating large numbers of smaller non-HEI providers. This has been accelerated in recent years with direct intervention to adjust the pre-service teacher allocations to encourage the growth of school led provision. The second change is the development of social media alongside technology such as push notifications, fast mobile broadband and the ability to service online communities privately through synchronous and asynchronous interactions.

The nature of communities such as those comprised of groups of pre-service teachers is something that Wenger (Lave and Wenger, 1991; Wenger, 1998; Wenger, McDermott and Snyder, 2007; Wenger, Smith and White, 2009) has written about extensively in his work on the concept of communities of practice. Communities of practice are "...important places of negotiation, learning, meaning and identity" (Wenger, 1998, p.133). Such communities may develop "...idiosyncratic ways of engaging with one and another" (*ibid.*, p.113) which require 'brokers' who broker ideas from one community to another. Participants operating across these communities are often engaged in a "...boundary encounter" (*ibid.*, p.112) with the broker being able to share practice across the communities, "Practice has the advantage of offering something to do together, some productive enterprise around which to negotiate diverging meanings and perspectives" (*ibid.*, p.144). Such a description also describes the nature of post graduate pre-service teacher education. In coming together with a shared single purpose, to become qualified teachers, their productive enterprise as a group of pre-service teachers is the achievement of becoming qualified teachers and the way that pre-service teachers experience different

communities as part of their teacher education. Within the framework of Wenger's theory of communities of practice there is a very clear definition of the core enterprise of a community of practice:

“[the core enterprise] is defined by the participants in the very process of pursuing it. It is their negotiated response to their situation and thus belongs to them in a profound sense, in spite of all the forces and influences that are beyond their control.”

(Wenger, 1998, p.77)

Within this study, the whole purpose for the existence of this group of pre-service teachers and the reason for them to come together in both physical and online settings is to become professional and qualified teachers. Thus the core enterprise of the group was to achieve the qualifications associated with becoming a qualified teacher on their pre-service teacher education course: qualified teacher status and the post graduate certificate in education. Whilst they would access more than just the qualification in their pursuance of it; the qualification or 'credential' is the reason the group exists. The community coming into existence due to the course has always been the case for pre-service teacher communities due to the nature of the course – they need to develop a professional understanding of teaching and this comes from combining knowledge from different parts of the profession. The recent difference for pre-service teachers and their practice as members of these multiple communities is that today many of these pre-service teachers are using private social networking during their teacher education courses as they experience the school communities and teacher education communities which form the constellation of communities in pre-service teacher education. Participants in teacher education belong to disparate communities: for example, the pre-service teacher community, the school communities within the placements, and the tutors within Higher Education. Looking through the lens of Wenger's concept of a community of practice at the private social networking of pre-service teachers enables this study to investigate how and why these private social media interactions are being used by the pre-service teachers during their teacher education course. By seeing the pre-service teachers as a community of practice, Wenger's key ideas from his concept of a community of

practice can be used as an analytical framework through which the private social media interactions of the pre-service teachers can be explored.

The nature of social networking revolves around notions of speed and privacy. By considering the nature of an audience one can decide how candid one can be in revealing thoughts. Such thoughts can be hidden within a small WhatsApp group or in a larger Facebook homepage replacing, reinforcing and adding to face to face verbal interactions between communities. Push notifications, (which are on screen messages that alert the smartphone or tablet user to immediate updates in the social media community) facilitate the speed and quantity of these interactions. In the current study and in the context of teacher education, the speed of push notifications can have a particular salience. Charged with a difficult period 5 lesson, for example, insecure pre-service teachers can use the Facebook app on their smartphone to select an available pre-service teacher from their private socially connected community of pre-service teachers and receive direct and immediate support or alternative ideas leading to a different outcome for the lesson had they not received such support.

The idea that pre-service teachers can influence the outcome of immediate or future challenges by building ideas and knowledge using a range of socially constructed ideas from beyond the place of learning is not new. As well as using Wenger's community of practice (1998) as a lens through which to view the community, there is also an acknowledgement in this study that Bourdieu's concept of 'habitus', "...acquired, socially constituted dispositions" (Bourdieu, 1990, p.13) is useful to make sense of what the pre-service teachers construct through their private social networking interactions. That is, although the immediate enterprise of pre-service teachers is to become qualified teachers, at the same time, pre-service teachers are acquiring knowledge and ideas for a career. This concept of habitus is reviewed in further detail within the literature review.

There is therefore a tension between two developments. On one side is a marketised system which seeks to enable individuals or groups of schools to encourage a localised notion of professionalism and teacher identity in their

teachers and the pre-service teachers whose development they support. On the other side, may be a community of pre-service teachers, potentially sharing resources and ideas about approaches to teaching, through private social media, with each other. These ideas may or may not be compatible with the practices and discourses in the school placements where the pre-service teachers are located. Such ideas do not necessarily only emanate from pre-service teachers brokering ideas from one community to another. Pre-service teachers undertaking a Post Graduate Certificate in Education with a subject specialism come with formal qualifications and experiences. Pre-service teachers can take the role of, as Vygotsky (1978) would term them from a constructivist perspective, more knowledgeable others. Vygotsky discussed the idea of more knowledgeable others as part of his explanation about what he called a zone of proximal development.

“...what we call the zone of proximal development. It is 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, p.87)

Within a community of practice, Wenger acknowledged that there exists ‘knowledge brokers’ (Wenger, McDermott and Snyder, 2007) and indeed he sees that members of a community of practice within an institutional context might find, “...policies that limit members’ flexibility, systems that don’t support knowledge sharing activities” (*ibid.*, p.191). With pre-service teacher communities spread out over a range of school placements for extended periods of time it is understandable that some turn to technology to share practice and knowledge when they are not together physically. However, there is, in fact, no need for pre-service teachers to use commercially available social media if they wish to use electronic forms of communication to interact in order to share knowledge and practice with peers or tutors. The very practice of Higher Education Institutions (HEIs) providing online learning platforms to foster learning communities in Higher Education was part of a planned strategy. In 2005, the Higher Education Funding Council for England (HEFCE) put into



place strategy and funding for Virtual Learning Environments (VLEs) saying at the opening of their strategy paper:

“We are committed to working with partners on plans to embed e-learning in higher education in a full and sustainable way within the next 10 years, as announced in the Government’s White Paper *The future of higher education*.”

(HEFCE, 2005, p.3)

At the heart of this idea of the HEI providing an interactive VLE is the concept of learning communities (Lave and Wenger, 1991), (Wenger 1998; Wenger, McDermott and Snyder, 2007; Wenger, Smith and White, 2009) – that the pre-service teachers can interact via the HEI’s VLE through course design and input from the course tutor to enhance their learning.

“It is through this collaboration that staff can encourage students to share and negotiate ideas to reach a deeper understanding of their subject discipline and develop a range of different skills such as critical inquiry and reflection.”

(Davies *et al.*, 2005, p.616)

Yet, despite this provision, in the experience of the current researcher, social media usage by those on HEI-based Post Graduate Certificate in Education (PGCE) secondary teacher education courses facilitates the operation of communities of practice through private social media interactions at the cost of interactions within HEIs’ VLE provision (Heirdsfield *et al.*, 2011). In other words, pre-service teachers value their *private* social media interactions over that of the contrived and designed learning apparatus that are being provided through non-private HEI VLEs. An HEI VLE is non-private as university staff can view, monitor and intervene in the interactions as well as design the need to interact into the course assessment and learning strategies which makes such interactions mandatory. In private social media, the pre-service teacher decides whether to interact, which technology to interact through, who to interact with, the nature of those interactions and, most crucially, who can see the interactions.

In the UK, the one-year Post Graduate Certificate in Education with Qualified Teacher Status (QTS) is an expensive (£9,000 fee plus possible maintenance

loan and other costs) investment on behalf of the pre-service teacher. To qualify as a teacher, pre-service teachers must successfully negotiate two school placements (mandatory), pass the scrutiny and assessment of school mentors and additional school staff, meet the standards of academic work required by the PGCE course and perhaps successfully cultivate employers for the year following the course. This makes the course a high risk venture for pre-service teachers. To ensure they pass the course, pre-service teachers' academic work, teaching identities and teaching delivery all need to meet the expected standards from a range of external subjective perspectives. To rephrase Wenger's early work in the context of claims processors becoming professional in the insurance field (1998), the pre-service teachers do not learn to teach on the course, they learn to become teachers. They need to, "...make the job possible by inventing and maintaining ways of squaring individual demands with the shifting reality of actual situations" (Wenger, 1998, p.46). One of the ways which individuals use to resolve this challenge is to work with others in similar situations, sharing solutions and resolutions in an efficient and collaborative way. Wenger looked at such communities as communities of practice, identifying them as

"A group of individuals who share a common interest and are motivated to gain and develop new knowledge on a topic through regular interaction."

(Wenger, McDermott and Snyder, 2007, p.4)

This definition aptly describes groups of pre-service teachers with a shared interest of becoming competent teachers, meeting the mandatory requirements and is the central reason why the structure and elements associated with communities of practice has been chosen as the analytical framework. A teacher's identity can be influenced by factors such as support, shared practice and collaboration other than that experienced as part of the PGCE course and placements. An option for a community of pre-service teachers on the PGCE course is to develop strategies using *private* social media which they can then share or introduce to their current or future schools.

“Brokers are able to make new connections across communities of practice, enable coordination and – if they are good brokers – open new possibilities for meaning.”

(Wenger, 1998, p.109)

Pre-service teachers may well be involved in such brokerage through private social media, but all such references to this practice are by their nature anecdotal and hidden due to the privacy built into such interactions. Without some kind of access, first hand or second hand, to such private social media based communities, there is no way of knowing who is using private social media, how it is being used, why it is being used, what value is being placed on these interactions and why privacy is so important to these interactions. This study set out to investigate the phenomena of private social media based online interactions within pre-service teacher communities, how they are established and just how private online interactions facilitate these communities.

## **1.2 Aims and Purpose**

The situation that faces pre-service teachers and which thus is the core enterprise of the pre-service teachers' communities is becoming qualified teachers. Yet there are a number of recent factors that influence this core enterprise: the recent legislative changes affecting schools and teacher education providers, the growth of social media, the reforms to teacher education allocations, the retention of teachers in the first five years of their career and the increased workload demands on pre-service and qualified teachers. This study set out to reveal how the communities of pre-service teachers used private social media interactions to support themselves to achieve that core enterprise.

In England, teacher education and the development of teachers is currently in a phase of change and debate. The impact of large scale changes to the provision of teacher education and the governance of schools following The Academies Act 2010 and The Education Act 2011 is currently being felt. The recentness and quantity of these changes have necessarily limited available research into pre-service teacher education in England. In addition, social media has intervened to become a common and habitual tool, used by pre-service teachers on a daily basis to interact with other pre-service teachers. This is not restricted to pre-service teacher education – the use of online platforms to create and service communities such as teachers is a feature of modern society (Macià and Garcia, 2016). This study could thus both access reflections on the private interactions within pre-service teachers' communities of practice in this challenging environment and at the same time make sense of the nature of the community's interactions. The two together would be able to inform the debate around the structure of pre-service teacher education provision to develop resilient and long standing teachers and the way that such provision educates pre-service teachers in their use of private social media interactions within their communities of practice in order to become qualified teachers.

The rapid increase in number of pre-service teacher education providers and subsequent fragmentation of service provision has led to increased numbers of cohorts in lower single figures (discussed in further detail in Chapter 2) to the

point where mainstream university teacher education providers such as The Open University and Bath University have closed their teacher education programmes according to the UK Universities' report 'The impact of initial teacher training reforms on English higher education institutions' (Universities UK, 2014).

As explained in detail in Chapter 2, in order to function as a viable community of practitioners, pre-service teachers need access to fellow pre-service teachers. However, fragmentation of provision through an increase in the number of providers of teacher education means that, increasingly, fewer traditionally sized subject and phase based learning communities will be in existence due to the reforms. Without peers with which to share the core enterprise of becoming a qualified teacher, pre-service subject teachers cannot readily establish or function as communities of practice. Whilst this study was not looking at those without access to such pre-service subject teacher communities, in highlighting the benefits of access it will establish what can be obtained through pre-service teacher communities that are facilitated by private social media interactions. A pre-service teacher community of practice comes into existence because the members come together through the core enterprise of becoming qualified teachers. From there, private social media can then facilitate the core enterprise of that community. To access the benefits of the private social media interactions, pre-service teachers must first come together physically as part of that core enterprise.

A further related issue which has gained importance in recent years is retention in teaching for the first five years of teachers' careers in the UK. This issue has occupied policy makers and the regulators of pre-service teacher education. The head of the independent inspection and regulatory body the Office for Standards in Education, Children's Services and Skills (Ofsted), which is charged with inspecting pre-service teacher education in England and Wales, made a speech in November 2014 in which he said the reason for poor retention was the quality of pre-service teacher provision. "It is a national scandal that we invest so much in teacher training and yet an estimated 40 percent of new entrants leave within five years" (Wilshaw, 2014). With such a large expense being incurred by all, it has been a high priority for the Department for Education (DfE) which has responded to such issues by

investing more money in the pre-service teacher training initiative run by the charity Teach First (a scheme which aims to take graduates from leading universities and place them in schools facing challenging circumstances for their teacher training), with a salary paid to each graduate they place on their course. However, even in Teach First, the retention rate is very poor. The key point to note is that today, for 40 percent of newly qualified teachers, there comes a point in the first five years of their teaching career where the role becomes something that the newly qualified teacher no longer wants or has the capacity to cope with and thus leaves the profession. It may be that some of the answers to this issue could be found within the private social networking communities of pre-service teachers.

For example, a recent survey by the National Union of Teachers (NUT) outlines workload (61 percent) and work-life balance (57 percent) as the main drivers for teachers wanting to leave the profession (YouGov poll for NUT, 2015).

Workload has been accepted by the DfE as one of the negative drivers which led to the commissioning of the workload study and report (DfE, 2015, 2016), a report which sought to outline how to reduce workload demands on teachers. It might be those pre-service teachers' communities of practice, serviced by private social media and modern technology could be helping pre-service teachers establish the skills, knowledge and networks needed to share or broker practice to surmount both current and future challenges such as workload and work-life balance. If this is the case, the fragmentation of pre-service teacher provision could be directly contributing to the inability of teachers to develop the habitus needed to stay in the profession beyond the first years of their career by removing access to the private social media based community of practice which is helping others sustain their career.

Current research into private pre-service teacher to pre-service teacher shared practice, support, and brokerage through communities of practice which are serviced by private social media appears to be non-existent. The reasons for this lack of research may be twofold: the area of push notification enabled, mobile broadband based, social media is very new and in addition, the private nature of the data makes it very difficult to study. This concept that constructivist online behaviour can be positive or negative for learning and is something which can be taught or influenced (Shea and Stockford, 2015) is an

important one. If the interactions within these private social media based pre-service teachers' communities of practice are having a positive effect on the pre-service teachers' core enterprise of becoming qualified teachers, then it could be that there is good practice that could be shared or embedded into ITE courses. Understanding private social media interactions, as part of a pre-service teacher community of practice, and embedding this knowledge into teacher education sessions during pre-service training means that not only can good practice be incorporated into ITE, but valid issues and concerns around privacy can be explored and accurate conclusions be drawn by the pre-service teachers in managing their decisions about privacy and use of social media as part of a pre-service teacher community of practice. In addition, private social media contacts and the sharing or brokerage of practice can continue beyond the life of the PGCE and yet still operate within the parameters of a community of practice. Such a community of practice has the potential to help newly qualified teachers manage workload (DfE, 2015), challenge, risk (Beck, 1994) and develop through the community (Wenger, 1998) solutions in their first years of teaching in the same way they enable pre-service teachers to manage workload, challenge, share practice and broker alternative approaches from other communities on the PGCE course. In addition, if the use of subject based private social media interactions are helping pre-service teachers construct valuable long term skills or knowledge (Vygotsky, 1978) it may be that the fragmentation of pre-service teacher education needs to be reduced so that enough pre-service teachers of a subject and phase are existent within a provider's course to ensure these online communities of practice can be created and sustained. In addition, further training for teacher educators in the nature of the interactions within private social media based pre-service teacher communities of practice could help providers work with pre-service teachers to establish online communities of practice - even though those communities and their interactions will always remain private and hidden. This study seeks to enable teacher educators to improve and understand that which they cannot see – the hidden private social media interactions of their pre-service teachers within their communities of practice.

### 1.3 Research Questions

This study started from facing the challenge of hidden data (Elliott and Higgins, 2012). The review of available literature revealed some key themes that could form the basis of the research questions in understanding what would feature in the pre-service teachers' communities' private social media interactions and subsequent data gathering such as notions around the development of professionalism and teacher identity. These themes centred on the way pre-service teachers supported each other, shared practice, whether they shared or brokered new ideas to each other, the development of their professionalism and teacher identities, the relationships they held with others in the community of practice and how they met issues and challenges faced during the pre-service training to "...square[ing] institutional demands with the shifting reality of situations" (Wenger, 1998, p.46).

In order to investigate the core enterprise of the communities of practice which the pre-service teachers accessed through private social media the research questions were:

- *What interactions sustain the social networking community of pre-service teachers?*
- *What ideas do the pre-service teachers explore and broker about what it means to be professional from the group discussions in the social networking community?*
- *What ideas, if any, do the pre-service teachers discuss about teaching which are different or similar to that seen in their placement schools?*
- *What issues do the pre-service teachers discuss that are related to their school experience or government policies through social networking?*

The terms 'social media' and 'social networking' were adopted as pre-service teachers adopted new technology software such as WhatsApp (a text, picture and file sharing, social organiser smartphone app) to supplement and facilitate their asynchronous (time delayed) and synchronous (non-time delayed) interactions through Facebook, Facebook's Messenger service (a similar app to



WhatsApp, but one that draws group membership from Facebook users), and also email. From discussions with previous cohorts of students prior to the cohort in this study it seemed that some pre-service teachers did not use Facebook for privacy reasons and sought to establish the community of practice through applications such as Glassboard (closed social media software which lacks push notifications) or Dropbox (individual or community based resource sharing software). All communications were termed social media as the very nature of software means that the actual means of communications change quite rapidly. This study was not concerned with which form of social media was 'best' or 'helpful' – it is assumed that pre-service teachers of any generation will select the social media which they are as a cohort most comfortable with and have access to within the concept of 'private'.

Lastly, it was recognised that as much as Higher Education Institutions were trying to use institutional based technology to foster online communities of practice, so the pre-service teachers themselves were using the latest commercial social media technology to supplement and supplant institutional technology in order to help sustain their learning community. It thus seemed to be natural that in-depth investigation into the communities of practice and how these terms and theories might be applied to pre-service teachers to help contextualise the group dynamics that emerged from technology facilitated interaction would be helpful.

#### **1.4 Overview of the Thesis**

Having introduced the rationale, aims and purpose and research questions in Chapter 1, this thesis establishes in Chapter 2 a context of ICT in higher education and the fact that teacher education courses such as post graduate pre-service teacher education courses entail less peer to peer contact and the different demands made on pre-service teachers by the nature of their isolation from their peers as a result of being on school placements. It then explores the recent reform of initial teacher education and allocation of pre-service teacher places. This thesis then sets out the one year secondary PGCE that forms that cohort of this study and explains the nature of their experiences as part of their teacher education through the course context.

Chapter 3 sets out a literature review beginning with the lens through which the pre-service teachers' private social media interactions are viewed, that of Wenger's (1998) community of practice. Attributes of teachers are further explored through the notions of teacher identity and teacher professionalism including professional identity, professional confidence and professional competence. Literature around reflective and reflexive teachers is then reviewed before the notion of reflexivity and how it affects the study is set out before the research questions are each presented with an overview of their formation.

Within Chapter 4, an overview of the research design is illustrated including the nature of case studies and the participants whilst explaining the difficulties in accessing a community for studying in which the very access itself affects the interactions within the community and thus the study. It looks at the methodology developed and how semi-structured group interviews interspaced at specific points in the pre-service teacher cycle of training were used to access the private online discussions of the pre-service teachers. The way the paradigms were developed are considered before the main tool, that of semi structured group interviews and the questions for the interviews are presented and justified. In Chapter 4 there is an explanation of how the analytical framework which the study is based upon was developed through Wenger's community of practice (1998) model as well as the limitations of the study and the methods of analysis.

The findings and analysis of the findings through the lens of Wenger's community of practice (1998) are set out in Chapter 5 to show each of the communities of practice that were reflected upon by the pre-service science, English, mathematics, modern languages, physical education and computer science teachers. These findings show how the pre-service teachers used their private social media interactions in order to achieve quite specific outcomes – namely the achievement of their PGCE and QTS award and the ability develop their habitus within the framework of a community of practice.

In Chapter 6, the discussion approaches each of the research questions and draws from all of the communities of practice in discussing the findings which

emerged in relation to the research questions. This discussion led to the formation of a conceptual model which is both diagrammatically presented and explained. Chapter 6 continues by setting out the next steps such as longitudinal research and how the study has contributed to knowledge, particularly by revealing the how and the why of the private social media interactions of the pre-service teachers as they looked to achieve their core enterprise in becoming qualified teachers. Strengths and limitations of the study, with the data having to be second hand due to the private nature of the interactions, but at the same time revealing thoughts and practices which would have otherwise remained hidden are also visited.

Finally, Chapter 7 takes the findings and discussions and uses these to set out a series of conclusions and recommendations for HEI teacher education providers and for those who allocate pre-service teacher places. There are suggested ways forward for pre-service teacher education courses so that instruction around communities of practice established through social media and technology are used to enhance the core enterprise of pre-service teachers' private social media based communities of practice, that of becoming a qualified teacher.

## **Chapter 2 Context**

This chapter explores two aspects of the context for this study. Firstly, it looks at the evolution of technology within HEIs and the challenges presented by commercial social media which are often in competition with the technology offered by HEIs. The chapter then goes on to set out the history of ITE in Higher Education contexts and frames the position within which the PGCE Secondary cohort of this study found themselves.

### **2.1.1 ICT in Higher Education**

The use of technology in Higher Education has evolved substantially in recent years as technology has moved from web 1.0 to web 2.0. The term, 'web 2.0', was coined in 2004 by Dougherty (O'Reilly, 2005) in an attempt to capture the shift from repository-led web-based materials (web 1.0) to interactive web-based materials (web 2.0). This shift has been driven by a number of other factors such as the increased network speed available through broadbands such as wifi or cellular as well the increased speed and capacity of mobile computing technology. In an attempt to capitalise on this shift, the Department for Education and Skills published a five year plan titled: 'Harnessing Technology' (DfE, 2005), to be spearheaded by the quango, British Educational Communications and Technology Agency (BECTA).

At the level of Higher Education, the focus for this initiative was the way HE students operated and interacted within the Virtual Learning Environments (VLEs) offered by their HEIs – for example through the Blackboard software (an international VLE package offered by many HEIs within England which enables online closed communities to be established by the institution and for the community to interact through online closed forums). This interaction is not the same for all HE students. Carmichael *et al.* (2006) established that HE students adopted different roles which rapidly interchanged and changed depending on the nature of the interaction and the section of the VLE being interacted with. This fits well with Wenger's ideas around the different roles in communities of practice as students within HE fulfil the roles presented by Wenger. Wenger saw that members would develop mutual relationships and engagement in his concept of the communities of practice (Wenger, 1998). One issue that stands

out prominently from Carmichael *et al.*'s study (2006) is the idea that HE students are tasked with working in 'public view' and that this was a deterrent to some of those in the study. This work centred on the fact that HEIs set up the VLEs with mandatory membership of communities and often mandatory interactions within these communities – all as part of an HEI's blended learning strategy. Lafferty (2005), found however, that this although mandatory, resistance by HEI students effectively means that membership still remains a choice and that in HE "...no matter how experienced the moderator may be, some students will not want to be involved to the same degree as others" (p.5). Thus, regardless of how the HEI sets up the VLE to help the community, the students will only adopt specific roles if they wish to. The same could be said for HEI tutors for whom Lafferty's study found that students had unrealistic expectations about the extent of their presence online. In other words, whether students in HE wanted it or not, participants in some online communities were going to have to function as a community, without the supervision of an HE tutor, for the majority of their course. At the time of this HEI based ICT provision, HEI tutors were not certain that their students could maintain or co-ordinate online learning communities on their own, yet felt that it would be good especially for trainee teachers who were "...trained for isolation" (Clarke and Abbott, 2008, p.11). The period of this study is interesting from a technological point of view because at this point in time, a number of notable technology enhancements were being made with the launch of the iPhone in 2007 leading to a rapid expansion in the smartphone market as captured by Nielsen in their 2009 report (Nielsen Corporation, 2009) who set out that modern HEI students were using mobile technologies and VLEs in a way their predecessors were not.

Up until 2010, BECTA had been the quango-based way for the government to financially help the achievement of objectives set out in papers such as 'Harnessing Technology'. After 2010, the UK government changed and in doing so BECTA lost its funding and was formally closed down. This loss of funding affected not just the strategic direction of much research at the time, but also coincided with the growth in commercially sourced software and technology aimed at new users of broadband connected mobile and fixed technologies.

Such technologies were dominated by social media with at first MySpace (largest social media company until 2008) and then Facebook (largest social media company since 2008) and the advent of push notifications in 2007. There have been further social media and communications based software companies that have also become very large market players internationally such as Twitter: 310 million users in 2016 (Statista, 2016), and WhatsApp: one billion users in 2016 (Statista, 2016). What these technology and social media companies have done is to potentially enable the building of communities of practice with speed and privacy built in. As set out earlier, the students in HE who disliked working in 'public view' could now remove the view of the public and select their audience. In addition, they were not reliant on a single HE tutor to facilitate the community. As established by Carmichael *et al.* (2006), the different roles within the group could be undertaken by students themselves who could interchange roles as needed, but now they could also work in private.

This creates an issue with research into how ICT is used in HEI-based teacher education to facilitate online learning communities. Firstly, the removal of BECTA's funding and focus by the government on ICT in HEIs has been accompanied by a reduction in research that ICT is having on pedagogies within HEIs. Caird and Laine, outline the issue:

“Despite the widespread availability of information and communication technologies (ICTs) and some research into specific pedagogical practices using them, there has been little research on the role of these technologies in shaping broader pedagogical approaches in higher education (HE).”

(Caird and Laine, 2015, p.1)

Much of the research following the completion of the five year plan from BECTA in 2010 that looked at how pre-service teachers in HEIs interacted was limited to provision of ICT and VLEs by the HEIs themselves (Hramiak, 2010). One possible solution would be to enable social media provision and offer this alongside the course and its VLE (Neier and Zayer, 2015). However, this does not remove the 'public view' highlighted as an issue by Carmichael *et al.* (2006) – privacy is not absolutely within the choice of the student. A higher education student can currently choose to interact with social media based communities

of practice where the level of privacy is a choice and they can prevent the HEI tutor or other specific peers from viewing those interactions. With the nature of private social media interactions being unsearchable or available it is no longer possible to review the way students in HE or, in particular, pre-service teachers have taken the speed from push notifications and the privacy of social media and technology enhancements to establish and use private communities of practice as part of their learning.

Smartphones with push notifications, alongside mobile platforms of social media such as the Facebook App and WhatsApp, have only really been an option for HEI pre-service teachers since the conception of push notifications was introduced for the first time by Apple Corporation in June 2009 as part of the launch of the iPhone 3G (Apple Corporation, 2009). Rival competitors offered similar smartphones with push notifications in response to this model and capacity and it is possible to see from Figure 2.1 that there was a large shift around 2010 which has led to smartphones becoming a mainstream commodity.

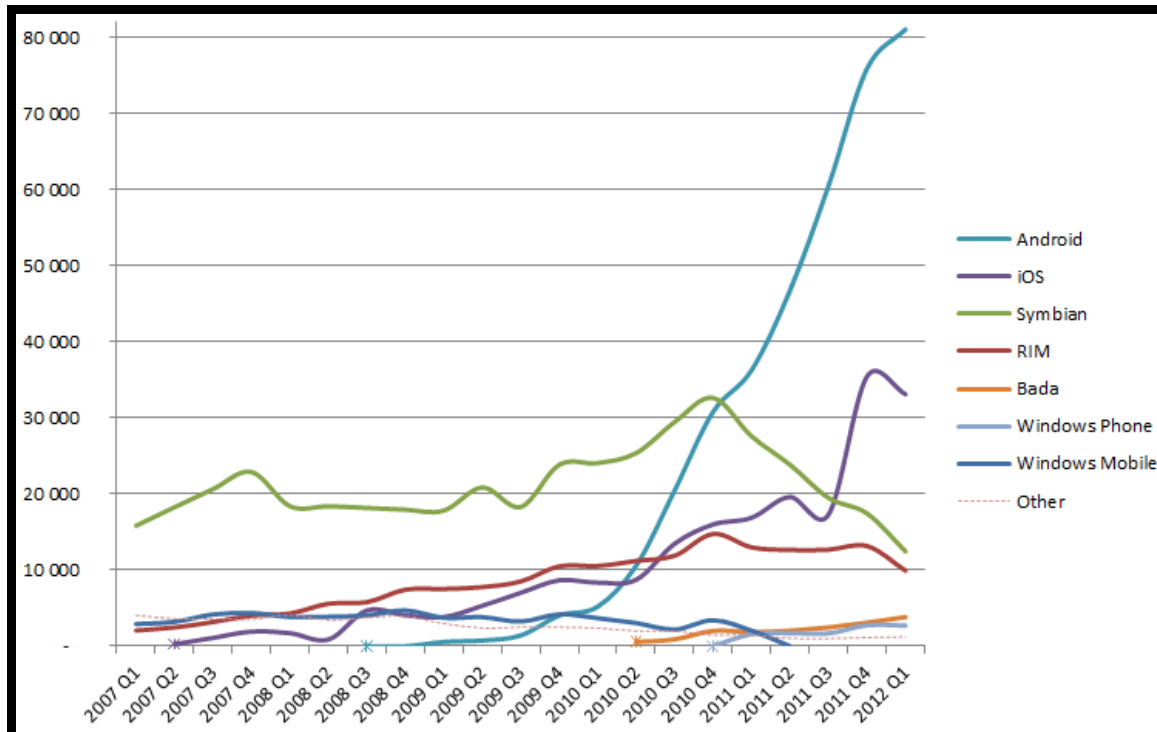


Figure 2.1 World Wide Smartphone Sales 2007-2012 (Gartner, 2012, p.1)

As set out above, a push notification enabled smartphone means the user does not need to log in to interact with their online communities. Instead, they are alerted through an on screen message to interactions from the community. This process is referred to as 'push technology' as the user has messages pushed to them rather than having to log in to access the message. This marks a significant change in the way technology interacts with the user. Traditionally, a user would manually request technology to check or identify new information – this is referred to as 'pulling' data. Push notification technology removes this process. Instead of waiting for the user to 'pull' the data, the phone is pre-programmed to 'fetch' data on a regular basis and 'push' this data to the user. This data is then prioritised by the smartphone's internal system to bypass all of the systems and interject through overlay and vibration to alert the user to the new data, sometimes moving from the phone to wearable technology such as a watch with push notifications enabled. The smartphone sales chart in Figure 2.1 indicates that push notifications have driven smartphone sales exponentially as users valued receiving automatic push notifications over the traditional 'pull' notifications. As smartphones have become popular with students in HEIs, so it has had an impact on HEIs' ability to draw student web 2.0 traffic to their VLEs and it is evident in pre-service teacher education that pre-service teachers are eschewing visible (i.e., non-private) interactions and opting instead for private interactions hosted and facilitated by the converged push notifications with social media (Bruneel *et al.*, 2013).

That smartphones and push notification technology dates from 2009 did not limit the literature review into interactions between pre-service teachers to research literature after this date. After all, pre-service teachers have been interacting physically and more recently electronically for an extended period. To help orient this study, the literature review explores the rationale behind pre-service teachers interacting in their communities and why such interactions could be beneficial to their becoming qualified teachers.

### **2.1.2 Initial Teacher Education**

Whilst there has been a formal system for training teachers in the UK since the Education Elementary Act in 1870 made universal primary education compulsory, this study is focused on the recent period of teacher education



which tracks the shift in provision of ITE from mainly HEI based with a small proportion of school led providers such as School Centred Initial Teacher Training (SCITT) where schools themselves organise and run teacher education, to that where many providers are competing for the same pre-service teachers. Whilst there are different local schemes and different learning institutions, the approach by each training provider is broadly the same: pre-service teachers are placed in a work context, which could be a school or college, for on-the-job practice and receive academic input from an HEI partner for the post graduate element of the teaching course. This was, for a considerably long part of the post-war era, the general approach to teacher education. Up until 2010, the Secretary of State for Education had a statutory duty to ensure that there were enough qualified teachers for the comprehensive provision of state schools and the local authorities had a central role in the statutory duty to provide education for all those within their area.

However, there has been a shift in the way education has been organised by successive recent governments which reflect ideological and political positioning. Instead of the post-war consensus that there is direct state responsibility for the delivery of education services such as teacher education, Ball says that from the 1979 Conservative government onwards, the introduction of a 'neo-liberal marketisation' of education has outsourced the accountability from the state to individual providers (Ball, 2013). Instead of the state directly providing an accountable service to the public, it is now only indirectly accountable as it outsources the provision to multiple and competing providers. By having multiple providers of the same service and by quantifying aspects of education it is possible to create an 'economy' in which different providers compete to provide this education (for example, in the way of school league tables) and in doing so accept direct accountability in lieu of the state. However, rather than having an even and fairly distributed 'comprehensive' system, in this marketised educational context there are different providers who vie to be as selective as possible in order to achieve the 'economy of student worth' (Ball, 2013, p.3).

In terms of teacher education and teacher provision, the coalition government of 2010-15 introduced mainstream changes through The Academies Act 2010

which rapidly expanded the number of schools which were not obliged by law to hire qualified teachers. This was coupled with an openly declared shift in marketisation of teacher education provision through the School Direct initiative. This initiative enabled schools to band together with a partner HEI and 'bid' for teacher training provider places. School Direct is a teacher training programme in which the places are allocated to schools who can then select their preferred provider-partner university as part of the pre-service teacher education provision. School Direct was introduced in 2012 (DfE, 2012) with the aim of encouraging schools to offer teacher education provision in addition to local HEI, Teach First and SCITT schemes. School Direct pre-service teachers are recruited by 'named' school partners (in the application process, pre-service teachers apply to a named school). By 2014, the number of School Direct schools acting as providers either alone or in groups had risen rapidly to 9,786 schools (NCTL, 2014). In order to monitor standards there has to be a line of accountability and the government allocates this accountability to the Office for Standards in Education, Children's Services and Skills (Ofsted) who undertake inspections on the government's behalf, which it has done since The Education Act 1994. Changes to the inspection framework have meant that this inspection reduces the quality of provision to that of a single grade overall: 1, 2, 3, or 4. Achievement of the inspection grade affects the ability of the provider to bid for teacher training places as set out by the National College of Teaching and Leadership (NCTL), "We will only allocate provider-led places to ITT providers graded "good" or "outstanding" for overall effectiveness by Ofsted" (NCTL, 2016, para. 17). This arrangement thus enables the provider to claim their accountability in the 'economy of student worth' and enter the market of pre-service teacher education.

There has also been a recent growth in Qualified Teacher Status (QTS) only courses to enable those who teach in local authority schools to do so without having to complete a PGCE course to obtain their QTS award. This could be through accessing school based training before entering an assessment only model (DfE, 2015) or simply by opting not to access the PGCE aspect of the teacher education offered by a provider such as that through The Times Educational Supplement (TES) 'institute' (<https://www.tes.com/institute/>) a

privately own company that runs partnerships between schools, trainee teachers and universities for profit.

Many other new teacher training schemes have also been launched or rapidly grown such as Teach First and SCITTs with the DfE setting out 'school centred' as the different feature of these schemes. This description is something of a misnomer as the reality is that all teacher training and teacher education is school centred in terms of the placement and indeed the QTS award mandates a minimum 120 days in school.

As set out before on p.21, HEI involvement in pre-service teacher education has been reduced nationally through the initiative School Direct, launched by the then Secretary of State for Education, Michael Gove. The difference with School Direct is that the groups of pre-service teachers being trained by schools may be very small and isolated from other pre-service teachers of the same phase and subject. Allocations data from 2015-16 (DfE, 2014) analysed by the Times Educational Supplement (Ward, 2014) demonstrates that School Direct will now attract more of the pre-service teacher allocation than HEIs with 17,609 places for School Direct and 15,490 places for HEIs. The remaining 11,000 places are spread across Teach First, SCITTs and other small providers such as QTS self-assessment.

One of the issues regarding the creation of stable and healthy sized communities of pre-service teachers is the ability of providers to recruit to target. HEIs recruited to 90 percent of their target allocation whereas School Direct recruited to just 61 percent of their target for 2013-14 (DfE, 2014). Many providers were single or small groups of schools and would be offering low single figure numbers courses for potential applicants.

	Initial allocations	Census (exc. Forecast)	Fill Rate
<b>Provider led (Total)</b>	<b>25,817</b>	<b>22,924</b>	<b>89%</b>
HEI	23,095	20,774	90%
SCITT	2,722	2,150	79%
<b>School Direct (Total)</b>	<b>15,254</b>	<b>9,232</b>	<b>61%</b>
School direct (Salaried)	3,919	2,781	71%
School direct (Fee)	11,335	6,451	57%
<b>Total</b>	<b>41,071</b>	<b>32,156</b>	<b>78%</b>

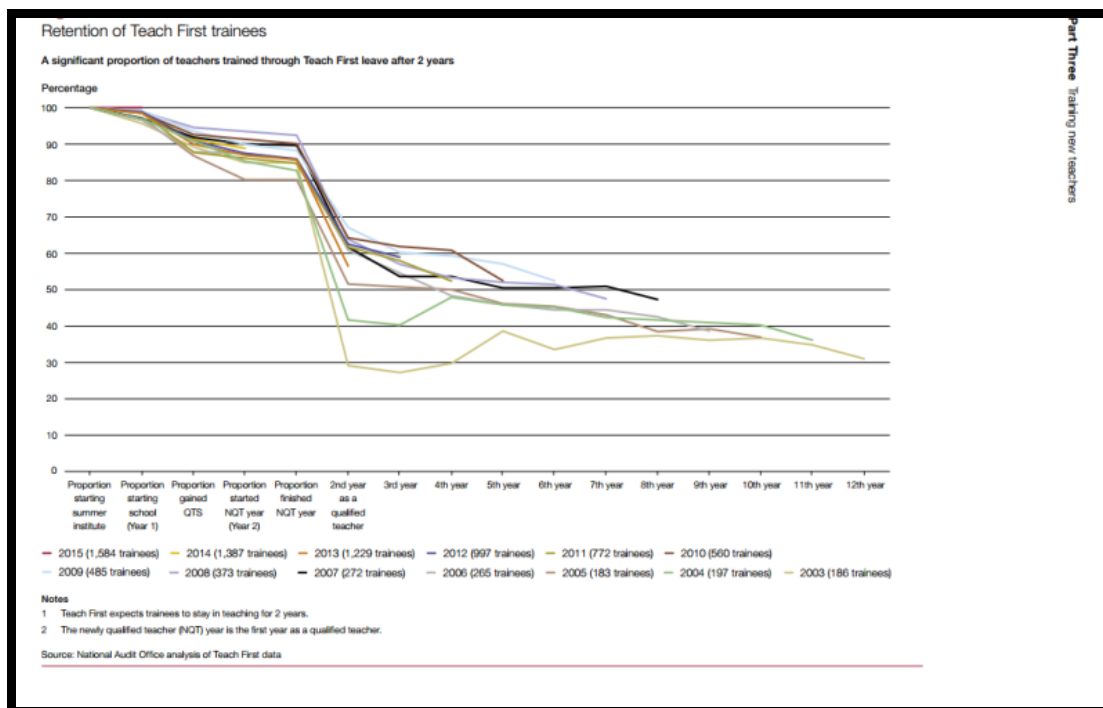
**Figure 2.2 Allocation fill rate by route (allocated places filled by time of census, academic year 2014-15)**

In particular, subjects that were difficult to fill such as physics, computer science and mathematics in which subject knowledge is acknowledged as a difficult barrier (many applicants come from a non-traditional subject background and either demonstrate associated knowledge such as through a statistics degree for mathematics, or they undertake a Subject Knowledge Enhancement course to qualify their entry) stood out for School Direct in terms of their ability to recruit pre-service teachers to these courses. From Figure 2.2 it is evident that pre-service teacher education model has expanded from HEIs, SCITTs and Teach First to include a large number of smaller providers through School Direct and this has a direct impact on the ability of pre-service teachers to operate as a community of practice with phase and subject specific pre-service teacher peers when they are on their teacher education course. The issues of pre-service teachers' feelings of isolation within the various models are well known – pre-service teachers can become isolated and course completion can be challenging (Johnston, 2010) leading to poor retention (sometimes known as completion) on the course.

In their submissions to establish Teach First, the then Teaching and Development Agency (TDA) provided records showing a completion rate of 86 percent from 2005-9 for PGCEs in Higher Education Institutions (Teach First, 2012). The data presented by the TDA was then used by the DfE as a reason to expand Teach First. Retention during pre-service training and retention in the profession are ongoing key issues for England and Wales and part of the

answer has been to dismantle the provision of largely HEI based pre-service teacher education.

Yet, the latest retention figures for Teach First (2015) demonstrate that retention in the profession is an issue for Teach First as well - set out in a parliamentary response to a Freedom of Information request (Gibb, 2015). In the UK, many teachers are leaving within the first five years of teaching and for Teach First, from 2010-15, a total of 1,956 teachers left within the first five years of their teaching life. Over the same period Teach First has recruited 4,845 teachers. It is too early to show how many of those will leave within the first five years, but certainly retention in the profession is an issue for all providers - even Teach First. Figure 2.3, the National Audit Office's 2016 report on teacher education demonstrated that retention is a key issue for teacher education in England and Wales and especially so for Teach First.



**Figure 2.3 Retention percentages of Teach First trainees (National Audit Office, 2016)**

As stated above, pre-service teacher education is currently undergoing a fundamental period of reform and indeed there are plans for further reform. At the time of writing, the Secretary of State for Education has published a White

Paper for education, *Education Excellence Everywhere* (DfE, 2016) in which pre-service teacher education would undergo even further reform. With teacher education reform a contemporary agenda, this thesis is directly placed to inform the debate as to the way teacher educators can understand how pre-service teachers have harnessed private social media and technology to affect the way they learn through any community of practice that they are involved in when attaining their PGCE and QTS. Whilst it remains to be seen whether the White Paper will be taken to the next phase in its current form, in all likelihood, teacher education faces an uncertain future.

## **2.2 Local University Context**

Within HEIs, Initial Teacher Education (ITE) in England and Wales continues to fluctuate and change rapidly in response to ongoing oversight from the DfE. The White Paper *Education Excellence Everywhere* (DfE, 2016) expresses a commitment of the UK government of 2015-20 to creating a market provision based on more school led pre-service teacher provision with the concept of 'school led' meaning that groups of schools may come together in increasingly larger groups to offer pre-service teacher education under the titles of School Direct or SCITT.

"We will continue to move to an increasingly school-led ITT system which recruits enough great teachers in every part of the country, so that the best schools and leaders control which teachers are recruited and how they are trained."

(DfE, 2016, p.24)

In 2014-15, a school could offer this provision alone, but from 2015-16 the official guidance from the National College of Teaching and Learning (2016) is that schools have to be in groups of five schools with a caveat that this number is to increase. In 2015-16, HEIs and other providers have been told that no longer would institutional caps be in place. Instead, each provider could recruit as many as it liked within their sector (HEIs is one sector, SCITT and School Direct are another) whilst the NCTL reserved the right to intervene with control mechanisms. Following a well-publicised media report (Scott, 2015) from Cambridge University about the possible closure of their PGCE History course, the National College of Teaching and Learning put into place institutional caps

preventing HEIs from recruiting over 75-95 percent of their totals from 2014-15 in order to stop other HEIs from closing their courses due to poor recruitment. The future of the management of places for pre-service teacher education in England and Wales is really quite unclear and there is another new system for the 2017-18 recruitment year planned and quite possibly another new system after that as part of the White Paper for education.

### **2.3 Course Context**

Within the ITE course of the HEI that features in this thesis (see Appendix 7), the course itself is taken over one academic year in which the pre-service teachers undertake two school placements as part of the course, totalling 120 days in school. In addition, they attend university almost every Friday for taught sessions on their chosen secondary subject and their 30 credits Masters Level units, *The Reflective Teacher* and *The Research Informed Teacher*, which are taught in mixed secondary subject groups. The pre-service teachers meet in their subject groups every Friday morning and then have two more additional groupings on Friday afternoons for their Masters Level units, of which each unit lasts half a year at a time. For the year of the data gathering in this study (2014-15), the pre-service teachers also attended twilight professional sessions within a geographical area held at a local school. This provided a fourth group where the pre-service teachers met each other physically. When the pre-service teachers changed placement, in most cases they stayed within the geographical area and thus stayed within the professional studies twilight group for that area. Thus, for the duration of the course, the pre-service teachers met with other pre-service teachers regularly and physically as part of the following groups:

- PGCE Subject Group (All year)
- PGCE Reflective Teacher Group (Half Year)
- PGCE Research Informed Teacher Group (Half Year)
- Professional Studies 'Cluster' Twilight Group (All year for most)

(See Appendix 7 for the PGCE Secondary Course Outline)

Although the study initially focused on the private Facebook homepage based groups that were organised, without HEI instruction, around subjects taught (science, English, mathematics, P.E., modern languages and computer science) by the pre-service teachers, the pre-service teachers would naturally be in more than one community. These multiple communities exist because the participants have some form of shared interest and both Wenger (1998) and Holland, Middleton and Uys (2012) refer to this as the co-existence of communities. As this study looks at pre-service teachers coming together as a community of practice with the core enterprise of becoming qualified teachers, understanding just when and why those teachers come together in face to face meetings can help contextualise the private social media interactions that feature in their community interactions.

## **2.4 Summary**

Technology has developed rapidly both through HEIs and through commercial markets and this has changed the environment within which pre-service teachers are educated and the way they can interact with each other as a community. Education, but in particular teacher education provision, has gone through rapid recent reform which means that pre-service teachers face a number of pressures as they seek to achieve their core enterprise of becoming qualified teachers.



## **Chapter 3 Literature Review**

### **3.1 Introduction**

The primary search for the academic literature on communities of practice, pre-service teachers and private social media interactions was through electronic resources on the internet, online computer databases, standard texts and journals. The key search words used were: 'communities of practice', 'habitus', 'social media', 'pre-service teacher', 'teacher', 'teacher identity', 'teacher professionalism', 'professional identity', 'professional confidence', 'professional competence', 'reflective teacher' and 'reflexivity'.

As set out in Chapter One, the pre-service teachers have been identified as a potential community of practice and this term needs exploring, alongside the key concepts that have emerged from this area of work by Wenger (Lave and Wenger, 1991; Wenger, 1998; Wenger, McDermott and Snyder, 2007). Wenger sets out how the community helps the individual access and build new knowledge and skills. Within this area was work by Bourdieu who refers to 'habitus', "...acquired, socially constituted dispositions" (Bourdieu, 1990, p.13). For this study, that individual was a pre-service teacher and this notion of developing a teacher identity with a socially constituted disposition for the future became part of the literature review. There were two parts to this idea – the very notion of what a teacher identity is and the way it is developed. This was important as many of the recent changes to ITE have been to both the notions of teacher identity and how this is established.

### **3.2 Communities of Practice**

Wenger (1991, 1998, and 2007) and others have explored the notion of communities of practice. Wenger offers a helpful definition as:

"A group of individuals who share a common interest and are motivated to gain and develop new knowledge on a topic through regular interaction."

(Wenger, McDermott and Snyder, 2007, p.4)

In establishing a community of practice lens through which to view the interactions of a community, it is helpful to draw upon Wenger's work amongst

others. Wenger's early work (1991), along with fellow researcher Lave, examines the communities established through an apprentice system by apprentices and masters, which may be seen to parallel the pre-service teachers and their school placement mentors of this study. In this work, he refers to Bourdieu (1977) to explain how legitimate peripheral participation drives the learning rather than the target practice (Wenger, 1991, p.96). Simple and low risk tasks undertaken by group members enable them to not just be part of the community albeit on the periphery, but also legitimate their status and value to the community as a whole. Group members' self-awareness, from this early peripheral participation, becomes advanced and they begin to see how the various tasks contribute to the overall community. Bourdieu's work is important because it suggests that from quite an early stage an individual both thrives and feeds within a group environment: "...his discourse continuously feeds off itself like a train bringing its own rails" (Bourdieu, 1977, p.79). Bourdieu also saw that it was the group which brought learning to the apprentice beyond that which the apprentice experienced in the workplace.

"...the apprentice insensibly and unconsciously acquires the principles of the 'art' and the art of living – including those which are not known to the produce of the practices of works imitated."

*(ibid.)*

The group interaction itself is explained here some forty years before the emergence of social media. Group interaction between apprentices to facilitate their learning and completion of their training period as a core enterprise is not something new – what is new is the way private social media, accentuated by the speed of push notifications, are enhancing and facilitating these interactions towards the core enterprise of a community of practice. This notion of private interactions facilitated by push notifications as a habitual and frequent part of the community's interactions as set out in Chapter 2.1.1 is so new as to be an unknown aspect that researchers using or critiquing communities of practice have been unable to evaluate. Wenger has applied his and Lave's theory on communities of practice to many groups and organisations (Wenger, 1998) and has seen his work on learning and social practice critiqued where communities are fragmented (Fuller *et al.*, 2005) or where his theory was based on

Bourdieu's notion of habitus (Bourdieu, 1977) and there were underlying problems with Bourdieu's understanding of how people are divided by communities (which Bourdieu called 'fields') (Hodkinson and Hodkinson, 2004). Yet, these critiques notwithstanding, the way pre-service teachers are using private social media interactions as part of becoming teachers not only fits Wenger's definition of practice within a community of practice, but also this way of working with practice and knowledge as a community through private social media counters some of the critiques of his work. In a way, the community itself has updated its practice through modern technology and this is why it is an important aspect of communities of practice to study. Engaging with and re-applying Wenger's work is seen as a viable area of study as Wenger's concept has "opened up new areas of empirical research" (Hughes, Jewson and Unwin, 2007, p.1), whilst at the same time it is recognised that re-applying this theory enables it to be used as "a lens that rendered visible that which had been previously invisible, ignored or neglected" (*ibid.*, p.4) – particularly when working in areas where this is not always easy to achieve such as with private social media interactions in pre-service teacher education (Kontopoulou and Fox, 2015).

Lave and Wenger see that 'knowledge' is not situated solely within the master or workplace. Thus, collectively, the apprentices have a wider knowledge base than that situated within their mentor and school placement. It is only by engaging as a group, the notion, picture or identity of the 'sketch of the enterprise' emerges (Lave and Wenger, 1991, p.95). In addition to this premise, Wenger also finds that the 'master' holds back knowledge and practice. For the pre-service teachers, it could be that they individually or collectively and through private social media propelled by technology such as push notifications, are fulfilling the role of more knowledgeable other and brokering ideas and approaches to assist peers in the community to attain standards or manage risks within their context as part of their core enterprise of becoming a qualified teacher.

Wenger responds to some of these critiques and develops these ideas further in his later book, 'Communities of Practice: Learning, Meaning, And Identity' (1998). With increased ability to communicate electronically as well as

physically, he sees modern society as one that enables individuals to exist within a range of communities saying that 'new learning' is often characterised by entry into new communities of practice. Wenger refers to his overall theory as the 'social theory of learning' saying that this is made up of four blended theoretical areas:

- theories of practice
- theories of social structure
- theories of identity
- and theories of situated experience

(Wenger, 1998, p.4)

Within these four areas he suggests further theories run through them all:

- theories of collectivity
- theories of meaning
- theories of power
- and theories of subjectivity

(*ibid.*)

It is a challenge, Wenger posits, to make sense of the way a community functions, but he does create a theoretical framework which provides a language with which to explore communities and make sense of their core enterprise. For example, he describes the term, 'brokering': "Brokering is a common feature of the relation of a community of practice with the outside" (Wenger, 1998, p.109). Communities of practice are multi-faceted and do not exist in isolation. They connect with other communities and individuals and "Brokers are able to make new connections across communities of practice, enable coordination, and – if they are good brokers – open new possibilities for meaning" (*ibid.*). Yet Wenger has been critiqued for his all-encompassing definition of communities of practice to define such groups and how they operate. Lindkvist, for example, points to modern short term or temporary groups which come together and who

“consist of people, most of whom have not met before, who have to engage in swift socialization and carry out a pre-specified task within set limits as to time and costs. Moreover, they comprise a mix of individuals with highly specialized competences, making it difficult to establish shared understandings or a common knowledge base.”

(Lindkvist, 2005, p.1190)

Such a definition could well apply to pre-service secondary teachers as they meet this definition of a community due to the fact that they already hold an undergraduate degree. However, it should be acknowledged that the hosting institution is actually a partnership of schools and university rather than a singular organisation. Considering pre-service teachers with their school placements and university sessions, Wenger’s work, albeit critiqued in some respects, paints a clear picture of the range of communities and how brokers are needed to help the communities of practice co-exist. Indeed, some newly established UK ‘free’ schools such as the London based Michaela Free School (Michaela Free School, 2016) approach education from the knowledge curriculum approach which highlights the current debate between skill based constructivist pedagogies and knowledge based pedagogies (Priestley and Sinnema, 2014). This point brings out a key issue with the notion of communities of practice in that the concept of ‘legitimate peripheral participation’ (Lave and Wenger, 1991) means that established teachers are the ‘experts’. However, those experts are only experts within the situated place of learning and, as Wenger notes in his more recent work, technology is enabling much greater interfacing between these communities of learning (Wenger, Smith and White, 2009). This point may be seen as countering critique of Wenger’s work (Contu and Willmott, 2003) which focuses on the relationship between the corporate structure and communities of practice and set out that within the concept of managerialism the practice of legitimate peripheral participation can be re-appropriated by the host of the community – for example by a school. From the history set out in Chapter 2.1.1., whilst technology can be a tool for legitimate peripheral participation the institution cannot always be in control of it. The notion of power and conflict in communities of practice is something that Wenger has been accused of ignoring, notions which might emerge through a study of private social media interactions of professionals (Fox, 2000; Mutch, 2003). Certainly there have been criticisms that researchers

with 'rose tinted' views are using the theory of communities of practice to simply pick out positive outcomes of such communities whilst ignoring the power-political issues that could be present (Pemberton, Mavin and Stalker, 2007).

This idea that 'situated learning' can be affected by brokered ideas through communities of practice, a term well favoured by Wenger to demonstrate that learning exists beyond that of the classroom or workplace (Wenger, 1998, p.3) is thus redefined by the notion of online learning through private social media. Here, it appears that social media are creating places for new learning (Dyson *et al.*, 2015), but that these are private with a restricted entry and that the practice is not something well documented, but still exists. This leads naturally to Wenger's theories such as collectivity – how are modern, private social media based communities of practice, such as those established by pre-service teachers, functioning? Some critics have argued that Wenger does not take into account the fact that there will be conflict in identity. "Individuals avoid conflicts of identity and practice by choosing *not to join* (i.e. participate in) non-complementary communities of practice" (Handley *et al.*, 2006, p.645) though it is acknowledged that identity in such communities is achieved through negotiation of self across multiple communities of practice (*ibid.*). Yet this makes looking at private social media community interactions even more interesting as the participants are self-selected and are not mandated to interact with each other.

Studies which do look at how small social media communities function do so by being part of them (Goodyear, Casey and Kirk, 2014) thus rendering the notion of privacy redundant. The problem with such studies is that rather than be observant of private social media based communities of practice, researchers establish them and function as part of them. Wenger sees communities as having a shared, negotiated and joint enterprise in which the theory of meaning runs concurrently through the idea of collectivity. For Wenger, the core enterprise of communities of practice is about the community working towards shared values and outcomes "...gain and develop new knowledge on a topic through regular interaction" (Wenger, McDermott and Snyder, 2007, p.4), saying they are "...important places of negotiation, learning, meaning and identity" (Wenger, 1998). In other words, the core enterprise is affected by the

presence, or not, of a researcher within that community and the level of privacy accorded to the community by any researcher. If the researcher is present then this will affect the core enterprise of the community and the meaning made by the community as that is how communities of practice work. Yet this both raises and seems to ignore another criticism of Wenger's communities of practice theory – that of trust, "Without trust, members of a community may be reluctant to share knowledge" (Roberts, 2006, p.627). In the same way that members would not trust the researcher and thus prevent access to valid information so the members. It is only by understanding the nature of privacy and trust within a community of practice can a real sense of how the community uses private social media interactions as an addition to their efforts to negotiate meaning through a community of practice be explored.

If, following Wenger's notions around communities of practice, pre-service teachers are negotiating meaning and dealing with issues around the contextual subjectivity that comes from a school placement, this suggests the community should be centred on developing knowledge beyond that of their immediate situated context – in a pre-service teacher's case, their school placement. Pre-service teacher communities of practice, through private social media interactions, should reflect the nature of situated learning and the limits of knowledge which can be contained within a school placement and a school mentor by using their familiarity with new technologies (Kumar and Vigil, 2011).

### **3.2.1 The development of habitus**

This concept of developing knowledge and skill for some future point fits with an idea from one of the researchers that Wenger refers to – Bourdieu and his notion of habitus. Developing habitus as defined by Bourdieu (1977) is recognised by Wenger (Lave and Wenger, 1991) as an influence on their understanding of how communities of practice construct learning and affect the participants. In Bourdieu's words, habitus is "...acquired, socially constituted dispositions" (Bourdieu, 1990, p.13) with Bourdieu firmly focused on the notion of owning and reproducing cultural capital whereas Wenger focused more on access to and reproduction of more than simply capital. Instead, Wenger looked specifically at the generation of new knowledge and the reproduction of learning and new knowledge. The term habitus itself is Aristotelian and Bourdieu

appropriates it to describe a specific set of dispositions. Dispositions are both inculcated and structured according to Bourdieu (1977), in other words, they are learned through repeated mundane processes of training, but also reflect the context through which they were learned. This can lead to homogeneity across individuals from similar backgrounds. It is clear to see just how this notion of habitus works alongside the notion of communities of practice as participants also participate in repeated low level interactions, 'legitimate peripheral participation' (Lave and Wenger, 1991), within a situated context of boundaries which frame the community of practice. The key notion for this study is that Bourdieu sees habitus as transposable and indeed helpful in 'markets' within which the participant has to operate "...habitus itself characterised by a particular degree of sensitivity to the tension in the market, or in other words, it is the anticipation of profits" (Bourdieu and Thompson, 1991, p.81). Nor is this habitus precisely pursued. Indeed, Bourdieu set out his notion that habitus does not require strategic direction, it "...takes the form of sequences that are objectively guided toward a certain end, without necessarily being the product either of a conscious strategy or a mechanical determination" (Bourdieu, 1990, p.90). Bourdieu's original usage of habitus was as a vehicle for exploration into the notion and power of cultural capital and its reproduction (Bourdieu, 1977). This aspect of Bourdieu's work, the effect of cultural capital on class and privilege, is not the focus of this study into pre-service teachers' use of private social media interactions. Indeed, the very notion of habitus has been described as "ambiguous and overloaded" (Nash, 1990, p.446). Yet examining Bourdieu's notion that an academic qualification alone is not the sum total of one's knowledge means habitus remains a valid notion. "Academic qualifications are a weak currency and possess all their value only within the limits of the academic market" (Bourdieu, 1977, p.505). This separation of that which is learned through the academic course and then additional knowledge or skill over and above the course is what concerns this study. Identifying exactly what that additional knowledge or skill is can be challenging. Sullivan (2002) suggests that habitus, being a construct, is of no use to empirical researchers looking to directly or indirectly observe quantifiable behaviour. However, just because something is not directly observable it does not necessarily lead that such a thing is not in existence. By removing the emphasis of Bourdieu's on



cultural capital and exploration of class divisions from the concept of habitus, one can then reapply the notion to pre-service teachers who are not just accessing a credential, but further unquantified knowledge or practice which may or may not form part of that credential or have a relationship with that credential through the existence of a community that relies upon the credential for existence. In other words, in Wenger's words, the core enterprise (Wenger, 1998). Reshaping Bourdieu's notion of habitus is not new. For example, Mutch (2003) suggests a response is to "reject habitus in Bourdieu's sense" (Mutch, 2003, p.393) whilst retaining the "emphasis on tacit acquisition and durable existence" (*ibid.*). His research suggested that communities of practice can contain conflicting and diverse group members reflecting evolving recruitment patterns and that habitus is thus less about reproduction of power, but about the way knowledge is shared through the community. This conceptual idea fits with the way Wenger has used this theory in his work on communities of practice.

For the pre-service teacher operating within a community of practice, this notion of habitus has two applications. The first is that the habitus they have built up through using private social networking prior to entering teacher education can be seen as the repeated low level interactions and thus pre-service teachers without notion or 'conscious strategy' will seek to continue to use private social media interactions in the same way that they always have to help them access the 'market' of teaching (Hall and McGinity, 2015). The second notion is that with habitus being transposable, such private social media interactions may reveal themselves to be, consciously or otherwise, contributing to the ability of a pre-service teacher to enter the market of teaching and to move from school to school. The introduction to Bourdieu's collection of essays, 'Language and Symbolic Power', captures this effectively.

"The habitus also provides individuals with a sense of how to act and respond in the course of their daily lives. It 'orients' their actions and inclinations without strictly determining them. It gives them a 'feel for the game', a sense of what is appropriate in the circumstances and what is not."

(Bourdieu and Thompson, 1991, p.13)

Looking at pre-service teachers through this lens of Bourdieu's work highlights how their "...actions are shaped by the values and expectation of the fields in which they work" (Dwyer, 2015, p.95). Through this process, the pre-service teachers can begin building a teacher identity or concept of self which contains the habitus needed to move from school placement to school placement both during their pre-service teacher education course and during their career. Whilst the pre-service teachers may not know exactly what it is they are building and what future challenges they are building this habitus for, their efforts can still contribute to a transposable habitus and enable them as a community of practice to work towards this habitus as part of the core enterprise of becoming qualified teachers.

### **3.3 Teacher Identity and Teacher Professionalism**

#### **3.3.1 Teacher Identity**

The notion of identity according to Mead and Morris (1934) and Giddens (1984) is centred around the way identity is formed as part of an active 'I' and a socialised 'me' setting out that the individual takes into account a range of external and internal factors in forming this identity. To progress from being a pre-service teacher to a teacher, the notion of teacher identity is very relevant to this study as these external and internal factors should form part of their exchanges through their community of practice.

The idea of teacher identity is not new (Sugrue, 2004) and pre-service teachers begin to build their identities with the formation of teacher perspective during the pre-service teacher phase (Kenny, Finneran and Mitchell, 2015).

Beauchamp and Thomas use teacher identity as a frame or lens through which to evaluate the growth of her HEI pre-service teachers upon the teacher education course. They note that forming a clear or consensual idea about teacher identity "...has often proved difficult for authors" (Beauchamp and Thomas, 2009). However, like Wenger, Beauchamp and Thomas see identity as 'negotiated' and formed through interaction with others although they accepts the notion of multiple selves. Wenger lists these different aspects of identity as:

- **negotiated experience:** we define who we are by the ways we experience ourselves through participation
- **community membership:** we define who we are by the familiar and unfamiliar
- **learning trajectory:** we define who we are by where we have been and where we are going
- **nexus of multi-membership:** we define who we are by the ways we reconcile our various forms of membership into one identity
- **a relation between the local and the global:** we define who we are by negotiating local ways of belonging to broader constellations and of manifesting broader styles and discourses

(Wenger, 1998, p.149)

In some ways, this brings into focus a weakness in Beauchamp's ideas. She sees the pre-service teacher negotiating with communities of teachers and pre-service teachers, but without reference to the concept of New Public Management set out by Hall and McGinity (2015). Within this concept, there must be more pressure on pre-service teachers to develop more than 'an identity' (Beauchamp and Thomas, 2009, p.186) and to learn how to negotiate and develop aspects of identity that can endure in the neo-liberal landscape of corporate governance within which they must be employed – the notion of habitus. In England, a pre-service teacher is expected to interact with other teachers as part of becoming a professional and this can be defined using Wenger's definition of identity within a community of practice which is to arrive at "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5) in developing an identity of 'teacher' for themselves. Yet, this interaction between pre-service teachers is no longer simply physical or through formal institutionalised technology forums as set out in section 2.1.1. The development of teacher identity has now been affected by not just the usage of social media, but the difficulties in conflating personal and professional identities as found, for example, in Fox and Bird's (2015) research into personal-professional identities. This research highlighted the conflicts that can emerge when teachers engage with developing their teacher voice using social media. They interviewed teachers and asked them a range of questions

about their presence in social media and how it related to their identities as teachers. It identified that there was a considerable range between teachers in terms of how much social media they used and how it interacted with the development of their teaching identities – for example, how comfortable they found being in both social and professional spaces at the same time. However, the study was limited by the low number of respondents interviewed and was concerned with public social media usage rather than private social media interactions but it does raise the issue that identity, public or private, is part of the process in becoming a teacher.

It has increasingly been the case that a successful teacher is one who has learned to present an identity which is acceptable to the performance review, assessment and managerialism expected by the host or employing educational institution as well as developing their own notions of teacher identity (Evetts, 2009) under the framework of New Public Management that has dominated public service governance over the past few decades (Hood and Peters, 2004). That expected identity has shifted a great deal in the UK with the advent of neo-liberal education policies requiring many teachers to conform to ideals based more on corporate governance than public institutions.

“...their professional identities have been co-opted by a managerial New Public Management identity so that teacher professionals have been recreated as managers with a discourse dominated by professionalism and leadership. For some there are tensions between developing professional identities which embrace some of the more powerful and dominant aspects of the neoliberal agenda on school reform such as the encroachment of private and corporate enterprise into schooling and curriculum structures through the Academies program, and their personal and professional values and beliefs.”

(Hall and McGinity, 2015, p.3)

The identity of the teacher thus becomes something more challenging than before. Hall and McGinity make a key point in which they capture the decreasing autonomy of teachers stating:

“Such critical accounts of changes to teacher professionalism under NPM stress attempts to manufacture teachers as compliant operatives (Smyth, 2001) in a system where the diminishment of their

professionalism has been such that they have had been left with much reduced space for the exercise of their agency.”

(Hall and McGinity, 2015, p.5)

Whereas traditionally, pre-service teachers enhanced and managed the challenges with creating such an identity by interacting physically as part of the formal course and through face to face social interactions as part of the core enterprise of their community – becoming a qualified teacher, study of pre-service teachers should now be looking at the added input of private social media interactions. This point seems wholly missing from Hall and McGinity’s arguments. The ability of private social media to enable teachers to break beyond the confines of situated learning within restricted communities of practice has not been addressed in Hall and McGinity’s research. The ability of pre-service teachers to develop their expertise through interactions beyond that provided by the course and the school placement such as networking with peers is already acknowledged (Fox and Wilson, 2015), but studies which attempt to look at the role social media plays in these interactions have been limited because of insider research issues (Kontopoulou and Fox, 2015) which found trust and privacy issues affected participation rates. However, there is evidence in the way teachers develop their professional learning, such as in Pedder, James and MacBeath’s study (2005), which found that not only is “teachers’ learning extended through consulting different sources of knowledge”, but that also “teachers’ learning is expanded through collaborative activity” (Pedder, James and MacBeath, 2005, p.222). The notion of ‘teacher identity’ thus is complex and one which can be seen as constructed from a range of fragmented parts, and nevertheless not only exists, but exists in a context with which it could find conflict (Day *et al.*, 2006).

Assuming that a pre-service teacher must present an identity of a teacher who meets the Teachers’ Standards (DfE, 2013) and that identity is formed not solely from the knowledge of practice by the individual, but also that of the collective group interactions (Beltman *et al.*, 2015), then the added input (or not) from private social media interactions may well become part of that identity. Further, in relation to the earlier identification of the issue of teacher retention there may be some future consideration of the robustness of the teacher

identity to cope with educational change and institution movement such as that set out in Hall and McGinity's study (Hall and McGinity, 2015). The habitus of the teacher might be restricted in terms of the ability to present an identity which fits within the context of a different institution. This means that teacher identity now potentially has the added element of new learning and identities affected by shared or brokered practice and knowledge through private social media interactions. The review of literature reveals that this aspect has not been considered prior to the current study.

Considering the notions of retention, habitus and teacher identity and then the ability of a teacher to move around and be able to operate within different educational contexts and pedagogical styles is helpful when reviewing the identity needed if a teacher is to stay within the profession. Czerniawski (2011) echoes Bourdieu and says that teachers' identities are 'social identities' - a fusion of their own identity, qualifications, and so on, with the collective identity of teachers. This 'collective' identity of teachers comes about through interaction with other teachers linking to Wenger's model of 'communities of practice' and suggests that the way teachers interact electronically can influence this construct of identity. However, Czerniawski also highlights a tension between the identity of the school and the identity of the teacher. He shows that often the teachers, parents and pupils in a school will come from similar types of schools themselves and thus although teacher education will often encourage autonomy of ideas about pedagogy and beliefs, the institution which hosts the education does not allow for this and seeks to impose an externally held 'identity' of what a teacher should be like. Pre-service teachers engaging in discourse about ideas in teaching will recognise that there are orthodox and heterodox positions to be taken within 'the universe of discourse' (Bourdieu, 1977) whilst at the same time recognising what Bourdieu refers to as 'doxa', that is 'the universe of the undiscussed' (*ibid.*) and made up, according to Bourdieu, of misrecognised and unquestioned aspects of practice. The problem with doxa is that "it favours practice reproduction rather than change" (Ellway and Walsham, 2015, p.142). Pre-service teachers looking to develop autonomy of ideas will find it challenging to develop a teacher identity unless there is space for discourse where they can engage with ideas about teaching

as well as “exposing the arbitrariness of the taken for granted” (Bourdieu, 1977, p.169). This reinforces what can be seen in the English education sector with the pursuit of neo-liberal educational structures. Again, there seems to be a gap in the literature here. Pre-service teachers in such situations may find that private social networks are a space where they can fully express issues and problems with becoming qualified teachers, take the risk of brokering ideas from other communities or experience brokerage and explore ideas that contravene practice in their placement outside of the situated learning and in keeping with their pre-service teacher educational needs. Although the majority of teacher education courses will offer physical opportunities for pre-service teachers to interact and reflect, often collaboratively, these opportunities are often a week or more apart and have a learning agenda which may be different to the immediate needs of a pre-service teacher. Private social media with push notifications enables pre-service teachers to initiate immediate debate or support, to be able to select the membership and to dictate the agenda of the ‘new learning’.

Developing teacher identity through successful reflection is another theme to consider. Tran and Nguyen (2013) undertook a study which suggests that a teacher’s critical reflections on his or her construct of ‘teacher identity’ is crucial to be able to resist the ‘institutional power structure’. There is, according to Tran and Nguyen, an opposition between the demands of the institution and a teacher’s beliefs about teaching.

“The teachers draw on human and ethical dimensions to engage in a critical reflection of their own teaching practices and the broader environment surrounding their professional practices.”

(Tran and Nguyen, 2013, p.211)

Thus, if pre-service teachers are unable to openly reflect within the school placement as part of their situated learning then it is challenging for them to access new learning, have ideas brokered to them and subsequently develop their practice. Yet at the same time, pre-service teachers are expected to be professionals within the community of practice. Wenger’s ideas (1998) demonstrate that being in a profession is also about accessing new learning and developing new ideas.

According to Wenger (1998), in a professional community of practice, a group interacts to define its own notion of professional identity, but tensions between placement driven values and those established by groups of pre-service professionals have been identified in a range of professions. Clements *et al.* found just such a tension amongst student nurses (Clements *et al.*, 2016) in which the student nurses found that sometimes the institutions imposed excessive workload and not enough support. This balance between workload and support is part of the professional identity as the profession has to deliver a professional standard. Clement and James' study suggests that the success of this standard is directly relatable to a balance between the challenge faced and the support they can offer each other as a profession. It is no coincidence that the DfE have published the findings of their 'workload' challenge *Government Response to the Workload Challenge* (DfE, 2015) in which they fully accept the recommendations of the committees. Nicky Morgan, the then Secretary of State for Education writes: "These reports are a great example of the profession taking charge of their own development and I want them to make a difference to the lives of teachers" (Morgan, 2016, para. 9). The notion is, then, that professionals should be interacting with each other to reduce workload, to be more efficient in their practice and to free up time to manage the learning over and above the day to day needs of the institutions. However, this notion of professionalism does contradict the definition of what a professional teacher is from the Teachers' Standards for England and Wales themselves (DfE, 2013). Thus it highlights the fact that teacher professionalism is far more than just what is included in the teacher standards, but that pre-service teachers have to meet this conflicted construct in achieving their qualified teacher status.

### **3.3.2 Teacher Professionalism**

Teacher professionalism is different from teacher identity, as professionalism is frequently situated within the place of learning or employment. Although the literature will, as set out in this chapter, explain that professionalism is something which is constructed by the individual through interaction with others, the notion of professionalism can be seen as where possessors of specialist knowledge "persuade society to grant them a privileged position" (Macdonald, 1995, p.xxii) whilst "No monopoly can be obtained and guaranteed in a modern



society...without the active cooperation of the state” (*ibid.*). For professional teachers then, their professionalism is also assessed as part of the Teachers’ Standards (DfE, 2013). This means that pre-service teachers in England have, within a national context of the marketization of schools in England (Ball, 2013) as part of the neo-liberalisation of schools, as outlined in section 2.1.2., set about achieving both their constructed professionalism and their assessed professionalism. Such a change in the status and role in professions in deregulated markets has been documented (Freidson, 2001). Indeed, Freidson presents the notion that not only is “monopoly essential to professionalism” (*ibid.*, p.3) but that “Freedom of judgement or discretion in performing work is also intrinsic to professionalism” (*ibid.*). This means there is a tension between the requirements of the state mandated credential of qualified teacher status and the autonomy of professional judgement. There is, then, a nuanced distinction between teacher professionalism and teacher identity and this is set out effectively in Avalos’ meta-study into ‘Teacher Professional Development’ which found that varying factors such as school cultures and macro conditions play a part in the way teachers develop their professionalism, but which acknowledged that the rising theme of studies into professionalism is New Public Management (Hall and McGinity, 2015) style changes being brought into educational systems across the world.

“The effects of policy environments centred on standardised examination results and restricted notions of teacher accountability. This is not a minor issue, as these policies have travelled the world and penetrated more strongly in precisely those contexts where teachers, working under difficult conditions, have limited opportunity to renew imaginatively their teaching through collaborative work amongst themselves.”

(Avalos, 2011, p.18)

In the context of this study, the changes to school structures under both the Learning and Skills Act 2000 and the Academies Act 2010 which allowed schools to convert their status from maintained schools into independent schools and rename themselves as academies, has increased the number of schools where that place of learning is substantially different to that of a maintained school. The main difference is that the DfE will have a separate and unique funding agreement with the academy which is separate from any

educational act aimed at maintained schools. This affects the pre-service secondary teacher in England who has to undertake school placements within a sector that contains both 1,053 maintained schools and 2,026 academies (DfE, 2016). Yet there are similarities in terms of the expected standards of teacher professionalism. In order to complete a PGCE with QTS, a pre-service teacher in the UK must successfully present a professional persona to placement mentors, the supervising university tutor and any other person that assesses the pre-service teacher as part of the training year. This is enshrined in part two of the Teachers' Standards (DfE, 2013) which repeatedly refers to the professional expectations of the pre-service teacher:

Part Two: Personal and professional conduct. A teacher is expected to demonstrate consistently high standards of personal and professional conduct. The following statements define the behaviour and attitudes which set the required standard for conduct throughout a teacher's career.

- Teachers uphold public trust in the profession and maintain high standards of ethics and behaviour, within and outside school, by:
  - treating pupils with dignity, building relationships rooted in mutual respect, and at all times observing proper boundaries appropriate to a teacher's professional position
  - having regard for the need to safeguard pupils' well-being, in accordance with statutory provisions
  - showing tolerance of and respect for the rights of others
  - not undermining fundamental British values, including democracy, the rule of law, individual liberty and mutual respect, and tolerance of those with different faiths and beliefs
  - ensuring that personal beliefs are not expressed in ways which exploit pupils' vulnerability or might lead them to break the law
- Teachers must have proper and professional regard for the ethos, policies and practices of the school in which they teach, and maintain high standards in their own attendance and punctuality
- Teachers must have an understanding of, and always act within, the statutory frameworks which set out their professional duties and responsibilities

(DfE, 2013, p.1)

Whilst it seems evident that the DfE's Teachers' Standards (DfE, 2013) set out what is meant by 'professional', the reality is that pre-service teachers meet this phrase frequently across the course in both its guises – the conceptual member-led guise and the market deregulated guise. Pedder *et al.*'s (2010) study into continuing professional development (CPD) in England found this conflict firmly within England's government-led CPD provision in which

Such CPD involves a great deal of devolution of policy initiative and pedagogic renewal and innovation to teachers in classrooms. However, enforcing compliance and tying teachers' learning so closely to a narrowly construed performance-oriented policy agenda undermines the professional independence and self-esteem that teachers need if they are to develop the risk-taking that is intrinsic to the experimental and collaborative professional learning practices and values that lie at the heart of effective CPD.

(Pedder *et al.*,2010, p.368)

Thus the pre-service teachers have to manage the risk involved with successfully demonstrating this professionalism against a range of subjective definitions as defined by the various people and institutions which they meet on the course. Professionalism is a complex term and when reviewing the literature around the term professionalism there are three themes that appear frequently:

1. Professional Identity
2. Professional Confidence
3. Professional Competence

### **3.3.2.1 Professional Identity**

The work by Trede, Macklin and Bridges (2012) on the concept of professionalism found a tension between personal and professional values, structural and power influences, discipline versus generic education and the role of workplace learning on professional identities. More particularly, they found "Of all the articles reviewed, only one, Paterson *et al.* (2002, p.6), prescribed a definition of professional identity" (Trede, Macklin and Bridges 2012, p.374). Thus this review sets out a dearth of agreement over what is

meant by 'the professional'. Not only is there no agreement, but there is no discussion of the definition either. Instead, work tended to be around the notion of professional identity – the working concept of what constitutes professionalism is situated within the community of those that inhabit the space within which professionalism is defined. For example, “Identity development and professional socialization are framed as a process of negotiated meaning-making within a community of practice” (Hunter, Laursen and Seymour, 2007, p.67). At the very least, professional teacher identity relies upon the placement and context of the teacher or pre-service teacher (Roberts, 2000). Certainly White’s (2013) study into the professional development needs of teacher educators exposes issues with the need to have access to a community of practice populated by peers in order to establish a professional identity. This emphasis on context is reinforced by Brown and Manktelow’s (2016) study into the impact that teacher standards have had on the development of teacher professional identity in which the teachers in the study suggested that teacher standards have led to imprecise quantitative measures being used to calculate the quality of ‘professional identity’ entering the debate with some teachers now equating their professional identity with performance evaluated against such standards. Such a shift in practice is seen where New Public Management (Hall and McGinity, 2015) style reform has emerged. In the United States, for example, Barrett (2009) finds that accountability and marketization changes can “fundamentally alter the professional practices and identities” (Barrett, 2009, p.1018). This returns the notion of professionalism for a pre-service teacher to that of our community of practitioners and thus includes the way meaning is made through private social media as well as within the school placement and the higher education setting. Rather than being something that is set out by government and the school placement, it suggests that the ideas around professionalism emerge through interaction – particularly when considering the higher risk of advancing views around professionalism that contradict those in the school placement.

Using the ideas sourced by Trede, Macklin and Bridges, it seems that, traditionally, notions of the professional teacher would be established by pre-service teachers amalgamating through sharing and brokering ideas and

reflections from their school placements and their university settings. However, just as with Wenger's apprentices (1991), the ideas of professionalism (Dufour, 2007) may vary from placement to placement and from school based mentor to school based mentor (Rockoff and Speroni, 2011). To then complicate the matter, it may be that the 'notion' of professionalism predicates the ability of a pre-service teacher to demonstrate certain standards within certain time frames. These standards may be around perceived workload management, resourcefulness, subject knowledge and ability to locate and deploy enhanced strategies – all within quite a short timescale such as from one subject lesson to the next. The efficacy of these standards for pre-service teachers in England has been questioned (Spendlove *et al.*, 2012) and the definition of Teachers' Standards (DfE, 2013), especially the notion of professionalism, has been shown to be subjective (Harrison, 2006) and that the emphasis on professional disposition has been dispensed with (Goepel, 2012). The second part of the challenge for pre-service teachers is to demonstrate improvement against these variable and subjective standards within the working week. This time scale would ordinarily mean that it would be beyond the ability of a pre-service teacher to call upon their traditional community of practitioners established through regular physical meetings with other pre-service teachers - which on the HEI course in this study, like many others, occurs on a weekly basis as part of their theoretical input. Orchard and Winch have argued that this theoretical input is an important part of pre-service teachers' growth as professional teachers but is increasingly in competition with the learning undertaken through school-led training (Orchard and Winch, 2015). However, the combination of smartphone technology with social media enables a community of practitioners to supersede the speed of traditional communities and thus enables members the opportunity to demonstrate standards that are a combination of shared and brokered knowledge, resourcefulness and strategies of the individual and his or her socially networked pre-service teacher community of practice rather than that of the individual alone.

### **3.3.2.2 Professional Confidence**

As Nolan and Molla (2017) conclude, there is a direct alignment between teacher professional confidence and teacher professional capital and find that

collaborative learning opportunities are essential to developing the confidence needed to develop professional capital. In addition, as Hargreaves (2012) finds, the New Public Management (Hall and McGinity, 2015) style educational reform introduced into American schools have hindered the growth of professional confidence and capital. Holland, Middleton and Uys (2012), suggests that professional confidence underpins professional competence and is linked to professional identity. This concept of managing time, resources and demonstrating knowledge are all linked to the ability of the pre-service teacher to demonstrate the confidence expected of a professional. Professional confidence is a difficult term for pre-service teachers because it must rely upon the reassurance of the individual in their ability to deliver certain standards or products within a certain timeframe. This resonates with the possible online interaction through private social media undertaken by pre-service teachers who could look to the community to validate their confidence in approaching situations in a certain way – to seek the reassurance needed and to share or broker new ideas or approaches as needed. In the same way that Wenger (1991) habitually refers to in his study of apprentices and masters, pre-service teachers can similarly reflect upon potential strategies not just with other pre-service teachers in other placements, but also with pre-service teachers who may have been in the same school placement before. Being able to ask the community to reflect upon the appropriateness of a strategy to a situated issue can lead to increased confidence in the competence that pre-service teachers are offering in relation to the Teachers' Standards (DfE, 2013).

Confidence is an important part of teacher professionalism, for example in areas such as behaviour management. A study in Australia looked at the impact of confidence on post graduate pre-service teacher behaviour management (Reupert and Woodcock, 2011) and found that if teachers had confidence in a method then they would be more likely to deploy it and that they had more success with behaviour management methods which they had confidence in. The most significant 'high stakes' area for pre-teacher competence is through behaviour management. The notion of behaviour management, whilst not new, is part of the new plans for education. The government have appointed what they describe as a behaviour expert in Tom

Bennett and directly referred to his role in the White Paper *Education, Excellence, Everywhere* (DfE, 2016).

2.22. Tom Bennett, a teacher and behaviour expert, is reviewing how well ITT prepares teachers for behaviour management, which will contribute to the framework; and as high quality mentoring is something that new trainees find most helpful, the Teaching Schools Council is developing a new standard for ITT mentors to help define and spread good practice. All three groups will publish their reports in the coming months.

(DfE, 2016, p.28)

Confidence thus impacts on the pre-service teacher and indeed the early teacher and can enhance or undermine their ability to deliver education in a competent way through enhancing their confidence in dealing with problems such as behaviour management as well as through enhancing their professional competencies (Orr, 2012). Having a private social media network of practitioners who could broker alternative ideas or strategies from other communities instead of producing potentially weak or inappropriate ideas or strategies to present to the school placement for continuous assessment against a perceived notion of professionalism could well make a difference to the perceived competence in professionalism being demonstrated by pre-service teachers.

### **3.3.2.3 Professional Competence**

The concept of professional competence is also linked to the notion of professionalism. For pre-service teacher education this has come about specifically as the move from competence into teacher standards and their enshrinement into pre-service teacher education through the 1990s (Tomlinson 1995; Burchill and Westmoreland, 1999). This is not restricted simply to England, but can be seen reflected in the education systems of other countries such as in the United States where educational qualifications have been seen as an insufficient guarantee of teacher competence leading to the introduction of performance assessments (Darling-Hammond, 2010) despite the fact that such assessments have been found to not have a correlation with improved teacher performance (Goodman, Arbona and de Rameriz, 2008). This issue of professional competence is not just for pre-service teacher education, but for

other public sector services such as professional psychologists. Johnson *et al.* (2013) developed the notion of professional competence by drawing on Wenger's communities of practice ideas. In the paper, 'The competence constellation model', Johnson *et al.* write,

"A competence constellation is defined as a cluster of relationships with people who take an active interest in and engage in action to advance a professional's well-being and professional competence...[the] concept of the competence constellation, a psychologist's network or consortium of individual colleagues, consultation groups, supervisors, and other relationships that, combined, help to ensure ongoing enhancement and assessment of competence from multiple sources."

(Johnson *et al.*, 2013, p.1)

In this, it seems that a pre-service teacher does not just take the assessment of a mentor into account when assessing their own professional competence. They take into account a wide range of views from those who exist in the constellation of their network – reinforcing the point made by Bourdieu (1977) about the way habitus is constructed. However, what private social media offer to community of practice members is speedy and precise access to various parts of those members of the constellation (James and Busher, 2013) and in such a way reflection and the sharing or brokering of knowledge and approaches related to competence can be carried out discreetly and outside the view of those such as the placement school mentor or the university tutor. Returning to the Teachers' Standards (DfE, 2013) that the pre-service teachers have to meet, it can be seen that pre-service teachers have to demonstrate the professionalism expected of them by their placement school. However, if a pre-service teacher has different ideas to teaching to that of the mentor or school, there is then a tension between notions of professionalism and pedagogy (Spendlove *et al.*, 2012; Harrison, 2006; Goepel, 2012).

What this literature review reveals is that to openly question or discuss different pedagogical ideas may lead to repercussions ranging from bullying, such as the work related bullying found to be the most common type of bullying for pre-service teachers (Drüge, Schleider and Rosati, 2016), to problems where summative grading is being used to assess the pre-service teacher (Matthews



and Noyes, 2016). Pre-service teachers could inadvertently be demonstrating that they hold what are seen by the school placement to be ‘unprofessional’ ideas within the situated context of the placement school or ideas and approaches that are different to those held in the situated context. Although there are noted issues with the use of private social media by pre-service professionals (Neville, 2016), private social media space seems to be an ideal place for such discussions as the privacy or membership of the discussion group can be selected, ideas ventured and even potentially examined by another pre-service teacher who has already completed a placement at the school in question. Using closed social media sites, albeit with institutional presence, has demonstrated that peer to peer discussions within social media can lead to reconsideration of pedagogical decisions (Krutka *et al.*, 2014).

Thus the ‘definition’ of professional competence is not only situated, but one that is going to change. It has to be situated within context and yet it is something that pre-service teachers will be concerned about developing. Under the Ofsted regulations for ITE (Ofsted, 2014), Newly Qualified Teachers will be examined for their behaviour management skills to see if their standards have maintained when moving from school placement to place of employment. It sets out in Section 161 of the Ofsted ITE inspection handbook that, alongside phonics, behaviour is picked out for specific attention:

Inspectors must consider first-hand evidence – including a sample of observations of trainees and NQTs teaching phonics or promoting and managing good behaviour – and observations of any school or centre-based phonics or behaviour training taking place at the time of the focused monitoring inspection.

(Ofsted, 2014, p.53)

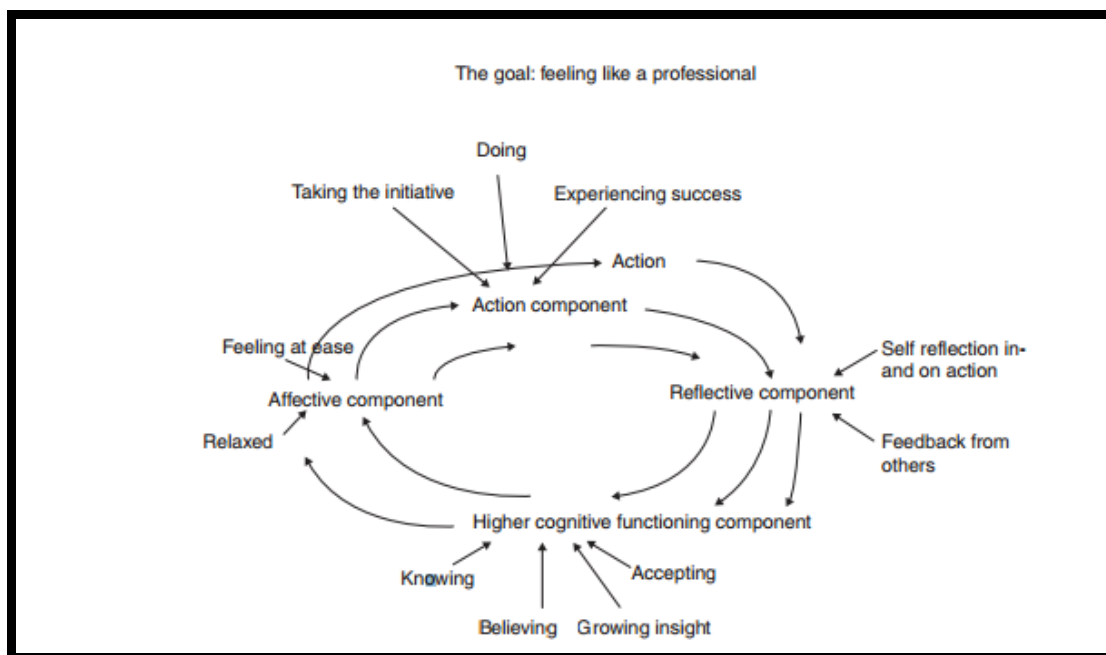
Thus the pre-service teacher needs to develop notions of behaviour management not just situated within the learning of their placement school, but also develop notions that are transferable to other schools as is implied in Bourdieu’s notion of habitus. The idea that pre-service teachers construct ideas through reflection on the ideas of their own and others is not something new to pre-service teacher education providers, but is being built upon (Ade-Ojo and Sowe, 2011). To reflect and construct ideas about teaching suggests that

teachers need some degree of autonomy in order to develop and deploy those ideas. Yet, despite the case that teacher autonomy is seen to be increasingly eroded (Hall and McGinity, 2015) and in particular at academies (Parker, 2015), it remains the case that reflection upon ideas as part of being a teacher is something that has been in place for a long while with Dewey calling for “...active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (Dewey, 1910, p.9). The notion that pre-service teachers and teachers will meet ethical dilemmas, such as having to be reflective within the context of decreased autonomy, as part of their reflection, is also recognised and where this is most seen is within reflective practice where the ‘invasion of privacy’ can be an issue for pre-service teachers such as that found in Finefter-Rosenbluh’s study who looked at how some pre-service teachers found aspects of reflection ethically challenging (Finefter-Rosenbluh, 2016). Such an ethical point could explain the need for pre-service teachers to access private and closed social networking spaces as this reduces some of the issues around privacy and the selection of audience.

### **3.4 The Reflective and Reflexive Teacher**

Reflection is firmly enshrined as a method of pre-service teacher assessment: Kolb’s experiential cycle (1984), Schön’s Reflection-in-Action (1995), to Moon’s influential ‘*Handbook of Reflective and Experiential Learning*’ (2004) have all found their way into the idea of how a pre-service teacher can demonstrate their growth as a teacher. As set out in the beginning, the course upon which this thesis is founded consists of four units of which one is titled *The Reflective Teacher*, a 30 credit Masters Level study requirement. Thus the pre-service teachers of this study have to manage not just the perceived professional competence and confidence within their school placement, but within their reflective writing. Within this writing, pre-service teachers are expected to reflect on their attempted strategies, reviewed knowledge areas and teaching experiences and to demonstrate how they have progressed. As an individual assessment, there is no room or reference to their online reflections which could be influential in their development as a teacher.

Having a private online area for reflection in which the pre-service teachers could more openly write about areas of weakness or challenges being faced could enable them to reflect (Cohen-Sayag and Fischl, 2012) through their writing and collaborate in a practical way to reinforce their confidence and thus their perceived competence. If this is the case, then there must be a clear link from confidence to competence. Holland, Middleton and Uys (2012) sets out a diagrammatic model for this which can be applied to this situation as shown below in Figure 3.1.



**Figure 3.1 A diagrammatic representation of the attributes of professional confidence and how they interact (Holland, Middleton and Uys, 2012, p.219)**

In Holland, Middleton and Uys' diagrammatic model, representing the attributes of professional confidence and how they interact, it can be seen that the 'feedback from others' is an intrinsic part in the cycle of developing the confidence to feel like a professional. In addition, the reflective cycle leads to habitual reassurance that the developed strategies and knowledge are effective and will deliver what the pre-service teachers need – the ability to take ever increasing amounts of action to develop as teachers without failing the assessment of being competent teachers. Pre-service teachers sometimes may not have the expertise from more knowledgeable others through their school placement and school mentor; as Wenger (1991) comments, the master is not

the front of all knowledge and thus pre-service teachers need access to additional input to provide feedback and or reassurance. Reviewing Holland, Middleton and Uys' model within the context of private social media, it could be that pre-service teachers look to private social media interactions for when the ability to 'feel like a professional' is unable to be achieved because of the restrictions that apply to reflections situated within a school placement and/or the relationship between the pre-service teachers and their school placement mentors.

Another frequent issue for pre-service teachers is the quality of relationship between a pre-service teacher and the mentor. In his book, '*Everyone needs a mentor*', Clutterbuck (2001) sets out how the relationship between the mentee and mentor is critical to the confidence which the mentee has in the mentor. Without a positive relationship, they are not receptive or reflective on the feedback from the mentor and thus fail to grow, leading to, for pre-service teachers especially, difficulties with their assessment against the expected standards (Clutterbuck, 2001). The models suggested by Holland, Middleton and Uys, and Clutterbuck, imply that reassurance is something that pre-service teachers require on a regular basis and that this can come from reflection in which others are involved. Private social media interactions could potentially not just help facilitate this model but also deliver it rapidly. There could be short term rapid situations in which a pre-service teacher is expected to undertake Holland, Middleton and Uys' reflective cycle rapidly and private social media alongside push notification could make that cycle happen. In addition, if a pre-service teacher was in a position where a mentor did not have the knowledge or the quality of relationship needed to ensure progress in an area then private social media interactions could be the facilitator which enables the reflective model to complete successfully and ensure the pre-service teacher meets the assessment requirements. Thus, it appears that speed, reassurance, privacy and reflection are all potentially bound up within usage of private social media usage and this study sets out how private social media helps these two areas: when speed is required and when the more knowledgeable other is not available through the school placement or mentor.

### 3.4.1 Reflexivity

There are two stages of reflection within this study. There is the reflection that occurs within private social networking and that which occurs during the pre-service teacher education year. One way to examine these reflections is to create a further opportunity for reflection. In asking the pre-service teachers to be reflective on the private social media interactions of themselves and their peers there has to be an acknowledgement of the fact that this reflection could lead them to "...question our ways of doing" (Hibbert, Coupland and Macintosh, 2010, p.48) leading to the pre-service teachers becoming reflexive and changing their actual interaction within private social media. Thus, in keeping with the notions from Bourdieu about subjectivity, in which doxa can influence actions and thoughts (Bourdieu, 1977), the concept of the reflexive teacher is important. Efforts to create or maintain communities of practice may actually occur because of the study itself. The study is quite open in its intentions and methods – it seeks to ask pre-service teachers to review their interactions and to reflect on the nature of their interactions. It encourages them to formulate ideas, speculate reasoning, offer and theme examples and in general act as a reflective group of people. It has already been established that the course upon which this study is based contains a Masters Level unit entitled *The Reflective Teacher* which encourages pre-service teachers to be reflective. However, that unit focuses on the individual pre-service teacher. It could be that the private social networking is actually group reflection in action designed to improve efficacy. Wyatt's recent study (Wyatt, 2016), looked in detail at how reflection can help teacher self-efficacy. In this study, it becomes quickly clear that the self-assessment of personal teaching competence is directly related to teacher efficacy. Wyatt's work shows that reflection is needed to find a match between the level of confidence in pre-service teachers and that of their performance. Private social media allow for pre-service teachers to advance ideas or to declare poor self-efficacy and to receive contextualising feedback. If pre-service teachers are using private social media networking to generate better self-efficacy, then that extra reflection could lead to some self-fulfilling outcomes.

The notion of the self-fulfilling prophecy is attributed to Merton who defined it as:

“The self-fulfilling prophecy is, in the beginning, a *false* definition of the situation evoking a new behaviour which makes the original false conception come *true*. This specious validity of the self-fulfilling prophecy perpetuates a reign of error. For the prophet will cite the actual course of events as proof that he was right from the very beginning.”

(Merton, 1948, p.195)

Thus by challenging held ideas in a way that leads to new behaviour and new outcomes demonstrates that reflection leading to new behaviour can lead to new outcomes from the previous situation. Merton’s work in turn was developed by Popper (1969) with his work on the methods of social sciences, Nagel (1979) and ultimately Beck (1994) in ‘The Risk Society: Towards a New Modernity’ which in attempting to explain the notions of reflexivity sets out how instead of accumulating wealth, those at the top accumulate a lack of risk. This notion of risk and reflexivity does highlight pre-service teachers as in a position of risk – they have to successfully negotiate their PGCE year in order to enter a new status of lower risk. Spendlove *et al.*’s research demonstrated that pre-service teachers are motivated to reduce risk at the cost of developing their classroom based skills (Spendlove *et al.*, 2012). Parker, in evaluating teacher autonomy in England within academies and maintained schools, set out a need to recognise both the reduction in autonomy and the need for autonomy (Parker, 2015). This suggests that the reflective thoughts of pre-service teachers in private social media may highlight if they are aware of the situated learning experience – particularly with the concerns around privacy that some pre-service teachers have (Finefther-Rosenbluh, 2016). This concept of situated reflection without privacy goes further as, when they are reflective without privacy, pre-service teachers within their host school placement are unable to be truly reflective as to do so may expose them to the risk of being seen as unprofessional, not meeting the standards expected of them or place them in sort of ethical quandary. To articulate their weaknesses or to set out contrasting or opposing educational philosophies is to enable them to manage the risk more effectively (Schön, 1995) and yet the space where this reflection can be undertaken is not always readily available as Finefther-Rosenbluh found.

With the increased managerialism and neo-liberal policies pursued by some schools (Hall and McGinity, 2015) alongside the modified Teachers' Standards Part 2 (DfE, 2013) for pre-service teachers to adhere to the ethos and policies of their school as part of their professionalism, pre-service teachers now have a risk of having to be careful with the identities which they present and in parallel develop teaching identities which could also meet the Teachers' Standards at contrasting future educational institutions.

### **3.4.2 Theoretical Framework**

This study employs a theoretical framework in which Wenger's ideas around communities of practice (1991, 1998, and 2007) are used as a lens through which to view the different communities of practice on a HEI based Post Graduate Certificate in Education combined with Qualified Teacher Status (QTS) for England and Wales to reveal that which was previously hidden or invisible (Hughes, Jewson and Unwin, 2007). Wenger sets out that communities of practice are "...important places of negotiation, learning, meaning and identity" (Wenger, 1998, p.133). The language of Wenger's concept of communities of practice is used to help inform interpretation and analysis of the data which the study generated such as "...idiosyncratic ways of engaging with one and another" (*ibid.*, p.113) which require 'brokers' who broker ideas from one community to another whilst they are in pursuit of their 'core enterprise' (*ibid.*, p.77). Participants operating across these communities are often engaged in a "...boundary encounter" (*ibid.*, p.112) with the broker in the role of 'more knowledgeable other' (Vygotsky, 1978) being able to share practice across the communities, "Practice has the advantage of offering something to do together, some productive enterprise around which to negotiate diverging meanings and perspectives" (*ibid.*, p.144). Not all interactions are brokered according to Wenger, and the notion of 'legitimate peripheral participation' (Lave and Wenger, 1991, p.96) is also used to explain how the trainees interact to help form their communities of practice. However, the theory of communities of practice is sometimes used in a superficial way (Pemberton, Mavin and Stalker, 2007) so the way Wenger originally used Bourdieu's theory of habitus (Bourdieu, 1977) to look at the how knowledge is

reproduced and developed was also reviewed and this review built into the theoretical framework. Bourdieu's use of habitus has been critiqued (Nash 1990; Sullivan 2003; Mutch 2003) and so where Bourdieu used habitus to examine cultural reproduction, that usage has not formed part of this theoretical framework and instead the notion of how transposable habitus (Bourdieu, 1990), in terms of knowledge and skills, can be reproduced and developed is seen as a part of the community of practice lens through which to view modern pre-service teachers using push notifications in private social media as part of the way they approach the production of knowledge on their teacher education course. In seeing the pre-service teachers operating as a community of practice and looking to investigate these communities through self-reported reflections of their private social media interactions the ontological position was therefore constructivist, and the epistemology interpretivist.

### **3.5 Research Questions**

In approaching this study, a number of areas were examined in depth to help frame the study. From these areas within the literature review, a number of main themes and contexts emerged which led to the research questions and the questions contained within the semi-structured group interviews undertaken as part of the study to investigate the private social media interactions of the pre-service teachers' communities of practice.

#### **3.5.1 What interactions sustain the social networking community of pre-service teachers?**

The first research question was about establishing what comprises the private social media interactions of the pre-service teachers' community of practice. Wenger talks about participants in a community of practice "...motivated to gain and develop new knowledge on a topic through regular interaction" (Wenger, McDermott and Snyder, 2007, p.4), and thus looking at the issues which foster and initiate interactions within the community will help show insight into the way the community of practice's interactions are established and operate within the group of pre-service teachers and help get examples of where this might have occurred through shared practice or been brokered from other communities: in other words, what interactions 'sustain' the group – the interactions which both



establish it and what the interviewees think are helping the core enterprise of becoming a qualified teacher.

### **3.5.2 What ideas do the pre-service teachers explore and broker about what it means to be professional from the group discussions in the social networking community?**

The second area that came through from the literature review was the notion of professionalism and its difficult iterations within the school placement settings. It is worth bearing in mind that this question may have implications for fewer pre-service teachers. It may be that it only affects a small number and that these issues may not surface until the second placement when pre-service teachers meet a different epistemological concept of what it means to be a professional teacher.

Professionalism is linked to identity and the pre-service teachers have to create an identity that meets the Teachers' Standards (DfE, 2013) if they are to successfully pass the course. This could well involve interactions between the community and the temporary more knowledgeable others, perhaps acting in the role of a broker.

### **3.5.3 What ideas, if any, do the pre-service teachers discuss about teaching which are different or similar to that seen in their placement schools?**

There needed to be a question which was linked to the concept of identity because it directly affected all the pre-service teachers and how they are managing the competing ideas of pedagogy and whether they are constructing knowledge or approaches from others that was not present in the epistemology of teaching situated within their place of learning or their mentor. The idea behind this question about pre-service teachers' exposure to the different ideas about teaching, is to evaluate to what level the pre-service teachers are sharing ideas, experiences and so forth.

### **3.5.4 What issues do the pre-service teachers discuss that are related to their school experience or government policies through social networking?**

Lastly, there is the issue of reflective teachers and reflexivity. The pre-service teachers have to make sense of the neo-liberal political context as set out by

Hall and McGinity (2015) and manage the risk inherent within their school placements' responses to such a context. These issues come with added risk and there is a sense that privacy will be directly related to this question. The study itself may also be contributing to this reflexivity and it is worth considering the subjectivity of the study itself. So, although not a main research question there should be an element of the study which addresses whether the pre-service teachers' reflexivity has affected the way they have interacted through private social media.

## **Chapter 4 Methodology**

### **4.1.1 Introduction**

This chapter articulates how and why this study chose a specific research approach and relates to the research focus and how and why it developed from the nature of the content to be studied. It also sets out the tools developed throughout to help the data analysis and the ethical issues encountered and resolved.

### **4.1.2 Overview of the research design**

The context of this study in Chapter 2 and the literature review in Chapter 3 both set out some of the parameters and challenges which the research design had to acknowledge. The design of the study had to provide insight into the different communities which emerged over the course of the PGCE course and how private social media interactions were part of those communities; in particular through the use of push notifications and through private or closed communications. Thus, the design of this study related to the focus of the research with the nature of the community of practice at its centre, and the kind of data required to address the main research questions. That data was the nature and content of those private interactions in which researcher influence was reduced as much as possible through the use of anonymity measures and by not being an insider researcher such as in Kontopoulou and Fox's research (2015). By having the participants in the study undertake group reflective interviews on a regular basis in which they reflected using their first-hand knowledge of the community's interactions, the precise content of those interactions could remain private whilst the nature and themes of the community's interactions could be revealed.

In seeking to reveal reflections on the private social media interactions which comprise the core enterprise of the different pre-service teachers' social network based communities of practice, communities whose premise is the key factor of being private, the research inquired into the interactions of the community whilst maintaining privacy. In short, it had to examine that which could not be revealed or studied at source first hand – private, hidden, online interactions whose content predicates on the concept that they were private

and hidden. This is a difficult proposition. Previous studies have addressed this through introducing the insider researcher into the community (Hramiak, 2007; 2010) in order to access the interactions. Yet, in placing themselves within the community, the researcher substantially affects the core enterprise of the community and removes the private interactions towards the core enterprise (Kontopoulou and Fox, 2015) – and it is the private interactions within the community of practice on which this study is focused.

The current study set out to investigate the private social media interactions of the community through a case study. This study methodology approaches the difficulty faced by the nature of the study by regularly interviewing the participants of the study, during the one year PGCE course that they were on as pre-service teachers, and asking them to reflect on the private social media interactions that they were part of during the course. Part of the answer to removing the influence of the researcher on the core enterprise of the community of practice was regular, chronologically sequenced, semi-structured group interviews in which pre-service teachers reflected anonymously upon the interactions of their communities. Yet it had to be made absolutely clear that the researcher, in a position of power, would reduce the risk of those reflections affecting the interviewees through a process of anonymity at the point of interview and by using a transcriber whose instructions were to filter any accidental breaches of anonymity. Thus it would be the further anonymised transcripts of those reflections on those online interactions that would be used for the study rather than the aural MP3 recordings of the interviews or the verbatim transcripts of those interviews. Those anonymised reflections could then be viewed through the lens of Wenger's community of practice model (Wenger, 1998) to evaluate the interactions within the context of pre-service teacher education. This double layer of anonymity would help reduce the subjectivity that affects other studies where a researcher is much closer to the core enterprise of the community of practice to the point where the researcher affects the core enterprise and the subsequent outcomes through compromising the privacy of the private social media interactions. Nevertheless, it was accepted that in studying the communities at regular intervals, the interviews themselves could affect the communities and their online interactions

and this aspect was acknowledged and addressed as part of a limitation to the study.

#### 4.1.3 Outline of methodology

Number and subject type of pre-service teacher participants interviewed	Timing of interview in PGCE Course	Interview number
Three English Three Mathematics Three Science One MFL, One P.E., One Computer Science	At the start of placement one	one
Three English Three Mathematics Three Science One MFL, One P.E., One Computer Science	At the end of placement one	two
Three English Three Mathematics Three Science One MFL, One P.E., One Computer Science	At the start of placement two	three
Three English Three Mathematics Three Science One MFL, One P.E., One Computer Science	At the end of placement two	four

**Table 4.1.3 Table setting out schedule of data collection points**

This study focused on pre-service teachers' recollections of, and reflections on, the private social media based interactions between the pre-service teachers undertaking a one year post graduate certificate in secondary education at a UK HEI as part of a community of practice. The ontological position was therefore constructivist, and the epistemology interpretivist, as befits personal narratives of experience, rather than realist and quantitative. For the purposes of this study, the data is wholly in the form of qualitative data derived from transcripts of the semi-structured group interviews performed at periodic points of the academic year. As part of a non-probability case study sample, volunteers for the study were sought from each of the six secondary subjects offered within the general HEI PGCE Secondary course. Some courses were

based on well-populated mandatory curriculum subjects (English, mathematics and science) whereas other courses drew from optional curriculum subjects (P.E., computer science and modern languages). There were issues around the projected recruitment to these courses as some of the courses were challenging to recruit to and others had seen their recruitment capped. However, the study's proposed number of participants was met and enough volunteers were recruited to sustain the study for a year.

As the PGCE was based across two mandatory school placements, the semi-structured group interviews were scheduled for early on in each placement and towards the end of each placement. Each group of three pre-service teachers attended four semi-structured group interviews in total over the year leading to a total of twelve semi-structured group interviews being conducted and transcribed.

#### **4.1.4 Case Studies**

Although case studies can be used for both qualitative and or quantitative research, in this case the approach has been as a qualitative case study. Useful for "...in-depth description and analysis of a bounded system" (Merriam and Tisdell, 2016, p.37), case studies have been established as a suitable tool for when,

"(1) the main research questions are how or why questions; (2) a researcher has little or no control over behavioral events; and (3) the focus of study is a contemporary (as opposed to entirely historical) phenomenon."

(Yin, 2014, p.2)

This study uses 'communities of practice' and what comprises 'the core enterprise' (Wenger, 1998) as a lens through which to investigate the private interactions between pre-service teacher secondary teachers during their teacher education via private social media.

As the private social media based interactions of the pre-service teachers were hidden and privately held in secure online spaces, the how and the why behind these interactions are not clear. Nor can a researcher become part of the group

in order to research it as doing so would influence the data and potentially threaten the privacy and it is the privacy which needed to be respected.

Yin's first requirement is that the study's main research questions are how or why questions. As the community of pre-service teachers are using private social media as a preference and in specific ways, this study is seeking to answer how or why the community is doing so. The design of the study is reactive in terms that this researcher is reacting to the fact that pre-service teachers are, uninitiated or bidden, creating communities through private or closed social media means. This study does not seek to control the behaviour or practice in order to study the communities. Rather, this study uses semi-structured group interviews after the event to investigate the behaviour and thus has little or no control and fits with the second of Yin's criteria. Finally, the use of private social media facilitated by push notifications to operate as a community of practice is exceptionally contemporary and thus this study fits the three requirements set out by Yin.

Yin uses Schramm to define what a case study is:

“The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result.”

(Schramm, 1971, pp.22-23)

It had become apparent to the researcher that pre-service teachers on an HEI PGCE Secondary course in his institute were not using the institutional Virtual Learning Environment (VLE) to interact online despite such a space being created for them in keeping with research (Ho *et al.*, 2009), (Carmichael *et al.*, 2006). The reason for this was that the pre-service teachers preferred to use commercially available social media to interact rather than the tools available through the HEI VLE. There is a history of HEIs using pre-designed Facebook pages (Dyson *et al.*, 2015) but the pre-service teachers regarded privacy as a key aspect of their interactions and created private Facebook homepages which only pre-service teachers on the specific PGCE Secondary subject course had access to. In addition, the pre-service teachers used other

commercially available social media to communicate, but the nature of these and the types of usage were unknown, but in terms best defined by Wenger, the students could be seen as a group of individuals looking to develop new knowledge through regular interaction (Wenger, McDermott and Snyder, 2007, p.4). Thus the pre-service teachers were making decisions to operate within private online networks and the decision making behind this is unclear.

It is clear that in looking at the pre-service teachers' community of practice and by investigating the how and what of their core enterprise, the case study is highly suitable as an approach that can illuminate the how and why behind why they have moved into private social media to operate their community of practice.

A case study approach also requires 'boundaries' which in this case was defined by membership of those who were on the one year PGCE pre-service secondary teacher education course and who had access to the communities of practice. However, there are some issues with the boundaries. With privacy tightly involved in these interactions a methodology needed to be developed which enabled the privacy of these interactions to be maintained throughout the year-long study, but also reveal how and why the community of practice for the pre-service teachers was being established through private social media interactions. At no point could the privacy of the cohort be threatened – not during the study nor post the study. This by its very nature frames the boundary of the study to be focused away from the actual interactions themselves and instead onto the reflections of pre-service teachers on the interactions.

Once the decision had been taken to adopt a case study approach as suitable to the focus of the research, the parameters of the case itself could be drawn. The boundaries of the case are constituted by membership of those who were undertaking the HEI one year post graduate certificate in education at the institution which formed part of the study. These pre-service teachers all arrive with a prior undergraduate degree in either; English, mathematics, a science, physical education, a modern language or computer science. These pre-service teachers are placed into physical groupings for those subjects as part of the course. In addition, when on school placement, they are not just placed into a



community within a school, but placed within a subject specific community within the school itself – e.g. a group of mathematic teachers. As part of their course, the pre-service teachers interact within their own community of subject specific pre-service teachers as well as with other pre-service teachers, the school and subject communities and indeed any other communities which they have access to having begun the course as a subject specialist. These communities interact both physically and electronically. However, there is no requirement for those on the course to interact as a community of practice electronically – this is something that some on the course choose to do as part of their private social media interactions.

#### **4.1.5 Participants**

In total there were sixteen participant pre-service teachers in this study, of which twelve were female and four were male. Twelve of the participants volunteered to directly participate in the group interviews and four of them agreed to be reserves. The participants were drawn from the 2014-15 cohort of pre-service teachers undertaking a one year PGCE pre-service secondary teacher education course at a local HEI. The course was made up of three larger groups of ‘core’ subject specialists and smaller groups of non-core subject specialists. The core subjects were English, mathematics and science. The non-core subjects were modern languages, physical education (P.E.) and computer science. The number of pre-service teachers on each of the subject strands affected potential recruitment of participants for the study and even further, the way the participants were grouped for the semi-structured group interviews. Using non-probability sampling (Newby, 2014), this case study was concerned with having the ability to gain enough participants considering the unpredictable numbers of pre-service teachers who would start the course, who would participate in the study and the need to have reserves to cater for drop outs (*ibid.*).

With the focus of the case study being private social media interactions there were concerns about potential participation rates (*ibid.*). The larger core subjects of English, mathematics and science had enough pre-service teachers to potentially have several volunteer participants from each group of pre-service teachers whereas the smaller non-core subjects of modern languages,

computer science and physical education only had enough members to potentially have one or two participants. For this reason, the aim of this study was for there to be three principal volunteers from each of the core groups of English, mathematics and science with a reserve volunteer making four in total from each group. For the non-core subjects of modern languages, physical education and computer science, to match the proportion of the core subject groups it was aimed that there should be one principal volunteer plus one reserve volunteer from each of the non-core subjects making two in total from each of the non-core subjects.

The rationale behind these numbers was that the participants were to be reflective during the semi-structured group interviews and for this purpose it was important that they had other participants contributing and building on their own reflective accounts. With the limitations on the number of viable volunteers and the need for participants in the interviews to have others to reflect with it, the size of the groups for the semi-structured group interviews limited to just three was selected as a viable and justifiable size (Newby, 2014). To enable the smaller non-core subjects of modern languages, physical education and computer science to also have the opportunity of being in a reflective group despite not having enough volunteers, the participants from these three groups were placed together for their semi-structured group interviews. This meant there were four groups of three for study with the fourth group being made up of the smaller cohorts of the pre-service teachers from modern languages, physical education and computer science.

#### **4.1.6 Development of paradigms**

As set out in the literature review, this study sees the pre-service teachers as a community of practice, with the core enterprise being to gain and develop knowledge as they become teachers for their current and future careers through regular interaction (Wenger, McDermott and Snyder, 2007, p.4). As a community of practice, the pre-service teachers are engaging with each other face to face and through private social networking to construct ideas and identities around teaching. This perspective is thus constructivist in its epistemological stance. It draws upon the ideas of Vygotsky (1978) in seeing that through interaction and through the presence of more knowledgeable

others new ideas and understanding can emerge. This perspective fits with how Wenger (1998) sees the community of practice at work with more knowledgeable others 'brokering' new ideas to the community. Further, for a member of a community to consider these new ideas and to "...question our ways of doing" (Hibbert, Coupland and Macintosh, 2010, p.48) such interaction causes reflexivity to occur. The core enterprise of the pre-service teachers' communities of practice is becoming a teacher which relates to the construct of identity. The pre-service teacher education course seeks to structure the journey from being a non-teacher, to being a pre-service teacher and finally to becoming a teacher. That ontological concept of being a teacher is, constructed through the pre-service teachers, their interactions with the different facets of their course and the people that they meet and interact with as part of their constellations of communities. As Bourdieu says, it can be seen as "...acquired, socially constituted dispositions" (Bourdieu, 1990, p.13). It is through the interpretative lens of Wenger's community of practice that this process of constructing ideas around becoming a teacher and of establishing just what that identity and concept of teacher means is explored.

#### **4.1.6.1 Researcher Positionality**

There are elements of positionality in this study to be considered as the researcher is the course leader within the pre-service teacher education course that features in this study and the participants within the study are in a power relationship with that researcher due to the nature of the course. In being a reflective participant within this study the researcher brings to the study, and the reflective interviews within the study, a history of teaching and pre-service teacher education that influences where the researcher stands as a constructivist interpretivist researcher. The researcher's own teacher education as a pre-service teacher was based upon a constructivist approach and the researcher's own teaching as a teacher used that theoretical approach as a construct upon which to teach. For the researcher, collaboration leads to opportunities for shared practice or for ideas to be brokered from other communities and that these ideas or the ideas of others are introduced, refined and explored as part of the collaboration process. The ontological perspective of this researcher is that there is no right way to teach, or to approach any

hypothetical teaching situation. Instead, there are pupils to be taught and that the teacher must seek to construct original and new learning programmes for every class taught through constructivist pedagogy. That ability to construct learning is difficult and complex and requires decision making on the part of the teacher. The ability to teach, thus, for the researcher, is centred on the ability to make pedagogical decisions. To this researcher, the increased options which pre-service teachers have and the more knowledge and the more access to different and new ideas that they have, all combine to enhance the decision making process. In viewing their reflections on their online community of practice, this is seeking to look at how the pre-service teachers use the community of practice to enhance that decision making, the development of knowledge around pedagogy and enhance their abilities to teach. However, not all educators take the same view. There are opposing schools of thought, such as the knowledge curriculum, which articulates that the professional understanding of *how* to teach is rooted firmly in schools and set by the school. And yet there is a tension here, set out by this study and predicated upon the notion that in the UK, private internet usage is possible. The only way for the school or government to impose pedagogical models would be if the teachers or pre-service teachers had no opportunity to reflect upon and modify their decision making process. This is not a truism as there is private communication occurring online and in private. The position of this researcher is that such communication is part of the pre-service teachers' construction of their identity of being a teacher and that the 'private' nature of it reflects the difficulty of acknowledging or accepting brokerage of the existence of opposing ideas to the school's mandated concept of being a teacher. Part of this positionality affects the outcome of the study as the researcher is, through the interview, seeking to ask the pre-service teachers to reflect and interpret on their interactions so that the researcher may better interpret and reflect on the interviews, reinforcing the ontological and epistemological beliefs that are held by the researcher as a constructivist, interpretivist researcher.

## **4.2 Research Tools**

### **4.2.1 Semi-Structured Group Interviews**

The approach chosen for this case study was semi-structured group interviews where participants from the communities of pre-service teachers could reflect, anonymously, on their interactions through private social networking whilst they were on their teacher education course. These discussions could be transcribed and then subsequently analysed to reveal insights into the nature and usage of these hidden interactions by pre-service teachers.

The interviews had some form of structure so that the interview can be termed semi-structured, "...most of the interview is guided by a list of questions or issues to be explored, and neither the exact wording nor the order of the questions is determined ahead of the time" (Merriam and Tisdell, 2016, p.110). In addition, between each interview, through the reading of the transcripts generated, there was further information identified which helped shape some of the interview questions and discussions. In some ways, the semi-structured group interviews drew upon Roulston's (2010) concept of the post-modern interview. Roulston has developed a range of types or categories for interviews based on her review of the history of qualitative interviews. The type which most fits the pre-service teacher in this study is that of the 'postmodern'. This is because a pre-service teacher is reflecting upon multiple selves and how these are combined to present the final identity of the 'pre-service' teacher. The notion of private online-self is not new, has attracted research attention (Misoch, 2015) and indeed the way this online-self interacts with others was the main focus of this study, but due to ethical and privacy issues, the only way to access this online self and its interactions was to interview the pre-service teachers in such a way that their reflections were anonymised. Within the semi-structured group interview, this anonymity means that pre-service teachers were able to talk to other members of the interview cohort about how their private-self and their online-self combined to present their pre-service teacher identity to their mentor and university. The nature of the research focus precludes any other approach as the first hand data are unavailable for study. The pre-service teachers were revealing and reflecting on their private

interactions that occurred in a context where no one else other than accepted members could access or view the interactions. This research study was looking at reports of private and self-generated social media interactions in order to establish how the community used private social media as part of its core enterprise of becoming a qualified teacher. In addition, this study was seeking to understand the way these communities utilised private social media and if this could influence the design of pre-service teacher education and development. Roulston sets out different types of interviews in *Considering Quality in Qualitative Interviewing* (2010), and in particular her outline of the postmodern interview sets out some identifying facets.

“The researcher is self-consciously aware of his/her subjectivities in relation to the research participants and the research topic (reflexivity) and explores how these relate to the research findings in representations of research, as well as the ways in which it may be uncomfortable.”

(Roulston, 2010, p.210)

These facets are readily identifiable for this study as the nature of the private social media combined with the positionality of the researcher form part of the semi-structured group interviews. In undertaking the interviews, a constructivist perspective was being reinforced and the pre-service teachers were being encouraged to reflect within their groups. At the same time, the fact that this study was asking the groups of pre-service teachers to reflect and consider the different meanings that could be made of the interactions that they are recalling to the point where they could form new meanings through the semi-structured group interviews also fits Roulston’s notions of the postmodern interview. “What are the multiple meanings expressed by the participants in the social setting of an interview concerning a topic?” (*ibid.*, p.211).

In many ways, this definition captures the reflective nature of these interviews and the emphasis on the awareness of the interviewer that the interactions of the interviewer were part of these discussions – something that this thesis iterates on a number of occasions.

This study interviewed participants from the pre-service teacher communities collectively as by having the interviews conducted in this way enhanced “...the

likelihood that interaction between interviewees will release more useful data” (Newby, 2014, p.365). In asking the pre-service teachers to reflect on a range of interactions, these conversations could prompt recall in fellow interviewees of either the same event or a similar event and thus release the more useful data. Having one to one interviews can mean that such opportunities for prompts or recollection are lost. Offering opportunities for the interviewees to see different interpretations of the private social media interactions by hearing other responses allowed for a more reflective interview to take place - singular in-depth interviews can mean that the “interviewee might change reality” (*ibid.*, p.361). In any case, the pre-service teachers in this study had limited amounts of time available on campus for being interviewed and during times when they were not in a taught session. Participants were going to have to complete the interviews during the single day that they were on campus and logistically, the most effective way to complete the interviews within such a time frame was going to be through semi-structured group interviews.

Whilst selecting semi-structured group interviews resolved some of the issues faced by this study, that choice led to further issues such as the fact that those who use this method “...find it difficult to use all of the data in our analysis” (Newby, 2014, p.340), whilst conducting and transcribing such data led to “the higher cost of interviews” (*ibid.*). With group interviews, especially over long periods such as the year of this teacher education course “there is [was] a danger that the answers given later in the interview cycle might have been affected by conditions in the wider world” (*ibid.*, p.342). There was also the danger that individual participants in the interview might have influenced the comments made by other members of the group leading to ‘group think’ and “...generating false notions for cohesion” (Denzin and Lincoln, 2011, p.557). To minimise this risk, the interviewer made sure to vary the opening speakers when asking the interview questions and to ask for specific supporting examples of evidence towards opinions offered through asking supplementary questions.

### **4.3 Formulation of questions for the interviews**

Through the literature review, it was possible to identify a range of contextual and conceptual questions alongside supplementary secondary questions designed to flesh out examples to be asked in the interviews in order to elicit information that would help to answer the core research questions. As noted already, the study uses Wenger's community of practice theoretical model as a lens through which to view the groups and their online social interactions and this combined with the context of being pre-service teachers alongside this researcher's constructivist and interpretivist perspective means that the questions were designed from that positionality.

Below are the semi-structured group interview questions asked of the participants to generate data towards each of the research questions in this study prefaced by an explanation of why these questions were chosen.

#### **Establishing the community of practice**

The first area for the interview to address was around establishing the community of practice and what private social media interactions were present within the community of practice. The pre-service teachers would be both bringing themselves together as a community through private social media and doing so through a core enterprise of becoming qualified teachers. Whilst the researcher was aware of the need to ask quite specific questions, if the positionality and subjective ability of the researcher to influence the opening questions was to be minimised it had to be the pre-service teachers who isolated and reflected on what they thought the interactions making up the private social media interactions were (Swift, 2014). In addition, the researcher did not want to be introducing the participants in the study to terminology from Wenger and asking them to interpret their interactions as that was what the study itself was seeking to do and in any case it would again influence the reflections of the pre-service teachers. The questions had to use quite generic terminology and the secondary questions be focused on seeking examples.

As part of the researcher's role as course leader, there was knowledge present that there were two contexts for the pre-service teachers: school placement and university. One of the questions asked them to separate out the two contexts,



but to reflect upon the group's engagement with the two contexts as 'challenges'. This is because part of constructivism and collaboration is about being altruistic in the face of a significant workload (Tseng and Kuo, 2014). One of the things that this researcher looked to explore was about the issues that seemed to be of primary concern to the communities of pre-service teachers. If more knowledgeable others existed who were able to offer specialist knowledge or access to knowledge situated in other communities (Lave and Wenger, 1991) then it could be that sharing and reflecting could increase self-efficacy (Holland, Middleton and Uys, 2012) and lead to the formulation of new knowledge for community members (Wenger, McDermott, and Snyder, 2007).

### **What interactions sustain the social networking community of pre-service teachers?**

- What binds the social networking community together?
  - Give me an example of this situation
  - How did that make you feel?
- What are the driving issues that seem to be of primary concern to the group?
- Are you aware of situations where members are tackling work or academic related challenges?
  - How did you respond?
  - What did you do next?
  - Has the discussion in the group changed your view on given things?

### **Professionalism**

In keeping with the researcher's constructivist notions about the development of knowledge, the questions around professionalism sought to ask the pre-service teachers if they indeed constructed ideas around the notion of professionalism (Trede, Macklin and Bridges, 2012). Due to the positionality of the researcher (Etherington, 2004), it was evident that as the notion of professionalism is something that is achieved over the duration of the course these answers and that these reflections were likely to ask the pre-service teachers to consider the

notions that professionalism is not something fixed by the school or government, but instead is constructed by the profession (Johnson *et al.*, 2013). It could be seen as a habitus (Bourdieu, 1977) in which the pre-service teachers develop knowledge relevant to their professional identity which is able to help them take on future challenges in the workplace. With the issue of retention in the profession being such a strong contextual issue, questions to see if they are indeed trying to develop their habitus through private social media interactions seemed relevant. As private social media is one of the few places where such constructed notions could take place, some questions were also asked about how the pre-service teachers' schools were approaching the use and access to social media by pre-service teachers.

### **What ideas do the pre-service teachers explore and broker about what it means to be professional from the group discussions in the social networking community?**

- Do you get ideas about what it means to be 'a professional' from the group's discussions?
  - Did people respond to this?
  - What kind of things did they say?
- Did you collaborate as a group about different ideas of what is expected in terms of 'competence and teaching standards' through the Facebook homepage?
- Is the notion of teachers' or student teachers' use of Facebook a part of your school placement's training?
  - What sort of advice have you been given?

### **Identity**

Part of the researcher's ontological perspective is that pre-service teachers construct their teacher identity through engagement with others, but that this could create tensions within the context of the New Public Management (Hall and McGinity, 2015) approach where schools set the identity of the teacher (Tran and Nguyen, 2013). The concept of challenge was also suggested as if new ideas are 'brokered' from other communities (Wenger, 1998) to the group

then this would involve opportunities for the pre-service teachers to create a more resilient identity for the future (Czerniawski, 2011).

**What ideas, if any, do the pre-service teachers discuss about teaching which are different or similar to that seen in their placement schools?**

- Do you discuss ideas about teaching which are different or similar to those seen in your placement school?
  - Give me an example of this situation
- Were individual ideas about education or teaching in the group challenged on occasions?
  - Was this common and what examples can you give?

**Reflective Teachers**

The main methodology of this study is through interviewing the pre-service teachers about their private social networking interactions and to create insights into the core enterprise of becoming a qualified teacher. The notion of the reflective teacher was explored in the literature review and much of what emerged turns on how self-efficacy, confidence and reassurance can emerge from engaging in reflective discussion (Holland, Middleton and Uys, 2012). The pre-service teachers are in a position of risk and part of their core enterprise will be to reduce this risk (Beck, 1994) through reflection. This risk could come from the school or through government policies, but it could also come from the university course that they are on. This creates subjectivity issues for the researcher as there is an issue of bias (Bourdieu, 1977) on the researcher's part and then there is the fact that in trying to manage the risk posed by the researcher as a representative of the university the students might seek to fulfil that which the researcher is asking questions around and create a self-fulfilling prophecy (Merton, 1948).

**What issues do the pre-service teachers discuss that are related to their school experience or government policies through social networking?**

- Did you talk about issues related to your school experiences – if so what sorts of things are discussed?
- Do you discuss government or school policies in the group?

- Has the reflection with this researcher (in this session or previous sessions) changed your understanding of past events or led to you interacting within the Facebook homepage differently to that which you did at the start?

#### **4.4 Achieving trustworthiness**

There were further reflexive pressures on this study: the researcher leading the interviews was also involved with the pre-service teachers in a formal capacity as their lead tutor. There is no escaping that as someone who was involved in the pre-service teachers in a professional capacity and in a research capacity the researcher's 'voice', subjective as it is, was going to be part of the narrative. Thus the relationship between the participants' voices and that of the researcher as both researcher and fellow participant is complex. There was a need to recognise the bias and subjectivity that would emerge, but also embrace it within the notion that a researcher has a voice. Thus the idea of: "...reflexivity and the use of self in research." (Etherington, 2004, p.16) presents itself as a notion that needed to be incorporated into the design of the data collection. In gathering the data, the researcher was interacting with the pre-service teachers to form a reflective account of a series of private social media interactions. These interactions were in the past tense and the pre-service teachers were asked to not just recount them, but to reflect upon them and to theme them by answering questions based on the literature review and the researcher's intention to look at them through Wenger's lens of a community of practice. In doing so the participants were asked questions which compartmentalised their reflections and thus the data generated an opportunity for reflexivity – one in which they reflected upon themselves and the interview questions and this reflection potentially changed the way that they interacted within private social networking for the duration of the course. The fact that the researcher took a decision to affect their interactions on the course in this way and combined with the positionality of the researcher meant that the participants trusted the researcher to not put them at risk. This is part of why in the interviews the anonymity was not just iterated, but that it was also reiterated through the double layer of

anonymity inserted by having the separate transcriber remove inadvertent non-anonymous comments. In addition, the participants were not just offered an opportunity to withdraw from the study at any stage, but orally offered this opportunity at the start of each interview as well.

In asking pre-service teachers to reflect upon their online social interactions the researcher was also reinforcing the premise that was taught on the course – that one should be a reflective pre-service teacher and thus this part of the study would not be wholly different to that which they were already exposed to, but it did reinforce the ideological bias the researcher is exposing the pre-service teachers to. The answer seemed to come in part from Bourdieu who advocated that the bias of the researcher is the solution rather than the problem and it is about becoming aware of such biases. It does not need to go as far as to see the researcher as the main area of research, but to recognise the biases present in a researcher and to see that this positionality and effect on the data is part of the data gathering.

#### **4.5 Analytical Framework**

It can be seen that communities of pre-service teachers engage in collaborative reflection (Santos and Arroio, 2013) in order to explore disparate notions of teaching; and whether through Kolb's experiential cycle (1984) or Schön's Reflection-in-Action (1995), reflection is a common part of such a pre-service teacher community (Ditchburn, 2015). With the recent evolution of mobile and social technology combined with access to mobile broadband internet, this collaboration is now undertaken online as well as physically through the course (Kim and Sin, 2016). The modus operandi of a community of practice that is made up of pre-service teachers has thus changed in recent years to accommodate the opportunities provided by such technological advancement such as in Kim and Sin's study (2016) into the use of Twitter by pre-service teachers which looked at how they developed different roles through the use of non-private social media as part of a community of practice.

This study, focused on the use of private social media by pre-service teachers, uses Wenger's communities of practice (1998) as its analytical framework to

explore through the private social media interactions the different communities of practice that pre-service teachers belong to, the different roles that core members take, as well those who participate less, and seeks to establish how such communities are formed and how the private social media interactions help the core enterprise of becoming a qualified teacher. Such communities are, according to Wenger, "...important places of negotiation, learning, meaning and identity" (Wenger, 1998, p.133). This study is looking to analyse how the community contributes to the way pre-service teachers can begin to develop their habitus and the multiple identities of teacher identity which are firmly rooted within the contexts that the community is based. To develop a teacher identity or habitus requires the members to engage with subjective notions of competence and find a way to conflate their original identity and ideas with the identity and ideas required of the community – such a process could involve the sharing of ideas or brokerage of ideas from other communities to and from each other in the role of more knowledgeable others and these key concepts form part of this analytical framework.

In the case of the pre-service teachers, 'outsiders' are removed through the privacy settings of the social media and close relationships forged. Wenger highlights this process clearly, "participants form close relationships...which outsiders cannot easily enter" (*ibid.*, p.6). The membership of these communities can be varied, but often there is an agent of change or need which pushes the pre-service teachers into forming such communities, "There are also times when society explicitly places us in situations where the issue of learning becomes problematic" (*ibid.*, p.8). For the pre-service teachers embarking upon a new one year vocational teacher education course, the agent of change in this case is the fact that not only are they becoming pre-service teachers of specific secondary subjects, but they are also entering a space in which constellations of communities exist and they will have to navigate their way around other communities to that of their own communities of pre-service teachers such as the community of teachers in their school placement.

As it was set out at the start of this thesis, pre-service teacher education is going through a great deal of change in England and this is the very thing that Wenger highlights, "If we proceed without reflecting on our fundamental

assumptions about the nature of learning, we run an increasing risk that our conceptions will have misleading ramifications” (*ibid.*, p.9). Without reviewing the very nature of learning of pre-service teachers who are working in a period of significant school reform whilst having potential access to communities of practice through private social media it is possible that this also means conceptions could have misleading ramifications. As Wenger outlines in his proposal for his analytical framework based on the communities of practice, “A key implication of our attempts to organise learning is that we must become reflective with regard to our own discourses of learning and to their effects on the ways we design for learning” (*ibid.*). Reviewing the discourses of private social media and reflecting on how learning for pre-service teachers is organised within the context of the reformation of English education could help enhance the way the ITE providers design learning for pre-service teachers.

#### **4.6 Limitations of study**

It is important that this study acknowledges that there are some limitations to this study (Chametzky, 2013) owing to:

- the private nature of the first hand data
- small size of the sample
- use of only one data collection method
- potential for influence by group members
- limited to one cohort of pre-service teachers in one year
- constraints of memory loss, distortion of facts, etc.

Part of the issue is because this study used the reflections of pre-service teachers upon their interactions within private social media of themselves and others on their pre-service teacher education course. There is no way to verify or refer to precisely those first hand interactions from private social media and thus in these terms this study has some limitations in terms of generalisability. However, within the confines of these restrictions, it can be seen how the structures of private social media interactions within communities occur and to

develop training and input for pre-service teacher education courses and school placements that can be applicable when it comes to influencing the private social media interactions that takes place on teacher education courses by pre-service teachers. A pre-service teacher is under no obligation to use private social media, but the model of how pre-service teachers use private social media to help the core enterprise of becoming a qualified teacher can demonstrate both what they are excluded from as well as what the nature of what takes place within these private social media based interactions.

Another limitation to acknowledge is the fact that not all those within the cohort were interviewed. There were limitations on the potential number of volunteers which reduced the ability of this study to investigate the reflections of all members of the cohort and instead the study was relying on the reflections of a sample of pre-service teachers on the interactions of the community of pre-service teachers. With semi-structured interviews being expensive and time consuming (Newby, 2014), this was always going to be a limitation that had to be considered.

This is also a case study of a single HEI secondary course, at only one location and over one year. This limits the ability to make comparisons across different courses and over different time periods.

Lastly, with the nature of the group interviews relying on second hand data through recollections there is scope for misrecollection and distortion of events that will accompany a group jointly reflecting on events from over a period of time.

#### **4.6.1 Reflective pre-service teachers**

With content and interactions from the private social media being used by the pre-service teachers in their communities of practice having to maintain privacy at all times, the methodology of this study was relying on interview participants to be reflective in relaying and sharing narratives during the semi-structured interviews. Without interviewing every member of the PGCE cohort, it would be impossible to gather a complete recollection of interactions. Even if this was so, some recollections would be redacted or reshaped as the nature of the



recollections and the different dynamics of the group would bring their own interpretative and reflect slant to the reflections. There could be no single representative group which would reflect the 'true' nature of the interactions and nor was this study seeking to establish such a thing. The purpose of the study was not to gather precise logistical details of each interaction between pre-service teachers, but rather to be able to see how private social media interactions helped establish the pre-service teachers' communities of practice and to interpret the interactions through the lens of Wenger's analytical framework of the community of practice.

#### **4.6.2 Transcriptions**

To ensure that the interviewer was able to explore the recollections with the pre-service teachers and to have good focus, each interview was recorded on an MP3 recorder. As part of the ethical approach to anonymity, these interviews were transcribed by an independent person who did not meet the pre-service teachers as part of their course. Each set of interviews was transcribed and interpreted prior to the next set of interviews in order to develop themes and the questions asked at subsequent sets of interviews. For example, in the first interview, one pre-service teacher referred to a WhatsApp conversation. Subsequent questioning within this interview and subsequent other interviews revealed that others were using WhatsApp, but had not been referring to it as part of their private social media interactions.

#### **4.6.3 Ethical considerations**

With privacy being the driving force behind both this study and what this study seeks to circumnavigate, the methodology had to make anonymity, data storage and the right to participate or withdraw at any stage of the study central tenets of the ethical side of this methodology. As laid out in the earlier sections, each participant not only gave formal consent, but had to iterate this formal consent at the start of each interview. The participants were reassured by the researcher as both the interviewer and course leader that their reflections were not only anonymised, but also had no bearing on their place on the course and the study sought only to establish what was occurring within their communities of practice so that it could be interpreted within the context of improving the

nature of teacher education. It was acknowledged that a power relationship was in place between the interviewer and the group and at the start of the interviews it was expressly made clear that part of the anonymity meant that participants would be anonymised through the transcription, meaning that the researcher would not have transcribed records as to which participant made which statement.

All data was kept securely on an encrypted PC within a locked office at all times and this fact was outlined to the participants as part of the study.

#### **4.7 Methods of analysis**

The study was designed to produce reflections upon data about private social media interactions related to the core enterprise of the pre-service teachers within their communities of practice: issues and challenges in achieving the core enterprise of becoming a qualified teacher and shared practices that developed to support this. Thus the primary data are unseen: the online interactions of the communities are not clearly available for study. It is the reported online interactions that comprised the data collection. To start to make sense of the data, the methods of analysis owe some part to grounded theory in helping to manage and make sense of the data in the initial phases. This study did not seek to use grounded theory for interpretation – it used Wenger’s community of practice through which to interpret the data. But in handling the first set of interview transcripts and to draw out themes there is an acknowledgement that the analytical tools from grounded theory were helpful to enable the analysis of meaning and content. In summary, grounded theory enabled the emergence of themes. This material was then interpreted against Wenger’s community of practice framework (1998).

Grounded theory emerged from the work by Glaser and Strauss in which they derided the emphasis on verifying theory over the generation of theory (Glaser and Strauss, 1967). The main thrust of the theory is to approach data with the overriding aim of discovering theory through the detailed and systematic sifting and analysis of the information and data generated by the study. Grounded theory took some while to be established due to the number of competing esoteric and non-systemic qualitative methodologies at the time (Charmaz,

2006). In addition, Glaser and Strauss began to work separately with Strauss working alongside Corbin to establish a codified version of grounded theory. However, whereas the original ideas from Glaser and Strauss suggested the researchers abstain from wider reading prior to the study, Strauss and Corbin suggested that this abstention could limit the researchers rather than enable them. What emerged were two strains of grounded theory: *Straussian* grounded theory and *classic* grounded theory. These two theories were blended together by one of Strauss and Glaser's doctoral students Charmaz who developed what is now known as *constructivist grounded theory* (Bryant and Charmaz, 2010). Charmaz's work softened the overly prescriptive codification rules of Strauss and Corbin and produced instead 'guidelines'. In addition, the neutrality of the observer was questioned by Charmaz, a point that was reinforced by Bryant in his article, 'A constructive/ist response to Glaser'.

"Glaser, correctly, sees the constructivist orientation as one of active involvement in the research process; although Glaser characterizes this in disparaging fashion, using terms such as bias, passion, personal predilection and so on."

(Bryant, 2007, p.110)

In her chapter on 'Abduction: the logic of discovery of Grounded Theory', Reichertz visits the debate and demonstrates issues with Glaser's insistence that "...the codes and categories emerge directly from the data" (Reichertz, 2007, p.215). The main idea of abduction, that it allows ideas to emerge, is much criticised in terms of those ideas emerging in isolation. As Charmaz repeatedly argues, these ideas already exist and subsequent analysis of previously hidden data can be matched against the ideas and from this theory can emerge. It is not new theory, but theory which has part of it made up of pre-reading and the researcher's personal subjectivity and how that influences the data gathering.

Bruscaglioni criticises grounded theory for being too prescriptive "...arguing that their [Glaser and Strauss'] coding paradigm forces data and analysis into preconceived categories and it does not allow new concepts to emerge" (Bruscaglioni, 2015, p.6) arguing instead that 'creative abduction' in which the researcher draws together pre-conceived notions with the data of the research

to allow theory to emerge. Reichertz goes further and cautions against excessive coding and setting out the process of grounded theory as two clear stages:

“Thus GT helps scientists to fulfil two tasks: the intellectual task of coding (open, axial, selective), and the intellectual task of developing and redeveloping concepts and theories while repeatedly moving to and fro between the collection of data, coding and memoing (logic of research).”

(Reichertz, 2007, p.223)

Glaser and Strauss suggest the researcher approaches the data without preconceived ideas or theories. Whilst there was no documented evidence available to show what pre-service teachers have said to each other during a teacher education course in a private online space and there was no way to determine which social media were being used or how they were being used, it did not follow that grounded theory was the right analytical tool for such data. The nature of the study was about accessing the private and hidden discussions, that pre-service teachers undertook within closed social media, through reflective interviews in which the researcher took part with clear positionality. In particular, the very privacy of the discussions would be part of the study as previous studies that look at pre-service teachers' interactions within social media in non-private spaces – such as a pre-designed space in which the tutor or researcher can see the actual posts (Hramiak, 2007; 2010; Boulton and Hramiak, 2012; Kent, 2013; Dyson *et al.*, 2015).

This means there are fundamental issues with Glaser and Strauss' approach to analysing the data of this study from a grounded theory perspective: the nature of the course is teacher education and the researcher is the lead tutor on the course. Such a position, often known as insider-researcher (Berger, 2015) brings with it reflexive issues. The approach formulated by Charmaz rather than that developed by Glaser and Strauss was also consulted. The reasons for this is that the intentions were to analyse the transcripts against the element of a community of practice in order to understand the process underpinning the pre-service teachers' interactions as reported by them. However, to interpret content it became important to understand what issues and challenges to

achieving the core enterprise were identified as well as the shared practices that developed these interactions, so Charmaz's approach to grounded theory was adopted for this. In addition, reading around the nature of pre-service teacher interaction was consulted as part of the literature review. Themes such as teacher identity (Tran and Nguyen, 2013), constructed notions of teaching (Nagle, 2008) and the perception of efficacy (Moulding, Stewart and Dunmeyer, 2014) are all frequent themes that have been present in pre-service teacher education. In addition, the nature of teacher education means that pre-service teachers are responding to ongoing changes to teaching in school, similarity of challenges in terms of achieving their qualified teacher status or undertaking academic work and the nature of being a subject specialist who resides within a group of subject specialists for the duration of the course. As Newby states, "since Glaser and Strauss' work became known, however, qualitative research has expanded greatly and with this expansion has come innovation and change in method" (Newby, 2014, pp.492-3). The route forward for this study was to see that although this is a case study which uses the lens of Wenger's community of practice (1998) through which to look at the data generated through transcribing the reflective interviews, grounded theory was consulted and found to be helpful in making sense of the first transcripts in order to help the later interviews and to make sense again of these later transcripts.

#### **4.8 Analysis of transcripts interviews one**

The approach for transcripts interviews one was to annotate the scripts to help form main themes in order to identify evidence which could be viewed through the lens of the community of practice as in Figure 4.8. See Appendix 5 for a full transcript example.

<p>INTERVIEWER: We are looking at your social interactions and how that community functions. What does bind that community together?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: We don't have a Facebook account as not everyone is on Facebook, so we have set up an account on <u>Glassboard</u> and still trying to find out how to use it.</p>	<p>No Facebook account</p> <p><u>Glassboard</u> account set up – but not successful</p>	<p>Establishment of a community of practice</p>
<p>PRE-SERVICE MATHEMATICS TEACHER B: It doesn't seem to work very well on our phones and it hasn't been updating fast enough so it's not useful in an interactive way so people haven't been using it.</p>	<p><u>Glassboard</u> does not work well on smartphones</p> <p><u>Glassboard</u> does not update fast enough</p> <p><u>Glassboard</u> is not interactive enough</p>	
<p>PRE-SERVICE MATHEMATICS TEACHER A: I am on the maths one and our cluster group has one which seems to be working well as people are putting links on it to resources for lessons. You can see it, but I can't. We are trying to use it share resources at the moment.</p>	<p><u>Glassboard</u> works for cluster</p> <p>Sharing resources</p>	<p>Establishment of a community of practice</p>

**Figure 4.8.1 Example of annotated transcript**

This analysis would then influence the subsequent interviews and the subsequent annotating of the transcripts from interviews two-four.

#### **4.8.1 Analysis of transcripts interviews two-four**

After annotation and analysis of the first interviews, themes were generated to help track the emergence of evidence relating to the themes formed. These main themes were used to annotate subsequent interviews to help gather evidence for the main themes of the study which emerged. These themes were:

- Establishment of a community of practice
- Achieving the core enterprise of the community
  - Brokerage within the community
  - More knowledgeable others as brokers
  - Issues and challenges in relation to achieving the core enterprise
  - Shared practices
  - Behaviour Management

The themes reflected the research questions posited from the literature review and the analysis of the first transcripts. This enabled the researcher to see that the questioning needed to probe these four areas within the general areas of questioning that had been established as part of the literature review.

To develop thematic analysis, the researcher went through the four sets of interviews in keeping with the notion of memo writing, “Memo writing is essential to...methodological practices and principles” (Lempert, 2007, p.245). These memoed logs, as demonstrated in Figure 4.8.2, show how the research questions and literature review interacted with the outcomes from the transcripts. The logs also referred to themes or ideas emerging as the researcher worked through each of the sets of interviews. (See Appendix 6 for a full example of a memoed transcript)

**1<sup>st</sup> Interview**

The pre-service mathematics teachers immediately said that because some pre-service mathematics teachers were not on Facebook they had decided not to set up a Facebook homepage - interesting. Contrasts with the science group who set it up despite someone not being on Facebook. However, it seems although there were more than one pre-service mathematics teachers not on Facebook, they were still keen to establish a community of practice through private social networking software, but using something they clearly feel more comfortable with, Glassboard.

PRE-SERVICE MATHEMATICS TEACHER A: We don't have a Facebook account as not everyone is on Facebook, so we have set up an account on Glassboard and still trying to find out how to use it.

The contrast in pre-service mathematics teachers reflects what other pre-service teachers said about Glassboard – the lack of smartphone compatibility

**Figure 4.8.2 Example of memoed transcript**

The next stage of the process was to revisit each of the memoed transcripts generated and begin to sort and bring them together within the main themes in order to develop the written findings (Simmons, 2010). For each of the communities, a common approach was used. The researcher first brought

together those memoed areas which pertained to the way the pre-service teachers used private social media to establish the pre-service teacher community and then looked at what interactions were in each of these communities of practice.

An important consideration was how to present the findings. What emerged from the analysis of transcripts and the memoed findings was that each community had distinctive features that reflected the challenges faced by the individual communities of subject based pre-service teachers. These distinctive features led to insights into the challenges faced by specific subjects which were unique and different from other subject based communities of pre-service teachers. And yet, each pre-service teacher community also had direct similarities or contrasts with each other. The results had to be presented in such a way as to preserve the unique insights into these individual communities of subject based pre-service teachers whilst retaining the ability to theme and evaluate the collective insights into all of the communities of subject based pre-service teachers. Each pre-service teacher community, whilst unique, had various contributions to make to the thematic areas identified. For example, the pre-service mathematics teachers consistently struggled to use social media to establish or help their community of practice in comparison to the pre-service English or science teachers. The modern language teachers faced unique challenges of moving to a new country and operating in second and third languages which were partly resolved through the use of private social media interactions. Whilst all of the communities had similarities in terms that they were all focused on the outcome of becoming qualified teachers, there were distinct differences depending on the subject being taught by the pre-service teachers. Conflating the findings of the different communities meant that two aims needed to be achieved if the presentations of the findings were not to hinder evaluation and analysis. The distinct findings from each of the communities needed to be retained and at the same time, the insight into the main themes provided by the community needed to be provided for. The decision reached was to present each community interviewed in their own separate section whilst examining each community through the main themes identified from reviewing all of the communities.



The researcher also picked out behaviour management separately as the literature review had identified this as a key aspect of the pre-service teachers' communities' core enterprise of becoming a qualified teacher. These findings then led to the creation of a conceptual framework to set out how the pre-service teachers' communities of practice use private social media to support their development during their pre-service teacher education as part of a community of practice. This conceptual framework then forms the start of the discussion chapter.

## **Chapter 5 Findings**

This chapter sets out the findings from the evaluation of the memoed transcripts of the interviews that took place over the year. It views these findings through the lens of the community of practice and uses Wenger's (1998) terms and concepts through which to analyse the memoed transcripts of the reflections on the private interactions within the social media of these communities of practice. These analysed findings have been set out across the six communities of practice examined.

### **5.1 Introduction**

The pre-service teachers in this case study embarked upon their teacher education course and began to network face to face and electronically ahead of the first main phase of their teaching placement without instruction or reference from the course leaders, or this study about the existence or formation of online communities or use of private social media. The use of private social media to establish the communities and to engage in the core enterprise initiated from the pre-service teachers and these findings capture that process. They were interviewed at four key stages of their course: at the start and end of their two placements. It was important to allow the pre-service teachers to begin on their placement before interviewing them so that enough time was allowed for the pre-service teachers to set up social media structures and to interact privately through social media and thus be in a position to reflect on their interactions within private social media through the opening phase of the placement. The first and third interviews, then, were sequenced to be just after the start of each of the two placements.

The teacher education course within this study is structured so that the pre-service teachers attend university on the Friday of each week and thus this was the only window in which to undertake the interviews. There was a concern that the volunteers for the interviews would be occasionally absent and that the reserve detailed as their replacement would be unaware of the narrative that was forming. Although there were reserves in place, the interviewees never missed an interview and thus the narrative was sustained. This was particularly helpful with the pre-service mathematics teachers who became more and more

reflexive about membership of a community of practice as time went on and from one interview to another in terms of their efforts in using private social media to establish and function as a pre-service teacher community of practice. This is important as the fact that some communities made specific decisions about how to use private social media to establish social media based communities of practice is one of the interesting outcomes of the study. Some communities made those decisions easily at the start whereas others continued to reflect and change their decisions over the period of the study.

The interviews began with the nature of anonymity being reiterated and the ability to withdraw at any stage being set out. In addition, the pre-service teachers were told at the start of each interview that someone else who was not part of the course was transcribing the recording and that she had been told to remove any accidental reference that could identify the interviewees or their peers. Although this focus on privacy was part of the ethical approach it did mean the pre-service teachers were quite open and frank about the nature of interactions that they had undertaken and that others had undertaken and which they had knowledge of.

## **5.2 Findings and Analysis**

This case study has been concerned with looking at the private social media interactions of HEI pre-service teachers over their one year course of teacher education as a collection of communities of practice.

Reported interactions within each community of practice have been looked at through the lens of Wenger's community of practice (1998) as part of the evaluation of the findings and grouped around some of the features that Wenger identifies. Some of the communities of pre-service teachers established themselves confidently as communities of practice through private social media whereas others struggled to do so despite aspiring to this.

The findings section approaches the results through each community and sets out how they established themselves. It then looks at the themes that emerged from the transcripts using Wenger's (1998) ideas to view the core enterprise and Charmaz's (2006) version of grounded theory to reflect on meaning and content:

- Establishment of a community of practice
- Achieving the core enterprise of the community
  - Brokerage within the community
  - More knowledgeable others as brokers
  - Issues and challenges in relation to achieving the core enterprise
  - Shared practices
  - Behaviour Management

Brokerage contributed to achieving the core enterprise of becoming a qualified teacher as did the way the community collaborated to resolve issues and challenges in relation to achieving the core enterprise as was the sharing of practices. The a sub-theme that emerged around behaviour management had been identified within the literature review as something that would feature in the discussions and was identified from Charmaz's approach to analysis as significant in the transcripts.

### **5.3 Findings and Analysis: Pre-Service Science Teachers**

#### **Establishment of a community of practice**

The interviews with the pre-service science teachers show that as part of establishing a community of practice there was a clear overlap between face to face and virtual interactions with discussions taking place when the pre-service teachers met as part of the course or socially as well as being discussed through private social media interactions. Wenger outlines the concept of identity in practice: "Developing a practice requires the formation of a community whose members can engage with one another and thus acknowledge each other as participants" (Wenger, 1998, p.149). This early process makes good sense – part of being a community of practice is identifying the members, their roles and then beginning to engage in constructing more complex ideas such as reflecting on what is meant by professionalism.

In the second interview transcript, the pre-service science teachers talk about the overlap between face to face and virtual interactions within their community

– they see the virtual as the organisation engine which helps everyone arrive at a similar place and time with the correct equipment or assignment requirements.

PRE-SERVICE SCIENCE TEACHER B: We organised the secret Santa on Facebook but we used emails to send them out.

PRE-SERVICE SCIENCE TEACHER C: What time is breakfast in the morning?

PRE-SERVICE SCIENCE TEACHER B: What do we need to bring for tomorrow?

PRE-SERVICE SCIENCE TEACHER A: What time are the enrichment sessions so we are arranging to meet up for lunch afterwards?

In some ways, the virtual interactions of the pre-service science teachers were making the face to face interactions more successful as they used speed and interaction to drive the success of the opportunities to meet.

What was also interesting was that the pre-service science teachers said that when they were seeing each other on a weekly basis at university they were interacting more on private social media – so the two are directly linked. Regular face to face meetings are needed to ensure the private social media based interactions of the community happen.

PRE-SERVICE SCIENCE TEACHER A: We use our Facebook group more when we are seeing each other as we have not seen much of each other in the last month while we have been doing the enrichment sessions.

The pre-service science teachers reflected on the fact that the person who withdrew from the course was the one person of their group who was not on Facebook. The first they knew about the fact that this person was withdrawing was when this specific pre-service science teacher, rather ironically, joined Facebook and notified them that she was leaving the course. They also said that the pre-service science teacher in question is now a teaching assistant and

since leaving the course interacts with the Facebook page posting and commenting.

PRE-SERVICE SCIENCE TEACHER B: She has become a Teaching Assistant so she is still within the educational field. She also comments and posts on our page. She is still very active, even though at the beginning of the year, she wasn't on Facebook.

PRE-SERVICE SCIENCE TEACHER C: It was a week or two before she left that she joined Facebook.

The other immediate finding from the opening phase for the pre-service science teachers was that they were operating across a cluster of alternative private social media based communities of practice. Wenger acknowledges that 'constellation of communities' are common: "...the community of practice can be in a peripheral or marginal position with respect to broader constellations and institutional arrangements" (Wenger, 1998, p.169).

PRE-SERVICE SCIENCE TEACHER B: It's more in cluster and there is not much talk on Facebook. There is a PGCE wide Facebook group which I am a member of but I haven't paid much attention to that.

PRE-SERVICE SCIENCE TEACHER A: I'm not a member of that.

Membership of these alternative communities was not structured in the same way that the subject specific group of pre-service science teachers was arranged. Here, it is clear that not all the pre-service science teachers in the interview were aware of these alternative groups or that they existed in addition to the main group and yet, as with all the communities of practice that exist through private social media, there is an advantage that is conveyed through being a member of a community. Many of these private social media groups establish themselves from institutional arrangements, but then membership seems to be driven by connections and word of mouth as evidenced by the lack of awareness by pre-service science teacher A of the Facebook group of which pre-service science teacher B is a member.

At the end of the interviews, the pre-service teachers again reflected upon the pre-service science teacher who withdrew from the course and her lack of online interaction outlining that if she had become a member earlier then they could have supported her better.

PRE-SERVICE SCIENCE TEACHER C: I think if we had got [the pre-service teacher who left] online earlier we could have supported her better.

Pre-service science teacher A reflected that it was less 'behaviour' that was the issue for the pre-service teacher who withdrew from the course.

PRE-SERVICE SCIENCE TEACHER A: Behaviour was only a minor one for her. It was more the workload and issues with her mentors.

Here, the pre-service science teachers reflected that the main issue was workload and the ability of the pre-service science teacher (who left the course) to manage issues with her mentors. As will be seen below, the pre-service science teachers were indeed dissipating collective workload issues and brokering alternative ideas about teaching from other communities through their community of practice and thus they were also resolving issues between themselves and their mentors, demonstrating that they could cope with challenges autonomously and were demonstrating to their mentors the ability to bring new ideas to their teaching. Clements *et al.*'s study (2016) into student nurses found that if the institution places excessive workload on the individual and not enough support, then this leads to poor retention. However, if institutions are judging the workload through their experience of socially connected pre-service teachers then they could get this balance wrong for a pre-service teacher who lacked such support. It suggests for the pre-service science teachers there was a level of enhanced competence: that stemmed from the social networked community of practice rather than their school mentor.

### **Achieving the core enterprise of the community**

Much of this study is about investigating the achievement of the 'core enterprise' (Wenger, 1998) of the pre-service teachers' communities of practice,

that of becoming a qualified teacher. When looking at the pre-service science teachers' first interview, resolving issues of time management and time efficiency appear to be the initial interactions of this group. By sharing as a group what has to be done, interpretations of the task, the location of specific documents, to the group it appeared they were simply looking at labour saving enterprises.

PRE-SERVICE SCIENCE TEACHER A: Food, breakfast and organising trips to the pub and organising cake club every Friday as one or two of us last week were bringing in cakes, checking what work we have and what forms are needed and if we can't find them where are they or where we have to upload x, y and z to.

Yet the further the group spoke, the more it began to appear that viewed through the lens of Wenger's community of practice (1998), achievement of the core enterprise of becoming a qualified teacher was much more about more knowledgeable others within the group than the group reflected on at first. These more knowledgeable others had a clear role in the community – and that was around sharing and brokering new ideas.

### **Brokerage within the community**

Those in the group who were 'more knowledgeable others' (Vygotsky, 1978) about whatever the topic of discussion was were seemingly altruistically helping others in the community develop approaches specific to tasks required of the pre-service teachers by the course. What becomes clear is that the pre-service science teachers were effectively accessing more efficient control of workload, time management and their outcomes by working in different roles at different times within their socially networked community of practice.

For example, one challenge for the pre-service science teachers seemed to be the need to identify and introduce scientific experiments that were in use beyond the place of situated learning. The evidence from the transcripts suggests that in this situation one pre-service teacher acts as a 'broker' (Wenger, 1998) to identify experiments that exist in a different situated learning and enables their peer to be able to introduce the experiment into their school



placement with knowledge that this experiment is a tried and tested experiment used by other schools. Thus, within their private social media based community of practice, the pre-service teachers shared ideas of what experiments can be done and described some as ‘off the wall’ – in other words, experiments that did not exist within their knowledge or the school in which they were placed – in Wenger’s term ‘the place of situated learning (Wenger, 1998).

PRE-SERVICE SCIENCE TEACHER B: We post ideas for experiments or good explanations about things we will post the link for others in the group to see.

INTERVIEWER: So experiments, you might not have had experience of?

PRE-SERVICE SCIENCE TEACHER B: or general ideas if they are not the sort of experiments that you would have done yourself in school or a bit off the wall.

This focus on experiments demonstrates that the learning firmly situated within a school has a limit. Lave and Wenger talk about the need for communities to have access to experts if they are to grow in terms of their knowledge and expertise (Lave and Wenger, 1991). Schools that do not collaborate with other schools may not be accessing other sources of learning. Yet, being involved in teacher education can offer the school and its teachers access to new ideas and subsequent growth beyond that of their immediate group of schools – new ideas, beyond the situated context, can be brokered to them by the pre-service teacher. When the pre-service science teachers shared ideas within their community of practice through private social media interactions they also shared the hidden innovative knowledge that existed in pockets of practitioners in some of these school communities and thus shared the learning that took place within their own community and potentially to subsequent other school communities. Lave and Wenger outlined the nature of situated learning, making the point in their work on masters and apprentices that knowledge is not solely situated within the master or workplace and this fits with Wenger’s later ideas that the [pre-service teachers] are “...motivated to gain and develop new knowledge on a topic through regular interaction” (Wenger, McDermott and

Snyder, 2007, p.4). Yet it goes beyond that; it brokers the new knowledge on a topic into the domain of the school and helps the school develop their situated body of knowledge. Thus, whether the pre-service teachers were aware of it or not, whilst achieving the core enterprise of the group entails gaining and developing new knowledge about teaching and learning another aspect is the brokering of new ideas to and from their placement schools.

In the first interview, the science pre-service teachers say that they talk through private social media in their community of practice about the university logistical and assessment elements as this is the main thing they have in common. E.g.

PRE-SERVICE SCIENCE TEACHER B: What do we need to bring for tomorrow?

However, one of the first non-university things they refer to sharing was science experiments and this is clearly subject knowledge growth which requires interaction with more knowledgeable others, but also leads to development of habitus through which to better cope with unseen demands in the future.

For brokerage to occur, pre-service teachers need to temporarily assume a role with sufficient status in order to influence the community. This is not a new element of group interactions; Bourdieu says there will be some members of a group who thrive from the interaction (Bourdieu, 1977). However, it does suggest there are a range of roles that exist within these online communities. Some pre-service teachers drive the group with postings and social organisation, "...for others in the group to see", whilst others are 'lurkers' - lurking is a well-established feature of online communities (Lai and Chen, 2014). This suggests that for a brokerage role to be undertaken a level of interaction is required. Yet not all members interact equally. The pre-service science teachers were aware that one person was not on Facebook and thus not interacting whereas others tended to lurk. This suggests that it is possible to train pre-service teachers to interact and to act as brokers within social media even though these interactions are private and beyond the perusal of the provider by educating them in the role of a broker as part of the core enterprise within a pre-service teacher community of practice of becoming a qualified teacher.

### **More knowledgeable others as brokers**

What comes through from the pre-service science teacher community is that one aspect of helping to achieve the core enterprise of the community of practice of becoming a qualified teacher through private social media usage is when the pre-service teachers are looking for specific knowledge to be shared or brokered from a more knowledgeable other. When reviewing Wenger's model for community of practice, it was clear that more knowledgeable others had a strong role in the community: "For individuals, it means that learning is an issue of engaging in and contributing to the practices of their communities" (Wenger, 1998, p.7). However, a review of the second interview shows that the more knowledgeable others in the pre-service science teachers' community were not operating and interacting in the main private Facebook page for group interactions. They were asked why they did not just post on the main private Facebook page and the concept of time and availability through private social media was highlighted as the reason.

INTERVIEWER: Why do you think people go to a smaller, private group to ask that kind of question and not put it on the bigger group?

PRE-SERVICE SCIENCE TEACHER C: I guess it is because I can see them online and I can get a quick response.

On Facebook, pre-service teachers can see who is currently online and can directly send them a push notification message through the Facebook tool of Messenger for a direct online conversation and a quick response. This means that they have to identify a more knowledgeable other who could potentially be a broker, perhaps through the access to another school or community, and then select them for communication. One of the ways that they find out about people's 'specialism', membership of alternative communities or more knowledgeable other status is because each person posts links to their favourite science area on Facebook thus 'advertising' their specific subject knowledge or membership of a community with specialist knowledge as evidenced by when pre-service science teacher A said that pre-service science teacher B "put up a post on Facebook about a telescope convention." And that she then isolated pre-service science teacher B as someone to ask for help

from in this area as this person has access to a community of scientists with an interest in astrophysics.

PRE-SERVICE SCIENCE TEACHER A: A while ago, he put up a post on Facebook about a telescope convention.

This necessity to have knowledge of those with the status as a more knowledgeable other to act as broker demonstrates that pre-service teachers indeed link not just general subject knowledge, but knowledge specific to their interests and membership of other communities so that peers can access specialist knowledge that they might not have access to through their school placement. As noted above, for the group to function, more knowledgeable others and brokers need to be identified. However, in a pre-service teacher subject group, all members are potentially more knowledgeable others and brokers within the different elements of the subject as they are all graduates with a related degree in the subject that they are teaching and all have access to other communities through being on school placement as part of the teacher education course. Thus there needs to be some sort of iteration of this status within the general page at an early phase of the community's interactions. This usage of multiple more knowledgeable others and brokers as illustrated in the transcripts also suggests that some of these pre-service teachers could have, with the assistance of more knowledgeable others or ideas brokered from another community, excelled in areas that they might have traditionally struggled. The self-efficacy of the pre-service teacher could be enhanced and have led to a stronger assessment of the teacher competence through this use of multiple more knowledgeable others and brokers. Considering the earlier notion of Lave and Wenger (1991) that knowledge is situated, then the pre-service teacher has used more knowledgeable others to broker knowledge from the astrophysics specialist's community to the school department. The school's group of science teachers thus also act as a community and their interaction with the community of pre-service science teachers through teacher education brings growth to the knowledge foundation within the school through this process of brokerage between communities. Through the 'constellation' of communities, then, brokerage is moving knowledge from the private sphere of the pre-service teachers into the communities that are present within schools.

In the third interview, the pre-service science teachers were interviewed having changed their school placement. This means they had been exposed to a different environment and could meet different concepts of professionalism around subject knowledge and thus be at risk of presenting a different identity to that expected. School A might have one interpretation of professionalism around subject knowledge and assess the pre-service teacher at a high standard. School B might have a different interpretation and value different qualities leading to the pre-service teacher's concept of professionalism around subject knowledge to be different to the situated knowledge in the second placement. For example, pre-service science teacher A said she needed subject specific knowledge on the menstrual cycle – this is how and what to teach rather than just what to teach.

PRE-SERVICE SCIENCE TEACHER A: For me, with my biological knowledge, I asked for help with the menstrual cycle and posted it on the Facebook page. You and [ANONYMOUS PRE-SERVICE TEACHER] responded quite helpfully.

Another pre-service science teacher had taught this and was able to help in the role of more knowledgeable other.

PRE-SERVICE SCIENCE TEACHER A: [NAMES A PRE-SERVICE TEACHER] went into a lot of detail.

In some ways, this suggests that, as Lave and Wenger (1991) said about masters and apprentices, some mentors could be holding back some knowledge in the belief that finding out how and what to teach is part of the learning process of demonstrating teacher competence. If a topic is already taught in the school, then resources and planning would ordinarily be available so there should be no reason for a pre-service teacher to covertly access a more knowledgeable other through private social media. However, what can be seen is that when a pre-service teacher arrives at a school with the contextually correct information and a range of teaching approaches she or he sees this as meeting the teaching standards for autonomy – as Holland, Middleton and Uys (2012) say, professional confidence is linked to professional competence. Without the support of more knowledgeable others through the private social

media based pre-service teacher community of practice, pre-service science teacher A would have presented a different self-efficacy and a different standard of teacher competence. That pre-service teachers find out from other pre-service teachers some of the knowledge that they need demonstrates that little has changed from Lave and Wenger's apprentices and masters. Whilst it is evidence that this enhanced knowledge provided by the community is a contributory part towards achieving the core enterprise of the community of practice (Lave and Wenger, 1991) for the pre-service science teachers, it does draw into question the value of the pre-service teacher's interaction with the community in terms of their assessment against the Teachers' Standards (DfE, 2013). If this assessment is being affected by private social media interactions then this means as outlined before, those interacting through private social media may be in a privileged position. Some groups may be supported in their learning by the school, mentor, pre-service teacher, physical peer support and university tutor (Johnson *et al.*, 2013), others may be supported by a constellation of communities including socially networked peers who can be further devolved into more private mini-communities of practice that effectively hides the fact that professional identity may be enhanced through private brokerage by more knowledgeable others. In short, this brokerage is helping the achievement of the core enterprise of the community to become qualified teachers by enhancing the potential to meet teaching standards by members of the community.

### **Issues and challenges in achieving the core enterprise**

Although these were pre-service secondary science teachers, not all the issues and challenges in becoming a qualified secondary science teacher were based on notions of secondary science. When the pre-service science teachers changed placements as part of the planned one year pre-service teacher education course, some of them were able to ask discreetly through private social networking about the school if a fellow pre-service science teacher had also attended this school. The social networking clearly enabled pre-service science teachers to ask a fellow pre-service science teacher for a candid insider perspective to the new department.

PRE-SERVICE SCIENCE TEACHER C: I think it was more about getting to know a bit more about people in the department and their expectations and we have taught the same class, so it was that kind of thing.

Thus the new mentor's (master) expectations and the expectations within the department are all important if the pre-service science teacher was to manage transitioning to a new school placement successfully – and this could be achieved by having a peer share or broker some of the new or contrasting ideas to them from the school placement in the safe space of a private social media area of the pre-service teacher community of practice. Without that safe space to be reflective or ask questions of new ideas about teaching, a pre-service teacher would have to manage this issue in the workplace and in front of their mentor thus making the ability to achieve the core enterprise more of a risk and challenge. Within the safe place of private social media, questions, challenges and explanations can take place and enable the transition to be more successful. This is quite an important outcome from the study as the pre-service science teachers also discussed the fact that different placement schools had very different approaches to both teaching and how they managed their teaching. In keeping with Hall and McGinity's outline of the New Public Management (2015) some schools were more liberal, whereas in other schools, specific pedagogical approaches were mandated.

PRE-SERVICE SCIENCE TEACHER C: At [SCHOOL A], I was very much left to myself as an independent worker I was able to get on with my lesson planning.

PRE-SERVICE SCIENCE TEACHER A: At [SCHOOL B] you have to have three learning objectives which have to be displayed on every slide and the children have to write it down. At [SCHOOL A] you can choose to do this or not.

Within this interview then, the pre-service science teachers reflected on how they had to have different models of learning brokered to them by their school communities – but part of what was being brokered was that there was more than one approach to learning that was expected by the

school placements. As Trede, Macklin and Bridges found (2012), there is no set understanding of what professionalism is despite it being in the Teachers' Standards (DfE, 2013). Professionalism, as assessed by the QTS standards, is situated within the school placement and this interpretation is what the pre-service teacher has to develop in order to pass their assessment. However, having one set of standards for professionalism does not help a pre-service teacher to manage the risks of a future school placement or employment and their different understanding of professionalism or to develop their habitus to meet the demands. It does go further than this though – it is not just the standards presented, but the notion of compliance expected. As pre-service science teacher A said, '...at [SCHOOL A], you can choose to do this or not.' This school appeared to see the professional teacher as an autonomous one who makes pedagogical decisions whereas school B saw the professional teacher as someone who follows the prescribed pedagogy and reinforcing both what Parker (2015) and Hall and McGinity (2015) have said about decreasing autonomy for teachers in schools. The community of pre-service teachers thus functions to broker the idea that both ideas are present within schools and this action within the community of practice enables pre-service teachers to perceive which schools they would be more likely to find sympathetic to their ideas about teaching and thus enable them to identify schools for a long term career.

Employability is something that was mentioned across all of the groups of pre-service teachers as part of the challenge in becoming a teacher for many of the cohort was to obtain employment in a school as a qualified teacher prior to completion of the course. In this group of pre-service science teachers, it seems that at this early stage they were not sharing interview questions or strategies, but they were sharing opportunities for employment – in their schools and so forth. Pre-service teachers also posted when they had an interview or if they had been successful thus encouraging others to feel confident about applying.

INTERVIEWER: Do people help each other? Such as what potential interview questions might come up?



PRE-SERVICE SCIENCE TEACHER B: We have had posts to make people aware that jobs are coming up perhaps in the school that you are working in or in a school that we know of.

INTERVIEWER: So if you know the jobs are coming up then you communicate that?

PRE-SERVICE SCIENCE TEACHER B: We have not necessarily shared about interview techniques.

In some ways, this statement by pre-service science teacher B about not sharing interview techniques reinforces the notion that this is a community of practice focused on helping the community become qualified teachers. Its core enterprise is not to help one individual attain employment at the expense of another – it is more about the development of and becoming a teacher. For example, the pre-service science teachers also discussed how a topic or request ‘qualified’ for being raised on private social media: how it is that opportunities for shared practice or brokerage of ideas from other communities emerge. It seemed to come down to time and need.

PRE-SERVICE SCIENCE TEACHER B: In your mind, you have a priority or an importance factor and we know that we will see each other every week; unless it is a burning question then you will ask it online unless it is something that can wait.

PRE-SERVICE SCIENCE TEACHER C: On Facebook it tends to be quick questions about a topic.

In achieving the core enterprise of the community of pre-service science teachers, becoming a qualified teacher, one of the challenges that was present was when pre-service science teachers had to teach a topic (subject knowledge) or a class (behavioural issue) before they next met face to face and thus the pre-service science teachers wanted to share ideas or access brokerage of ideas from other communities and deliver improvement to their teaching immediately, “quick questions”, rather than wait until the Friday and that they saw group reflection as the vehicle for this. Without physically meeting the group, private social media provided the platform for this to take place.

The pre-service science teachers finished the third interview with quite a telling quotation.

PRE-SERVICE SCIENCE TEACHER C: It's good and it is reassuring that you know you can get help.

This demonstrates that future events that could be stressful or overwhelming can be modified by the fact that pre-service teachers are reassured that should they have this situation then they can get support, ideas or brokerage of knowledge or approaches from other communities to overcome this challenge through private social media interactions. Pre-service science teachers who have access to support, shared practice and brokered ideas through the private social networking community which they can use to match to a challenge and be successful where pre-service science teachers without such access might be overwhelmed. Traditionally, a pre-service teacher would use face to face interactions to help them develop a sense of self-efficacy and teacher competence. However, there is now another layer of support that comes through private social media. What this also suggests is that the 'expected' standard of teacher competence could soon change if a mentor becomes accustomed to this new enhanced level of pre-service teacher competence and thus raises an issue about how assessment of pre-service teachers is undertaken.

Whereas in the first interviews there were no references to the challenge of 'being a professional' by the pre-service science teachers, in the final interview there were references to those who were not trained or qualified.

PRE-SERVICE SCIENCE TEACHER A: I think it is a bit hypocritical that at Free Schools you do not need a teaching qualification to be a teacher. We have paid £9,000 tuition fees to come and train to teach and they are going to be earning more money than we are going to be.

Thus the pre-service science teachers did see that in meeting the notion of professionalism, it involves being 'qualified'. The White Paper *Education, Excellence, Everywhere* (DfE, 2016) suggests that the new definition of

'qualified teacher' will be left to Head Teachers who will be the ones to award QTS. However, as this study has shown, this definition is situated within the place of learning whereas for a pre-service teacher, the ability to be professional in a range of educational establishments is important if the pre-service teacher is to manage future risks.

As part of the literature review, it was seen that in meeting the challenge of becoming a qualified teacher, reflection was a route to improved teacher efficacy (Wyatt, 2016) and subsequent self-assessment of teacher competence. With the concept of teacher professionalism being something that is both developed personally by pre-service teachers as well as existing within a placement in a neo-liberal environment (Hall and McGinity, 2015) there was an expectation that one of the ways a pre-service teacher could reflect on the multiple ideas of teaching was through private social media. In the final interview, one of the pre-service science teachers spoke about coping with the contrast in different ideas about teaching within the two school placements

PRE-SERVICE SCIENCE TEACHER C: You vent to other people on Facebook.

The phrase 'vent' is a process through which the pre-service teacher was asking for help and may experience support, shared practice or brokerage of ideas from other communities that could help them with their challenges. As part of becoming a qualified teacher, pre-service teachers are expected on the course to both develop their ideas about teaching, to build on their habitus, but also to present perceived 'competence' around teaching ideas to their school placements. The main thrust of the issue for pre-service science teacher C seemed to be, upon reflection, a lack of autonomy to develop or deploy teaching methods that they had personally selected.

PRE-SERVICE SCIENCE TEACHER C: One person went from having the freedom to do what they wanted and then being more restricted and found it much more difficult to develop and improve their teaching as they were being told what to do.

The reflection in this interview suggests a direct link between the development of teacher efficacy as well as habitus and an ability to practice making decisions about teaching approaches based on their collected knowledge. For pre-service science teacher C, this school's rigid approach was seen as impeding the other pre-service science teacher's ability to develop a sense of teacher efficacy and teacher competence and thus the notion that increasing numbers of schools are reducing teacher autonomy (Parker 2015) in some ways suggests that there is a potential for these pre-service teachers to be less likely to choose such schools as employers in the future if they feel it restricts their ability to develop as teachers.

### **Shared practices**

The notion of pre-service teachers reflecting and sharing practices through private social media is a complex one. The pre-service science teachers used private social media for sharing practice, but this was often tailored to the level of risk and the corresponding need for increased privacy. For example, an increased level of privacy in social media can clearly help according to pre-service teacher A.

PRE-SERVICE SCIENCE TEACHER A: I have had a private conversation with someone on Facebook in our Science group who is demoralised and considering completing their NQT year and then leaving. We talked about challenges that we have in the classroom, but not in an open forum.

This study has identified the notion of retention as a contextual issue and here in the transcript there can be seen a direct reference to teachers who leave in the first five years of their teaching career – long term retention is part of the current national context facing teacher education that was identified at the start of the study. Pre-service science teacher C said the prevalence of such items in the news made them reflect openly in the group.

PRE-SERVICE SCIENCE TEACHER C: I keep telling myself that I do not want to be one of those [who leave teaching in the first five years], but I can see why people choose to leave so quickly.

For these pre-service science teachers, those who are leaving the profession are those who are not managing the challenge against their self-efficacy and subsequent teacher competence. This study has identified the need to avoid being perceived as 'weak' in areas such as classroom management, but there is also a power balance between the pre-service teachers themselves. In the final interview, there was a perception that it is the 'weaker' teachers who are the ones that are leaving

PRE-SERVICE SCIENCE TEACHER A: It's the lower end of the pyramid that is leaving.

In recognition of Hall and McGinity's neo-liberal NPS model, pre-service science teacher B saw it as an opportunity for a career growth in a marketised system.

PRE-SERVICE SCIENCE TEACHER B: It does motivate me to stick at it as there is room for progression. If other people are leaving then that gives us room to grow.

PRE-SERVICE SCIENCE TEACHER B: ... but then the competition is depleting. They say that we might be getting towards a teaching crisis and I can see more incentives for coming in and better benefits for being a teacher.

None of the pre-service science teachers would publically admit to thoughts of leaving the profession however,

PRE-SERVICE SCIENCE TEACHER C: It's more in the private chat.

What this suggests is that if a pre-service teacher says that he or she is thinking of leaving either during the course or in the future then this can be seen as a code for being a weaker teacher who cannot manage the challenge and risks being faced. This makes it harder for a pre-service teacher to be reflective and realign their thoughts around their ability to meet current and future challenges, build their habitus and stay in the profession. One answer to this may come from the ability of social media to offer enhanced and selective privacy for pre-service teachers' interactions.

Thus, to operate in the pre-service teacher community of practice, to reflect, share practice in which ideas about teaching are developed and habitus developed, there is a need for privacy which can be delivered by social media. The ability to not just develop a professional identity which successfully passes the competence requirements for the PGCE and QTS, but also that the pre-service teachers have built enough knowledge about behaviour management and the different aspects of their subject to develop habitus is important. If the pre-service teachers undertake their teaching placements in schools where limited ranges of ideas about teaching are used and they cannot or will not access opportunities for sharing ideas, or for brokerage of ideas from others, then they could fail to develop their habitus and cope with a future variation in challenge and thus this could affect retention.

One way of asking for the sharing or brokerage of ideas in a colloquial and stress-reducing way was for the pre-service science teachers to 'rant' or 'vent'. When 'ranting', the subtext is that there is a mismatch between the challenge being posed by the class and the ability of pre-service teachers to manage that challenge and ranting or venting is a way of asking for help from the community.

PRE-SERVICE SCIENCE TEACHER B: We have a little rant to each other on a Friday if we need to or if we had a difficult class we could ask others if they had had similar experiences.

This extract suggests that pre-service teachers unable to 'rant' would be unable to develop this sense of self-efficacy and thus the cycle set out by Wyatt (2016) to help teacher competence develop would not occur as effectively. This still fits with Wenger's notion of achieving the core enterprise within a community of practice as it can be seen as a more 'fun' way of expressing a need for help thus "can live with, have some fun and fulfil the requirements of" (Wenger, 1998, p.6) what the private social media interactions as part of the pre-service community of practice is there for – to help them become qualified teachers. The increase in privacy allows for more informality and risk taking in terms of being candid with others around experiences and thus participating in the community of practice through private social media is about identifying the type

of topics discussed, how candid one should be and the level of privacy needed for the topic to be discussed within the community, the sharing of practice and nowhere was that more important than in the area of behaviour management.

### **Behaviour management**

In the literature review, behaviour management was isolated as one aspect of professionalism which had gained a higher status nationally due to pressure from Ofsted (2014) and this is also indicated by the White Paper *Education, Excellence, Everywhere* (DfE, 2016). This elevated status seems to have increased the level of privacy required by the pre-service science teachers to discuss behaviour issues. When the pre-service science teachers were asked about Messenger (as explained on p.11) conversations in their second interview this is when they spoke directly about behaviour issues.

INTERVIEWER: Do you sometimes have a Messenger conversation with the subject group within your cluster?

PRE-SERVICE SCIENCE TEACHER C: We talk about how the week went and any issues or trouble.

INTERVIEWER: What do people do or say?

PRE-SERVICE SCIENCE TEACHER A: I have had a nightmare class today. They won't stop talking

This suggests that revealing inadequacies of knowledge or expertise about classroom management is seen as such a risky thing to do to the point that even within private pre-service subject groups they are selecting the audience for this 'revelation'. If a pre-service teacher's pupils will not 'stop talking' then this means they are struggling to demonstrate the teacher competence of behaviour management and have low self-efficacy. Through the Messenger conversation they are rebuilding that self-efficacy, sharing their issues and perhaps receiving brokerage around alternative ideas from other school communities and receive more of an empathetic formative reception rather than the summative reception it receives in the place of situated learning – the school placement. Applying William's ideas about assessment (2014), this does

suggest that the evaluative part, measuring the standard of teacher competence, gets in the way of the reflective cycle. The focus is not on the teacher competence, but the level of challenge, "...a nightmare class...". To request support and/or brokerage, pre-service teachers adopt the concept of 'rant' or 'vent' and present the mismatch of the challenge (risk) to their self-efficacy and/or teacher competence and then collaborate within the selected group of more knowledgeable others to enhance their knowledge or expertise and rebuild the cycle before the next meeting of the challenge.

Behaviour issues featured quite early on in the interviews with the pre-service science teachers; some of them were working with pupils who have behavioural issues and they clearly embraced virtual or physical support and advice from their peers.

PRE-SERVICE SCIENCE TEACHER B: I have [spoken through private social media about behaviour management]. I have kids come up to me and say 'Hi Miss' or 'High 5 Miss'. A lot of schools have a no contact policy, and ours doesn't and I am working with low ability kids who have lot of behavioural and educational issues.

Here, the pre-service teachers' reported private social media interactions appear to demonstrate that some pre-service science teachers were acting as brokers to bring understandings and procedures from one school setting to the community and thus the pre-service teachers were brokered to the notion that a 'no contact policy' is not the only approach to behaviour management. Some of the pre-service teachers had more experience of alternative approaches to behaviour management than others and thus this gave them the 'status' needed to share or broker the practices of one school to the community (Wenger, 1998).

What came out of the literature review was recognition of the need to demonstrate better competence in behaviour management than in other standards due to the extra emphasis placed upon this by the Ofsted inspection framework and the *White Paper Education, Excellence, Everywhere* (DfE, 2016). In the first interview for the pre-service science teachers it was evident that a direct issue was raised collectively and it was clear that the pre-service



science teachers have compared schools and found that, as noted above, some schools have a no-contact policy and some do not. They also had children that desired contact. Thus, to best identify what is 'professional' and what is unique to a school placement they needed to share ideas, compare and broker ideas across the communities. To be professional, they have to be able to work in any environment and it is by functioning as a community of practice, albeit through private social media exchanges, that they can establish better self-efficacy and subsequently habitus in their competence in behaviour management which is rooted in professionalism, not just practice which exists within their school placement. This means one of the elements of becoming a teacher is a need to establish a distinction between what constitutes an individual school policy and what is seen as professional behaviour by teachers across all schools so that they can move across educational institutions without compromising their professional standards.

The fourth interview was conducted at the end of the second school placement and at a time when the pre-service teachers on the HEI teacher education course have generally developed their teacher competence to the standard required to meet the Teachers' Standards (DfE, 2013). Yet, when a pre-service science teacher had a bad day or week this was still shared with their peers right up to the end of the course – especially through more private social networking means.

PRE-SERVICE SCIENCE TEACHER C: I will get a message saying I have had a really bad day or this has happened.

This interview suggests a personal Messenger or WhatsApp style message which carries an extra degree of privacy is being used and shows that even at the end of the course when for all intents and purposes they were practising teachers; the pre-service teachers still felt the need to be able to articulate to each other that pupils were causing them problems or that their weak teaching was enabling pupils to overcome the pre-service teachers' behaviour management skills. This suggests that ideas about behaviour management in teaching transcend the issue – if a pre-service teacher's approach to behaviour management is insufficient in some capacity then the pre-service teacher feels

a need for further ideas or concepts around behaviour management to be shared or brokered through private social media interactions and within the closed pre-service teacher community of practice. Pre-service teachers need ideas beyond those that exist within their knowledge or within the knowledge base of their mentor or department, the situated place of learning.

#### **5.4 Findings and Analysis: Pre-Service English Teachers**

##### **Establishment of a community of practice**

The pre-service English teachers had a clear vision of themselves as a community sharing, supporting and taking on the role of more knowledgeable others in specific areas. In the very first reflective interview, they referred to their group as a community from the start:

PRE-SERVICE ENGLISH TEACHER C: ...it is like a community where you can share stuff.

PRE-SERVICE ENGLISH TEACHER A: Community is a good word and it is where you get support and share interests.

PRE-SERVICE ENGLISH TEACHER B: It gives us a chance to form a stronger group.

PRE-SERVICE ENGLISH TEACHER B: When I go to the Facebook group it is a chance to relax and chat about things as I am reading all the time and I get home from school and there is no free time so Facebook is something to relax with and not necessarily engage with a difficult discussion.

The reflections of the pre-service English teachers in many ways echo Wenger's identification of a community of practice, as a group of individuals who share a common interest (Wenger, McDermott and Snyder, 2007, p.4). Through this early interview, the ability of private social media to integrate itself into the pre-service English teacher community of practice and help with the early establishment of its existence is clear. The pre-service teachers value private social media's ability to save time, to share feelings and to generally be a help and thus allow it to be part of their life and take up time and space. One

pre-service English teacher reflected that using Facebook might be as simple as organising a successful social event, but that crucially, “we will probably end up talking about education”.

PRE-SERVICE ENGLISH TEACHER B: I have an example for today as I have arranged for everyone to come to my house which is difficult to arrange if you don't have Facebook to arrange events.

PRE-SERVICE ENGLISH TEACHER A: I've got to think about my Christmas party to say that this is the day I am having my Christmas party and it's quite nice to have those sort of things as well. We are in education and we will probably end up talking about education but we don't have to.

Thus the establishment of the community of practice, including the discourse of education, is facilitated and enhanced by the existence of private social media. There are some challenges here that might not be immediately apparent. These pre-service teachers have quite likely met only for the first time through the pre-service teacher education course. Many pre-service teachers move to the HEI geographical area for the duration of the course and recognise that without the social events organised on Facebook they would have little social life.

PRE-SERVICE ENGLISH TEACHER B: Particularly for people who have come into the area and straight from university this is the social group and school there is nothing else around here for them and if we don't arrange social things through things like Facebook.

Thus online social networking can fulfil more than one brief when it comes to the establishment of the pre-service teacher community of practice. It can provide better logistical support for social networking to occur – something very important for the pre-service teacher who has moved area.

In establishing the community, the pre-service English teachers were similar to the pre-service science teachers in that their initial interactions appear to be that they use private social media to overcome academic issues – information about the course, assignments, and course specific resources.

PRE-SERVICE ENGLISH TEACHER A: Usually it's information about the course or assignments, i.e. where do I find this on BREO?

The pre-service teacher who participates in a community of practice through private social media interactions is thus at an advantage in terms of time management. Instead of each person personally solving the challenge at variable levels of success, successful experiences are shared to maximise efficiency and this happens at speed. Taking the issue of workload implication: membership of the Facebook group page can involve at a simple level those who have resolved logistical problems and share these with each other to exchange time savings. This early exchange seemed to be not just helping the pre-service English teachers achieve the core enterprise of becoming qualified teachers, but something that makes the community attractive to be part of. Lave and Wenger (1991) called these simple level interactions 'legitimate peripheral participation' with Wenger later describing them as having 'lessened risk' (Wenger, 1998, p.100) and suggests that for participants it 'provides a sense of how the community operates' (*ibid.*). However, this private social media based community of practice is more attractive than a HEI based online VLE and in establishing why this community works through private social media there needs to be an evaluation of where the interviews reflect on the options to interact, even at a simple level, in ways that HEI based online VLEs are not offering.

The pre-service English teachers referred to the existence of other groups using other software. For example, Glassboard was mentioned and compared to Facebook directly with the logging in and push notification directly referenced as the reason Facebook was more successful than Glassboard. This is important as the pre-service mathematics teachers, as noted in the next section of the findings, tried to use Glassboard to underpin their pre-service teacher community of practice.) The concept of speed is driven by push notification and this is seen as a key desirable element of a functioning community. Pre-service teachers are not going to check the forums to ascertain if opportunities to interact are available – they want to be notified about a guaranteed event.

PRE-SERVICE ENGLISH TEACHER B: With our cluster, someone started a Glassboard group but that does not notify you when someone has posted to it and I don't really check it anymore as you have to actively have to go and check it whereas with Facebook it lets you know when someone has posted to it. It started the first week with people communicating through it but it has tailed off.

Although when social media platforms without push notifications did work, they clearly separated the pre-service teachers out into those who belonged and those who did not.

PRE-SERVICE ENGLISH TEACHER B: I think when Glassboard was working with our cluster; it was obvious who wasn't a part of it.

INTERVIEWER: How did you know? Can you give me an example?

PRE-SERVICE ENGLISH TEACHER B: They would come with slightly different stuff to the rest of us as we had already decided what we were going to bring.

As Wenger says, "Developing a practice requires the formation of a community whose members can engage with one another" (Wenger, 1998, p.149). This developed practice is an element of the early stages of establishing a community of practice for the pre-service English teachers. Collective understanding and collective ideas which are formed by the pre-service teachers as a combination of virtual and face to face interactions are going to be different to those ideas formed by pre-service teachers who only interact face to face. This directly relates to Wenger's theories behind communities of practice in which he demonstrates that theories of meaning, subjectivity, collectivity and power run concurrently throughout communities of practice (Wenger, 1998).

In this study, it has been identified that the colloquial term of 'venting' used by pre-service teachers refers to a means of asking for help. The venting also occurs both face to face and virtually and that pre-service teachers finds outlets for this venting to help them manage the risks which they face on the course through their constellations of communities of practice. The different

constellations (Holland, Middleton and Uys, 2012) that emerge are founded upon notions of privacy and selection. For the pre-service English teachers, the school placement is part of their constellation of communities.

PRE-SERVICE ENGLISH TEACHER A: As you get to know people in your department you can vent to them.

This means the members of one's communities of practice are evaluated and a judgement made for the pre-service teacher's ability to access a member in that community or the community itself. This shows why the early formation of alternative communities is important as the communities available in the school might not necessarily be the right communities for the pre-service teacher to 'vent' to or ask for help from.

At the third interview stage, the pre-service English teachers had changed school placements and so one thing that the researcher looked at was whether this affected their interactions as a group. At first, it was clear from the transcript that organisation of time, resources and social events were clearly still the interactions that were contributing towards the core enterprise of the community. The pre-service English teachers had also gone through a major assessment deadline at the point of this interview and it seemed those who were leaving things to the last minute were clearly communicating about this assessment.

PRE-SERVICE ENGLISH TEACHER A: Where we are meeting for things?

PRE-SERVICE ENGLISH TEACHER C: When grades go up [become available].

PRE-SERVICE ENGLISH TEACHER B: Texting at Pizza Hut to say when we are coming.

Thus even though the pre-service teachers had changed placement, they were still in need of an established pre-service teacher community of practice. However, one side issue is the way some schools block social media users or indeed have poor service. In interview two, they talked about how one school

had blocked Facebook from the school's internet making it harder for them to access speedy interactions and then they discussed these issues again in interview three.

(Interview two) PRE-SERVICE ENGLISH TEACHER C: Facebook is blocked in my school, so sometimes I am looking at a BBC news article and cannot post it ... I have got less time and I don't have the access so I cannot physically can't do it.

And then in this third interview:

PRE-SERVICE ENGLISH TEACHER C: It's hard to get service in school as sometimes I cannot get onto the internet and my phone will buzz (not in lessons) and it will be a message from one of these two. I will text and say what does that say because I cannot see it?

Clearly, the pre-service English teachers needed access to the community of practice's private social media interactions as feel they are missing out from an opportunity for sharing practice or brokerage of ideas from other communities which could contribute to their growth in teacher competence. With some schools responding to the New Public Management agenda highlighted by Hall and McGinity (2015) the ability to collaborate and communicate through social media is something that is not always allowed by some of the schools and hence why the blocking of some social media sites or the exclusion of smartphones has been put into place for, not just pupils, but also teachers in these schools. For the pre-service English teachers, these policies directly conflicted with their ability to establish a pre-service teacher community of practice through private social media interactions and access the core enterprise of the community in the way they wanted to.

The community of practice established exists within a constellation, as theorised by Wenger (1998), but the way private social media interfaces with these constellations to help establish them can be seen in the reflections of the pre-service English teachers when they talk about some of the wider groups they have become part of and show that these extended groups continue to change as people interact differently. When reflecting upon the geographical

groups that they have been in for some of the sessions they show how the technology has changed to WhatsApp.

PRE-SERVICE ENGLISH TEACHER B: It has been more of a sub-group of us doing things after sessions so there has been more WhatsApp communication as the Facebook groups don't really fit anymore.

WhatsApp is an extension of the different groups, but seems to be less of a community and more of an opportunity to create or foster private mini-communities within the larger community. If the larger Facebook group does not offer the discretion needed to deliver the privacy needed for these interactions, then the pre-service teachers use WhatsApp to deliver this privacy.

The idea that pre-service English teachers interact and continue to do so within communities within their constellation is not restricted to this course. The pre-service teachers on this course have friends who have attended teacher education elsewhere and those communities were also linked to their community.

PRE-SERVICE ENGLISH TEACHER A: I have some friends that I did my UG degree with who went into teaching and said that we have a Facebook page as well separate from the course and we share ideas and resources as there are in London and Hatfield areas. It's interesting to see how they have dealt with the course over the last year from an outside perspective.

This awareness of other pre-service teachers came out as insightful because they were able to compare themselves with their peers who were on courses where isolation was a stronger element of their course than the pre-service teachers on this course.

PRE-SERVICE ENGLISH TEACHER C: I have got friends who have gone through SCITTs and who feel really isolated and who are struggling. One of my friends is in a small SCITT and is struggling because she feels really isolated. We have been talking more as the



year has progressed as she wants to speak to someone else, even if it is not the same subject, and is working in a rural school.

Here, pre-service English teacher C reflected on the contrast between her experience as part of a community of practice and her friend in a SCITT. There is a direct contrast between those who interact through communities of practice and those that have limited access to such a resource, but it also reinforces a point made in the context part of this study – isolation is an issue for teacher education (Johnston, 2010).

The reflective aspect of the interview provoked pre-service English teacher A at this point to recall that she had a friend with similar issues and she compares the experience she has as part of an online private social media community with that of the SCITT based pre-service teacher who was struggling to cope with the challenge of her course.

PRE-SERVICE ENGLISH TEACHER A: My friend in the SCITT is really struggling as she is struggling with her mentor and a lot of pressure from doing her salaried route. Getting a series of observations and then getting that average and feedback is ongoing whereas with her it is continuous grades and when you see lots of threes and twos you start to worry, so it's [having a private social media pre-service teacher community] good in that respect.

It is clear here that the establishment of the pre-service teacher community of practice and its link to other communities of practice within a constellation through private social media is an important process through which the core enterprise of the group can then be accessed and facilitated by its members. For the pre-service English teachers, establishing a pre-service teacher community of practice in a way that fits and functions with their life can help. However, the community exists through the pre-service teachers trying to 'belong' to the community.

PRE-SERVICE ENGLISH TEACHER A: That's when I use Messenger more. Using Facebook as a messaging tool is quite

useful as I have the app on my phone and I can sit watching The Apprentice sending messages to people.

Wenger talks about 'modes of belonging' as part of the establishment of the core enterprise in a community of practice: "They see themselves as participants in social processes and configurations that extend beyond their direct engagement in their own practices" (Wenger, 1998, p.173).

### **Achieving the core enterprise of the community**

In reviewing the pre-service English teachers' transcripts, it becomes clear that the notion of privacy within social media interactions has a role in helping them progress to becoming qualified teachers. In the first interview, the pre-service English teachers interestingly discuss the 'permanency' of opinions as regards longevity of privacy. One of them recognised that his earlier opinions might change and so extra privacy is the key to handling the need to express opinions, even if those opinions are incorrect.

PRE-SERVICE ENGLISH TEACHER A: Your opinions change of people and I think you [PRE-SERVICE ENGLISH TEACHER B] are right it does feel quite permanent whereas in a Messenger conversation or face to face then it doesn't feel as permanent.

As reflective teachers experiencing support, sharing practice and brokering ideas from other communities, they are aware that in expressing fixed opinions in education there is a likelihood that those opinions are subject to change and that one of the ways to manage the risk of expressing uninformed opinions is to increase the privacy level in relation to the risk of expressing that opinion. To operate reflectively online and to participate in brokerage of ideas from one community to another is to leave a trail of old ideas that existed prior to the new ideas developed. The more contentious the original idea and the more likely it is to change then the more privacy and less permanence of record that is needed.

In understanding how the core enterprise of becoming a qualified teacher was being achieved it was necessary to distinguish between brokerage and the simple sharing of ideas. In the second interview, the pre-service English teachers talked about the competitive nature of the main Facebook page –

within this page people shared successes and resources much more than they shared weaknesses or asked for help.

PRE-SERVICE ENGLISH TEACHER B: ...there is that element of competition which makes it harder to share a weakness. On that main group we tend to share the positives more than the negatives.

There is risk involved in sharing a weakness as this study has demonstrated with the pre-service science teachers – even between pre-service teachers operating in a private socially networked pre-service teacher community of practice. To share a success or resource is not brokerage. The brokerage of new ideas from other communities within the pre-service teacher community of practice tended to occur at a more personal level in terms of Messenger, WhatsApp and within some form of an enhanced privacy level mainly by restricting the participants and audience of the conversation.

### **Brokerage within the community**

The concept of brokering and receiving brokerage of different ideas about teaching to construct a new understanding in oneself or others sits as a constructivist concept in a New Public Management (Hall and McGinity, 2015) context which in some ways opposes this ideal. In the Teachers' Standards (DfE, 2013) and in some schools, the senior leadership team mandate the pedagogical ideas which must be adhered to. Thus, to broker ideas about *how* to teach, to another, is to put another or oneself at risk and what the pre-service teachers need to develop is less risk (Beck, 1994). Yet, the one key way to develop less risk or develop habitus is to engage in brokerage and reflection around new ideas to better become a qualified teacher and to be successful in staying in the profession.

The pre-service English teachers referred to contrasting placements and differing teaching styles in their opening interview but said they discussed this during their face to face meetings at lunchtimes to the point where they said that this is where face to face meetings contrast with private social media.

PRE-SERVICE ENGLISH TEACHER B: It's a difficult thing to bring up in a post. You won't say my school is doing this, what is your school doing? You chat about it as it is a natural thing.

Face to face conversations deliver the greatest level of privacy and reduce the risk to a minimum whilst allowing for reflection to take place. This opportunity to present concepts, share ideas and experience brokerage of ideas from other school communities is something for which there was a clear demand for.

PRE-SERVICE ENGLISH TEACHER C: It's that shared experience really. In my departmental staff room I find it really hard to say anything honestly as it is quite cliquey. Even though I don't know the people on the course fantastically well, I do know that we are all in the same boat and in the same sort of situations so it is quite nice to hear that opinion. The people at school don't seem to get it as much so I do use Facebook and social media and technology just to sound off some ideas and get some feedback on it.

This concept of brokerage occurring through private social media was reinforced in the second interview where the transcripts show that the pre-service English teachers can be seen reflecting on how different ideas about teaching were explored through enhanced privacy:

INTERVIEWER: Do you discuss the different approaches to teaching that different schools use?

PRE-SERVICE ENGLISH TEACHER C: Not in the Facebook group.

PRE-SERVICE ENGLISH TEACHER B: We do in our little Messenger group. I think with Facebook as there are so many people; it feels more personal in a Messenger group than on a Facebook group.

PRE-SERVICE ENGLISH TEACHER C: Within the Facebook group, there seem to be some people who do not get on well with others and if I put it on Facebook I won't care who saw it but with these

smaller groups it might because you might not want to share it with everyone.

Again, there is evidence of the notion that pre-service English teachers could select within the group using Messenger to create a reflective dialogue in which they interacted to arrive at a new understanding – pre-service English teachers needed to value or respect the different members of their shared dialogue group to the point where that sharing of practice or brokerage of ideas from other communities would occur. If there are too wide a range of opinions or the pre-service English teachers did not value someone's input, then they will reject or repudiate the shared opinion and revert to their own.

PRE-SERVICE ENGLISH TEACHER B: So it is nice to have that difference of opinion or that you are in the same area in your way of thinking.

What is clear here is the welcoming of different ideas – the “...question our ways of doing” (Hibbert, Coupland and Macintosh 2010) that is needed for the brokerage of ideas from other participants in the community of practice. And what private social media does is provide the enhanced levels of privacy so that the pre-service teachers can access more opportunities to experience brokerage or to broker ideas to others from other communities.

### **More knowledgeable others as brokers**

To share or indeed broker ideas to another pre-service English teacher successfully the status of more knowledgeable other needed to be achieved with either personal knowledge or membership of another community such as a school community demonstrated. In the opening interview, the pre-service English teachers discussed the fact that they posted articles on the Facebook home page in the same way as the pre-service science teachers did in their community.

PRE-SERVICE ENGLISH TEACHER A: Some of us find the articles online interesting and I posted about the one about the work-life/teacher balance so I thought I would share this with everyone

because sometimes people feel guilty about having a life outside of work.

It could be that in posting articles they are establishing the niche boundaries or parameters of their groups in the way that Lave and Wenger referred to when they describe legitimate peripheral participation (Lave and Wenger, 1991) as the simple interactions which amongst other things “engage newcomers and provide a sense of how the community operates” (Wenger, 1998, p.100). However, it could also be interpreted as a subtle way of advertising their personalised specialist knowledge or interest – in other words, this could be how they advertise the fact that they are a more knowledgeable other and are ‘looking’ to establish who the more knowledgeable others are in an area – for example, Shakespeare or drama.

It was the pre-service English teachers who first mentioned the use of Messenger and the ability to electronically select specific people or ‘more knowledgeable others’ to form a smaller group within the community of practice, which is something private social media allows. If they are in a community, then they can see who in the community is online and currently active.

PRE-SERVICE ENGLISH TEACHER A: Someone asked about a particular scheme that they were doing and did anyone have any suggestions on how they might do that and where to look for resources. I have used the Messenger thing quite a lot. If we don’t do with the whole group then we are using those contacts through Facebook and Messenger and using more specific people.

In particular, the reference to ‘specific people’ is important as specific people have specific knowledge. The sharing of ‘resources’, however, is not evidence of the more knowledgeable other. In this extract, the request is not solely for someone who has access to resources, but someone who has ideas about where to look. The pre-service English teachers were not collating or building a library of resources. Instead, the pre-service English teachers were looking for more knowledgeable others to share or broker ideas about how to teach a particular scheme from other school communities and how to resource those ideas about how to teach.

Identifying resources for specific pre-service English teachers was clearly helping the community achieve the core enterprise of becoming a qualified teacher – if one pre-service teacher had a specific challenge, then the group will search *en masse*.

PRE-SERVICE ENGLISH TEACHER B: Resources is something we still look at, especially if someone is looking for something in particular, especially if they cannot find anything online or to ask if anyone has any other ideas.

This comes out as different to having a repository of resources. Instead of collating a large repository, they agreed to ‘search’ demonstrating that their status as more knowledgeable other lay in their ability to source new ideas about teaching through their access to other communities or search skills.

This type of interaction suggests that the pre-service English teachers saw a potential for growth in either self-efficacy or teacher competence from participating in someone else’s private social media interactions. What is interesting is that pre-service English teacher C contrasted this with a non-English pre-service teacher who did not have access to private social media. It is clear that some pre-service teachers were sharing resources across some of the geographical communities referred to as ‘clusters’.

PRE-SERVICE ENGLISH TEACHER C: One of the members of our cluster group has set up a Glassboard group which you can share resources on as one person doesn’t have Facebook.

The pre-service English teachers saw private social media as a place to go in order to receive not just shared resources, but also clarification from others, particularly if they were unsure, and they liked knowing that they were not the only ones struggling with such things.

PRE-SERVICE ENGLISH TEACHER A: There are particular things that I have been confused about and it’s good to see someone else saying ‘do you know what we have to do for this?’ or where to find this information

In the third interview, the English pre-service teachers had also gone through a major assessment deadline and it seems those who were leaving things to the last minute were clearly communicating about this assessment during the writing phase.

PRE-SERVICE ENGLISH TEACHER B: I think for those of us that were very late in were sitting online chatting but not on Facebook but through Messenger.

By selecting specific people, pre-service English teachers could control the safety of revealing that they were leaving their assessment until late. It is clear that they were writing their assessments and interacting online at the same time – this ‘shared understanding’ or ‘shared dialogue’ was affecting their essays as they took in turns to be more knowledgeable others during the collective writing of assignments.

PRE-SERVICE ENGLISH TEACHER B: You can see if people are at their computers at the same time as me, so just three of us chatted.

INTERVIEWER: So you are online writing your essay and then you can communicate in your small group about your essay?

PRE-SERVICE ENGLISH TEACHER B: I have three screens at home and one of them is going to be chat, one an essay and the other my music

Although some of the brokerage is around ideas about teaching from other communities which are sometimes expressed through their assessments there was also sharing of the emotions experienced during pre-service teacher education. The early interviews, for example, show the pre-service English teachers reflecting about their emotional time on the course rather than their ideas about teaching, but they are linked.

PRE-SERVICE ENGLISH TEACHER B: We are talking about our emotions and feelings more than specific actual teaching.

This study has established that the idea of expressing emotions can be a codified form of asking for help, so even though the pre-service English



teachers do not perceive it, they were already asking for the sharing of practice and brokerage around different ideas of teaching from other communities. From there, the pre-service English teachers began to demonstrate that 'knowing' their group members enabled them to identify the more knowledgeable others who might have different ideas about how to approach teaching in specific subject areas either through their personal knowledge or through their access to other communities.

PRE-SERVICE ENGLISH TEACHER A: My weak area is poetry so I would go to someone who finds that as a strong area and I know who those people are through the subject specialism session and also through things that they say on Facebook and in person. If I am at school on a Monday and not seeing them until Friday and can't wait then I will get in touch with them a different way for some ideas or ask for some advice.

In this extract there is a direct articulation from pre-service teacher A of how private social media can facilitate the sharing and brokerage of ideas from either the individual or their school community in between scheduled face to face meetings. Although the HEI teacher education course in this study, like many others, provides regular face to face meetings where the pre-service teachers can undertake reflection or brokerage of ideas from those with access to other communities, what is evident here is that the speed of not having to wait until Friday intervenes and there is an opportunity for communication where they could share or broker ideas which are different to those seen or available in their placement school. However, this 'openly' asking for advice was revealing a weakness or a 'limited' understanding of ideas about teaching and they saw issues with asking for this help in the school placement such as from their mentor or department.

PRE-SERVICE ENGLISH TEACHER B: I have got teachers that I have worked with in the past that I could potentially work with in the future and while the same is true with people on the course so we don't have the same level of panic over everything that is going on

whereas I do not want to present that to potential employers. It's protection from that.

Once again, there is a perceived risk with revealing one's understanding of ideas about teaching to others such as 'potential employers'. Thus without the pre-service teacher community of practice which enable them to utilise peers as more knowledgeable others to share or broker approaches or ideas about teaching, pre-service teachers might be put in a position where they either have to reveal their weakness or have a weak performance against the Teachers' Standards (DfE, 2013) exposing them to immediate or future risk.

In addition to this reflection within the smaller Messenger groups there was a direct route back to the larger Facebook homepage group if support could not be achieved through the smaller group.

INTERVIEWER: Do conversations from the small Messenger group go on to the main group?

PRE-SERVICE ENGLISH TEACHER B: They can do, especially with resources. We could not help this person so they went on the main group.

Thus if the small group does not have the new ideas required it demonstrates that this pedagogical area is a common area for the community in which ideas about teaching are limited allowing the smaller group to reduce its privacy and move the topic to the main Facebook homepage. The direct correlation between risk and privacy is thus reinforced.

For the group of pre-service English teachers, their private online interactions, such as sharing ideas or accessing brokerage of alternative approaches, were so important that even when competing with other activities for attention they could use the push notification process to immediately create a small community of practitioners. Yet the resultant interaction was clearly important – even the simple nature of posting resources or news was not as passive as it seems; pre-service teacher English teacher B clearly expected interaction of some kind in response.

PRE-SERVICE ENGLISH TEACHER A: That's fine, but if someone has ... but it's like with students if they share their work and there is no positive feedback then they are not likely to do it again. People will 'like' things; they will press the like button.

PRE-SERVICE ENGLISH TEACHER B: Sometimes people will click the like button which drives me insane because I think if you like it why not give me some feedback.

Thus for pre-service English teacher B, in posting something, she gave an example of how she does not see it as a one-sided event. From this we can see that pre-service teacher B was not interested in passive 'likes' – she wanted interaction and even more, perhaps the sharing of practice, or to see that someone recognises she was potentially brokering ideas from another community.

### **Issues and challenges in relation to achieving the core enterprise**

The fact that pre-service teachers in England have two school placements meant that some pre-service teachers on the HEI course in this study were exposed to mentors that had different concepts around the definition of teacher professionalism and this provided a distinct challenge for the pre-service English teachers. Being able to talk privately to another pre-service English teacher who had already met this definition of professionalism enabled them to manage the difficulties inherent in the relationship described.

PRE-SERVICE ENGLISH TEACHER B: Where I am, there is a teacher who refuses to share things, is critical of every PowerPoint and any displays behind you so this makes you think of something entirely different. I got to discuss this with someone and say what did you do with this teacher? How did you work around this and how did you support the students?

In this account it can be seen that the concept of 'professionalism' is localised to the school placement and indeed to the mentor. In this case, the mentor disliked the use of visual learning materials and this was affecting how the mentor assessed the pre-service teacher's ability to teach. As Hunter says

“...negotiated meaning-making” (Hunter, Laursen and Seymour, 2007, p.67) is part of the process of developing professional identity. For the pre-service English teachers, they have to both develop the professionalism required by the school placements and develop pedagogical skills to help them face future challenges where they know different skills will be required. The way this was achieved was by accessing someone who had already experienced the school placement and thus ideas about how to manage these pedagogical challenges were brokered to pre-service English teacher B through private social media interactions.

One of the issues that emerged from this study has been the requirement of pre-service teachers to navigate a complex marketised context of different schools from local authority schools, converter academies, forced academies, multi-academy trusts (MATs), federated schools, free schools and independent schools. Hall and McGinity (2015) has set out how this neo-liberal landscape has brought managerialism and competition into the sector which has previously identified collaboration as something desirable such as the ‘London Challenge’ (Kelly, 2011) and the intention for all schools to become part of MATs through the White Paper *Education, Excellence, Everywhere* (DfE, 2016) with an emphasis on schools working together.

However, there is a tension between schools competing and schools working together – a tension that the pre-service English teachers had to navigate.

PRE-SERVICE ENGLISH TEACHER A: With the new GCSEs coming in I have been really struggling and there is anything out there. As people do it more, it will become really useful for that.

PRE-SERVICE ENGLISH TEACHER B: Schools are reluctant to share their newer stuff which they are really proud of. At least this way we can surreptitiously help each other.

Here there is evidence that communities within schools have developed new ways of working to ensure their delivery of the new GCSEs are

successful and do not want to share this with other schools to the point where they do not want the pre-service teachers to share school resources with other schools – leading the pre-service teachers to share them ‘surreptitiously’.

These pre-service English teachers, however, are clearly not of the ideological position that collaboration is to be avoided. It would make no sense for pre-service teachers faced with managing high risk workload to increase their risk by adopting a non-collaborative perspective to professionalism. Indeed, in this further extract it can be seen that some of the good practice of sharing resources that they have seen in Messenger is now being planned for the wider group. The pre-service English teachers see traditional teachers as those who hold the view that teaching is an individual pursuit rather than one in which sharing practice and brokerage of ideas from community to community is a common activity – and this fits with their way of interacting through private social media, they see themselves as a pre-service teacher community of practice and by extension schools and teachers as other communities of practitioners within their constellation of communities.

PRE-SERVICE ENGLISH TEACHER C: I think we were doing that through the group through Messenger especially if we weren't sure how to approach a particular lesson. We were already seeking out advice and sharing resources. This way you can go and find stuff without having to wait for people to get back to you.

PRE-SERVICE ENGLISH TEACHER B: We have seen schools where people are not sharing resources and therefore sharing in this group is great as we are all young and willing. The old guard.

From this perspective, it is evident that social media are influencing the way the pre-service English teachers see collaboration across the *profession*. The pre-service English teachers feel that the profession is a community of practice with the division and competition between schools and MATs going against that notion of the profession that they hold.

The increasing way that ideas about teaching differ from school placement to school placement in the New Public Management model (Hall and McGinity, 2015) of academies, free schools and Local Authority (LA) schools and the reduction of autonomy (Parker, 2015) may demonstrate one of the reasons why the pre-service English teachers turn to private social media to look for support and the sharing or brokerage of ideas around how to cope with the challenge of such situations.

PRE-SERVICE ENGLISH TEACHER A: In my second placement, my mentor has a totally different style to me and I have spoken to other people about this through Facebook and Messenger.

However, it is not just that a pre-service teacher wants to have a 'fixed' idea of pedagogy. There is evidence that that pre-service English teachers were monitoring fellow pre-service teachers' experiences of contrasting teaching experiences, styles and experiments and thinking about whether they will appropriate what they have heard about into their own lesson. Pre-service English teacher B, for example, was clearly integrating elements of other people's lesson into her own teaching.

PRE-SERVICE ENGLISH TEACHER B: I think it depends on how you mash up teaching styles. Although when you hear that sounds great for you, one hundred percent I'm sure you had a great time with that lesson, but it wouldn't suit me but sometimes you hear things and you get your notebook out and write something down and think that is going into my lesson next week.

When the pre-service English teachers in the interview heard her say this, it made them reflect on how helpful it was for people to share such experiences rather than simply talk about the challenges that they face.

PRE-SERVICE ENGLISH TEACHER B: It has struck me how little we are hearing about what people are doing in lessons or in teaching it has become more about how they are getting on with the workload and requirements.

Here the pre-service teachers were becoming reflexive in the interview itself and thus the study itself was affecting their interactions, but at the same time, they were supposed to be reflective teachers as part of the HEI course in this study. What they identify however, was how powerful experiences of sharing ideas or brokering ideas from their different communities could be within their pre-service teacher community of practice and that discussion around approaches to teaching through private social media could lead to this.

### **Shared practices**

Looking at the community of pre-service English teachers through the lens of Wenger's community of practice model (1998) means identifying how the community is working towards the core enterprise of becoming a qualified teacher and in particular how the sharing of practices helps this. For example, pre-service English teacher A described a three person Messenger group with the criteria for membership being a specific subject pre-service teacher within a geographical area – in other words, similar schools in a town. Analysis of the extract reveals that the group of pre-service English teachers were evaluating the challenges they were facing and were discussing the need to have a work/life balance whilst achieving the core enterprise of the community.

PRE-SERVICE ENGLISH TEACHER A: How school has gone or day-to-day things? Any issues with particular classes or sounding off and stuff about life, if there is one outside teaching.

It is almost as if they had a daily problem solving session in which they collaborated and shared ideas and practice to ensure that all three members of the mini-community were successful.

In the extract, the pre-service English teachers also talk about how they network to ensure they are successful in their attendance to training sessions and the outcome is that these pre-service English teachers do find the way to the session, they do arrive on time, they do have the correct number of copies, they do have examples if needed and they are reassured with what is needed at the training session.

PRE-SERVICE ENGLISH TEACHER B: When we went to visit a lower school there was no parking nearby so we had to park on a sports ground and it was difficult to find out how to get to the actual school as we had been told there was a footpath and they had done some building work, so this was messaging which way do I need to go? It can be what we need to bring this week or how many copies of this do we need. Do you need physical examples of this or are you just going and telling people about it? It is clarification of what is needed at that session.

Whilst this is not brokerage, it still fits with Wenger's notions around the community sharing core aims. Comparing this to a pre-service teacher who might be unsure on any of those challenges mentioned by pre-service English teacher B and it is clear how the participants in the community get a lot of reassurance from their interactions. This reassurance clearly leads to increased self-efficacy, lower levels of anxiety, subsequent developed habitus and enables the pre-service teacher to demonstrate enhanced teacher competence in the training sessions to external observers. Multiply this over a number of sessions and these pre-service teachers will begin to enhance their teacher competence across a range of Teachers' Standards (DfE, 2013) and to all the different external observers who feed into their overall QTS assessment. Thus in their pursuit of the core enterprise of becoming a qualified teacher it can be seen that the pre-service English teachers set about generating 'reassurance' and through seemingly insignificant activities that collectively are quite powerful.

The year 2015 was the year of a general election and thus was part of the context for this study. In the fourth interview, it became apparent that the general election had affected the community of pre-service English teachers. Education in England could go in one of two ideological directions and the pre-service teachers had clearly reflected on this directional fork in the educational road. Hall and McGinley's report on New Public Management (2015) sets out how the concepts of managerialism have affected schools and indeed teacher education with more market based provision across schools and teacher education providers. The pre-service English teachers clearly had to manage not just the risks involved in successfully completing their PGCE and the QTS



award, but they also had to manage risks in the future by generating habitus during their training year for the risks ahead. Sharing of practice then, was not just about the immediate point in time, but also about the future.

For example, the pre-service English teachers were making preparations for their group to function through the NQT year and to be even more efficient in the management of resources ready to face the impending challenge of resourcing the new specifications for the English GCSEs coming in for first teaching in 2015-16.

PRE-SERVICE ENGLISH TEACHER B: I have been trying to set up a cloud-based resource sharing for sharing resources which has been done through the group.

Thus even though this is not part of the assessment for the pre-service teachers, they were aware that in the future they will face challenges which require access to a strong set of resources that might not be available through the context of their next school. The core enterprise of becoming a qualified teacher is not fixed in the standards at this time point then, but at some point in the future also and this is linked to their habitus. The collected ideas that they form as part of their habitus are not the only part of their preparation for the future; the collected communities of practice and the enhancements offered by them such as continued access to resources are also part of this.

Like the pre- service science teachers, the community of practice established by the pre-service English teachers reflected upon shared experiences:

PRE-SERVICE ENGLISH TEACHER C: It's shared experiences as well. That's where you get most of the comments.

The remark about the comments refers to examples seen across all of the communities where each of them is offering their own opinion, new ideas or offering empathy. Sharing practice helps these pre-service teachers achieve the core enterprise of becoming a qualified teacher and they want that experience to be interactive. The emotive side of such experiences are important however; there seems to be a negative side to the sharing of feelings and emotions. It is as if the pre-service teachers need somewhere to, as the

pre-service science teachers said, 'vent' the emotions being experienced. This venting enables them to contextualise the stimulus for the negative stress by having the collective experience and advice of the community of practice lead to having new ideas or solutions shared or brokered.

The academic assessment side is something that clearly features in the online reflections for the pre-service English teachers – they referred to feedback and grades as separate things so in a way by sharing the formative feedback they could access someone else's feedback and consider whether this feedback could help them manage the risk of their own PGCE assessment. The sharing of ideas and reflection within the community of practice seem to overlap in this part of the community's interactions. The sharing of grades seemed not to be worrying the pre-service English teachers as much as the pre-service science teachers: they were clearly looking for opportunities to reflect and share different ideas about grades and criteria.

PRE-SERVICE ENGLISH TEACHER B: We clarify what points of the criteria, i.e. I think it meant this and this is what we did.

PRE-SERVICE ENGLISH TEACHER A: How we could have improved on this - which is good self-reflection.

The notion that reflection is built into the expectation of a pre-service teacher can be seen by pre-service English teacher A. The pre-service English teachers understood that they were participating in reflection. Thus the pre-service teachers were engaging with their interpretation of the assessment criteria and holding that interpretation up for group appraisal. The community of pre-service English teachers, then, was making a collective sense of the assessment criteria, not just an individual sense, by offering new interpretations to each other. Although this form of peer assessment will also be done in face to face university based sessions, with Facebook and Messenger, the pre-service English teachers could be selective, engage or lurk as was their will and identify those who they thought were the right more knowledgeable others to make up a selective group. This can be seen with their reflections on the teaching assessment as well.

PRE-SERVICE ENGLISH TEACHER B: We have got targets and we had a little conversation on our Messenger group about our targets and how we are going to achieve them as it is something we have talked about in cluster. In this smaller group we discussed different things we were going to try out.

Thus what is clear here is that it is not as simple as that the community openly operates within the private shared area through Facebook. Within this community, smaller more private groups are created to discuss and perhaps broker approaches and ideas that they then go on to try out in the classroom. It is clear the community are taking something that happened in the physical session and then transposing this to a smaller select online group through private social media and are more ambitious or candid with the things they are prepared to reflect upon. What becomes apparent is that there is a relationship between the ability to have a candid reflective session and the size and selection of the group. There is an issue of control – by establishing a precise ‘mini-community’ or community within a community a pre-service teacher can elevate the chances and opportunities for the sharing or brokerage of ideas from others and other communities to occur. Secondly, there is an element of risk – to be candid is to expose or declare a weakness in either self-efficacy or in teacher competence and this is a risk if as a pre-service teacher you have cultivated an identity of teacher competence which you then expose to others.

In the first interview, the pre-service English teachers approached the notion of privacy and its relationship with professionalism. The concept of privacy is built into both the strength and weakness of using social media to develop self-efficacy and teacher competence. Privacy is the reason pre-service teachers of all subjects create Facebook groups, WhatsApp groups, Messenger groups and private Messenger conversations rather than general social media or use HEI VLEs and so it is important to expose the role privacy plays in the development of professionalism.

PRE-SERVICE ENGLISH TEACHER A: It’s more private and not out in the world and more **secure**. I think for some people this is the worry about Facebook (my emboldening).

PRE-SERVICE ENGLISH TEACHER A: A little bit. Especially if I have been struggling as it's good to realise that I am not the only one. There are issues and there is solidarity.

PRE-SERVICE ENGLISH TEACHER B: About reassurance as well.

The notion of sharing practice and issues to provide reassurance came out from the pre-service English teachers in a similar fashion to the pre-service science teachers. Reassurance is a constant theme and this is part of the way the community of practice reflects around the notion of a professional teacher identity against the Teachers' Standards (DfE, 2013). For the pre-service English teachers, they had to control the perception of them, by others, and this included their multiple virtual identities as well as their physical private and professional identities. What is evident from the transcripts is the more private 'identity' that is reflecting in a private social media forum is different from the more public 'identity' reflecting with the mentor or the university tutor. The risk of one of their 'other' identities being exposed to one of their other 'constellations' (Holland, Middleton and Uys, 2012) means that this has to be controlled tightly for the enhancement of professionalism to be successfully managed. Each community within their constellation of communities will have a different perspective of the pre-service teacher's competence and knowledge and that perspective will directly relate to the level of privacy that a community within the constellation has.

This can be seen when the pre-service English teachers referred to the 'changing of the name' in terms of Facebook. As they have become teachers, so they have had to splinter their online social profiles. They are aware that other pre-service teachers, pupils, school placement staff and parents will be potentially searching for information about them and are keen to increase their privacy by changing their surname to their middle name and this practice is widely shared.

STUDENT C: I think it is Facebook names more than anything. When I came in to the course I did the Camp America and that parents would be researching Facebook and not that I have anything to hide on there, I did drop my surname and put my middle name up.

STUDENT A: As you see more and more people doing it in that Facebook community and you see teachers who have done it ages ago. I resisted for a while, but it was only because my new name is more easily recognisable than my old name

Thus a pre-service teacher has to adopt multiple online identities through privacy notions in order to maintain the 'image' of professionalism. This image is not 'real', it is merely limited through privacy measures so that the perceptions by others are managed. When asked directly in the interview about how they reflect on professionalism within social media, the pre-service English teachers said that they needed to be able to say unprofessional things, but within the safety of the Facebook group or Messenger conversations as set out by pre-service English teacher B.

PRE-SERVICE ENGLISH TEACHER B: It does help with Facebook as you see professionalism, it is almost the reverse as you get chance to blow off steam and not be professional.

Thus to 'vent', to 'blow off steam' and to 'rant' are all colloquialisms for the same thing – to set out a weakness and ask for support or brokerage of alternative approaches when there is a mismatch between challenge, risk, self-efficacy and teacher competence. To reflect in this way though venting is in some way seen as unprofessional by the community of pre-service teachers and yet they see that there is opportunity for support or brokerage of ideas from other communities to occur and to be able to improve their self-efficacy and teacher competence. In addition, it enables them to build a base of knowledge and strategies that whilst not immediately useful, could be useful at some future point in time when a new risk occurs and thus their habitus is enhanced.

### **Behaviour management**

An important finding from this study is that there is a link for pre-service teachers between privacy and revealing a weakness such as behaviour management to a member of one of their communities. The open advertising of weaknesses such as behaviour management, even within the privacy of a

Facebook homepage, was seen as something the pre-service English teachers were reluctant to do.

PRE-SERVICE ENGLISH TEACHER B: I don't know about you, but I feel uncomfortable about posting about weaknesses if it is something I have struggled with.

The solution was to increase the level of privacy – this is a relationship that has emerged from this research: the level of privacy and the revealing of this alternative identity, a weaker teacher. The pre-service English teachers did not like to reveal this weaker teacher identity to others as it undermined their efforts to present and manage their teacher identity and success on the course. Even with other pre-service teachers of the same subject, they still felt the need to carefully select their more knowledgeable others in order to both manage their presented identity and to enable the sharing or brokerage of alternative ideas and approaches to take place.

As established in the literature review and subsequent interviews, behaviour management assumes an elevated status within private social networking owing to the higher risk involved in demonstrating teacher competence. In their first interview, the English pre-service teachers referred to a specific incident concerning behaviour management and so a pre-service English teacher has to reflect not just on how their behaviour management skills fitted with the placement school's expectations about professionalism, but also the higher risk of allegations being made.

PRE-SERVICE ENGLISH TEACHER A: Someone sent a student out because they swore at them. There was a small note about how it had been handled, witnesses to the swearing and the teacher thought that she was being personally victimised, i.e. her word against the student so she was talking to the rest of us as to what we would do in that situation.

Allegations against teaching staff in behaviour management situations is a national concern and there have been a number of recent changes from policy guidance (DfE, 2011) which stipulates things such as schools not having a 'no

touch' policy (something directly referred to by the pre-service science teachers in interview one) to an extended focus on this by Ofsted (2014) and the White Paper *Education, Excellent, Everywhere* (DfE, 2016). This high risk incident could certainly have led to a formal intervention for the pre-service English teacher. It shows the seriousness of such incidents and how private social networking can be used to help manage this situation with more knowledgeable others within the community of practice brokering ideas and approaches from their past and current schools to ensure the risk presented is managed.

This idea of 'venting' as a means of asking for support can be seen in all of the interviews, but can be seen from the extracts is that it also leads to increased self-efficacy for the pre-service English teachers though getting this support – something that is helpful in their core enterprise of becoming a qualified teacher. In 'venting' their frustration, challenge or risk they are effectively saying that the challenge they are facing is overwhelming them and this invites others to offer ways to overcome either the challenge or the stress of facing the challenge as can be seen with pre-service English teacher A.

PRE-SERVICE ENGLISH TEACHER A: I had a really bad week about a fortnight ago where I had to isolate some children on call and removed, but I think that is me becoming more confident because before I took it quite personally, why are they doing this to me? I would vent about that on Messenger.

INTERVIEWER: So after that did you go onto the main group?

PRE-SERVICE ENGLISH TEACHER A: No just the small group. I talked to the Messenger group, a few people in the department and I got a bit more confident so when the boy kicked off I had him removed from the lesson. From then on I had zero percent tolerance, but that was getting support from people.

What this reveals quite clearly is the way that constellations of communities of practice are operating to offer support or broker ideas from other communities that pre-service teachers exist in, for example schools, and help increase teacher competence for pre-service English teacher A through increased self-

efficacy. The smaller group within the community of practice thus offered ideas to pre-service English teacher A to help her deal with the behaviour issues. This idea of the smaller, selected group goes to the heart of what pre-service teachers worry about in terms of revealing that they are being overcome by a challenge, but as can be seen with pre-service teacher A, the support from selected others made a difference in her ability to meet Teachers' Standard 7 for behaviour management. This standard has repeatedly stood out in this study as an area of higher risk and having access to constellations of communities of practice where this risk has been managed was crucial for pre-service English teacher C. One of the practices of this community was to help the members manage the increased risk with the theme of behaviour management.

PRE-SERVICE ENGLISH TEACHER C: It is a safety thing. If you are in a group where you don't feel safe with everyone in it, perhaps they see people judging them, it's not necessarily true and you are worried about how other people see you. I think it make you less willing to put yourself out there if you feel that you are weak in any way, especially with behavioural issues as that is seen as weak.

They were also aware that they were sharing these things privately and that such sharing was good for other pre-service teachers, but know that revealing such weaknesses, even to the main Facebook group, was not something that happens.

PRE-SERVICE ENGLISH TEACHER C: It is a shame that this sort of thing doesn't get shared with the group as we are going through similar things. Everyone knows they are going to have problems with behaviour and it's good to know that people are in the same boat.

Thus, even within the private main group, ideas about behaviour management were not being shared to each other through their exposure to other communities situated in their own school placements. However, within the smaller Messenger group it was not only occurring, but it sometimes occurred in direct conflict with the situated knowledge and practice that existed in the school placement. There is a perspective from the pre-service English teachers



that there was a school-defined approach to behaviour management and that this might not fit with the ideas brokered from communities in other schools with other practices and other discourses of the pre-service teacher and his/her peers.

INTERVIEWER: Can you give me an example?

PRE-SERVICE ENGLISH TEACHER C: You (PRE-SERVICE ENGLISH TEACHER A) had problems with a student being very abusive.

INTERVIEWER: So it was a behavioural issue?

PRE-SERVICE ENGLISH TEACHER C: We spoke about it over Messenger and said it could be done this way. Sometimes it is a case of saying it's just one lesson, deal with it in the way that the school would and it's frustrating that things don't get taken seriously.

INTERVIEWER: Is it just you and the student or it is how the schools handled the incident?

PRE-SERVICE ENGLISH TEACHER A: Sometimes you can be too close to the department so you need an outside perspective.

Thus part of the practice of the private social media based community of practice is to enable smaller, even more private communities to be temporarily brought into existence where the pre-service English teachers are brokering ideas from school to school and constructing their own interpretation of the professional approach to what behaviour management is. However, there is an acceptance that there needs to be a middle ground in which a compromise between the teacher and the school is reached. It does suggest there is a tension between a pre-service teacher's notion of professionalism and that of the school. However, Teachers' Standard Part Two, "Teachers must have proper and professional regard for the ethos, policies and practices of the school in which they teach" (DfE, 2013) suggests that the school's notion of professionalism takes priority over that of the pre-service teacher's notion. The school and mentor's notion of professionalism around behaviour takes

precedence over the pre-service teacher because they have to supervise the pre-service teacher. Whilst the rules around behaviour management are a reference to procedural issues, it could be that the pre-service teacher has different pedagogical ideas about how to approach a specific pupil or group of pupils to that of their school or mentor.

PRE-SERVICE ENGLISH TEACHER A: You get constant feedback from loads of different people and you have to make up your own mind and a clash of what they expect of you and what you expect. When we go into it next year we will have our own classes and we can establish that.

Pre-service English teacher A makes it very clear that she saw some of the ideas around behaviour management, that either she held or had been brokered to her, as too risky or 'disruptive' for exposing to supervision and will keep them back for when she is teaching unsupervised at her next place of employment. This concept of having to develop potentially conflicting professional standards of behaviour management as part of the habitus for future challenges is again reiterated within this study. The pre-service English teachers have had an opportunity through social media to reflect on those ideas hypothetically by discussing with other pre-service teachers about their experiences and can see that different ideas about behaviour management in teaching do in fact perpetuate and are used in different schools in different ways – there is not any one clear definition of professionalism in behaviour management and that their perspective could be different and yet as valid as that which is present in their current school placement.

## **5.5 Findings and Analysis: Pre-Service Mathematics Teachers**

### **Establishment of a community of practice**

Throughout the interviews for the pre-service mathematics teachers the researcher was aware that there was an ongoing narrative about their efforts to establish and function as a community of practice through social media. For a clear focus on the core enterprise, the community had to establish itself and function, yet this process did not occur in a similar way to that of the pre-service science and English teachers. The interview group of pre-service mathematics

teachers consisted of a mix between pre-service mathematics teachers who used Facebook and WhatsApp and other pre-service mathematics teachers who did not really use social media much at all and this reflected their cohort as a whole. However, as will be seen from the transcripts, there was repeated reference from the pre-service mathematics teachers throughout the interviews that the main group of pre-service mathematics teachers could be more effective (in achieving the core enterprise of becoming a qualified teacher) if only they could better establish the pre-service teacher community through private social media.

In the first interview, the group of pre-service mathematics teachers opened by saying that because some pre-service mathematics teachers were not on Facebook they had decided not to set up a Facebook homepage. This contrasted with the group of pre-service science teachers who set it up despite someone in their group not being on Facebook. However, it was clear that although there were pre-service mathematics teachers not on Facebook, they were keen to establish an online community through alternative means.

PRE-SERVICE MATHEMATICS TEACHER A: We don't have a Facebook account as not everyone is on Facebook, so we have set up an account on Glassboard and still trying to find out how to use it.

In the first interview, the group also discussed the pros and cons of WhatsApp as a form of social media that could be used within a pre-service teacher community of practice. WhatsApp requires users share phone numbers in order to function as a group text message. As there were issues over privacy within Facebook, some pre-service teachers thought that if they could avoid sharing their phone numbers in establishing the social media based community of practice then they would do so.

PRE-SERVICE MATHEMATICS TEACHER C: I have a small group on WhatsApp but you have to share your numbers which you have to be comfortable with before sharing. WhatsApp is working well as if I have a lesson plan I take a photo of it and post it straight away on the WhatsApp. We were uploading our PRP on ITP and we were having issues so we were discussing. I think WhatsApp is really efficient and

if the Glassboard is as efficient as WhatsApp then we will prefer to use that as we are not sharing our personal numbers.

Reviewing this extract reveals that for the sharing of practice or brokerage of ideas through private social media to occur then the establishment of the private social media based community was needed. Pre-service mathematics teacher C was really quite worried about not being part of a group. It became apparent that she was used to leaning on a group's capacity to deal with overwhelming parts of her course.

PRE-SERVICE MATHEMATICS TEACHER C: I think it is important to have a group as at the moment we are getting so much information so that I hope that I am not missing anything.

The lack of Facebook users was clearly the issue for the pre-service mathematics teachers. In the first interview, the pre-service teachers were asked why they felt online interaction was important to them and the answer was firmly centred on workload, collaboration and reassurance.

PRE-SERVICE MATHEMATICS TEACHER B: I think we would have excluded half of the group who are not on Facebook. That's why we set up the Glassboard one.

PRE-SERVICE MATHEMATICS TEACHER A: I think because of the workload and make it easier by using other people's efforts and vice versa and it makes it less effort.

PRE-SERVICE MATHEMATICS TEACHER C: If there are things that you are doing on your own it takes lots of time and energy whereas if you are working as a team you are sharing.

PRE-SERVICE MATHEMATICS TEACHER B: It is reassurance that you are doing the right thing.

Here, it can be seen that with the pre-service mathematics teachers, along with that of the pre-service science and English teachers, key themes emerged around the establishment of a community of practice in accordance with Wenger's definition of identity within a community of practice which is to arrive

at "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5).

One of the pre-service mathematics teachers was so keen in the first interview to belong to online groups that she was seeking alternative communities through her constellation of communities outside of the pre-service teacher subject community of practice at the start of the course.

PRE-SERVICE MATHEMATICS TEACHER A: I tend to communicate with the cluster group more as we meet weekly and we have a WhatsApp group.

INTERVIEWER: So you have a WhatsApp group?

PRE-SERVICE MATHEMATICS TEACHER A: And we message.

The questions in the interviews about their ability to use social media to help them function as a pre-service teacher community of practice led to more of a focus on this aspect in some of the subsequent questioning. In the second interview, the pre-service mathematics teachers were asked directly if the first interview affected their networking as a community of practice through private social media and indeed it had: their responses demonstrate that the pre-service mathematics teachers were focused on the need for a 'closed' network which is what the Facebook homepage is. However, with pre-service teachers not on Facebook or worried about privacy issues they were struggling to identify the right alternative to Facebook.

PRE-SERVICE MATHEMATICS TEACHER A: I think it did [the interview affected their efforts to function as a community] because that was when we set up the Glassboard group but it is unfortunate that it has folded.

PRE-SERVICE MATHEMATICS TEACHER B: We need to find another way to do the same thing.

PRE-SERVICE MATHEMATICS TEACHER C: I think we are looking for something that is a closed network which Glassboard was but it had its own difficulties such as having to upload documents one at a

time which took a long time. So we need something like Dropbox but something that is a networking thing and it is just finding the right one.

From the start, one of the pre-service mathematics teachers in the interview group wanted to be part of a social media based community and sought this outside of the group of pre-service mathematics teachers.

PRE-SERVICE MATHEMATICS TEACHER B: There is a Face Book community for the PGCE students. I don't know if you two are on Face Book, we have a group for everybody across the PGCE and I find a lot of people put questions on there and people answer them. Such as how do I reference this or has someone got a reference for this kind of thing? We also share jokes on there, this was what my kids were like today, obviously not the actual students.

PRE-SERVICE MATHEMATICS TEACHER C: I didn't know about that and I am on Face Book.

PRE-SERVICE MATHEMATICS TEACHER B: I got sent a request to join the group

Existence of these communities within the constellation of communities available to pre-service mathematics teachers seems to be very much word of mouth or Facebook requests to join. The reasoning behind this additional community across the PGCE group seems to have come from one of the university lecturers on the course.

PRE-SERVICE MATHEMATICS TEACHER B: One of the lecturers did mention about opening up a PGCE group and someone obviously took that and opened it and invited everyone they knew.

This demonstrates how the initiation, the validation and even the approval of using Facebook homepages can be driven by university staff leading to the establishment of a group to which the pre-service mathematics teacher in this group has been invited to and involved in. However, membership of this group has been clearly limited and pre-service mathematics teacher C saw that from

being part of the interview. Again, this interview outlined to the pre-service mathematics teachers that communities of practice had emerged through private social media and that membership of these private social media organised communities of practice is different to that of a formally organised community. For the pre-service mathematics teachers, these interviews certainly were more reflexive events than for the other groups of pre-service teachers.

One thing that stands out in the way that this community was established is that at the start of the first interview the pre-service mathematics teachers said that 'some of the group' and potentially 'half of the group' were not on Facebook. Yet at the end of this final interview it transpired that this was not the case. When the pre-service mathematics teachers were reflecting on what they would advise the next year's pre-service mathematics teachers it becomes clear that, like the pre-service science teachers, there was just one person who was not on Facebook, 'not some'.

PRE-SERVICE MATHEMATICS TEACHER A: Get them to set it up in the first week. Someone to take the lead and do that as after that it is less likely to happen. Also at first our sticking point was Facebook as one member of our group didn't want to use it that made us a bit stuck really as we didn't want to exclude them.

INTERVIEWER: What was that person's issue with Facebook?

PRE-SERVICE MATHEMATICS TEACHER A: It was privacy.

INTERVIEWER: Did they articulate what they were concerned about?

PRE-SERVICE MATHEMATICS TEACHER A: It was just a point blank 'I don't use Facebook' and there was no negotiation on that.

PRE-SERVICE MATHEMATICS TEACHER C: No.

PRE-SERVICE MATHEMATICS TEACHER A: We could have gone ahead without him but it didn't feel the right thing to do at that time so that's why it didn't happen.

So the pre-service mathematics teachers, in trying to be inclusive, excluded themselves as a group and hindered their use of private social media as a community of practice. This happened because the pre-service mathematics teachers did not know how to cope with someone who refused to offer a level of privacy in exchange for opportunities for support and the brokerage of ideas from other school communities through private social media interactions with the pre-service mathematics teachers. And yet the community of pre-service mathematics teachers wanted "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5) and thus this seemed to be the reason behind not using Facebook.

In the final interview, the pre-service mathematics teachers spoke about a collaborative project at a local school which required them to liaise electronically.

PRE-SERVICE MATHEMATICS TEACHER A: We have been working together, so that's what the communication has been about. It's been via email.

This meant that the pre-service mathematics teachers' attempt to set up a group through Dropbox had been unsuccessful and so it transpired.

PRE-SERVICE MATHEMATICS TEACHER A: We got a Dropbox account but no-one seems to be using it, although everyone has access to it and email. It seems to be too late for anyone to do anything about it and set it up.

This is reinforced by the fact that some of the pre-service mathematics teachers had set up a WhatsApp group, but the membership of this group was limited by notions of privacy.

PRE-SERVICE MATHEMATICS TEACHER B: We are talking about our RIT [L7 UNIT ASSESSMENT] project and the [NAMES SCHOOL] project. It is not with everyone in the mathematics group, only those who felt comfortable exchanging their numbers.



Thus, although the pre-service mathematics teachers' community of practice had not used Facebook to host the community, some of the community had turned to WhatsApp and formed a smaller community of practice for those who were comfortable with the loss of privacy (telephone number) in exchange for an opportunity to access the core enterprise of the group, for example, not just the project that they are doing collaboratively is being reflected upon through these private social media interactions, but also the Masters Level academic assessment section of the PGCE which dictates whether they are awarded a post-graduate qualification or a professional qualification.

### **Achieving the core enterprise of the community**

A key question for this study is assessing how the core enterprise of becoming a qualified teacher within each of the pre-service teacher communities is achieved through private social media usage. Despite the lack of a consistent social media usage across the pre-service mathematics teacher community of practice, the same pressures that exist in the other subject pre-service teacher communities are still evident in this community. Pre-service mathematics teacher A reflects that she is aware of another pre-service mathematics teacher who is not sharing or receiving support from the group to help him reduce his workload.

PRE-SERVICE MATHEMATICS TEACHER A: I see [ANOTHER PRE-SERVICE MATHEMATICS TEACHER] in cluster group on a Thursday and we found out he was working really late so we do need to find a way to share that information. [Lesson planning]

To be able to demonstrate acceptable teacher competence against the Teachers' Standards (DfE, 2013) and become a qualified teacher, the pre-service teacher has to successfully manage what is seen as a suitable workload. However, this 'definition of workload' is also subjective and situated. As Wiliam said, (2014), the notion of the standard is one that is collective. If that collective standard is based on pre-service teachers who are resolving workload issues through collaborative social media interactions, then that sense of standard could be skewed against those that do not collaborate in online communities of practitioners. This study seems to show there is a difference

between the pre-service teacher who uses private social media to collaborate through a community of practice and one who does not and the mathematics pre-service teacher community having this distinction in their group highlights it well.

### **Brokerage within the community**

The nature of lesson planning and the ability to amalgamate different ideas about teaching run through all of these interviews and this is where the sharing of ideas and brokerage of contrasting approaches could occur as members of the community share the different approaches to teaching that they are learning through being part of the community of a school or department. The pre-service mathematics teachers discussed the failure of their 'alternative' online group based on the Glassboard app. However, when it was working, they found it useful for lesson planning.

PRE-SERVICE MATHEMATICS TEACHER A: We don't necessarily have a group. We had a Glassboard group but it went under a few weeks ago. No-one has yet been inspired to create another group. When it was running I found it useful for support, lesson planning.

In the interviews, the pre-service mathematics teachers were asked to explore exactly what it was that drove the group to use the social media based pre-service teacher community of practice – what were the things that they perceived to be useful from networking online through social media.

PRE-SERVICE MATHEMATICS TEACHER C: So it was good for support when we had a query about university work.

INTERVIEWER: So not just school-based stuff but university based stuff, so as a problem-solving tool.

PRE-SERVICE MATHEMATICS TEACHER A: We ran things past each other as some assignments were due in terms of referencing or how many things you linked to.

INTERVIEWER: To increase your ability to pass the assessment to a good standard that was something you worked towards?

PRE-SERVICE MATHEMATICS TEACHER A: Just for reassurance that everyone is doing it in the same way that you are or understood it in the same way you have.

This repeated notion of reflection, sharing ideas and brokerage of different ideas from other communities comes through here from the group of pre-service mathematics teachers and in doing so it reinforces similar outcomes from that of the other subject communities.

The pre-service teachers had spoken about the non-sustainability of Glassboard and their desire to try other providers: in this case Dropbox. In the interview, the pre-service mathematics teachers were asked about what it was that drove them to set up the Dropbox.

PRE-SERVICE MATHEMATICS TEACHER A: As Glassboard was expiring, we made a Dropbox account.

However, as noted already, its immediate impact was less than successful.

PRE-SERVICE MATHEMATICS TEACHER B: We haven't used it much.

Their answer drew from one of the key themes that have emerged from this research – the management of workload through the sharing of resources.

PRE-SERVICE MATHEMATICS TEACHER C: Glassboard went down and sharing resources is a good thing as if you are planning a lesson next week on a particular topic and not sure what to do, someone might have already done it and have some resources that would help you out. Dropbox is a place where we can do that.

What this example demonstrates is that even if those other ideas about teaching are not delivered through brokerage, if they exist just as a resource that has a pedagogical approach embedded within it then pre-service mathematics teacher C was open to new ideas on how to approach the teaching of a topic.

### **More knowledgeable others as brokers**

Despite their difficulties in establishing effective online access to more knowledgeable others through private social media in comparison to the other pre-service teacher communities of practice, the pre-service mathematics teachers still valued the idea of more knowledgeable others. In the interview, this idea was explored – that a pre-service mathematics teacher might look for peer support online at a critical moment and overcome a challenge due to the support received by a fellow pre-service mathematics teacher. Naturally this could be done face to face or by phone, but this relies upon three things for this community: on the exchange of privacy, the candid revealing of inadequacies and the availability of others. Wenger’s notions of how a community of practice works are clearly highlighting how the core enterprise of the pre-service mathematics group is achieved through the use of a more knowledgeable other. For example, in the first interview pre-service mathematics teacher C said that through private social media interactions, a community she was a part of collectively compiled a check list and then all went through the check list as a group.

INTERVIEWER: Can you give me an example when you think you have missed something and you have communicated with someone about it?

PRE-SERVICE MATHEMATICS TEACHER C: The forms that we were supposed to be having for PRP and I thought my file was complete then I read something on BREO but I didn’t note it and I forgot it and I didn’t print the progress report form. We were doing a check list on WhatsApp.

What was interesting was that this exchange is that it is two-way in terms of support by a more knowledgeable other. In this extract, pre-service mathematics teacher C invites someone from another community of practice, who was struggling, into the group to receive support, but then selects some his work to help her own as a different part of his work was stronger than hers. She sees that when communities are connected then, being supportive and brokering ideas to another is a two-way process:

PRE-SERVICE MATHEMATICS TEACHER C: There is one guy in history who was having similar problems, so I invited him to WhatsApp and invited him to join our group. I checked his file and his form was missing which he had but his file was good so I took some tips of him. As a result, our files and work quality are getting better.

There is clearly an exchange here. Pre-service teachers who have a weakness and bring them to the group bring not just their problem, but their strengths as a more knowledgeable other. In providing a service to the pre-service history teacher, pre-service mathematics teacher C was able to harness the pre-service history teacher as a more knowledgeable other for herself. The act is not simply one of altruism, but one of a community of practitioners. This 'awareness' that other pre-service teachers are struggling and that other pre-service teachers are resolving their struggles through the private social media interactions of a community of practice comes through well in this interview as with the other pre-service teachers interviewed in this study.

In the final interview, the pre-service mathematics teachers have clearly splintered into those who are interacting through private social media and supporting each other as part of the community of practice and those who are not. Thus whilst it seems that the pre-service mathematics teachers have not established a social media based community within which all the pre-service mathematics teachers are members, one can see that they have appropriated other groups such as Facebook homepages and WhatsApp groups in their constellation of communities of practice to access other pre-service mathematics teachers or other pre-service teachers in general to get help.

PRE-SERVICE MATHEMATICS TEACHER A: I think it is helpful to have that if we need it. You [PRE-SERVICE MATHEMATICS TEACHER B] messaged the other day about teaching a particular topic and people offered resources to help with that. If we are ever stuck with a topic we have got people there to help us.

The last example is clearly subject related, 'particular topic', and yet the only place these pre-service mathematics teachers are online is as part of other pre-service teacher's groups and the smaller WhatsApp group. In other words, the

pre-service mathematics teachers were operating as fellow mathematics specialists, but within a different non subject-specific pre-service teacher community of practice which just happened to contain both of them.

The pre-service mathematics teachers clearly felt from the start that if they could improve their ability to network virtually then they could improve each other's ability to deliver high quality teaching within a manageable time framework.

PRE-SERVICE MATHEMATICS TEACHER B: I feel as though we are reinventing the wheel all the time. I could have spent hours last week doing a Pythagoras lesson that you have done the week before.

PRE-SERVICE MATHEMATICS TEACHER C: Last week I said to [ANOTHER PRE-SERVICE MATHEMATICS TEACHER] as I saw a teacher doing a lesson on Pythagoras and was able to get a really good idea from that so that I would type it up and send it to him. If I knew you were doing Pythagoras I could do the same.

What this exchange highlights is a frequent aspect of the interview. The pre-service mathematics teachers could visualise the community within the interview and talk about how shared practices, brokerage and other typical community of practice outcomes could occur which would be helpful to their core enterprise of being a qualified teacher. However, because their community was not using social media in the same way as the other groups they were not providing each other this support.

Whilst it could be perceived that the interviews themselves had provided the impetus for some of the pre-service mathematics teacher to access other pre-service teacher communities of practice, it became apparent that pre-service mathematics teacher C was a driving force in the interview group, wanting to improve the group's social networking and very aware of what the lack of networking was depriving the pre-service mathematics teachers from. This type of group member was accounted for by both Bourdieu (1977) and Wenger (2006) so it is too simplistic to perceive that the interviews created this outcome

for the pre-service mathematics teachers, rather it accentuated or provided a platform for what members of the community of pre-service mathematics teachers were already thinking.

Within the pre-service mathematics teachers, however, the ability to experience sharing of resources and the opportunity for brokerage of new ideas from other schools and communities around teaching remained an important area. As the pre-service mathematics teachers found, which is reflected in Hall and McGinity's report (2015) on neo-liberal policies in education, there is often only one way of teaching in a school or department and this has quite major implications for pre-service teacher education. In this reflective exchange during the third interview, the pre-service mathematics teachers demonstrate how they had to 'adapt' their ideas about teaching through the pre-service mathematics teachers' face to face and private social media based interactions:

PRE-SERVICE MATHEMATICS TEACHER B: Initially, it did. I like using PowerPoints and being interactive. In this placement, when I started using PowerPoint and getting the kids to come up to the whiteboard. When I started observing [observing practice in the department], it wasn't anything like that. I had a meeting with the head of mathematics and he said this was how he wanted me to teach whilst I was in this placement.

INTERVIEWER: Did you share this with your group to find out if they had had similar experiences?

PRE-SERVICE MATHEMATICS TEACHER B: We talked about it last week. I don't think anyone is having it as quite as extreme as mine.

PRE-SERVICE MATHEMATICS TEACHER C: Some people are experiencing differences which we have to adapt to.

PRE-SERVICE MATHEMATICS TEACHER A: My experience is similar to yours but my mentor is really good. I didn't really ask him which method he would like me to teach. From the first day I did PowerPoint and he quite liked it. In schools every teacher has a

different method of teaching, so I was lucky because my mentor accepted it really quickly.

In this exchange, the constructed notion of teaching, 'every teacher has a different method of teaching' is offered, but the pre-service teacher sees herself as 'lucky' that she had a mentor who saw alternative ideas about teaching as valid and was receptive to having these alternative ideas brokered to him.

### **Issues and challenges in relation to achieving the core enterprise**

In trying to evaluate why the use of social media is chosen over non-social media technology for helping the mathematics pre-service teachers' community of practice meet the issues and challenges in relation to achieving their core enterprise, pre-service mathematics teacher B provides a valuable insight. Pre-service mathematics teacher B, who was keen to be part of a socially networked community of pre-service teachers, explained why Facebook rather than other social media such as Dropbox or Glassboard was attractive to her: the answer was push notifications and the speed of them.

INTERVIEWER: What is it about a Facebook group that you find appealing?

PRE-SERVICE MATHEMATICS TEACHER B: As a lot of people are on it and using it. It is easy to access get notifications when people are doing things so you know when someone has posted something and you can see if it is going to be helpful to you or you can help someone as you can see straight away.

This 'speed' is very important – if there is an issue or challenge that is important, the pre-service mathematics teacher finds out immediately and can assess whether the interaction that has occurred is an opportunity for the sharing of ideas or resources, or for brokerage from one community to the community of pre-service mathematics teachers. The concept of sharing practices or brokerage of ideas in either capacity (providing or receiving) delivers the ability for greater self-efficacy and subsequent teacher competence. Brokerage and sharing of ideas and resources in meeting the issues and challenges of becoming a qualified teacher have always been



available to communities of practice, but Facebook (and other social media technology) though push notification technology is delivering the sharing of practice and brokerage not just privately, but also at speed.

The contrast in the pre-service mathematics teachers to other pre-service teachers reflects what other the pre-service teachers said about Glassboard – the lack of smartphone compatibility with push notifications means it struggles to compete with the services offered by Facebook.

PRE-SERVICE MATHEMATICS TEACHER B: It doesn't seem to work very well on our phones and it hasn't been updating fast enough so it's not useful in an interactive way so people haven't been using it.

As seen with the pre-service English teachers, the need for an immediate support, sharing of practice or opportunity for brokerage is delivered by push notifications. These notifications present a summary of the 'event', reminders and are all automated in contrast to non-social media technology. Not knowing if there is an event available means that a pre-service teacher could be wasting time logging in and checking – the pre-service teachers in this interview wanted automated push notifications informing them instead.

PRE-SERVICE MATHEMATICS TEACHER C: I find it difficult to use [Glassboard]. I try messaging but we don't get notifications. There are no reminders, I don't know if there is anything in the settings? We are so busy multi-tasking that a reminder needs to be there.

And thus this sums up how the pre-service mathematics teachers contribute towards the core enterprise very well. Faced with a large workload and a need to develop new pedagogical ideas in order to balance the demands of achieving both the QTS and their PGCE, the pre-service mathematics teachers see the interactions within the community of practice as being able to broker "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5).

### **Shared Practice**

It became clear that the interviews themselves were affecting the pre-service mathematics teachers and generating reflexivity about the notion of sharing practice as the study went on. They were reflecting in the interviews and thinking about themselves and other pre-service mathematics teachers who were not receiving the support they had identified.

PRE-SERVICE MATHEMATICS TEACHER C: We need to make it work better

PRE-SERVICE MATHEMATICS TEACHER A: I think we are going to talk about that today and maybe WhatsApp.

The pre-service mathematics teachers had a conundrum – they had community members who were not prepared to exchange their privacy with other members of the community to facilitate a closed socially networked community and its collective aims of sharing and brokerage of ideas from other communities, workload management and other aspects of the community's work towards becoming a qualified teacher. Yet through the interview it was clear that some members of this community still wanted to function as a community of practice or access pre-service teacher communities of practice through private social media.

### **Behaviour management**

It was suggested in the literature review that behaviour management would be referred to in the interviews by the pre-service teachers and when the pre-service mathematics teachers were directly asked about incidents which made it into the private social media interactions this was the content that featured. In this final interview, they refer to an incident of behaviour.

INTERVIEWER: Can you give me an example where someone has had an incident on placement and then communicated it with other people in the group online?

PRE-SERVICE MATHEMATICS TEACHER B: In my cluster, there is a PGCE student who had problems with behaviour in a Year 10

class. We discussed it on WhatsApp and put forward ways of handling this.

This pre-service mathematics teacher was operating outside the pre-service mathematics teacher community and the reference is to a community within the cluster of communities that she belongs to, but what it demonstrates is that brokerage of alternative ideas from other school communities was available to the pre-service mathematics teacher. Through her participation in a WhatsApp based community of practice she was developing an ability to construct a notion of professional behaviour management from the different communities of practice that each pre-service teacher is a member of. As established with the pre-service English teachers, one thing that seems to be variable from school to school is the nature of behaviour management policies. Each school is unique and the pre-service teachers see that each school has strengths and weaknesses at both formal and informal level. This is something that is discussed by the pre-service mathematics teachers.

PRE-SERVICE MATHEMATICS TEACHER B: The different behaviour policies in each school. How it works and our own behaviour strategies – count down and clapping.

PRE-SERVICE MATHEMATICS TEACHER A: Especially if someone has had a bad week and they come in with some examples and how they have dealt with it

Behaviour management thus sits differently to subject knowledge in terms of the status of more knowledgeable others in their role as the pre-service teachers work towards the achievement of becoming a qualified teacher. It is also not always as simplistic as seeing the others as more knowledgeable others – in some ways it is closer to Wenger's notion that the pre-service teachers are establishing the 'nature of the enterprise'. (Wenger, 1998). Although the more knowledgeable other concept is useful here, in some ways the pre-service teachers are unable to fully explore different ideas of behaviour management in their school placement due to two risks: a school's didactic approach to behaviour management and the heightened risk of being seen as 'weak' at behaviour management.

## 5.6 Findings and Analysis: Pre-Service Modern Languages, Physical Education and Computer Science Teachers

### Establishment of a community of practice

The combined cohorts of pre-service modern languages, physical education and computer science teachers together equalled a similar number of pre-service teachers to the cohort size in the *individual* core subjects of English, mathematics and science. They are the smaller cohort of PGCE subjects and therefore for logistical reasons their volunteering participants were brought together to form one semi-structured interview group. This study was fortunate to maintain the same group members over the entire year and thus whilst they reflected individually on their different community's private social media interactions, they also reflected with each other to develop ideas about what sort of activities took place over the four interviews in a similar fashion to that of the other subject specific core pre-service teacher communities. In this sense then, the interviews followed a similar pattern to those in the core subjects where the participants were reflecting on the private social media interactions of the communities of practice they were part of and were using each other to form reflections and observations.

The modern language and P.E. pre-service teachers' usage of private social media to establish communities of practice contrasted with the pre-service computer science teachers who did not use Facebook, but rather used Glassboard.

PRE-SERVICE COMPUTER SCIENCE TEACHER C: We have set up a thing called Glassboard but we use normal emails to share resources. It's really for passing on resources and information.

Although the private social media interactions identified at the start of establishing the pre-service computer science teacher community of practice is about sharing 'resources and information', there is a distinction about how resources are shared – by email. From this, it can be seen that the pre-service computer science teachers are connecting their school placements with the community of pre-service computer science teachers. This fits with the way

both Wenger (1998) and Holland, Middleton and Uys (2012) see constellations of communities working with each other. The holding of resources is often situated in school placements and thus to have access to this collective database of resources requires an exchange process to be in place. As a constellation of communities of practice, then, any members of these groups are accessing the collective information and resources.

The pre-service computer science teachers, in a similar way to the pre-service mathematics teachers group, set out to establish a community of practice through Glassboard rather than Facebook. Like the pre-service mathematics teachers, this initiative was short lived.

PRE-SERVICE COMPUTER SCIENCE TEACHER B: We tended to use Glassboard but people stopped using it within a month as we use emails so it really never took off. We use private emails for most of that or face to face is very common.

This was in contrast to the pre-service modern languages and P.E. pre-service teachers who had both simply set up Facebook homepages with all members of their cohorts being members of their private social media based pre-service teacher communities of practice. In some ways, this reflects the way the core subjects approached the issue with the pre-service English and science teachers using Facebook confidently and the pre-service mathematics teacher eschewing Facebook for an initial foray into Glassboard.

Establishing a pre-service teacher community of practice through private social media then, requires more than just a piece of software. It requires ease of use and privacy. In the third interview, Pre-service computer science teacher C reflected that he continued to maintain interest in other communities, but at this stage of the course employability was also driving his interest.

PRE-SERVICE COMPUTER SCIENCE TEACHER C: It's mainly gossip about jobs. Do you know the school and what are the staff like? I am making contact with the other specialist groups outside the

course. My focus is changing a bit now as it is coming to the end of the course.

INTERVIEWER: So you exist in more than one community?

PRE-SERVICE COMPUTER SCIENCE TEACHER C: A couple

In establishing access to private social media based communities of practice, the pre-service computer science teacher was looking for groups to help him *beyond* the course and this reiterates one of the insights into the social networking part of the core enterprises of these communities of practice – that social networking is not just about managing progress on the ITT course itself, but about building on one's habitus: self-efficacy, future teacher competence and an ability to cope with future placements and employment as a teacher.

The third interview captured the pre-service teachers at a time when they have had an extended break and then transferred to a second school placement. This means that they could be exposed to further isolation and it is clear that the highlighted connect between face to face and social media interactions in establishing a community of practice is present in this extract from pre-service modern language teacher B's reflections:

PRE-SERVICE MODERN LANGUAGES TEACHER B: We haven't really been speaking very much since last December. Over Christmas we did not have any contact and after that we have been talking about the RT [Reflective Teacher Masters Level Assessment] and when it was due in. In the primary week we did contact each other more, such as how was everything going since Christmas and when did we need to submit the RT work? Then we had a break and we didn't speak in a while but we have a Cluster WhatsApp group and we text each other a lot reminding people where they are and what to bring such as PRP2.

INTERVIEWER: So it is organisational things?

In this third interview, the pre-service modern language teacher is reflecting on the range of communication happening from text messages

to WhatsApp in the cluster group. Here, the outline given by pre-service modern language teacher B demonstrates that she is interacting within a constellation of communities and within a range of privacies. Although her own group of pre-service modern language teachers were not interacting as much, she has membership of a geographical WhatsApp group and this demonstrates how the social media groups are situated around the communities – in this case the PRP2 (formal interim assessment of their teacher competence).

The pre-service modern languages teacher is also not limited to her subject group or to just Facebook. Instead, it becomes clear that she roves across both physical and private social media groups looking for opportunities to reflect, offer and received support or shared practice and broker new ideas about teaching from their different school communities.

PRE-SERVICE MODERN LANGUAGES TEACHER B: We use Facebook, Messenger, we talk a lot in Cluster meetings.

INTERVIEWER: Give me some examples?

PRE-SERVICE MODERN LANGUAGES TEACHER B: We talk about everything. As we are based in [AREA 1] we have the same kind of students that they don't have in [AREA 2], for example.

Thus groups exist geographically due to contrasting school systems. AREA 2 is a mix of Upper/Middle and some 11-18 schools whereas AREA 1 is predominantly 11-16. Reviewing this extract reveals how pre-service modern languages teacher B is assessing the ability of group members to contribute collectively. Upper school teachers do not teach years 7 and 8 and so in order to collaborate collectively and build self-efficacy and subsequent teacher competence, pre-service modern languages teacher B needs to ensure groups she belongs to can provide those experiences in their roles as brokers. These pre-service teachers will have experience of how different school communities have approached these age phase based issues and be able to act as brokers to offer alternative ideas about teaching to members of the community of practice.

## **Achieving the core enterprise of the community**

The three communities of practice for physical education, modern languages and computer science in these interviews contrasted in some ways to the communities for the English, mathematics and science communities of practice. It seems that in these non-core subjects, the development of subject knowledge was a different challenge to that of the core subjects and featured as part of their community more strongly as they sought to achieve qualified teacher status. For the pre-service P.E. teachers, they appeared to have a wide range of sports and topics as well as ways to teach that they had to develop during the course. This mirrored the challenges faced by the pre-service modern language teachers who would have to operate across several languages in which their expertise would reduce in quality once they were down to their third or fourth language. The same sort of challenge existed for the pre-service computer science teachers. They were expected to teach both ICT and programming when they would typically have a background in one or the other and not both. For these reasons, there seemed to be some interesting examples of shared practices and brokerage where they were clearly looking for new ideas about teaching their topics and reflecting on their ability to develop this brokerage in the interviews.

## **Brokerage within the community**

In the first interview, when asked about whether they talked about government policy, it was interesting that pre-service P.E. teacher A reflected that the community of pre-service P.E. teachers did not feel confident to offer opinions through social media, but did talk about them face to face later in the week.

PRE-SERVICE P.E. TEACHER A: One person did post something on Facebook that might be of interest ...

INTERVIEWER: And what happened when they did?

PRE-SERVICE P.E. TEACHER A: I don't really know. I had a look but non-one posted back or liked it or it wasn't commented upon. We met on Friday and discussed it then as we knew we would see everyone then.



Although the pre-service P.E. teachers were in a closed Facebook homepage, none in the group was confident at the start to articulate opinions acquired from other communities: instead they resorted to face to face interactions, which afford the deepest level of privacy. This fits with other the other pre-service teachers –there is a relationship between the risk involved in participating in shared practice and being able to select privacy levels to enable them to articulate opinions or to ask for help. Establishing the community, identifying challenge in achieving the core enterprise and developing layers of privacy for brokerage to take part are all part of the process behind these pre-service teacher communities of practice.

### **More knowledgeable others as brokers**

This idea that the purpose of using private social media in pre-service teacher communities is to help them manage their progress in school and on the course is replicated across the different pre-service teacher groups of this study. However, with the pre-service modern languages teachers another theme emerged; one that had been touched on in other courses, but more so for the pre-service modern languages teachers: many have moved here from quite a distance, often from abroad, and thus have lost their network of social and family support and in some cases are in a very different cultural place.

PRE-SERVICE MODERN LANGUAGES TEACHER B: We went on a boat trip and to the language show. We keep up to date with things like which train are you taking or what are you doing at the weekend. You can join us if you like as most of us are foreigners, some of us have been living here sometime and have a group of friends but others have just been here for their PGCE so we are contacts if people want to move to our town to go out with our friends Facebook is used.

In that extract, it is evident that the community of pre-service modern language teachers consists of those who are resident and those who are new. The residents act as brokers and help broker to members of the community not just ideas about teaching from English school communities, but knowledge about how to operate culturally and socially within the UK in a range of communities.

The idea of each pre-service teacher's learning being situated within the context of the school placement affected the pre-service P.E. teachers also. In the final interview, at the end of their second school placement, the pre-service P.E. teachers were continuing to share ideas and resources in their capacities as more knowledgeable others. One thing that comes out that is distinctly different for the pre-service P.E. teachers is that at different times of the year, different sports or subjects are being taught. At the time of the final interview, it was the athletics season.

PRE-SERVICE P.E. TEACHER A: I put on Dropbox a pacing lesson for 800 m. It is interesting what they might want to plan.

INTERVIEWER: So some P.E. students won't have an athletics background.

PRE-SERVICE P.E. TEACHER A: or have already taught it and it has gone well and they think what ideas have you already done as you have already taught it and then share it around.

In terms of fostering opportunities for sharing practice or brokering ideas from their school placement to another school placement through the community of pre-service P.E. teachers, the Facebook home page led to participation by all of the pre-service P.E. teachers as they looked to develop the knowledge and skills needed to achieve qualified teacher status. Through their participation in the Facebook page and as part of the community of practice, they agreed ways to help each other with the demands on the subject knowledge. This is something that is quite challenging to pre-service P.E. teachers as there are so many sports, gendered sports in particular, in which they are expected to be knowledgeable and this presents a problem that is different to some pre-service teachers of other subjects.

PRE-SERVICE P.E. TEACHER A: We all agreed on there, we would take a five minute session into our lectures that you would teach my subject specialism within P.E. is dance but no-one else is, so I took in a mini-lesson plan based around a choreographer called Cunningham's theory. It's where you roll a dice and a number relates

to a specific movement and you can use it through any element of dance as a way of developing a lesson. We agreed that we would post our lesson plans on Facebook to let everyone go back and have the chance to adapt for everyone's particular weaknesses that they have got.

Although the role of more knowledgeable other (Vygotsky, 1978) was seen in the literature review to be a likely feature of the communities of practice (Wenger, 1998), what was not perceived was that some of the 'subjects' around which school based learning is centred in the UK would place different demands on some pre-service teachers in their roles as more knowledgeable others. The pre-service modern languages teachers have similar issues – in the UK, there is often insufficient demand for a single language modern languages teacher within a school and thus to make up a full timetable of teaching they are expected to teach more than one language. Thus the real risk and challenge for pre-service modern languages teachers is the third and fourth languages which they are also required to teach. Within a group of pre-service modern languages teachers, they share the expertise across the common languages learned and so they share opportunities to develop these languages through the community of practice.

PRE-SERVICE MODERN LANGUAGES TEACHER B: We exchange ideas about the language show or other seminars that are coming up.

Professional pre-service modern language teachers have to be rapidly developing those third and fourth languages, showing evidence of this process and collectively they can help each other achieve that aim and present the necessary teacher competence for the QTS award and further – to develop their habitus for unknown language challenges in future employment.

For some specific subjects of pre-service teachers, what became clear is that having to have multiple subject knowledge is part of the expected professionalism. This can be challenging if one's degree or knowledge is in a related but different area – such as modern languages.

INTERVIEWER: When you have to teach more than one language?

PRE-SERVICE MODERN LANGUAGES TEACHER B: If it is outside the main specialism occasionally when it is a higher level task you want to make sure that it is right and asking one of the main French trainee teachers was really useful to be able to do that quickly.

Here is an example of where a pre-service teacher community can offer the opportunity of sharing ideas from other communities to participants through private social media so that they can address the conceptualisation of the teaching experience which they have planned. It has been established in this study that some of the pre-service teacher subject groups have a greater reliance on others for ideas about teaching which are centred on specific topics. This is because in some subjects, the first challenge is to develop specific knowledge from a finite range such as that of sports. In the first interview, pre-service P.E. teacher A had a clear idea about how her group would be sharing ideas around teaching.

PRE-SERVICE P.E. TEACHER A: I assume as we get more lessons to teach and you don't see your group [of fellow pre-service teachers] as much you are likely to put on Facebook have you have got this specialism in PE, can you send me over a few ideas? At my school they give you schemes of work and you can model it based around that and probably share across Facebook then. I know that some people do have dance and gymnastics coming up which are my specialisms so they have already asked me when it comes to that can we share information.

Although this need to share resources helps with workload management and reduction of risks, there has also been established a marketisation of education and with increased reluctance for the sharing of resources with 'competitors'. In the pre-service English teachers' reflections, it could be seen that some schools' leadership teams did not approve of the sharing of resources. What this study is showing is that the greater the risk presented to the pre-service teacher, the more privacy that is selected by the pre-service teachers for their

private social media interactions – or, in this case, the sharing of resources that have been appropriated from other communities.

Pre-service modern languages teacher C voiced a concern – that resource sharing carries a risk and exposes the pre-service teacher to a tension between the professionalism as defined by the school (professionals do not share resources) and the professionalism defined by the group of pre-service modern languages teachers (professionals share resources to reduce workload.)

PRE-SERVICE MODERN LANGUAGES TEACHER C: It is because I am not happy uploading material onto Facebook so we have been talking about alternatives perhaps using Dropbox because it would be a nice sharing platform but I sense that might become more frequent as our workload goes up. Some of us have been talking about sharing our resources as we have French, German and Spanish within the PGCE so that we don't have to make everything from scratch as it saves time for all of us. As we are teaching more we will have a lot more materials and when you put things on Facebook it belongs to everyone, so we prefer to do it via email or Dropbox.

In this interview, there is a tension between the pre-service modern language teachers accepted need for additional resources to help reduce workload when developing not just second languages, but third and fourth languages, and the inherent risks associated with openly sharing resources through Facebook – even if it is a 'closed community'. There is evidence of a community of practice at work here – a community that wants to collaborate and as established by Wenger, "...develop new knowledge on a topic through regular interaction." (Wenger, McDermott and Snyder, 2007, p.4) but one which also has to manage the risks involved in developing the new knowledge. The answer is to use the privacy afforded by social media to help the community achieve its core enterprise.

### **Issues and challenges in relation to achieving the core enterprise**

The construction of professionalism as part of being a qualified teacher can be seen as one of the challenges for the pre-service teacher community of practice and its core enterprise, and the different interpretations around teacher professionalism are part of that. Reviewing the idea that private social networking can be seen as disruptive and subversive with the neo-liberal perspective (Hall and McGinity, 2015) that pervades schools and teacher education then privacy is a central part of that ability for disruptive collaboration. The pre-service P.E. teacher, for example, raised the need for social networking that does not involve the university tutor and there is a sense that collectively, the group of pre-service teachers can resolve problems without alerting the tutor to the fact that these problems exist.

PRE-SERVICE P.E. TEACHER A: We have Glassboard as well but that is open to our tutor but the Facebook is closed.

INTERVIEWER: Is that something that appealed to you, having a closed space whether neither school or university staff are participating but only you as students?

PRE-SERVICE P.E. TEACHER A: If anyone has a concern that does not need to go the tutor then you can deal with it in your group rather than get anyone else involved, usually its small issues.

To fulfil the core enterprise of becoming a qualified teacher this community was looking to resolve problems through shared practice and ideas, to offer brokerage to each other and to not reveal to the course tutor that they needed such support. Part of the identity of these pre-service teachers is about establishing a form of authority and confidence in order to better become teachers. For example, in interview three, pre-service P.E. teacher A reflected that the pre-service P.E. teachers are not always allowed to teach using the ideas about teaching P.E. that they have collectively learned. In the case of physical education, this referred to the teaching of games for understanding (TGU).

PRE-SERVICE P.E. TEACHER A: I know that some of the other student's mentors will not even allow them to implement it and see if

the strategy works as they say “No it doesn’t work and this is the way we do it in this school and we want you to follow our structure”. Then we are saying that if we can’t do it and then if we get moderated on it when [P.E. SUBJECT TUTOR’S NAME] comes in and if we are not implementing new strategies then, what is the final outcome going to be?

Clearly there is a risk inherent here. The subject tutor for physical education will be visiting as part of the Quality Assurance policy and the pre-service P.E. teachers are worrying that they will have to demonstrate the ‘new strategies’ or ideas about teaching, that they have developed in subject sessions through the subject tutor’s tutelage to them of the ideas around TGU and that because of the restrictions within their school placement these new ideas about teaching cannot be explored. The pre-service P.E. teachers have clearly subsumed the idea that a professional teacher should have knowledge of and be ‘implementing new strategies’ and are now at a loss about how to manage this challenge if they are in a school where they cannot do so.

This topic of teaching games for understanding was returned to in the final interview to see how the pre-service P.E. teachers had managed the challenge involved in demonstrating new ideas about teaching. The disruption caused by the online interactions around this tension between schools not wanting to use TGU and the pre-service P.E. teachers’ (university subject tutor driven) interest in this pedagogy seem to demonstrate that schools can change their approach to teaching through their involvement with pre-service teachers who broker ideas from outside the school.

INTERVIEWER: In P.E. there was some tension in teaching games for understanding. Is this still an on-going issue?

PRE-SERVICE P.E. TEACHER A: No, not really as the schools have started to adapt to it in taking on some of the ideas. They are still a bit funny with starting with a practice session because even though you pose a question about game time they are not really thinking about it not really learning from it until they have gone back into the conditioned game. There are still queries over this, but they are up

for trying it and with some groups it really worked as we have setted the groups as before they were mixed ability. It would not have worked so well, but now the groups are setted into high and lower ability, it is working better.

What this shows is that as a community of practitioners the pre-service P.E. teachers developed their sense of self-efficacy in the nature of teaching games for understanding. They have taken this self-efficacy and used it to broker the ideas about teaching at their school placements and thus allow the pre-service P.E. teachers to demonstrate teacher competence in this area. Part of the group's practice must be seen then as being able to broker some of the ideas that exist within the community to the constellation of communities within which they exist – in which the school placement is one such constellation.

Some of the issues and challenges that were faced by the pre-service teachers enabled some of the pre-service teachers to undertake low key interventions which could be seen as legitimate peripheral participation (Wenger, 1998), but were still contributing to the core enterprise of helping members of the community achieve their aim of being qualified teachers. In the first interview, pre-service P.E teacher A reflected on the early logistical needs of pre-service P.E. teachers – having the correct kit, being in the correct room, what to bring to the lecture and so forth, but who was actually describing how through legitimate peripheral participation (Lave and Wenger, 1991) the group members established a collective understanding of what the community was there for

PRE-SERVICE P.E. TEACHER A: We were talking about kit the other week as there is a new kit gone up on BREO so if anyone wants it you can order it. People would say they hadn't received the email so can you forward it to me. It's so that everyone gets the same uniform. Also we had a change of room last week and not everyone knew about it and there was one person walking towards the original room and there was already a lecture going on in there, so we just posted on Facebook that we changed rooms to P1.01 The person picked it up through a push notification on the phone and they found the correct room.



At a minor level, individual pre-service P.E. teachers are meeting requirements such as having the correct kit or turning up to the room on time. Although this seems minor, it makes pre-service P.E. teachers *reassured* that they can rely on private social media interactions to support their ability to meet these challenges that pre-service teachers habitually face on a teacher education course. If they are to move to what Wenger says is a community of practice "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5), then part of these seemingly minor behavioural actions: organised, cooperative, committed to punctuality, preparedness and learning are all part of the community's ability to function and deliver the core enterprise. The early exchanges within the establishment of a community of practice are about communication between the university and the pre-service teachers. There are clearly gaps where pre-service teachers are not receiving emails or communication and thus would ordinarily miss out. Using Facebook to share the communications ensures there is a second information stream for these pre-service teachers which acts as a check on the information that they are receiving.

PRE-SERVICE MODERN LANGUAGES TEACHER B: We keep up-to-date with emails that perhaps people have not read as not all of us receive the uni emails to our phones. We post on Facebook that we have received this information from the university and this needs to be done. Also reminding people about lectures.

Analysis of this extract shows that it can be seen that both the pre-service P.E. teachers and the pre-service modern languages teachers are using private social media to reinforce behaviours and attitudes within the community as well as be helpful to each other.

The way they interact with their mentors is also part of the socially networked community as they try to get to grips with mentor/mentee relationships at the start of the school placement. For example, pre-service modern languages teacher B was able to articulate her problem with not having a mentor and still feel part of the community in setting out the practices and approaches.

PRE-SERVICE MODERN LANGUAGES TEACHER B: They knew it because they posted as they asked me how my new school was and how my mentor was. I told them I did not have a mentor and they asked 'how come?' and I asked them and they had fantastic experiences which I preferred to listen to rather than mine as I didn't have any.

The pre-service teachers are clearly reflecting on their school and mentor experiences as a group and this allows the pre-service modern languages teacher to tap into other pre-service teachers' reflections and allow her to consider her own in contrast. It also enables her to form a sense of what different notions of professionalism are being presented and how they are being approached. Without a mentor, her image of a professional teacher has no external to be presented to and assessed by and this was an issue she resolved by following the interactions through the closed social media community. Although she herself was not undergoing the process, she could see that the process was occurring and how others were adapting to their new schools and mentors and thus become familiar with the process that she was not experiencing.

Pre-service modern languages teacher B reflected on the difference between face to face and virtual interactions within their community of practice. To her it is that face to face interactions are more about social needs – to be able to 'vent', relax and socialise. The private social media interaction tends to be about saving time and improving one's teaching.

PRE-SERVICE MODERN LANGUAGES TEACHER B: On Fridays we usually go out together and let off steam. On Facebook it is usually schemes of work that have to be done.

Although to the pre-service modern language teachers it appears to be a simple social event, this compares to what this study has revealed with the pre-service English teachers; that what happens is there are opportunities to share practice, reflect and broker ideas from other communities about teaching within these face to face interactions. In addition, the 'letting off of steam' has been clearly identified as a way of requesting help with a situation and asking the

group to collaborate in order to help deliver ideas or approaches from their collected knowledge and access to other communities leading them to new solutions or risk management strategies. Thus the private social media interactions of the community still mirror and influences the physical community as they offer opportunities to develop ideas about teaching as well as network socially in the pursuit of becoming a qualified teacher.

The challenge in collating and identifying good resources as shared practice in the pre-service teachers' online communities is seen throughout all of the communities of pre-service teachers within this study and it was no different for the pre-service modern language teachers. The use of Dropbox was set out as a resource based aspect of the community for the pre-service modern languages teachers.

PRE-SERVICE MODERN LANGUAGES TEACHER B: We have started to us Dropbox if someone has a resource that they want to share.

Yet, there is a difference here between the different pre-service subject teachers. Where knowledge of specific subjects is required, then Dropbox seems to be set up. However, some of the subjects such as the pre-service English teachers did not need a resource bank, but a group of skilled researchers or members of a community with access to school based resources. Thus the sharing of practice to help pre-service teachers overcoming issues and challenges in becoming a qualified teacher is as much about being able to bring access to resources synchronously as well as asynchronously and this is a major feature of private social networking – the ability to provide online community members ready to help.

All pre-service teachers have to undergo regular quality assurance (QA) checks of their progress against the Teachers' Standards (DfE, 2013) including professionalism as part of the challenge in becoming a qualified teacher. On the course within this study, each pre-service teacher was visited for QA in each of their school placements by a university tutor. What this study has found is the private social networking features of the community of practice enables a pre-service teacher to manage the challenge involved in this process. In interview

two, pre-service P.E. teacher B spoke about the formal observation, but also the place that the closed social networking had in this observation.

PRE-SERVICE P.E. TEACHER B: I was the last person to be observed, so I was nervous and everyone said no you will be fine as it is the same as the observation that you have in school. It made it a better experience for me. We set up a Dropbox so that everyone puts in their lesson plans each week and resources. Everyone has a different specialism so that you can pull out the relevant resources plus any that people have got from their schools.

In this interview, it can be seen that in the opinion of pre-service P.E. teacher B, the ability to reflect collectively and get reassurance over her perception of the assessment experience ‘...made it a better experience for me...’ As Johnson *et al.* found, the constellation within this pre-service P.E. teacher’s networks has helped, “...advance a professional’s well-being and professional competence” (Johnson *et al.*, 2013, p.1). Thus the outcome of this formal observation could well be influenced by the fact that the pre-service P.E. teacher is fully aware of the other observations and the ways her fellow pre-service teachers have managed the challenge and their outcomes. This collective experience is being used to help influence the outcome of her formal observation and her subsequent assessment against the professionalism Teachers’ Standards (DfE, 2013). Without a specific layer of privacy, this would not be possible – this pre-service P.E. teacher has exchanged privacy for the support afforded by social networking.

Part of the shared practice of the communities for the pre-service teachers is clearly to resolve workload issues and part of the workload requirement for a pre-service teacher is that of the PGCE academic award. In interview three, pre-service P.E. A teacher talks about how private social media interactions have made her change her approach to managing the workload demands of her academic work.

PRE-SERVICE P.E. TEACHER A: It’s just general comments. I started rather late, so it made me nervous as they had already started or were half way through.

INTERVIEWER: So when you saw comments on Facebook that they were half way through?

PRE-SERVICE P.E. TEACHER A: I thought the deadline is coming sooner so I better start.

Thus in even quite minor ways, the community seeks to establish a 'body of...common practices' (Wenger, McDermott and Snyder, 2007, pp.4-5) and those common practices are about being organised around balancing workload and assessment requirements: challenges that an established teacher has to meet let alone a pre-service teacher. For pre-service P.E. teacher A, reflecting on her peers' organisation of their workload forms part of her development as a teacher.

### **Shared Practices**

The use of private social media by the pre-service teachers enabled them to share practices with each other and this was particularly true where pre-service teachers were going through similar experiences in the different chronological stages of the one year PGCE course that they were all on. In the second interview at the end of their first school placement, the pre-service teachers in this interview were undergoing similar experiences such as their first formal QA teaching observation and here pre-service modern language teacher A reflects on this important part in the achievement of being a qualified teacher.

PRE-SERVICE MODERN LANGUAGES TEACHER A: It tends to be pastoral. We have talked a lot about the teaching observation, especially about how they feel about it afterwards.

INTERVIEWER: Can you give me an example?

PRE-SERVICE MODERN LANGUAGES TEACHER A: It is partly practical, what do I need to remember to bring? Do I have the wrong idea about what it is about, what happened on the day and how do you feel about it? Someone will say I had an observation with the Subject Leader or someone in the school and someone will say practically this and this happened and I was a lot less nervous then I

thought I would be or I didn't really feel tested. This has been happening more as we have all been going through observations.

The reflection within the community of practice around the QA process happens through private social media with opportunities to share new ideas about how to approach the process. That need for opportunities is driven by achievement of the core enterprise – the successful completion of the pre-service teacher education, in this case the formal observation, and the outcome is enhanced self-efficacy during the process '...a lot less nervous', and teacher competence, '...I didn't really feel tested'.

At this point in the interview, the interview process begins to generate reflexivity as the pre-service computer science teacher began to "...question our ways of doing" (Hibbert, Coupland and Macintosh, 2010, p.48) and became aware that this reflection and development of ideas about teaching could be on offer. He suggests that his group, without their Facebook homepage and only using Glassboard, are only focused on practical issues rather than the processes of engagement, support and so forth. He reflected on the fact that he sees the pre-service modern languages teachers in physical social situations and actually values the place of social networks, both physical and virtual, in the life of a pre-service teacher.

PRE-SERVICE COMPUTER SCIENCE TEACHER B: For me, it has been the face to face friendships and mixing more with the language group and I am often in the pub with them, but I have not mixed with the computer guys which I find strange as they are very insular but fine but talk about computing but not the wider issues. When I mix with the language guys we are actually taking about teaching issues, and these things are better for me to learn about. The IT side of things I get from the staff at the school. The social groups have really turned around in the last month.

In this interview, there is evidence that the pre-service computer science teacher reiterates what the pre-service English teachers said: that successful physical social events offer opportunities for what can be described as sharing of practice and brokerage of ideas from other communities. Although the pre-

service computer science teachers communicate online and physically around subject knowledge in the role of more knowledgeable other, for pre-service computer science teacher B they were not broadening the topics of reflection to look at how each of them approaches teaching issues. This second interview was conducted at the end of placement one which precedes an extended break in which the pre-service teachers have no formal interaction with each other, their schools or the university. The pre-service teachers have said that that there exists a relationship between private social media interactions and face to face interactions and the fact that the pre-service teachers would not be seeing each other meant that opportunities for reflection, shared practice and brokerage of ideas from other communities had to be organised through social media:

PRE-SERVICE P.E. TEACHER B: Next Friday we are going out for a Christmas meal which has been planned over Facebook as we know that we are not going to see each other.

Once again, the challenge of ensuring a successful social event is enhanced by the use of social media and this can then lead to successful opportunities for the pre-service teachers to exchange reflection, experience support or share practice and have opportunity for brokerage of alternative ideas and approaches from the different school communities that the pre-service teachers have access to.

Pre-service computer science teacher B is similar in some ways to pre-service mathematics teacher C who valued and wanted an online group to help provide her with the opportunities that comes from being in a private social media based community of practice and who faced a challenge in finding such access. Like pre-service mathematics teacher C, in this interview pre-service computer science teacher C reflects on how he set up a Facebook account in order to access the interaction from an alternative cluster based Facebook community of practice.

PRE-SERVICE COMPUTER SCIENCE TEACHER C: I have got a Facebook account now. I have changed cluster and the old cluster does have a Facebook set up so I am using that to keep in contact

with them. We have arranged a meal out and I can see the use for that as I will be going back to that cluster at some point. It's good to keep pace with the gossip.

The transcripts suggest that the reflective nature of the methodology in this study has affected pre-service computer science teacher C as he values the social side as well as the logistical side and has set up a Facebook account. The shift to create a Facebook account means that he has moved towards social networking, including access to the constellations of clusters that both Wenger (1998) and Holland, Middleton and Uys (2012) referred to as he can see that they give him access to closed social media interactions of the communities and thus access to the core enterprise of becoming a qualified teacher.

In interview 4, it became apparent there was a tension between the pre-service P.E. teachers and their placement schools in that the pre-service teachers found that instead of hiring qualified P.E. teachers who adopted the professional attribute of knowing a wide range of topics and sports, the schools were eroding the notion of 'physical education' by the use of sports coaches in the place of qualified P.E. teachers.

PRE-SERVICE P.E. TEACHER A: At the moment schools are buying in sports coaches rather than P.E. teachers as it is cheaper. Sports coaches are OK for after school clubs where you want to learn hockey as they only know one particular sport. Within PE, it's not just about teaching that one sport it's the education and theory behind it as well so they are learning the tactical approach and concept rather than knowing that rugby, hockey, netball come under one umbrella as invasion games rather than this is how you play hockey you cannot transfer it to any other sport as that is not the case.

INTERVIEWER: Have P.E. teachers talked about the fact that an unqualified version of a P.E. teacher is coming into schools?

PRE-SERVICE P.E. TEACHER A: It's more because they are cheaper as they bring them in for the scheduled timetable and



schools are OK with the fact that the children are active and learning, but what we are finding is that they are not learning as much as they could be as the sports coaches don't have the pedagogical knowledge and the background behind it. They just teach for sport's sake and keeping them active rather than anything else. Everyone in the group is saying you need to have the background behind it.

It is clear that the telling phrase is 'everyone in the group is saying...' Thus in pursuit of the core enterprise of being qualified P.E. teachers, the pre-service P.E. teachers are constructing ideas around the teaching of physical education that have emerged around the concept of the professional teacher which is in opposition to the managerialism (Hall and McGinity, 2015) strategies being deployed through the schools themselves in which they are hiring sports coaches rather than qualified P.E. teachers.

### **Behaviour management**

In the literature review, it was suggested (Ofsted, 2014), (DfE, 2016), that Teachers' Standard Seven, behaviour management, was a higher risk for pre-service teachers than other of the Teachers' Standards (DfE, 2013) and thus could appear in the pre-service teachers' social media interactions as they tried to manage the enhanced risk. Pre-service modern languages teacher B reflected that her community reflected around behaviour management – a theme that was present in all the pre-service teacher groups.

PRE-SERVICE MODERN LANGUAGES TEACHER B: It [content of private social media interactions] could be a behavioural issue and we don't have the right experience yet to handle the behaviour quick enough which can begin to escalate in the class. We have been talking about where it has gone wrong and where it could have been improved.

Collectively, then, the pre-service modern languages teachers are reflecting on behaviour management through liaising with the group through private social media interactions and are offering ideas around behaviour management to each other in order to build the habitus of community members.

In the early interviews, the pre-service teachers did not always see that they were reflecting on things like behaviour management. However, in the first interview it is evident that pre-service P.E. teacher A, despite dismissing the social media as 'general chat' and suggests 'no-one has any real problems', is reflecting on the fact that the pre-service P.E. teachers compared schools comprehensively as well as how she brought an account of an incident of violence to the community for discussion.

PRE-SERVICE P.E. TEACHER A: At the moment no-one has had any real problems with their school which is positive. In the first few weeks it was what is your school like? What is your timetable like? So it was more comparing, what are your year groups like. Are they boys or girls or mixed, ability groups? Within P.E. some groups put them in ability groups according to their fitness levels, they will do two weeks of lots of different sports and they put out groups for various team sports that you normally play within a school. We talk about the strengths and weaknesses of those methods. Also classroom management as some of us are in tougher schools than others. Two children had a fight in my lesson and I questioned how other people would have dealt with it. Who did you get involved and who did you have to go to? I think I am the first person to have dealt with this situation. P.E. you don't necessarily have a TA in with you for EAL so it is how to overcome those obstacles using resource cards and demonstrations but some people have experienced that more than others. So they will post that and they will come back with ideas, so it is more of a general chat.

Thus, for 'general chat' it can be seen that the pre-service P.E. teachers are actually comparing how the different schools approach the subject of P.E. and indeed how these ideas about teaching are shared across the group from a very early stage and this includes behaviour management as the community seeks, through its core enterprise of becoming a qualified teacher, to reflect and develop ideas about this aspect of professionalism through sharing practice and also offering ideas from their school communities which they could broker to other members of the pre-service teacher community.

## **5.7 Summary**

Overall, the findings have not just explored the data from the interviews, the themes which emerged and how these findings have provided evidence to how the different pre-service teachers have used private social media interactions to help achieve the core enterprise of becoming a qualified teacher. What the findings have also done is set out the similarities and differences between each pre-service teacher community of practice and how they used private social media interactions as part of their community of practice. There is evidence of pre-service teachers sharing practice, of providing brokerage to and from schools, such as the pre-service P.E. teachers in their difficulties with TGU and of some of the distinct challenges faced by specific subject communities practice such as the pre-service modern language teachers whose community included members from other countries.

## **Chapter 6 Discussion**

In this chapter, a review and contextualisation of the key themes which emerged after the annotation and analysis of the first interviews and which were used to explore the findings is presented and positioned within the findings from the literature. From there, the research questions which were posited at the start of the study are addressed with findings from all six communities of practice drawn together for discussion and there are clear outcomes in terms of the how and what private social media interactions are used with an extended discussion on how such interactions have interacted with the relationship between schools and pre-service teachers. From this discussion, a conceptual model explaining how the pre-service teachers use private social media to help their core enterprise of becoming a qualified teacher is offered in diagrammatic form and then explained. The different components of the HEI ITE pre-service teachers' course, school placement and development of both their current and future challenges are all shown to be affected by the use of private social media. Reasons for the use of private social media over public social media or HEI offered VLEs are offered.

Strengths and limitations of the study are also discussed in this chapter as investigating a discourse that was 'private' meant that the methodology had to influence the participants as little as possible whilst still revealing the nature of the interactions as the different communities functioned through private social media. This leads to a discussion setting out the next steps in this research in terms of conceptualising how to study private social media communities of practice made up of early teachers over a longitudinal period of time. Finally, the contribution this study makes to the body of knowledge in terms of illuminating why pre-service teachers eschew HEI VLEs in favour of private social media, in particular within the context of the variety of school types that they are placed in during their course is discussed.

### **6.1 Reviewing the themes**

The themes which emerged from annotation and analysis of first interviews are, as set out on p.79:

- Establishment of a community of practice

- Achieving the core enterprise of the community
  - Brokerage within the community
  - More knowledgeable others as brokers
  - Issues and challenges in relation to achieving the core enterprise
  - Shared practices
  - Behaviour Management

The emergence of these themes (see appendix 5) was instrumental in influencing various stages of the study from interviews 2-4 and in terms of analysing the findings. The themes emerged within a context of the literature review and a theoretical framework built upon Wenger's theory of communities of practice (Wenger, 1998). Before revisiting the research questions, it is worth discussing the themes and positioning the findings within these themes.

### **Establishment of a community of practice**

As set out in the literature review in 3.2., it is quite usual for communities to drive learning through legitimate peripheral participation (Wenger, 1998, p.96), but the advent of private social media as part of the legitimate peripheral participation is a new element which is forming part of this study of the practices of pre-service teachers. The participants in the interviews sometimes did not see their private social media interactions as particularly important, with the pre-service P.E. teacher dismissing them as "general chat" such as in p.190, but at the same time describing private social media interactions where the community was comparing schools and experiences to investigate what is common and what is different across schools, such as in p.189, reinforcing what Wenger describes as a community of practice, "...a body of common knowledge, practices and approach" (Wenger, McDermott and Snyder, 2007, pp.4-5). Many of the private social media interactions were seen as quite simple by the participants in the interviews, referring to where to go, what to bring and so on, such as in p.170 and p.180, and these are clear examples of legitimate peripheral participation (Lave and Wenger, 1991) as the community members facilitated the wider community with simple, but helpful shared knowledge and

practice. If pre-service teachers on a course are accessing more shared practice, more support and more brokerage of ideas from other communities than a minority of others on the course then then this can redefine the bar or standard of teacher expected by the ITE provider and the host school placements and indeed variable mentors (p.179), expectations (p.148) and flexibility (pp.162-163) were reported within the participants of the study with direct references from the pre-service P.E. teachers as to the role of private social media interactions in facilitating change (pp.177-178). However, the existence of a private social media group is reliant on a member of a group creating it and subsequent joiners of the group interacting within it. It is not something the pre-service teachers are obliged or even asked to do as part of their teacher education. It is a practice that has 'emerged' as participants see there is something to gain from being a member: as Wenger says, they access 'new learning' (Wenger, 1998) and perhaps a development or extension of their habitus (Bourdieu, 1977) which is transferable from one context to another. This ensures teachers are not restricted to being competent in one context, but can apply their competence and ability to teach to other schools or contexts. What this study is demonstrating is that some teachers are managing the challenges of the New Public Management (Hall and McGinity, 2015) approach and the increase in workload (Morgan, 2016), (DfE, 2016) via the development of habitus partly through access to private social media interactions as they establish a pre-service teacher community of practice such as the pre-service English teachers set out on p.135. If pre-service teachers do not access the private social media interactions within the pre-service teacher community of practice or are unsuccessful in establishing such a community then they could find themselves with habitus that has not been developed in this way and potentially less ability to manage the issues and challenges of becoming qualified teachers and indeed staying in the profession. The findings clearly demonstrated pre-service teachers, such as pre-service mathematics teacher C did on p.151, saw the establishment of a community of practice through private social media interactions as a way to help develop the core enterprise. This idea of the private social media interactions and, by extension, the establishment of a community of practice through private social media interactions being a form of support can be highlighted best through considering

the pre-service science teacher who did not interact online through private social media. This pre-service science teacher left the course before its end and the participants in the study reflected (p.98) that they thought if they had got this pre-service science teacher interacting through private social media earlier then they could have “supported her better.” The pre-service science teacher had been struggling with workload and the concept of using private social media interactions to resolve workload issues was raised frequently, such as on p.183, across all of the pre-service teacher communities reinforcing the national debate around how teachers can manage workload (Morgan, 2016), (DfE, 2016). The pre-service science teachers in this study set out how they were sharing practice and indeed brokering ideas from other communities such as science experiments (pp.103-104), within private social media interactions. This sharing of practice was evidently affecting their practice and the way they were managing their development as teachers. However, what is clear it that the establishment of a closed space in social media for the community is not something that happens through institutional direction or indeed from community of practice direction. Rather, there is a clear set of processes which lead to the establishment of the community through private social media interactions and these can be found through recognising the role that legitimate peripheral participation (Lave and Wenger, 1991) plays in the emergence and establishment of the community as part of normal problem solving approach that a pre-service teacher brings to the new community of practice.

### **Achieving the core enterprise of the community**

The second key theme which emerged from the annotation and analysis of the first interviews was the notion of achieving the core enterprise of the community and the parts and actions that went towards this. In Wenger’s theory of communities of practice there is a very clear definition of the core enterprise:

“[the core enterprise] is defined by the participants in the very process of pursuing it. It is their negotiated response to their situation and thus belongs to them in a profound sense, in spite of all the forces and influences that are beyond their control.”

(Wenger, 1998, p.77)

In the literature review section 3.3.1, it was identified that whilst the pre-service teachers had come together with a clear purpose, to become qualified teachers through attaining the post graduate certificate in education and qualified teacher status, there were also opportunities to develop their expertise as teachers beyond the course itself. Previous research into social media and its role in this process had been limited by insider research issues (Kontopoulou and Fox, 2015), but it remained that, as Pedder, James and MacBeath (2005) established, the identity of these teachers is expanded through collaborative activity. This study has used Wenger's ideas to explore that collaborative activity which contributes to achieving the core enterprise of the communities of practice in pre-service teachers. This involved using some of the terms from his concept of communities of practice, as set out in section 3.4.2., such as brokerage, the sharing of practice rather than brokerage and the idea of more knowledgeable others (Vygotsky, 1978) which Wenger uses in his work.

Whilst the study was focused on the journey of pre-service teachers into becoming professionally qualified teachers, this professionalism applied not just to the pre-service teachers' endeavours on their school placement, but also in the university sessions and their formal academic assessments. The core enterprise of becoming a qualified teacher involved completing a PGCE as well as attaining QTS and thus the pre-service teachers used private social media interactions to help this feature also. They discussed and shared knowledge about when and where to be at formal training events, with the correct preparation and documents, so that participants in these private social interactions presented a strong professional approach to their work. This even went so far as affecting the way participants went about approaching their academic work with the pre-service P.E. teacher adapting their schedule to begin work earlier (p.171) and the pre-service English teachers holding a Messenger conversation in parallel to working on their academic work (p.131). Achieving the core enterprise of becoming a qualified teacher was thus more complex and could be broken down into some different components using the knowledge gained from the literature review around Wenger's communities of practice (1998) and the work and political context within which the pre-service



teachers were operating. As set out on p.79, the annotation and analysis of the first interviews around the notion of achieving the core enterprise of the community led to the following five themes within the notion of the achieving the core enterprise:

- Brokerage within the community
- More knowledgeable others as brokers
- Issues and challenges in relation to achieving the core enterprise
- Shared practices
- Behaviour Management

### **Brokerage within the community**

Wenger set out that communities of practice require 'brokers' who broker ideas from one community to another whilst they are in pursuit of their 'core enterprise' (Wenger, 1998, p.77). Sometimes, the pre-service teachers discussed precise incidents around professionalism from school to school. For example, the way a school handled an issue of behavioural management and whether this was considered professional was explored by pre-service English teachers, but only within a selected Messenger group rather than through the private Facebook page (p.146). This selected group meant that there was a relationship between privacy and the nature of the discussion about professionalism. Although, studies have already demonstrated that online communities of pre-service teachers function effectively (Hramiak, 2010; Boulton and Hramiak, 2012), these are open communities rather than private. What this study is demonstrating is that the private nature of the communities is leading to the habitus of pre-service teachers being developed and in particular in areas where the schools are very fixed in their ideas about how teaching should be done; for example, behaviour management, pedagogical approaches and reduced autonomy (Parker, 2015). This aspect of 'situated learning' concerned both Lave and Wenger (1991) and they readily saw it as an aspect of limitation which could be overcome by a community of practice as demonstrated by the pre-service teachers in their private social media

interactions. From an early stage in this study, the notion that brokerage occurred stood out quite clearly against a background of situated learning.

### **More knowledgeable others as brokers**

Wenger drew upon Vygotsky's notion of how learning occurs in collaboration with more knowledgeable others (Vygotsky, 1978) in his theory of communities of practice and this theme came through quite clearly as part of the pre-service teachers achieving the core enterprise. For example, one of the features that emerged from this study pertaining to achieving the core enterprise was that, as Parker (2015) had found, some schools offered teachers less autonomy. When moving placement from one school to another there were examples of pre-service teachers finding this transition, from having autonomy in one school placement to having their autonomy restricted in a second school placement, challenging, such as the pre-service English teacher on p.134 and the pre-service maths teacher on pp.162-163. Having the ability to discuss this challenge through private social media interactions with a pre-service teacher who had already experienced the placement and who was in a position to act as a broker to help their peer transition to the professional expectations at the new school placement was clearly beneficial for the pre-service teachers as evidenced by the pre-service English teacher on p.134.

Pre-service teachers, on their school placements as part of an ITE course, have to balance the situational pedagogy mandated by the schools with the fact that they are learning through their communities of practice, both through private social media and face to face interactions, the knowledge that there are a range of pedagogies which could be deployed in other school placements. To learn only one theory of practice is to not be prepared for schools where different theories of practice are used or needed. This presents a future challenge for pre-service teachers who might, in their first few years of working, find themselves in a school in which a different pedagogical approach is needed and thus requiring a habitus which can help them with such a challenge. At the same time, the professional identity presented by the pre-service teacher to their placement school must fit with the ethos and approach mandated by the placement school as set out in part two of the Teachers' Standards (DfE, 2013).

This professional identity is not the same professional identity as one presented in a contrasting teacher placement. Pre-service teachers, then, must learn how to present different identities to different formal institutions as part of becoming professional teachers as set out by Hall and McGinity (2015) and Parker (2015) and the pre-service teachers frequently referred to the need to be prepared for unknown future schools such as for the pre-service English teacher on p.132 and p.149.

### **Issues and challenges in relation to achieving the core enterprise**

The literature review revealed that the theme of collaboration was isolated by a range of researchers (Vygotsky, 1978; Wenger 1998; Davies *et al.*, 2005; Kelly, 2011; Kim and Sin, 2016; Tseng and Kuo, 2014) and also an educational minister (DfE, 2015; Morgan, 2016) as something that helps those working in education share ideas and improves practice. One of the issues related to school experience raised by the pre-service teachers was that their specific desires to foster collaboration, to reduce workload, to help fellow teachers improve the teaching of all pupils and to discuss the validity of ideas, conflicted with some of their placement schools' notions of professionalism. In short, for some of the pre-service teachers in this study, their placement schools did not approve of them sharing school resources. Although this conflict reinforces Lave and Wenger's ideas (1991) about masters and apprentices in the way apprentices in their study would share knowledge with each other, it goes further – the pre-service English teachers talk about 'surreptitiously' helping each other with the subtext being that their schools would not approve (p.135). From this study, there is clearly evidence that some schools have specific ideas about approaches to teaching and whether teachers should be sharing ideas and resources about teaching with teachers from other schools. Overall, this theme occurred where issues of autonomy occurred and part of the resolution was that private social media interactions could help facilitate problem solving towards the issue such as with the pre-service P.E. teachers (p.177).

### **Shared practices**

As set out in the literature review, it is not just brokerage which occurs when a community collaborates in order to achieve the core enterprise. Sometimes it is

smaller, simpler interactions such as legitimate peripheral participation (Lave and Wenger, 1991). For pre-service teachers these were centred on the sharing of practice and approaches to teaching. It is not enough for the pre-service teachers to just develop their habitus; in addition they have to manage the relationships with other teachers at their institutions. Yet, interaction whilst in the guise of that identity could therefore limit 'new learning' as contrasting pedagogies cannot always be freely explored if some of those pedagogies contradict the ideology of the institution as seen by the pre-service English teachers on p.134 and the pre-service P.E. teachers on p.187. What this study has shown is that pre-service teachers in this type of situation need a space and access to practice shared by more knowledgeable others with whom they can explore or broker ideas from other communities when needed and where they can remove the limits of the teacher identity, interact with others and stimulate new learning – and just such a space exists in private social media. For example, what was seen with the pre-service English teachers is that the more they revealed of their experiences, issues and challenges the more privacy that was required and the more selective they were around membership of the miniature community within the community of practice created through Messenger or WhatsApp such as when they restricted membership of a discussion on p.146 to talk about a more contentious issue of practice. The ability of social media to deliver this privacy and selective group membership is an important aspect of the difference between private social media and HEI provided VLEs and that difference was the sense of privacy.

### **Behaviour Management**

The final aspect which emerged following the annotation and analysis of the first interviews within the theme of achieving the core enterprise of the community was behaviour management. The issue of Teachers' Standard 7, behaviour management, stood out strongly in all the interviews as predicted in the literature review and a good example of this was seen in the interview with the pre-service English teachers. They reflected that when they reveal that they are having issues with behaviour management it potentially invites others in their constellations of communities to see them in a negative light as is illustrated on p.147. Yet there is a constant tension between the neo-liberal

approaches to education mandated by the agencies such as Ofsted – for example, the report ‘Below the radar: low-level disruption in the country’s classrooms’ (Ofsted, 2014) which places the blame clearly on ‘weak headteachers’, suggesting the answer lies within managerialism and a top down approach to concepts around behaviour management. This contrasts with the DfE who advocate that behaviour management is a trait to be held by the best teachers and the appointment by the DfE of Tom Bennett as what they term a ‘behaviour expert’ (DfE, 2016). For a pre-service teacher, this means behaviour management is a critical quality and one that carries considerable cachet and risk: pre-service teachers thus have to develop this critical component of the core enterprise without revealing to those in power that it is a weakness. However, it is only by revealing that it is a weakness to more knowledgeable others that they can access support, shared practice and brokerage to alternative ideas and approaches from other communities. Overall, behaviour management was a regular theme which formed part of achieving the core enterprise and which all pre-service teachers not only reflected upon, but also set out how private social media interactions could help resolve some of the challenges they were meeting.

The annotation and analysis of the first interviews highlighted these key themes early on and the evidence from the transcripts reinforced that what was being revealed was that which was previously hidden or invisible (Hughes, Jewson and Unwin, 2007).

## **6.2 Discussion of the research questions**

### **6.2.1 What interactions sustain the social networking community of pre-service teachers?**

Within the different communities of pre-service teachers there were consistencies in the way that many of the private social media interactions were related to face to face social interactions. As identified by the pre-service English teachers, such face to face social interactions were also opportunities to discuss educational matters. Some of the communities of practice of pre-service teachers in this study, such as those for the pre-service MFL and P.E. teachers, were very active in terms of the level of private social media

interactions. HEI staff do not always recognise just how much interaction takes place on social media to verify formal information and there is a noted gap between how much HEI staff value this interaction and how much university students value such interactions (Kim and Sin, 2016). Part of the extra interaction by some of the pre-service teachers in this study was designed to counteract isolation such as that by the pre-service modern language teachers some of whom were from other countries. This means, for example, that the isolation highlighted by Johnston (2010) in his study into the 16 pre-service English teachers is amplified by the fact that, for pre-service modern language teachers, they are experiencing cultural isolation as well as familial and peer isolation. In such cases, private social media can help establish, at speed, successful social interactions. By attending successful social interactions, the pre-service modern language teachers can then access opportunities for shared practice, support and brokerage of ideas from other communities from pre-service teachers in similar situated terms – those who are managing the increased risks of being isolated culturally as well as from family and peers but also being supported by those who are less culturally and geographically isolated.

Many of the private social interactions were linked to face to face meetings for the pre-service teacher communities and considering how opinion is formed in the digital age (Uzunoğlu and Misci, 2014) through many online interactions both private and public, it can be seen from this study that the connection between private social interactions and face to face events influences the emergence of sharing of knowledge and practice, and brokerage of ideas from other communities to participants in the pre-service teacher community. Private social media might not directly be responsible for the physical exchange of views and ideas on education, but it can facilitate the success of social events where such exchanges take place.

However, the most common phrase used for these private social media interactions was the term 'reassuring'. Again, this reinforces the notion that the pre-service teachers are operating as a community of practice within a constellation of communities of practice and are looking to identify common practices either amongst their own community of pre-service teachers or within

the communities of schools. However, this approach does not fit in the New Public Management (Hall and McGinity, 2015) within schools where schools and their teachers are sometimes expected to compete against each other. In many ways, constructivist notions go against the 'competitive' environment within which schools are increasingly operating. Considering Wenger's ideas around communities of practice (1998) and combining them with Wiliam's (2014) observation about how assessment is undertaken then it can be seen that reassurance is what the community members are receiving in exchange for revealing their private experiences through private social media interactions – an ability to establish a reassured consensus around practices, approaches and knowledge.

The community of practice for the pre-service science teachers while effectively functioning through private social media interactions also excluded a member who declined to participate through personal reasons around privacy and social media. An isolated pre-service teacher who does not have access to more knowledgeable others to share practice with or act as brokers of ideas from other communities contrasts the experience for those pre-service teachers in this study who did have access to such a community. It demonstrates that being a participatory part of the private social media interactions within the community as the pre-service teachers become qualified teachers is transformative in terms of the progress, self-esteem and employment prospects for the participating community members. This does present a contrast between the pre-service teacher who is participating in the core enterprise of the online interactions of the community of practice in becoming a qualified teacher and the pre-service teacher who is not interacting sufficiently within the private social media interactions of the community of practice to get such support. A participating pre-service science teacher will make better progress as a teacher as measured against the Teachers' Standards (DfE, 2013) because the Teachers' Standards themselves refer to the making of progress in terms of ideas about teaching. This suggests there is also a difference between the level of participation within the community and the outcomes. This could be a pre-service science teacher who lurks (Lai and Chen, 2014) rather than fully participates in the private social media interactions suggesting that ITE training

for pre-service teachers to move them from lurkers to becoming a more interactive member of the community would lead to a wider range of the benefits of being interactive within the private social media community of practice being accessed.

One of the most common interactions referred to by all of the communities was the way that members could 'vent' their problems through private social media and receive support or shared practice and knowledge in return. What this study shows is that there is more to private social networking than simply sharing resources and organisational issues. This was highlighted by the two communities that tried to use social media which did not offer push notifications or enhanced privacy control. Both the pre-service mathematics teachers and the pre-service computer science teachers attempted, unsuccessfully, to use Glassboard to host their private social media interactions. The difference between Glassboard and Facebook are: selection of privacy through Messenger, push notifications and the lighter social aspect of social media such as Facebook where people can 'vent' but actually ask for help through this venting. In purpose built VLEs such as Glassboard, to initiate sharing of practice one has to formally begin a discussion topic. In social media, one can simply exhort emotionally, to 'vent', without overtly be expecting a formal discussion with more knowledgeable others to ensue.

What, then, is emerging through this study of private social media interactions by pre-service teachers, is an issue of acknowledging the role of private social media interactions when assessing the standards of pre-service teachers. As outlined in the national policy context section (Ball, 2013), (Ward, 2014) and in Hall and McGinity's (2015) report on the neo-liberal marketisation of provision, the allocation of teacher training places (DfE, 2014) have led to an increase in school centred teacher education courses which have smaller cohorts. Such pre-service teachers can be on a five days a week school placement as set out by the government's 'Get into teaching' website for SCITT courses, "You will benefit from working and learning every day in a school" (DfE, 2016), rather than attending weekly day release at university such as on the course within this study. Not having that combination of private social media and successful face to face interaction would mean that they would have less access to



opportunities for shared practice, support and access to brokerage of ideas from other communities that the group of pre-service English teachers in this study seemed to value so much. This point about non-HEI based ITE courses is reinforced by pre-service English teacher C's reference to her peer on the SCITT course demonstrating that opportunities to operate within such a private social media community of practice with a core enterprise of becoming a qualified teacher would be welcomed by some pre-service teachers on courses like those within the SCITT structure. To expand, the process that Wyatt (2016) describes in which the pre-service teacher develops self-efficacy and enhanced teacher competence seems to be directly affected here. Instead of accessing support, shared practice and brokerage of ideas from other communities through private social media interactions, the pre-service teacher on the SCITT is having events of grading alongside formative feedback from the external assessor. This is an important difference as Wiliam has spoken about the problems in the way formative and summative assessment are used together (Wiliam, 2014). In his paper, Wiliam sets out some of the issues with combined assessment and how interpretation of those standards negatively affects the student's attempt to pass the standard.

### **6.2.2 What ideas do the pre-service teachers explore and broker about what it means to be professional from the group discussions in the social networking community**

Much of the private social media based support that was reflected upon by the pre-service teachers in the interviews depended very much on the types of problems that the pre-service teachers were experiencing as, for example, if they were having issues with behaviour management then such issues tended to be subjected to even further restrictions on privacy with the participants of a small private social media group carefully selected through Messenger. Behaviour management stood out in all of the pre-service teachers' communities of practice as one of the issues of professionalism that was discussed. Sometimes it centred on a school policy such as a 'no contact' policy and whether this was industry wide or school specific – pre-service teacher private social media based exploration of this topic revealed it to be the latter.

The interviews with the pre-service English teachers revealed that members of their community managed this challenge by hand picking a select group from the private social media based community of pre-service English teachers and by using private interactions within Messenger to help develop their skills and strategies in behaviour management. By selecting the key people to reveal their challenges around behaviour management to, they limit the issues in sharing this information and gather support and different ideas about how to overcome these challenges. The privacy and use of the Messenger tool could be a key difference here between socially networked pre-service teachers and pre-service teachers who have a high degree of isolation and lack of opportunities to raise such challenges around behaviour management with peers - especially if they were having short term issues, e.g., teaching the same class or difficult to manage individuals repeatedly before they would next meet their peer pre-service teachers face to face who might be able to offer support, shared practice or brokerage of ideas from other communities in the role of more knowledgeable others.

One of the key observations of this study is that some pre-service teachers were less comfortable with accessing private social media. Access to the private social media interactions as part of a community of practice of pre-service teachers is thus related to an individual pre-service teacher's notions around privacy. For example, WhatsApp requires the sharing of telephone numbers and thus some of the pre-service teachers were not comfortable sharing their telephone number with others. This means there could be varying levels of support and access to shared practice, knowledge and approaches and thus variable levels of the presented identity of a professional teacher. One of the suppositions of this study is that pre-service teachers' professional identities, enhanced by access to private social media interactions, could be affecting the expectation by schools and mentors of the standards to be demonstrated by all pre-service teachers. If it is assumed that the 'expected' level of professionalism is being modified by the private social networking then what could be perceived as a lower level of presented professionalism could actually be an aversion to using private social media and thus a lack of access to the support and enhancement accessed through private social networking

interactions of communities of pre-service teachers rather than a lower level of professionalism.

### **6.2.3 What ideas, if any, do the pre-service teachers discuss ideas about teaching which are different or similar to that seen in their placement schools?**

The pre-service teachers were certainly sharing practice habitually through private social media interactions. In many instances, these were centred on workload issues. All the pre-service teachers were asking each other for ideas, resources and shared practice on a regular basis. The discussion of these different ideas varied from pre-service teacher community to pre-service teacher community and so there were differences noted in the study. For example, in the fourth interview, it was seen that the status of more knowledgeable others for pre-service P.E. teachers was not just that they had knowledge and resources in an area. Rather, it was that they had developed and taught knowledge and approaches to a topic as a pre-service P.E. teacher in a school placement. They then shared that experience with the group and sometimes brokered an approach to teaching a topic to others in the community. This idea of sharing such practice did raise an interesting point. In the school placement, the mentors and other departmental teachers have all taught these topics successfully, have resources available and are responsible for the training of the pre-service teachers. There is no reason for the pre-service teacher to go beyond the situated context for ideas and approaches to teach these topics. This means there is something else that the pre-service P.E. teachers get from being part of the private social media groups and interactions of the pre-service P.E. teacher community of practice in addition to that offered with the situational context of the school placement. The answer could lie in teacher identity – they are presenting an identity to their mentor to whom they demonstrate knowledge or skill from outside the situated learning as evidence towards their teacher competence. This fits with Czerniawski's assertion around the collective identity of teachers (2011), that pre-service P.E. teachers are expected to demonstrate that they are finding ideas from beyond their personal knowledge and the knowledge within their situated learning of the school placement. To facilitate this need, the pre-service P.E. teachers were

using Dropbox as a shared resource folder so that pre-service P.E teachers could access these resources from any terminal or device and thus demonstrate to the community of teachers at the school that they can bring new resources or ideas to the community from their constellation of communities. Thus even within the assessment of the QTS award, it seems this ability to bring ideas and resources through collaboration is seemingly embedded into the practice of mentoring a pre-service teacher, even if those in a school leadership might not actually approve of the practice as seen with the pre-service English teachers. However, this exchange of ideas and resources reinforces the point that technology, in this case private social media and cloud based repository sites are leading to a disruption (Downes and Nunes, 2013) in the ability of schools to control the development of specific approaches to teaching a topic.

What has emerged from this study of pre-service teachers and their social networking interactions is that this habitual way of working with private social media, as part of a constellation of communities of practitioners, is so imbued into their way of life that they are doing it whilst working at their placement school or relaxing socially. Whether between lessons or at home, they are interfacing in their communities through private social media. In addition, the personal nature of Messenger which enables the selection of more knowledgeable others means it is a very powerful tool within private social media. Pre-service teachers can select one or more people to create a small community of practitioners, often in the role of more knowledgeable others, to execute a live, somewhat asynchronous exchange of support, shared practice or the brokering of ideas from other communities rather than drawn out asynchronous conversations, such as those found in discussion forums, and without the need to log in, load or check for updates. The private online conversations are helped by the push notifications which allow the pre-service teachers to reduce the asynchronous nature of the discussions and to become as close to synchronous as possible.

The study also found that the pre-service teachers were sharing practice and brokering ideas from other communities to the community of pre-service teachers and then finding that by sharing the successes they could overcome

the challenges as a community more effectively, binding them together as a community and thus reinforces what Wenger says is a community of practice "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5). The pre-service P.E. teachers' challenge in using TGU in their teaching was a good example of this. In addition, it gave them a situated notion of their competence – if others were facing similar struggles or successes then this enabled them to place their self-efficacy into context and feel reassurance that their level of knowledge and their practices and approaches were similar to that of others in the community of practice. Without an private social media based community and without the layers of privacy where a pre-service teacher can be open and receive support, share ideas or broker ideas from other communities, a pre-service teacher would have less reassurance, and perhaps a different approach to planning, marking and teaching to that of their peers. So, just as Lave and Wenger (1991) discovered with apprentices, the pre-service teachers are helping each other to succeed as part of a community. The core enterprise for a community of pre-service teachers is to help participants succeed in being a teacher both in terms of competence and in terms of managing the completion of the PGCE and the QTS assessments by developing their habitus and by developing common approaches, practice and knowledge. Once again, however, the contrast must be in those pre-service teachers who do not access the private social media interactions of such a community. And so a pre-service teacher on a teacher education course who does not have access to the interactions of a private socially networked community of practitioners will not have this additional opportunity to develop teacher efficacy and subsequent teacher competence.

The pre-service P.E. teachers' issue with TGU in this study shows that the enhanced collected self-efficacy of the community of practice can be strong enough to disrupt the pervading ideas about teaching held in school placements by brokering new ideas to the school placement. Overall, whilst no single perspective about teaching exists, there is a permanent, evolving construction of ideas about teaching. However, if pre-service teachers are exposed to a set of ideas about teaching which are situated in the place of learning to the point where schools only pass on that which is known within the

school, federation or chain then not only is this set of ideas about teaching limited, but also this aspect of a school's ability to develop its set of ideas about teaching is also limited.

#### **6.2.4 What issues do the pre-service teachers discuss that are related to their school experience or government policies through social networking**

The pre-service teachers met a lot of issues and challenges related to their school experiences and these certainly found their way into their private social media interactions. For example, the pre-service modern languages teacher in the study did not have a mentor at first, but was still able to get a sense of the experience by the fact that she could participate in the private social media interactions of other pre-service modern language teachers as they discussed their own mentors and the challenges of adapting to a mentor's ideas and expectations.

One of the most common issues that the pre-service teachers would discuss would be short term challenges. That is, they needed to source resources, ideas about teaching and planning in order to teach a lesson. Sometimes the knowledge did exist within the school placement and the pre-service teachers would use private social media interactions to source ideas and resources – for example, the pre-service science teacher who needed information about menstruation. However, it seems there is also an expectation that pre-service teachers will be developing the ability to source ideas beyond the situated context of the school and here the private social media interactions were particularly useful. For example, the pre-service P.E. teachers worked together to share ideas about teaching and resources across the wide range of sports and topics that they were expected to teach.

What seems to be clear is that having a community of practice facilitated by private social media offers opportunities for enhancement in the ability of pre-service teachers to overcome assessment challenges of both the QTS and PGCE variety. However, it goes further – it enables them to develop ideas about pedagogy with which to challenge the ideas coming from their mentors and schools – it enables the pre-service teachers to broker ideas back to the

school. Further, it enables the pre-service teachers to see schools and teachers' approaches as ideological or academic positions which the pre-service teachers can potentially engage with rather than 'the right way' of teaching or dealing with incidents and thus offers opportunities for the pre-service teachers to transcend the situational nature of their learning on school placement.

The pre-service computer science teachers in this study were using their socially networked community to assess what the school and staff were like as potential employers. In Hall and McGinity's (2015) neo-liberal vision of marketised and managerialised education this is important as pre-service computer science teacher C implies that as members of a pre-service teacher community, they care whether their constructed pedagogical notions of teaching fit their school. If there is a mismatch, then their future challenge is much higher as they may not have the type of teacher competence or ideas about teaching that the potential school requires. The pre-service computer science teachers in this study wanted to find a school in which the school's perspective on teaching matched their own and thus towards the end of the course the focus for these members was changing. The pre-service computer science teacher interviewed was looking beyond needing his community to pass the course. What he was looking for was the ability to accurately match his habitus and his beliefs around approaches to teaching against a future employer – to not just become a qualified teacher, but also to continue being an employed qualified teacher.

This concept is beyond the mentor/master model of Lave and Wenger (1991); this is the institution of the school and its senior leadership and their perception of professionalism. It is evident from this study that some schools have an ideological position or a value in which the sharing of resources and the enhancement of the teaching of other pupils in other schools is not encouraged. This position is in opposition to a speech given by the then Secretary of State for Education,

“If we are to be a truly world-class education system then we need to make sure that academies performing well are able to share their knowledge and collaborate with each other.”

(Morgan, 2016, p.2)

This is a clear position to take on school to school collaboration and yet the White Paper of *Education, Excellence, Everywhere* (DfE, 2016) has also said that the Head Teachers of schools (or MATs in the future) should be the ones who will define professionalism (as set out under section two of Teachers' Standards (DfE, 2013) and award pre-teachers their QTS. With such contrasting views of professionalism, it remains a difficult thing to see how Head Teachers can reconcile the twin pressures of developing practice through collaboration and the marketisation of education (Ball, 2013), (Hall and McGinity, 2015). Although that tension exists, what this study shows is that even if Head Teachers disapprove of the practice of collaboration through resources, then pre-service teachers and subsequently teachers will use private social media to form communities of practice and constellations of those communities of practice made up of practitioners who do believe that collaboration is part of professionalism. This means despite the Teachers' Standards (DfE, 2013) referring to professionalism and despite the awarding powers for QTS potentially going to Head Teachers, the definition of professionalism will continue in part to be made by pre-service teachers in negotiation with others through their private social media based constellations of communities and that privacy controls put into place through private social media will ensure that those notions of professionalism are kept private from those who would not agree with those notions of professionalism. In addition, ideas around professionalism, formed in the private social network communities could well be brokered back to schools as was seen with the pre-service P.E. teachers in their struggle with schools around the ideas of teaching games for understanding.

In effect, sharing practice, resources and the brokerage of ideas from other communities through private social networking is a part of how the core enterprise of becoming a qualified teacher is achieved by the pre-service teacher communities of practice. This suggests that the value of private social media collaboration with its virtue of seeking to reduce workload through sharing practice and ideas from other communities could cause disruption to



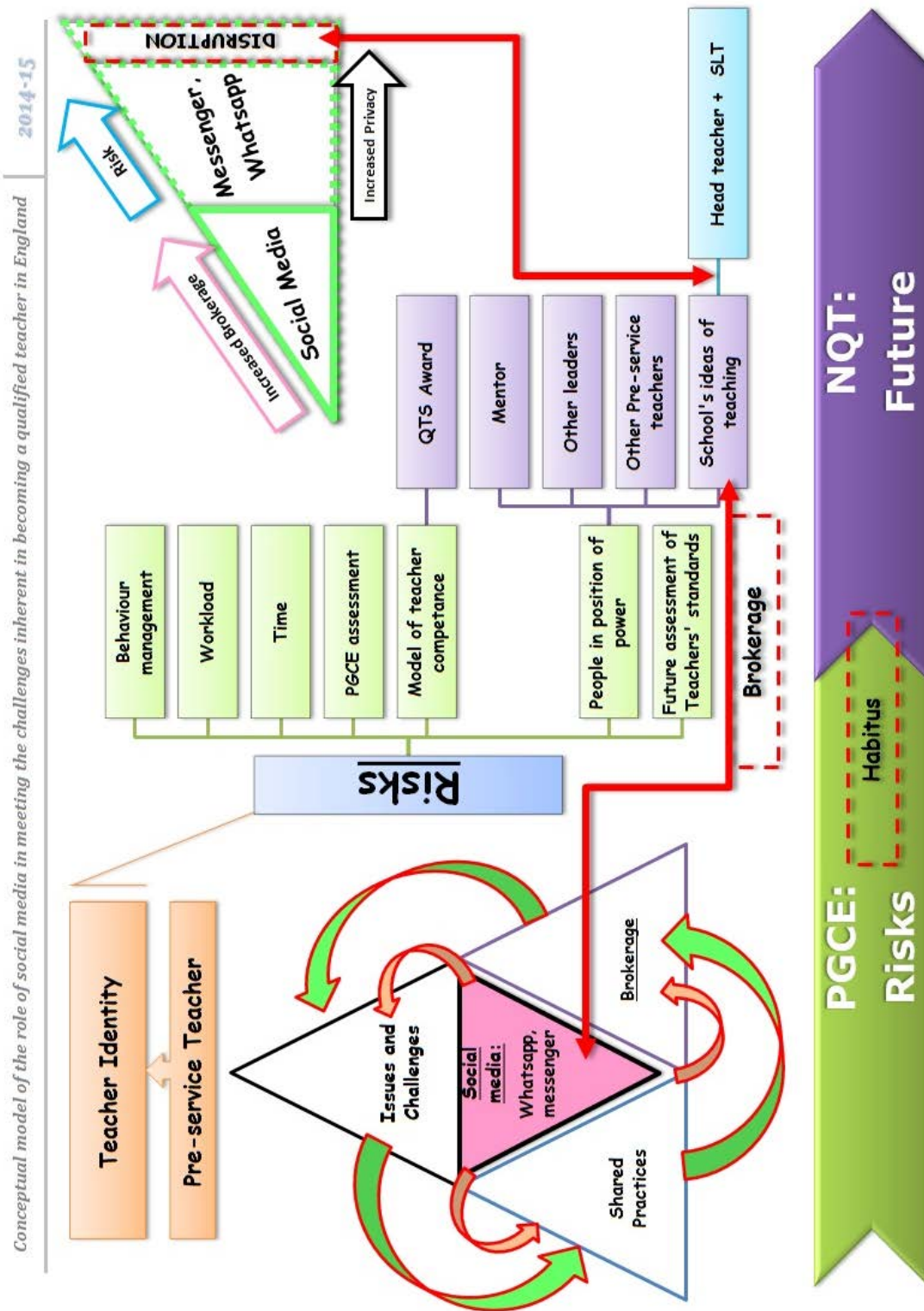
the system of neo-liberal management that has been brought into schools. This idea that social media can supplant those who traditionally hold positions of power within institutions is starting to attract some research (Leonardi, Huysman and Steinfield, 2013; Laurell and Sandström, 2014). The idea that technology (private social media) is disrupting the usual source or production of content (educational ideology) is known as 'disruption' (Downes and Nunes, 2013). For example, Orr (2012) demonstrated that when collaborative technology was used then groups approached their projects by first negotiating *how* they will work. This suggests that the disruption being made by layers of private social media is already affecting ideas about teaching and that much of the increased efforts by the government through forced academisation (DfE, 2016) and increased challenge from Ofsted inspections (Wilshaw, 2012) to impose control or hierarchal control through senior leadership as part of the New Public Management (Hall and McGinity, 2015) is being affected through private social media interactions. As Downes says, 'Your business is already being disrupted' (Downes and Nunes, 2013, p.56). As "the old guard" referred to by pre-service English teacher B is replaced by millenials (Orlando and Attard, 2016), so there is a need for recognition that this new way of defining professionalism is going to become even more widespread. Karakas, Manisaligil and Sarigollu (2015) have set out the need to design in reflective, creative and collaborative learning opportunities for millennials (Tapscott, 2009) and with these learners being those who will both define professionalism as well as be future learners there is a need to find ways for senior leadership to engage with the sophisticated private social media based communities of teachers that are in existence if they are not to be disconnected by the disruption caused by such interaction.

In some ways, the disruption of the neo-liberal nature of the modern educational systems in England has to be acknowledged by the issue around how pre-service teachers are using private social media to help their core enterprise of becoming qualified teachers. This study has identified that there is a debate around collaboration and competition between schools, which are measured in comparison to each other and the idea that pre-service teachers, or indeed teachers, share resources and approaches to ideas about teaching

with each other. The idea that membership of the pre-service teacher communities involves an expectation around the sharing of resources is not new or challenging. What is new is the increased managerialism in schools (Hall and McGinity, 2015), (Ball, 2013), decreased autonomy of teachers (Parker, 2015) and the subsequent use of technology in the form of private social media to circumnavigate or disrupt this increased managerialism and reduced autonomy. However, if a pre-service teacher is not prepared to access the private social media interactions of the community of practice then what could result is reduced access to workload reduction, support, shared practice, brokered ideas from other communities and not just access to more knowledgeable others, but, through those more knowledgeable others, resources in the finite range of topics which are specific to some subject based pre-service teacher education courses.

To summarise, within pre-service teacher education courses, there exist enhanced opportunities to interact when members of groups create private social media structures such as a Facebook homepage, WhatsApp groups or even an email list. Within these structures, pre-service teachers can control the privacy, the level of interaction, the speed of the interaction and the membership of the private social media communities. Through private social media interactions they can share practice, become brokers or access brokers and in doing so transcend some of the difficulties and limitations presented by the communities of practice that they meet as part of the pre-service teacher education course.

### 6.3 Conceptual model of the role of social media in meeting the challenges inherent in becoming a qualified teacher in England



**Figure 6.1** Conceptual model of the role of social media in meeting the challenges inherent in becoming a qualified teacher in England

The diagram in Figure 6.1 shows an outline of the role of commercial social media in meeting the challenges inherent in becoming a qualified teacher in England based on the private social media interactions analysed from the pre-service teacher communities that featured in this study as they set about their core enterprise of becoming qualified teachers. Building models from such multidisciplinary topics can be seen as a way of setting out the data (Jabareen, 2009) and can lead to sense being made of sophisticated sets of data. In this case, the data came from the pre-service teachers during semi-structured group interviews on the private social media interactions that occurred during their one-year pre-service teacher education course.

Figure 6.1 sets out to show diagrammatically just how and why pre-service teachers use private social media interactions to help the community's core enterprise of becoming a qualified teacher. It draws together not just the immediate contextual pressures faced by pre-service teachers in terms of their course and school placements, but also a sense of how they are preparing for the future as well as the immediate present. What has emerged from this study and is shown in the diagram is a series of concepts grounded within each of the areas of the findings. These concepts are based on the experiences of the participants in this study as these pre-service teachers interacted through private social media on their course and attended the four interviews where they reflected on those interactions and their understanding of those interactions. Within this conceptual framework is Wenger's notion around communities of practice that they will have a 'core enterprise' (1998), in this case the members becoming a qualified teacher. In addition, there is recognition that retention is a significant issue for current pre-service teachers and the ability to develop their habitus for the management of future challenges was part of that core enterprise. Thus, the core enterprise was not just about becoming a qualified teacher during the duration of the course, but also about becoming a qualified teacher for the future. This challenge to the pre-service teachers is both immediate and long term. Pre-service teachers could have challenge or 'risk' (Beck, 1994), presenting itself in a very short time frame such as the issue or challenge of teaching a topic or class the next day and yet they also have to establish enough skill and knowledge to move school placements

successfully within their pre-service teacher education, and further – to cope with unidentified schools in their future teaching. This is demonstrated by the diagram in Figure 6.1 which looks to capture the PGCE and NQT years of teaching highlighted as the period where retention is an issue, as set out in the context chapter (Wilshaw, 2014; DfE, 2015; Gibb, 2015). To mitigate this risk, pre-service teachers can access more knowledgeable others for support, shared practice and brokerage of ideas from other communities through private social media interactions. Here they share their private experiences in exchange for access to constellations of communities of practice. How many communities and how much support they receive from those communities depends on how active they are, the specific challenges they face, the subject they have to teach and how much privacy they are prepared to exchange as sharing private experiences is not always readily undertaken within pre-service teacher education (Finefter-Rosenbluh, 2016).

The diagram in Figure 6.1 also sets out a relationship between risk and privacy and nowhere is this better exemplified by Teachers' Standard 7 – behaviour management. This particular Teachers' Standard carries extra risk due to the national context (Ofsted, 2014; DfE, 2016). It was because of this extra risk that it is found more so not just within private social media, but within through enhanced privacy provided by the option of personally selected membership such as that offered by Messenger and WhatsApp. The outcome of this access to constellations of communities of practice with its layers of privacy is an enhanced teacher identity, an ability to accumulate shared practice, knowledge and skill for unidentified future challenges and an ability to manage issues such as workload, assessment of the PGCE and QTS and issues where the ideas around teaching in the school placement can be detrimental to the pre-service teacher. The key phrase that pre-service teachers used was reassurance – they used private social media to contextualise their efforts and to ensure that they were managing their personal levels of risk proportionately to the rest of the group and could access support and (as termed by Wenger) brokerage when required. When they were not managing those levels of risk, they had access to reflection to help them improve their presented professional identity to those in positions of power. However, it was not as simple as the pre-service

teachers were using private social networking to manage the risks faced during and beyond the teacher education course. There existed an element of 'disruption' in which the exchanges undertaken either undermined or influenced through brokerage the prevailing ideas about teaching situated within the school placement. This disruption was both necessary, for protection against future risk, and part of the developed professionalism within the pre-service teachers who saw professional identity as more than that defined by the school placement in the New Public Management (Hall and McGinity, 2015) school system. For example, sharing approaches to teaching in the different school placements through private social media interactions meant that pre-service teachers discovered that different levels of teacher autonomy existed (Parker, 2015) and further, that some schools were against the sharing of practice and resources with other schools. In terms of brokerage of ideas from the pre-service teachers to schools, in this study there was a clear example of the pre-service P.E. teachers brokering ideas about teaching back to their school.

It does leave those who do not interact through private social media interactions, to observe or offer private experiences, in a difficult position – not only are they excluded from the online support, shared practice, brokered ideas from other communities and reassurance offered through private social media interactions, but the expected levels of competence, expected by mentors and schools hosting socially connected pre-service teachers, could well be challenging to meet.

Figure 6.1 therefore sets out to capture those interconnecting exchanges and the contextualising factors in a diagrammatic way to better enhance the presentation of this conceptual framework.

#### **6.4 Next steps for research**

This study has repeatedly referred to the issue of retention (Johnston, 2010), (Teach First, 2012), (Gibb, 2015), (National Audit Office, 2016), as part of this study suggesting that habitus (Bourdieu, 1977) developed on the course through private social media interactions as well as the connections and habits as part of a pre-service teacher of practice and wider communities of constellations (Wenger, 1998), (Holland, Middleton and Uys, 2012). This

suggests that the next steps lie in more longitudinal study of the pre-service teachers as they move through their early teaching years from their NQT year into their first full five years of teaching – the timeline set out by Wilshaw (2014) in which forty percent of teachers in their first five years of teaching leave the profession. Further, one of the limitations of this study has been that it only looked at those attending a HEI based course of teacher education. References from the participants in this study have demonstrated that gaining information from pre-service teachers on other types of school centred courses and those in smaller cohort would have provided insightful material to evaluate.

Now that a methodology of semi-structured group interviews at regular points has been developed to enable access to the private social networking interactions of pre-service teacher communities of practice, so this can be developed further to enable access to the nature of private social networking interactions by emerging teachers to investigate how they use such interactions in these further five years. It could be that the pre-service teacher social media based communities are sustained beyond the training year, that new communities are developed and that private social media interactions facilitate membership of further communities of practice within their constellations. It could also show an insight into the way those who interact through private social media manage the issues and challenges of continuing to be a qualified teacher in the first five years of their career. Finally, such a longitudinal study might reveal whether the private social media interactions have a role to play in retention within the profession in these first five years and whether there is a relationship between the nature of their private social media interactions and their ability to overcome issues and challenges which cause others to leave the profession.

## **6.5 Contribution to knowledge**

What this study set out to achieve from the start was to reveal the how and what (Yin, 2014) of the interactions within private social media of pre-service teachers on their one year HEI teacher education course as they looked to achieve their core enterprise of becoming a qualified teacher. Previous studies into such online communities, (Carmichael *et al.*, 2006; Hramiak, 2010; Boulton and Hramiak, 2012), relied upon having access to the online interactions as

part of HEI VLEs, or with the researcher having membership and access to the social media interactions of the community (Neier and Zayer, 2015). In accessing private social media interactions that occurred within an online space, this study is in a position to contribute to knowledge about pre-service teachers and the issues and challenges they face in achieving the core enterprise of becoming a qualified teacher.

The first area of knowledge that this study contributes to is in revealing that pre-service teachers have important concerns that they do not reveal to outsiders. These concerns are not just hidden from outsiders to their closed social media based communities of practice, but are hidden from fellow community members in addition to those outsiders. These concerns are seen as so important to those pre-service teachers that reveal them, that they use in-built privacy tools such as Messenger to personally select the audience to the raising of those concerns. There are two outcomes here. The first outcome is that there are issues and challenges to a pre-service teacher's ability to become a qualified teacher which can be resolved through the articulation of those issues and challenges to others who can share practice with them, broker ideas from other communities or otherwise offer support to the pre-service teacher. However, for these particular issues and challenges and the pre-service teachers' concerns about them, there is not a space within the way in which ITE is set up nor the way schools are structured (Hall and McGinity, 2015) that pre-service teachers feel they can safely articulate those concerns. These concerns are particularly acute when it comes to quite serious issues such as behaviour management (Morgan, 2015) and the way that some aspects of the notion of professionalism, particularly around behaviour management, is constructed within a situated context. The second outcome is that one of the reasons behind this inability to articulate specific ideas which has been revealed by this study is that pre-service teachers have to operate in a marketised system (Ball, 2013) in which schools of all types have been set up to compete with each other through a system of 'economy of worth' (*ibid.*). Yet the pre-service teacher needs to develop their ability to use a range of approaches to teaching through reflection on their ideas about teaching (Davies *et al.*, 2005), (Tran and Nguyen, 2013), and through collaboration, an idea supported by the then Secretary of State for



Education (Morgan, 2015). With decreasing autonomy for teachers to engage with approaches to pedagogy (Parker, 2015), (Hall and McGinity, 2015), but at the same time a conflicting need to demonstrate autonomy of ideas as part of being a teacher (Holland, Middleton and Uys, 2012), something that was reinforced by mentors such as those of the pre-service P.E. teachers in this study, what this study has demonstrated is that some pre-service teachers can and do use private social media to resolve the conflict.

In demonstrating how pre-service teachers use private social media to develop into reflective practitioners who are able to discuss concerns openly and are able to learn from these discussions this study highlights that there are issues and problems which stand in the way of the way pre-service teachers are able to fulfil their potential depending on factors such as: the size and nature of the teacher education course that they are on, the willingness or ability of peer (if there are peers) pre-service subject specific teachers to engage with private social media interactions, the types of knowledge and access to other communities through members of the social media based community, knowledge about how to use privacy to enable serious concerns such as those about behaviour management to be explored and finally the practical access to and abilities around technology itself which relies on expensive and sometimes complex technology such as push-notification enabled smartphones or tablets.

There is also another issue here, which is one of the key reasons that pre-service teachers established their private social media based communities of practice was not just to become a qualified teacher, but to continue being a qualified teacher. In other words, to be able to move from school to school successfully as confident (Holland, Middleton and Uys, 2012) and competent teachers who could readily call upon their habitus as part of having the teacher identity needed to meet the issues and challenges of a new school (Czerniawski, 2011). With issues around retention (Johnston, 2010) seen as a relevant and national issue (Wilshaw, 2014; Gibb, 2015), this study has demonstrated that pre-service teachers are also concerned about their ability to stay in the profession and are having to use private social media interactions to develop some of the shared practice, sharing of resources, exchanges of approaches to teaching and behaviour management to enhance their ability to

move from school to school successfully and not leave the profession in the first five years of their career.

If, as this study has shown, the rapid reforms to teacher education alongside the marketised system of schools set out by Ball (2013) and Hall and McGinity (2015) have contributed to a reduced ability of pre-service teachers to develop into reflective practitioners with the flexibility to move from one school to another as confident (Holland, Middleton and Uys, 2012) and competent teachers then this study is also in a position to contribute to ITE in terms of a discussion of ways to organise support for pre-service teachers in the current national context. Thus, one of the ways in which pre-service teachers can develop their ability to meet the Teachers' Standards (DfE, 2013) and become a qualified teacher is to be instructed in the nature of how private social media interactions by pre-service teachers can contribute to their core enterprise of becoming a qualified teacher. These instructions range from the technical, such as push-notifications and the use of privacy settings, to the way the communities work with the need for knowledgeable others and brokers to see their roles in the social media based community of practice as one which important for the community members.

What has also been revealed by this study are that there are some similarities in the way the communities of practice operated through private social media interactions and in studies into non-private communities of practice (Carmichael *et al.*, 2006; Hramiak, 2007; Boulton and Hramiak, 2012). In the same way as Carmichael *et al.* found, the members of the communities took on different interchanging roles within the community, but with a difference, these roles emerged rather than were placed on the community. In addition, the community itself was not rigid in structure and membership. Not all members of a community of practice engaged in the private social media interactions. This enabled the study to see what such pre-service teachers did not have access to and whether it was affecting their ability to become a qualified teacher. The communities were also connected through constellations of communities with pre-service teachers existing in multiple communities through private social media interactions for different reasons with each community using different

technology or privacy levels. However, all these communities were focused on the core enterprise of the communities which was to become qualified teachers.

What this study also revealed is that pre-service teachers are using technology to manage and disrupt (Downes and Nunes, 2013) some of the challenges of becoming a teacher in the New Public Management (Hall and McGinity, 2015) system of schools in which there has been a reduction of teacher autonomy (Parker, 2015). The private nature of such communities and the ability of members to operate across schools which may be part of chains, federation or simply competing with each other through the 'economy of student worth' (Ball, 2013, p.3) demonstrates that the development of approaches to teaching, the sharing of practice and resources and the brokerage of ideas about teaching by community members to their communities and other community members is being affected by the tools provided through private social media. The main tool is privacy. Pre-service teachers are not limited to just creating a single private space through social media for a select community. Within that community they can create further sub-communities; each time increasing the privacy so that they can share experiences in order to develop into confident, competent, reflective practitioners and achieve their core enterprise of becoming a qualified teacher. This study demonstrated that the more challenge the pre-service teachers face from institutional and governmental reforms, the more that some of them used privacy as a tool to disrupt the power of these reforms and to bring a constructivist approach to the development of ideas about teaching. This can be seen through the diagrammatic representation in 6.1 which further contributes to the knowledge in this area by providing an illustration of the conceptual framework which can be used to make sense not just of pre-service teachers' private social media interactions but those of practicing teachers also.

## **6.6 Strengths and limitations of the study**

One of the limitations faced by this study was seeking to study private data (Chametzky, 2013) made up of the private social media interactions of pre-service teachers whilst minimising the impact that the very act of studying those interactions was having on the way the participants in the study and the pre-service teacher communities of practice interacted through private social media. The data collection method selected was to interview the pre-service teachers

in small groups of three in which they reflected on the interactions of their communities and offered details and reflections on these interactions. In itself, not having access to the source was a limitation as there was no way to verify the participants' reflections and recollections, but at the same it was a strength as it limited the impact that having direct access to the source would have had on the interactions themselves – to remove the private nature of them.

It was accepted by this researcher from the start of this study that participants would become reflexive about their private online interactions in their communities of practice because of the questioning within the interviews and this was indeed seen within the pre-service mathematics and computer science teachers who were participants in the study. However, much of this reflexivity was reported after the fact – the pre-service mathematics teachers were trying to establish an online community of practice through private social media and reported this through the interview. The interview therefore was simply an additional space for the pre-service teachers to reflect on the challenge rather than the instigator of the reflexivity. There was also further evidence that the participants were candid in their reflections through the interviews. They referred to incidents of where they shared resources 'surreptitiously' and where they discussed schools' approaches to behaviour management. In doing so, they were demonstrating that some of the issues with having a researcher who was in a position of power with the participants had been successfully negotiated to the point that the pre-service teachers were revealing information that explained how they were navigating power relationships on the teacher education course even though their relationship with the interviewer was one of the power relationships that they were navigating on the course.

Having the interviews a few weeks into and at the end of each placement was also strength for this study as it enabled the participants to reflect on the way social media was being used at significant points in the course. It enabled the study to capture the 'establishing' phase of the online community of practice with participants engaging in legitimate peripheral participation (Lave and Wenger, 1991) as well as allowing the participants to reflect back on some of the key challenges and issues to achieving the core enterprise of becoming a qualified teacher during a school placement. Lastly, what was very insightful

was the ability of the study to capture the role private social media had when the pre-service teachers changed school placement or made preparations for their first or later employing school. Here it was evident that having access to private social media interactions with selected peers enabled the pre-service teachers to better navigate the transition across schools with contrasting pedagogies. This was one of the stronger outcomes of the study – an ability to see how the pre-service teachers were using the private nature of social networking to better manage some of the power relationships that they met in the marketised (Ball, 2013) system of schools that have emerged through recent reform. The study also revealed it went further than simply managing the power relationship, the pre-service teachers were also developing ideas and approaches within private social networking which their school placements did not necessarily approve of and they were on occasion brokering those ideas back to the schools. With technology rapidly usurping traditional power relationships in industry and education (Downes and Nunes, 2013) this study has shown that some pre-service teachers, such as those in this study, are part of this global shift in institutional power relationships through the use of private social media interactions.

The study also revealed that some of the participants had peers on alternative school centred teacher education courses and this study was unable to capture those experiences or interview pre-service teachers on alternative courses in which they were not in large cohorts or in frequent face to face meetings with peers of a similar phase and subject. An improvement to this study would be to study participants from contrasting teacher education courses with different cohort sizes, meeting schedules and approaches to teacher education. The participants on this study were HEI based pre-service teachers and studying non-HEI based teachers would enable a contrast to be made to see if some of the issues found about having to develop skills and knowledge across different schools are applicable to pre-service teachers on such courses.

Lastly, the length of this study was one year. However, one of the outcomes was that pre-service teachers were developing skills and knowledge for their future careers. This study recognised that there are issues in England over workload and retention of teachers and this study suggests that some of the

answers can come from having teachers who are connected through private social media and sharing practice, resources and ideas, and brokering different approaches to teaching from the different communities that they have access to. Yet with this study being limited to one year means it is unable to offer further insights on the private social media interactions of the pre-service teachers as they enter their NQT year and first five years in the profession. It could be that once the teachers in this study became NQTs, they continued to operate within a private social media based community and it could be that they developed further private social media communities with the intention of continuing to enhance their ability to operate as a teacher who can move from school to school in the New Public Management (Hall and McGinity, 2015) system of schools. However, this study is unable to offer that insight due to being a one-year study as this study was only looking at pre-service teachers. Further studies should look to track pre-service teachers from their training year to their fifth year of teaching to see if the private online interactions have a bearing on the way they develop as teachers during this point in time and whether they stay in the profession.

## **Chapter 7 Conclusions and recommendations**

Establishing a private social media based community of practice in order to facilitate the core enterprise of becoming a qualified teacher was not always easy for the participants in this study. For example, there was an overarching tension between the desire of the mathematics pre-service teachers for a private socially networked community of practice and their ability to deliver such an outcome in the opening weeks of the pre-service teacher education course in this study. In the first instance, this tension sets out that there is a need to embed into the induction training information to the pre-service teachers that working as a community of practice can be seen as part of becoming a qualified teacher and that it is important to establish effective community networking and functioning private social networks amongst those pre-service teachers who want to use private social networking as part of their interaction within the community.

The pre-service mathematics teachers endeavoured throughout the year to establish private socially networked opportunities for sharing knowledge, practices and approaches with limited success. This lack of success compared to the other pre-service teachers' communities could have been changed by intervention at the start of the course about inclusion and good behaviour for online learning. In their book on technology and education, Shea and Stockford repeatedly outline the notion for online behaviour for learning in social media and how it should be taught as a specific strategy (Shea and Stockford, 2015, p.47). By setting out what is happening within the hidden sphere of private social media and by outlining strategies that are helpful to learning; taking on the more knowledgeable other role to share ideas or broker approaches to teaching from other communities, so pre-service teachers can increase the potential for the subsequent development of teaching and learning. This practice of good behaviour for online learning within social media should be embedded into a general instructional lecture about learning communities within the induction period and further, good behaviour for online learning needs to be part of the PGCE embedded instruction to ensure inclusion and prevent the formation of cliques or exclusion of others from the private social media based

community of practice. This way, the ‘hidden’ nature of the private social media networking can be directed, openly, by those delivering the teacher education course even though those delivering the course cannot actually see what interactions are taking place.

Another two things that can be set out to pre-service teachers at the start of their teacher education course are the opportunities and differences for the community to engage in the core enterprise of establishing “...a body of common knowledge, practices and approaches” (Wenger, McDermott and Snyder, 2007, pp.4-5), as part of becoming a qualified teacher through physical and private social media based interactions. In Table 7.1, some of the differences between physical and private social media interactions based on the outcomes from this study are set out to highlight the advantages private social media offers:

<b>Private Social Media</b>	<b>Physical</b>
Ability to select individual, small group or entire group	Relies on fortuitous seating plans and limits the ability to maintain privacy
Speed of response	Have to wait until the next physical meeting – might be too late
Ease of raising an issue	Have to wait for or engineer an opportunity to raise the topic conversationally or as part of a session
Ability to see who is online and ensure that person is given a voice to the response	Inability to control who comments and gives advice – the best person might not be able to interject over someone else
Knowledge assimilation through lurking and reviewing	Unawareness that others in the group are having or have had similar conversations

**Table 7.1 Comparative table of physical and social communities of practice interactions**

The main rationale behind this study was that ITE was operating without insight into the private social media interactions that were being undertaken by pre-



service teachers as part of being in a community of practice whose core enterprise was becoming a qualified teacher. When those interactions were within the purview of ITE providers (Hramiak, 2010; Neier and Zayer, 2015) it was possible to observe and influence good behaviour for online learning (Shea and Stockford, 2015). However, once those interactions, driven by the attraction of *private* social media, disappeared behind a screen of privacy it became necessary for those interactions to be studied so the ITE providers could once again ensure that good behaviour for online learning could be influenced and encouraged and at the same time understand why pre-service teachers valued their privacy as part of becoming a qualified teacher. Yet the study has revealed more than expected in terms of ITE provision. On one side, there are a set of behaviours that pre-service teachers can adopt which will help more of them facilitate the core enterprise of the community in becoming a qualified teacher, enable that private social media based community to be better understood and for the exchange process in which a pre-service teacher reveals details about their private experiences in order to receive private help from participants in a private social media based community, is accurately set out. On the other side, there are implications for assessment standards, for the pre-service teacher who will not or cannot access shared practice, support or brokered ideas from other communities through members of the private socially networked pre-service teacher community and indeed for the ability of schools or groups of schools to mandate what those assessment standards are. Those implications are that there could be variable standards in evidence and the variability can be explained not by pre-service teacher competence, but by pre-service teacher access and interaction to the private social media interactions of their community of practice.

Even though the pre-service teachers' communities of practice operate through private social media, this study has established that *how* they use private social media to enhance the core enterprise of becoming a qualified teacher can be enhanced through intervention from the ITE course leaders. A starting point is that it is important for the pre-service teachers to know who the more knowledgeable others are in terms of their knowledge and their access to different ideas to teaching in other communities. This establishment of 'more

knowledgeable other' status is not difficult to influence even if course tutors do not have access to the social networking community of their pre-service teachers. It would mean that at the start of the academic year, course staff should encourage pre-service teachers to post, not just articles that interest them, but to see it as an extension of their interests and access to alternative ideas. Early exchanges should be an advert to their community members so that those who are required to teach an area could approach them for recommended resources, strategies and indeed alternative ideas from other communities that could be brokered to them.

Although the selection of the appropriate social media of private interactions will always be up to the pre-service teachers, outlining to them at the start of the course about how the different features are used could lead to pre-service teacher communities selecting social media which offers opportunities for rapid asynchronous communication through push notifications, selection of small sub-groups within the community and multiple layers of privacy – features that were not available to software such as Glassboard. This would enable the pre-service teachers to better evaluate the competing commercial software providers and their ability to successfully host the pre-service teachers' private interactions in a way which enhances the core enterprise of the community - becoming a qualified teacher.

In addition to advising about features of social media, it is also possible to instruct pre-service teachers on the notions of private social media based communities of practice and how to recognise features which accentuate the core enterprise of becoming a qualified teacher. These could include encouraging certain key practices: inclusivity of membership, allowing lurkers to interact, use of speed and privacy to handle challenges and issues, and the notion that ideas can be brokered from one community to another. This instruction needs to happen during the induction phase so that pre-service teachers understand some of the notions of how communities of practice work as well as the balance between power and privacy that is delivered by private social networking interactions.

Inclusion is also one of the outcomes for this study. One of the outcomes was about educating pre-service teachers about good behaviour for learning practice as part of a private social media community of practice with a core enterprise of becoming a qualified teacher. It can be seen that this applies not just to the way they interact, but also to instructing pre-service teachers on the different types of users and how to approach the issue of refusers: respecting the decision of refusers to not want to engage in private social media interactions and yet not refrain from establishing a private social media based community of practice because of refusers. However, in the induction phase of the ITE course it could be better established just what interaction within a private social media based community of practice brings to the participants by setting out the way communities of pre-service teachers have established their communities through private social media. Here, the issue around personal privacy decisions becomes evident. The inability of the pre-service mathematics teachers to establish a successful private social media based community suggests that notions of privacy are relatable to a pre-service teacher's ability to access the community's private social media interactions. If these notions of privacy and understanding of what privacy is delivered by different social media were explored at the start of pre-service teacher education then it could be that such pre-service teachers are more accurate in their personal assessment of their needs for privacy balanced by what could be offered by the different social media networks available. This is not to say one should assert that a pre-service teacher should override their aversion to using private social media, rather that there is a need to instruction and information at the induction phase for pre-service teachers around the notions of communities of practice, privacy and social networking so that such decisions are made from a fully informed position.

Being part of a private socially networked community of practice for pre-service teachers has been demonstrated through this study to enable, through shared ideas, approaches to teaching and brokerage of ideas from other communities, the opportunity to access contrasting models of teaching. This outcome has implications for the design and allocation of places to teacher education courses in England and Wales. If the number of pre-service teachers within a

specific subject is very low on a provider's teacher education course or if they have limited opportunities to interact with different ideas about teaching through the provider only having access to a limited range of schools then the outcome would be that the pre-service teachers would access useful development of their habitus and this means that when they move to another school or are faced with a different cohort they could meet challenges which require a stronger range of ideas about teaching to that which they have developed. This issue therefore goes back to the nature of retention – not just on pre-service teacher education courses, but in the first five years of teaching. It should be an objective, when allocating teacher training places to providers, for enough subject specific pre-service teachers to be present in a community of practice to function effectively through private social networking. In addition, the provider should have access to a cross range of schools drawn from approaches to teaching so that the different models of teaching can be discussed and the habitus of pre-service teachers be developed.

There also needs to be a recognition on the part of pre-service teacher education courses that not all secondary subject cohorts are the same and that subsequently some subjects rely on private social networking more so than others and for good reason. For example, modern languages pre-service teachers who have to manage more than one language and being away from their usual geographically based support networks including being in another country rely more on private social networking to ensure they are successful during their year-long teacher education course.

One clear outcome from the study which perhaps warrants further research is that there are implications for teacher education providers in terms of the developmental training that they offer to their mentors. The notion that some pre-service teachers who are not accessing the private social network interactions in their pre-service teacher community of practice may present perceived 'weaker' professional identities to that of their socially networked peers needs to be explored so that they are not penalised for their failure to participate in communities of practice through private social networking and thus may not manage workload or develop ideas from outside the school placement in the same way as that of their socially networked peers.

In the study, it was evident that some schools sought a degree of control over their pre-service teachers in a number of ways. One way was in terms of restricting the pre-service teachers' ability to share resources. Other ways were in terms of strictly mandating what they thought the correct approach to behaviour management was or in restricting pre-service teachers' access to their private social media. These are all rights that the schools have in the current New Public Management (Hall and McGinity, 2015) system that exists. What the study revealed is that private socially connected pre-service teachers are quite constructivist in nature. They use privacy to circumnavigate challenges in developing the ideas about teaching that the school placements presents – in part, to help them develop their habitus. If schools are to contribute to a rise in retention of teachers in the first five years of teaching then schools need to recognise the desire for constructivist pre-service teachers (or teachers) to develop habitus through their private socially networked based constellations of communities. Schools could see that allowing pre-service teachers access to their private social media during school time, encouraging them to share and broker pedagogical ideas or resources privately through social media and to also broker ideas or approaches back to the school itself gained from private interactions within constellations of communities could all not just help pre-service teachers develop their habitus and retention in the profession, but strengthen the quality of constructed ideas of teaching in the schools themselves.

Lastly, it seems that making Teachers' Standard 7, behaviour management, have a higher status than other Teachers' Standards (Ofsted, 2014), (DfE, 2016) is leading to counterproductive behaviour. Reflective thoughts about behaviour management challenges and issues are suppressed by the pre-service teachers and instead of being revealed to those responsible for the pre-service teacher's development for reflective engagement, instead they are developed through private social media interactions. Whilst pre-service teachers are using private social networking to ensure that they develop this area, the fact that they cannot reveal these issues openly restricts the ability of the pre-service teacher to develop their behaviour management through the traditional structures of school and university based reflection. In addition, pre-

service teachers who do not access private socially networked communities of practice are not able to have different ideas about behaviour management shared with them. This directly affects their habitus and ability to deal with future behaviour management challenges in comparison to their peers who are sharing such practice through private social media.

Pre-service teacher education and the private socially networked pre-service teachers' communities of practice are remarkably similar in wanting to develop teachers who are reflective, collaborative, who share practice and who seek to develop habitus so that they stay in the profession. Private social media therefore has a role to play in the formation of these qualities. Some of the outcomes from this study comment on the need to structure pre-service teacher training allocations properly, some of the outcomes look at training the pre-service teachers themselves in order to better become teachers for the future through their private social media interactions. Rather than dismiss or try to restrict private social media, it should be seen that it actually helps our professional teachers of tomorrow with their core enterprise of establishing "...a body of common knowledge, practices and approaches" (Wenger, McDermott and Snyder, 2007, pp.4-5), in becoming a qualified teacher.

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## Appendices

### Appendix 1 Consent Letter



#### Informed Consent Letter

This study is designed to gather data around your use of social networking whilst on the PGCE course at this university. However, the study has built in safeguards to ensure your anonymity at all times – details of which can be found in the accompanying information sheet. This letter clarifies your informed consent to participate in the study.

At each juncture of this study you will be shown this letter and asked if you would no longer like your data to form part of this study. You can also request your data be removed from the study at any time and destroyed. There is no obligation for you or your data to be part of this study and it has no bearing on your PGCE course. At any point, should you wish to be removed from this study and your data destroyed, simply email [James.Shea@beds.ac.uk](mailto:James.Shea@beds.ac.uk) indicating that you wish your data to be destroyed and your name removed from any lists.

If you would like a copy of the study when it is completed, please write to [James.Shea@beds.ac.uk](mailto:James.Shea@beds.ac.uk) enclosing a valid email address and a copy will be emailed to you once it has been completed.

Many thanks for your assistance in this study.

James Shea  
Senior Lecturer in Education  
School of Teacher Education  
University of Bedfordshire

## Appendix 2 Agreement Form



### Study Participant Agreement Form

I have read the study information sheet and the informed consent letter and give my consent for data gathered through my participation to be used in this study and further publications as and when they arise.

Name: .....

Signature: .....

Date: .....

I no longer wish to participate in this study (tick)

## Appendix 3 Information Form



### Information Sheet

This study is designed to gather data around your use of social networking whilst on the PGCE course at this university. As part of your studies, it is often the case that students participate within social networking sites such as Facebook. Often, subject groups within the course set up specific homepages which are only accessible to those within the subject groups. This study is designed to investigate the role that such interaction has on your progress through the course.

As the nature of the interaction being investigated is private to you and your social networking group, anonymity is being built into all aspects of the study. The informed consent letter sets out how you can refrain from participating in this study if that is your wish. To reinforce the point in the informed consent letter; non-participation will have no negative bearing on you or your progress on this course.

Although you are asked to put your name on the questionnaires, your name will not be associated with your data. This is because a colleague, who is not associated with this study, will remove your name and ascribe your survey responses with an anonymous, but identifiable sign such as 'Student A'. All data collected in this survey will be rendered using the same methodology so that your anonymity is assured throughout the study.

During the semi-structured interviews, participants will not be identified and participants will also be asked not to refer to any student, school or other identifying information. In addition, this interview will be transcribed and checked by a colleague who is not involved with this study and any inadvertent information identifying any participant, school or other identifying information will be removed prior to the transcript being made available for study.

Any data gathered as part of this study will be stored securely on a networked hard drive and not on a personal or portable hard drive. The study based upon



this data may be published in a range of places such as academic journals. At the end of the study, this data may be accessed again for future research, but at all times will retain the anonymity built into the design.

If you would like a copy of the study when it is completed, please write to [James.Shea@beds.ac.uk](mailto:James.Shea@beds.ac.uk) enclosing a valid email address and a copy will be emailed to you once it has been completed.

Many thanks for your assistance in this study.

James Shea  
Senior Lecturer in Education  
School of Teacher Education  
University of Bedfordshire

## **Appendix 4 Example Transcript: English Pre-Service Teachers Interview One**

Transcript – Pre-service English teachers interview one

INTERVIEWER: Since our last interview, you have changed placements so has there have been any issues that have prompted people to communicate with each other online?

PRE-SERVICE ENGLISH TEACHER A: It had been quite quiet up until today when one person uploaded something like a video from a previous session and other people joined in and shared things.

PRE-SERVICE ENGLISH TEACHER B: It has been mainly if we are going to Pizza Hut and there has been one other post.

PRE-SERVICE ENGLISH TEACHER C: And the day when you changed the times that went up on there as well ....

INTERVIEWER: Still social things ....

PRE-SERVICE ENGLISH TEACHER A: Organisational things ....

PRE-SERVICE ENGLISH TEACHER B: Passing on things ....

INTERVIEWER: Can you give me an example of the organisational things?

PRE-SERVICE ENGLISH TEACHER A: Where we are meeting for things ...

PRE-SERVICE ENGLISH TEACHER C: When grades go up .....

PRE-SERVICE ENGLISH TEACHER B: Texting at Pizza Hut to say when we are coming.

INTERVIEWER: When the Reflective Teacher was due, where people communicating around that time?

PRE-SERVICE ENGLISH TEACHER B: I think for those of us that were very late in were sitting online chatting but not on Facebook but through messenger.

INTERVIEWER: Why go through messenger and not Facebook? Is it a privacy issue?

PRE-SERVICE ENGLISH TEACHER C: It's more conversational ....

PRE-SERVICE ENGLISH TEACHER B: Although Facebook is immediate it feels more like immediate conversation when you are chatting to someone.....

PRE-SERVICE ENGLISH TEACHER A: To don't have to write a full sentence you can just say "u alright?".

INTERVIEWER: It's more informal ....

PRE-SERVICE ENGLISH TEACHER C: You get all those notifications through which might not be relevant for everyone.

PRE-SERVICE ENGLISH TEACHER B: The structure of Facebook is not conversational.

INTERVIEWER: If you post on the Facebook homepage it sends a notification, whereas with Messenger conversation you don't want it binging every time a notification is posted.

PRE-SERVICE ENGLISH TEACHER A: It's used to communicate in smaller groups ...

PRE-SERVICE ENGLISH TEACHER C: ... and it's quicker response and you can see if people have responded.

PRE-SERVICE ENGLISH TEACHER B: You can see if people are at their computers at the same time as me, so just three of us chatted.

INTERVIEWER: So you are online writing your essay and then you can communicate in your small group about your essay?

PRE-SERVICE ENGLISH TEACHER B: I have three screens at home and one of them is going to be chat, one an essay and the other my music.

INTERVIEWER: What about when you moved schools, did you ask people about what was expected of you as a professional teacher?

PRE-SERVICE ENGLISH TEACHER C: There was some things to do with the primary school booklet about what we had to fill in but again that was in small groups. When does it need to be in by? Do we have to reference?

PRE-SERVICE ENGLISH TEACHER A: With each task do we need to publish that in some way ....

PRE-SERVICE ENGLISH TEACHER C: We had a chat about some of the teaching practice .....

PRE-SERVICE ENGLISH TEACHER B: We dealt with all of this in cluster in groups. I don't think people worried about going to a different school as we had done it before.

PRE-SERVICE ENGLISH TEACHER A: I think we are getting used to being in a different place. We know from our first placement what we need to get from

them and what they expect from us. We talked a bit about our second placement and compared a little bit as we were in similar schools in terms of setting. In our cluster groups we were all in similar settings so it was interesting to see how different schools work within that setting.

INTERVIEWER: You went to a school where one of the other students had already been, so was that a source of information for you?

PRE-SERVICE ENGLISH TEACHER B: We talked a bit about it beforehand and it's nice as a student is going back there to keep track of what is happening in the school.

INTERVIEWER: Somebody went to the school that you had just been at. Did that person ask you any questions?

PRE-SERVICE ENGLISH TEACHER B: A little bit beforehand but afterwards you discuss individual teachers and it's easier to share experiences once you have had that same experience and you can talk about what you have seen.

INTERVIEWER: Is the idea behind that that you have a good start at the school?

PRE-SERVICE ENGLISH TEACHER A: It's the unknown like in the middle school placement, although we had moved around and we had got settled in one school and it was like going back to September with a new school and new classes.

PRE-SERVICE ENGLISH TEACHER C: You were sitting around doing nothing and so I started to organise my hours.

PRE-SERVICE ENGLISH TEACHER B: Its confirmation, I'm sat there thinking one teacher was good and one teacher not so good. To get someone else's opinion who is a friend rather than a work colleague feels more open.

INTERVIEWER: To do you think changing placements has given you a stronger sense of what it means to be a Professional Teacher now that you have seen different schools?

PRE-SERVICE ENGLISH TEACHER A: Yes, as they were two very different schools in ethos and the way they run KS2/3 on my current placement so it is interesting to see that. I think as it is smaller than my first school and that the standards of professional conduct are higher in the smaller schools. There were times that I didn't want to hear the conversations about people going out and doing this and that which I didn't think was appropriate. That was part of the culture there and even the Head said "we work hard and play hard" and he was up for big staff nights out which he used as a motivational thing but this would not be my personal philosophy. It is nice seeing a different way of doing it and I

would argue that the people in my school seem to be a lot happier and more secure. Their school is about to go through a bit change but seem to be prepared for this. At my last school there would have been more chaotic.

INTERVIEWER: Have you been able to articulate this to other people in your group? Through online or other ways ...

PRE-SERVICE ENGLISH TEACHER A: As we are both in middle schools now, we have said how the pace is different. This resulted in the kids being unsettled, as the staff got stressed rushing from one end of the school to the other each lesson change and never being in the same classroom twice. You could spend a good 10 minutes trying to calm them down as it had been a mad rush and if you as a teacher are panicked and rushed and it's difficult to get the kids to calm down. I think we talked about the contrast in the two schools....

INTERVIEWER: Did it help to talk to someone who had been through a similar placement pattern to you?

PRE-SERVICE ENGLISH TEACHER A: Yes, it is interesting to compare our experiences.

PRE-SERVICE ENGLISH TEACHER B: There was some discussion after the primary placement between everyone as if they would consider primary as an option and that was quite nice because you kind of knew which students in the group would be the same as you.

INTERVIEWER: Do you think that hearing about these different approaches within schools from other people is helping you shape your identity as a teacher?

PRE-SERVICE ENGLISH TEACHER C: You are naturally going to make judgements and comparisons. I don't think there is one significant teacher role as it is completely individual, but it's nice to share ideas. In cluster we did a thinking hats and shared different ideas and people approached it in completely different ways. It was nice to get that across.

PRE-SERVICE ENGLISH TEACHER B: It makes you challenge some of your preconceptions. Where I am there is a teacher is refuses to share things, critical of every powerpoint and any displays behind you so this makes you think of something entirely different. I got to discuss this with someone and say what did you do with this teacher? How did you work around this and how did you support the students?

INTERVIEWER: Ideas about different ways of teaching have been challenged?

PRE-SERVICE ENGLISH TEACHER A: I was quite comfortable in my style and was in line with my first placement and my mentors and head of department. In

my second placement, my mentor has a totally different style to me and I have spoken to other people about this through Facebook and Messenger. She often whispers and the effect that it has on the kids is fantastic. If she feels that they are a bit unsettled in the morning, she will do her register in almost a whisper as they are meant to be silent reading while she is doing it and it really works bring down the hyper in the morning and channels it as they go off to their first lesson. This is something I have not considered doing and do big active mad ....

INTERVIEWER: Did you tell the others in the group about it?

PRE-SERVICE ENGLISH TEACHER A: If someone had described her teaching style, I would have said if it works for her .....but having seen it and the way she does discussions is a great style to it. I don't think it something that I would want to replicate but I think it is an interesting contrast to how I would do it. It has made me re-evaluate my own need to be slightly manic and active and sometimes there are times when just reading and discussing the book is fine and I don't need to have these flashy things everywhere.

INTERVIEWER: When you hear someone talk about how they have changed direction do you think it makes you more open to trying it yourself?

PRE-SERVICE ENGLISH TEACHER B: In my new placement, the class sizes are quite big, so I find myself walking around the classroom more and not constrained to the powerpoint at the desk anymore. I do a lot more drama activities so I feel that I am more relaxed as I enjoy drama as well as the children. The person observing me at the back says it's quite good as I am not a fan of the drama side so she is going to nab my powerpoints when I leave so she can teach it next year, so that is quite a good feeling.

PRE-SERVICE ENGLISH TEACHER B: I think it depends on how you mesh up teaching styles. Although when you hear that sounds great for you, 100% I'm sure you had a great time with that lesson, but it wouldn't suit me but sometimes you hear things and you get your notebook out and write something down and think that is going into my lesson next week.

PRE-SERVICE ENGLISH TEACHER C: I think hearing things is not the same as seeing them as I do get frustrated sometimes, but it might be a tiny thing such as how they introduce the starter, do they set clear parameters and see what effect that has? It does make you think about your own practice a bit more.

PRE-SERVICE ENGLISH TEACHER B: It has struck me how little we are hearing about what people are doing in lessons or in teaching it has become more about how they are getting on with the workload and requirements.

INTERVIEWER: Is it more about being a teacher?

PRE-SERVICE ENGLISH TEACHER B: We have been doing for the first time this year and the focus has gone from lesson by lesson planning .....

PRE-SERVICE ENGLISH TEACHER A: I don't think we are daunted by planning a lesson anymore. When you first start you feel that you need to put all your tricks into one lesson and that didn't work but now I know that I can spread them out. I can focus on what I want the students to get out of it not what I want to show off I can do.

PRE-SERVICE ENGLISH TEACHER B: Those people with more experience are asking a lot more questions about lesson planning and if you are still doing that .....

PRE-SERVICE ENGLISH TEACHER A: The day to day teaching is taking a bit of a back seat and ....

PRE-SERVICE ENGLISH TEACHER C: It becomes second nature.

PRE-SERVICE ENGLISH TEACHER A: Its more about life, work balance more.

PRE-SERVICE ENGLISH TEACHER B: It's more about what is your department like.

PRE-SERVICE ENGLISH TEACHER A: The wider school and your wider life as a person.

PRE-SERVICE ENGLISH TEACHER B: The stand out trips, enrichment which people find exciting which just isn't a normal lesson. It's not so much about the day to day.

INTERVIEWER: Do you think getting a job changes you as a teacher?

PRE-SERVICE ENGLISH TEACHER A: I'm more investing in this placement as it is the same kind of setting that I will be working in next year. I'm a lot more interested in looking at KS2 feeding into KS3, but on the other hand it also means that I am not looking forward to my final placement because that it is upper school and I can see in the long term it would be useful at the moment it is the motivation for the last placement which is slightly escaping me at the moment. I have found a setting where my style works quite well. Coming from working in special and I like building relationships with the children, it's the size of the school which has made me realise how much I value being part of a smaller team more than the school and I enjoyed those close working relationships across departments and key stages. I think it has confirmed for me my opinions on things like school size and working across the curriculum.

INTERVIEWER: Are you still finding that you are having what's app conversations as well as Messenger conversations on top of the Facebook home pages?

PRE-SERVICE ENGLISH TEACHER A: I use Messenger.

PRE-SERVICE ENGLISH TEACHER C: and texts as well. It's hard to get service in school as sometimes I cannot get onto the internet and my phone will buzz (not in lessons!) and it will be a message from one of these two. I will text and say what does that say because I cannot see it? It will generally be something funny that has happened during the day there were two children having an animal stand-off in the middle of a lesson which I thought was odd.

PRE-SERVICE ENGLISH TEACHER A: Or it can be something really mundane that has nothing to do with teaching.

PRE-SERVICE ENGLISH TEACHER B: Because of my cluster and some of my subject are more willing to do things after sessions, we will gather and do social activities. It has been more of a sub-group of us doing things after sessions so there has been more what's app communication as the Facebook groups don't really fit anymore.

PRE-SERVICE ENGLISH TEACHER A: We have the de-briefing cluster and we feel that this is our weekly purge. We usually get there half an hour before the session starts and eat our lunch and chat about our week. We don't have that on a Friday .....

PRE-SERVICE ENGLISH TEACHER B: Sometimes people after a Friday go out.

PRE-SERVICE ENGLISH TEACHER A: I've never been invited .....

PRE-SERVICE ENGLISH TEACHER C: We go out on Thursdays.

PRE-SERVICE ENGLISH TEACHER B: So last week some people from English and Science went out. As things are changing and we are meeting new people....

PRE-SERVICE ENGLISH TEACHER A: I think when we first started we spent those first couple of weeks together as a subject group and because of things like our reflective unit and we are mixed with other subjects and phases which is quite nice. When I walk into our RIT group, I don't necessarily go and sit with the English students, not because I don't like them, because of the subject area I find it more interesting to find out what someone from science is looking at. It is nice to have a different perspective.

PRE-SERVICE ENGLISH TEACHER B: Anyone except primary.....

PRE-SERVICE ENGLISH TEACHER A: No there are a few. It's more of interest so I know where their values and ideas are. I think it's more interesting to speak to one of the MFL students to see how they are approaching it.



PRE-SERVICE ENGLISH TEACHER B: Were you guys there for the homophobic lecture as it was quite interesting to see as there were comments made that were quite ignorant. It was interesting to see the groups within the groups, perhaps judging people who were speaking and its quite interesting within the group of teachers ...

PRE-SERVICE ENGLISH TEACHER A: how different opinions can be.

PRE-SERVICE ENGLISH TEACHER B: There was quite a lot of antipathy within the groups.

INTERVIEWER: I think we will leave it there.

**End of English Interview one**

## Appendix 5 Example of Annotated Transcript

<p>INTERVIEWER: We are looking at your social interactions and how that community functions. What does bind that community together?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: We don't have a Facebook account as not everyone is on Facebook, so we have set up an account on Glassboard and still trying to find out how to use it.</p>	<p>No Facebook account Glassboard account set up – but not successful</p>	<p>Establishment of a community of practice</p>
<p>PRE-SERVICE MATHEMATICS TEACHER B: It doesn't seem to work very well on our phones and it hasn't been updating fast enough so it's not useful in an interactive way so people haven't been using it.</p>	<p>Glassboard does not work well on smartphones Glassboard does not update fast enough</p>	
<p>PRE-SERVICE MATHEMATICS TEACHER A: I am on the maths one and our cluster group has one which seems to be working well as people are putting links on it to resources for lessons. You can see it, but I can't. We are trying to use it share resources at the moment.</p>	<p>Glassboard is not interactive enough Glassboard works for cluster Sharing resources</p>	<p>Establishment of a community of practice</p>
<p>INTERVIEWER: Do you think you will move towards setting up a Facebook homepage at some stage?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: We have got people who just don't want to go on Facebook. So I think we will have to use something different.</p>	<p>Some people do not want to go on Facebook</p>	<p>Establishment of a community of practice</p>
<p>INTERVIEWER: So it was the Glassboard....</p>		

<p>PRE-SERVICE MATHEMATICS TEACHER A: That was the idea</p>		
<p>INTERVIEWER: What about you?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER C: I started to use Facebook but as everything was public, I just took it off and tried to use other Bedfordshire campus community but I couldn't join the one specific to maths so that's when I joined Glassboard. I find it difficult to use. I try messaging but we don't get notifications. There are no reminders, I don't know if there is anything in the settings? We are so busy multi-tasking that a reminder needs to be there. A reminder comes up on WhatsApp but nothing comes up, so you have to go into it to see if there is anything there. I have a small group on WhatsApp but you have to share your numbers which you have to be comfortable with before sharing. WhatsApp is working well as if I have a lesson plan I take a photo of it and post it straight away on WhatsApp. We were uploading our PRP on ITP and we were having issues so we were discussing. I think WhatsApp is really efficient and if the Glassboard is as efficient as WhatsApp then we will prefer to use that as we are not sharing our personal numbers.</p>	<p>Facebook privacy issues</p> <p>No Facebook for maths</p> <p>Glassboard difficult to use</p> <p>Glassboard does not do push notifications or reminders</p> <p>Whatsapp has reminders</p> <p>Whatsapp has to be checked manually</p> <p>Whatsapp privacy issues – sharing numbers</p> <p>Sharing resources</p> <p>Solving problems as a community</p>	<p>Establishment of a community of practice</p> <p>Establishment of community of practice</p> <p>Shared practices</p>
<p>INTERVIEWER: Is privacy an important issue to you?</p>	<p>Prefer to use system with better privacy</p>	<p>Establishment of community of practice</p>
<p>PRE-SERVICE MATHEMATICS TEACHER A: It does seem to be.</p>	<p>Privacy is important</p>	
<p>INTERVIEWER: Is this part of the reason why you don't have a Facebook account?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: The reason that we went for Glassboard was that no-one was sure of any better alternative. If WhatsApp worked better I don't think people would mind their numbers</p>	<p>Privacy concerns about WhatsApp</p>	<p>Establishment of community of practice</p>

<p>being shared amongst those people. It doesn't share them publicly does it?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER C: Just amongst the group. It is very efficient I use it all the time. I think we would be quite confident sharing our numbers in our group. I think it is important to have a group as at the moment we are getting so much information so that I hope that I am not missing anything.</p> <p>INTERVIEWER: Can you give me an example when you think you have missed something and you have communicated with someone about it?</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: The forms that we were supposed to be having for PRP and I thought my file was complete then I read something on BREO but I didn't note it and I forgot it and I didn't print the progress report form. We were doing a check list on WhatsApp ...</p> <p>INTERVIEWER: So you discussed this WhatsApp?</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: Yes, have you got this form and that one and I realised that I was missing one and then we sent the link to each other. I don't like typing so I just take a picture and send it. There is one guy in history who was having similar problems, so I invited him to WhatsApp and invited him to join our group. I checked his file and his form was missing which he had but his file was good so I took some tips of him. As a result our files and work quality are getting better.</p> <p>INTERVIEWER: Who is in the WhatsApp group?</p>	<p>Values having a group</p> <p>Worried that not having a group means they are missing out</p> <p>Solving academic problems as a group</p> <p>Check list on WhatsApp</p> <p>Taking pictures and sending them</p> <p>Mixing across subject groups</p> <p>Sharing and modelling of good practice Work improving due to sharing</p>	<p>Establishment of community of practice</p> <p>Shared practices</p> <p>Issues and challenges in relation to achieving the core enterprise</p> <p>Shared practices</p> <p>Issues and challenges in relation to achieving the core enterprise</p>



<p>INTERVIEWER: What do you do when you are faced with these sorts of problems and how do you communicate with other people on the course?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: I don't think we have had a need to.</p>	<p>No need to communicate and share problem solving</p>	<p>Issues and challenges in relation to achieving the core enterprise</p>
<p>PRE-SERVICE MATHEMATICS TEACHER B: No.</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: At the moment we are seeing each other every Friday we have these discussions then. I suppose when we not in then it will be a different situation.</p>	<p>Meeting on Fridays helps problem solving and communication</p>	<p>Establishment of a community of practice</p>
<p>PRE-SERVICE MATHEMATICS TEACHER C: When we see each other on a Friday, if we want to discuss something then we discuss it beforehand ie sharing resources so we know that we have to get together to discuss it.</p>	<p>Friday meetings link to virtual communication</p>	<p>Establishment of a community of practice Shared practices</p>
<p>PRE-SERVICE MATHEMATICS TEACHER A: I see [NAMES PRE-SERVICE TEACHERS] in cluster group on a Thursday and we found out he was working really late so we do need to find a way to share that information.</p>	<p>Student working late unnecessarily</p>	<p>Issues and challenges in relation to achieving the core enterprise</p>
<p>PRE-SERVICE MATHEMATICS TEACHER C: We need to be working as a team as making use of Glassboard or WhatsApp so we can speed up our communication.</p>	<p>Working as a community is desirable</p>	<p>Shared practices Establishment of community of practice</p>
<p>INTERVIEWER: The other subjects have gone for a Facebook homepage which mean that it is wholly private to those people in the subject specialist groups. Why did you not go for that kind of answer?</p>		

<p>PRE-SERVICE MATHEMATICS TEACHER C: I searched for that but there wasn't one specifically for maths.</p>	<p>No Facebook for Mathematics</p>	<p>Establishment of community of practice</p>
<p>INTERVIEWER: You have to set it up.</p> <p>PRE-SERVICE MATHEMATICS TEACHER A: I don't think there was anyone who was familiar enough with Facebook to have done it.</p> <p>PRE-SERVICE MATHEMATICS TEACHER B: I think we would be excluded half of the group who are not on Facebook. That's why we set up the Glassboard one.</p> <p>INTERVIEWER: But people are not using that either .....</p> <p>PRE-SERVICE MATHEMATICS TEACHER A: Most people have joined it. I think I am the only one who has put some stuff on it but nobody can see it.</p> <p>INTERVIEWER: So you see a need to function as a community of Mathematicians especially as once the Fridays have gone that is quite important to you? What is that driving thing?</p> <p>PRE-SERVICE MATHEMATICS TEACHER A: I think because of the workload and make it easier by using other people's efforts and vice versa and it makes it less effort.</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: If there are things that you are doing on your own it takes lots of time and energy whereas if you are working as a team you are sharing.</p> <p>PRE-SERVICE MATHEMATICS TEACHER B: It is reassurance that you are going the right thing.</p>	<p>The skill of setting up a Facebook home page is not something that the group had</p> <p>Exclusion of people who do not use Facebook Reason for setting up Glassboard</p> <p>Glassboard not being used</p> <p>Networking reduces workload</p> <p>Working alone is a lot of work</p> <p>Working as a team and sharing</p> <p>Reassurance that you are doing it right</p>	<p>Shared practices</p> <p>Shared practices</p> <p>Issues and challenges in relation to achieving the core enterprise</p> <p>Shared practices</p>

<p>INTERVIEWER: What about the way you tackle problems and resolve them?</p>		
<p>PRE-SERVICE MATHEMATICS TEACHER A: It's been done in the cluster sessions on Thursdays. Usually they are common issues amongst all the trainees that when things are discussed and resolved.</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: If I am I am not able to locate anything on BREO we discuss it amongst ourselves. As the teachers are really approachable here so I will email them and they are prompt in replying.</p> <p>INTERVIEWER: As we have had this conversation has it changed your thoughts in any way about how you as a group of Mathematicians function as a community and what is going to happen after half term?</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: We need to make it work better</p> <p>PRE-SERVICE MATHEMATICS TEACHER A: I think we are going to talk about that today and maybe it's WhatsApp.</p> <p>PRE-SERVICE MATHEMATICS TEACHER B: I feel as though we are reinventing the wheel all the time. I could have spent hours last week doing a Pythagoras lesson that you have done the week before.</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: Last week I said to [NAMES PRE-SERVICE TEACHER] as I saw a teacher doing a lesson on Pythagoras and was able to get a really good idea from that so that I would type it up and send it to him. If I knew you were doing Pythagoras I could do the same.</p>	<p>Cluster sessions on Thursdays</p> <p>Location on BREO</p> <p>Email teachers</p> <p>Need to make the community work</p> <p>Will discuss as a group</p> <p>Reinventing the wheel</p> <p>Sharing good practice</p> <p>More knowledgeable other</p>	<p>Issues and challenges in relation to achieving the core enterprise</p> <p>Issues and challenges in relation to achieving the core enterprise</p> <p>Establishing a community of practice</p> <p>Issues and challenges in relation to achieving the core enterprise</p> <p>Shared Practices</p> <p>More knowledgeable other as broker</p>



<p>PRE-SERVICE MATHEMATICS TEACHER B: Hopefully by the time we have our next meeting we will have a better way of doing it.</p>	<p>Declared desire for improvement</p>	<p>Issues and challenges in relation to achieving the core enterprise</p>
<p>INTERVIEWER: It sounds as though you are in the early stages of starting to form a community and you try to set Glassboard up. How did it come about that you set it up?</p> <p>PRE-SERVICE MATHEMATICS TEACHER A: There is already one for our cluster group and it worked, so I thought that was a good idea as it was pretty straight forward to set up because we had talked about setting something up but no one was quite sure what.</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: I didn't think about WhatsApp because I wasn't comfortable about sharing numbers so when you came up with Glassboard, I thought that was fantastic. I think the other groups like Chemistry are going better at communication as they use WhatsApp.</p> <p>INTERVIEWER: What things do you think they are doing better at?</p> <p>PRE-SERVICE MATHEMATICS TEACHER C: In primary there is a group for the reflective teacher so they share the reading as there is so much to do and they discuss it on Fridays and they make notes so everyone does not have to do all the reading. If there is anything interesting comes out of a particular subject such as peer assessment then I can do further reading.</p> <p>INTERVIEWER: It gives you some ideas. When we next meet I will ask you what impact has the fact that you have participated has had.</p>	<p>Saw Glassboard working for the cluster</p> <p>WhatsApp privacy issues</p> <p>Other groups have better communication</p> <p>Group work to solve academic problems</p> <p>Workload</p>	<p>Establishing a community of practice</p> <p>Issues and challenges in relation to achieving the core enterprise</p> <p>Issues and challenges in relation to achieving the core enterprise</p>

## **Appendix 6 Example of Memoed Findings (Secondary Mathematics)**

Throughout the secondary mathematics interviews this group of pre-service mathematics teachers were struggling to establish a community of practice through private social media interactions. In the interview were a mix of pre-service mathematics teachers who used Facebook and WhatsApp, and other pre-service mathematics teachers who did not really use social media. However, there was a strong awareness throughout the interviews that the pre-service mathematics teachers could be more effective if only they would network properly. Each time the interview finished, the selected pre-service mathematics teachers said they were going to try and remedy what they saw as a community that was struggling to establish itself through private social media interactions and every time it was clear that they did not succeed. It said a lot about those opening weeks on the course and the need to flag up to pre-service teachers that this is a high stakes time of the course when it is important to establish effective group physical networks and functioning private social networks amongst those pre-service teachers who want to use private social networking to function as a community.

### **1<sup>st</sup> Interview**

The pre-service mathematics teachers immediately said that because some pre-service mathematics teachers were not on Facebook they had decided not to set up a Facebook homepage - interesting. Contrasts with the science group who set it up despite someone not being on Facebook. However, it seems although there were more than one pre-service mathematics teachers not on Facebook, they were still keen to establish a community of practice through private social networking software, but using something they clearly feel more comfortable with, Glassboard.

PRE-SERVICE MATHEMATICS TEACHER A: We don't have a Facebook account as not everyone is on Facebook, so we have set up an account on Glassboard and still trying to find out how to use it.

The contrast in pre-service mathematics teachers reflects what other pre-service teachers said about Glassboard – the lack of smartphone compatibility

with push notifications means it struggles to compete with Facebook users. It is just like the institution VLE really, needs a log in, no push notification and another bit of software when they already have and use Facebook through their phones.

PRE-SERVICE MATHEMATICS TEACHER B: It doesn't seem to work very well on our phones and it hasn't been updating fast enough so it's not useful in an interactive way so people haven't been using it.

This need to save time seems to be one of the ways they want to approach issues and challenges to becoming teachers – they don't want to waste time checking, they want alerts telling them. Speed must be part of the way I write this up – the role of speed means they can access help faster. They have so much workload, multi-tasking, that time is everything.

PRE-SERVICE MATHEMATICS TEACHER C: I find it difficult to use. I try messaging but we don't get notifications. There are no reminders, I don't know if there is anything in the settings? We are so busy multi-tasking that a reminder needs to be there.

This discussion of the pros and cons of WhatsApp is insightful. It is clear that it demands more invasion of your privacy in terms of your phone number. Despite this, pre-service teachers seem happy to swap numbers fairly early on. The notion of 'privacy' is different for some pre-service teachers – they see the phone number like an email address almost, simply something someone uses to contact you. However, if they can avoid sharing their phone numbers then they will do so. Each pre-service teacher is unique on this one – I am sure they would all rather be on Facebook rather than sharing numbers on Whatsapp.

PRE-SERVICE MATHEMATICS TEACHER C: I have a small group on WhatsApp but you have to share your numbers which you have to be comfortable with before sharing. WhatsApp is working well as if I have a lesson plan I take a photo of it and post it straight away on the WhatsApp. We were uploading our PRP on ITP and we were having issues so we were discussing. I think WhatsApp is really efficient and if the Glassboard is as efficient as

WhatsApp then we will prefer to use that as we are not sharing our personal numbers.

This is clearly sharing resources and practice. Pre-service mathematics teacher C was really quite worried about not being part of a community of practice interacting through private social media. It became apparent that she was used to leaning on a community's capacity to deal with issues and challenges related to the core enterprise. This is very much like Bourdieu's habitus, she is used to doing this and has inadvertently brought this practice to her course and now has suddenly realised that using a community of practice through private social media is something she values.

PRE-SERVICE MATHEMATICS TEACHER C: I think it is important to have a group as at the moment we are getting so much information so that I hope that I am not missing anything.

In the interview, this idea was explored – that a pre-service mathematics teacher might look for peer support through private social media at a critical moment and overcome a challenge to the core enterprise due to the support or shared practice received by a pre-service mathematics teacher. Naturally this could be done face to face or by phone, but this relies on the sharing of much greater privacy, the revealing of inadequacies and the availability of others. What the pre-service mathematics teacher said was that as a group they collectively compiled a check list and then all went through the check list as a group. It seems really quite light, but in fact this is an assessment and they are helping each other meet the assessment requirements for the Teachers' Standards.

INTERVIEWER: Can you give me an example when you think you have missed something and you have communicated with someone about it?

PRE-SERVICE MATHEMATICS TEACHER C: The forms that we were supposed to be having for PRP and I thought my file was complete then I read something on BREO but I didn't note it and I forgot it and I didn't print the progress report form. We were doing a check list on WhatsApp.

What was interesting was that this exchange is two way. In this extract, pre-service mathematics teacher C invites someone struggling into the group to receive support, but then cherry picks some of his work to help her own as a different part of his work was stronger than hers. She sees that as a community of practice, the collective quality of knowledge is enhanced as well as the individual quality of knowledge.

PRE-SERVICE MATHEMATICS TEACHER C: There is one guy in history who was having similar problems, so I invited him to WhatsApp and invited him to join our group. I checked his file and his form was missing which he had but his file was good so I took some tips of him. As a result our files and work quality are getting better.

This 'awareness' that other pre-service teachers are struggling and that other pre-service teachers are resolving their struggles through networking online through private social networking comes through here. Pre-service mathematics teacher A reflects that she is aware of another pre-service mathematics teacher who isn't sharing or receiving support from the community to help him with issues and challenges to becoming a qualified teacher.

PRE-SERVICE MATHEMATICS TEACHER A: I see [ANOTHER MATHEMATICS PRE-SERVICE MATHEMATICS TEACHER] in cluster group on a Thursday and we found out he was working really late so we do need to find a way to share that information.

The lack of Facebook users was clearly the issue. They do see the 'group' as a community of practice and want to establish the online community with everyone.

PRE-SERVICE MATHEMATICS TEACHER B: I think we would have excluded half of the group who are not on Facebook. That's why we set up the Glassboard one.

In the interview, the pre-service mathematics teachers were asked why they felt private social media interaction was important to them and workload being made easier through shared practice immediately comes up. Workload came up in the literature review and is one of the challenges not just to pre-service

teachers, but current teachers. It must be something that is affecting emerging teachers such as NQTs whether they have such a community of practice or not. If the Facebook groups go into the NQT year and beyond we could have one set of teachers with extra help and ideas about teaching and one set without. Retention is a real issue.

PRE-SERVICE MATHEMATICS TEACHER A: I think because of the workload and make it easier by using other people's efforts and vice versa and it makes it less effort.

PRE-SERVICE MATHEMATICS TEACHER C: If there are things that you are doing on your own it takes lots of time and energy whereas if you are working as a team you are sharing.

PRE-SERVICE MATHEMATICS TEACHER B: It is reassurance that you are going the right thing.

This is good evidence of sharing practice and some of them acting as more knowledgeable others. This reassurance was something I picked up in some of the reading from Wenger. They are establishing the community of practice but also achieving reassurance that this is a standard of knowledge in the community. At this point, it became clear that the interview itself was affecting the pre-service mathematics teachers. They were reflecting in the session and thinking about themselves and other pre-service mathematics teachers who were not receiving the support they had identified.

PRE-SERVICE MATHEMATICS TEACHER C: We need to make it work better

PRE-SERVICE MATHEMATICS TEACHER A: I think we are going to talk about that today and maybe WhatsApp.

PRE-SERVICE MATHEMATICS TEACHER B: I feel as though we are reinventing the wheel all the time. I could have spent hours last week doing a Pythagoras lesson that you have done the week before.

PRE-SERVICE MATHEMATICS TEACHER C: Last week I said to [NAMES PRE-SERVICE TEACHER] as I saw a teacher doing a lesson on Pythagoras

and was able to get a really good idea from that so that I would type it up and send it to him. If I knew you were doing Pythagoras I could do the same.

The interview was making not really making the group function differently to that which they would have without the interview – they have reflected on this already and are trying to establish their community of practice, but the interview is letting them reflect on it further. However, pre-service mathematics teacher A was a driving force in the group, wanting to improve the group's networking and very aware of what the lack of networking was depriving the pre-service mathematics teachers of - her habitus has been transposed. The interview offered the participants from the community in this interview space and time to explore their reflections, rather than the interview initiated this thought. It is interesting how pre-service teacher A is used to developing her habitus through social media and is missing it here and looking to recreate it.

## **2<sup>nd</sup> Interview**

The pre-service mathematics teachers discussed the failure of their 'alternative' private social media interactions based on the Glassboard app. However, when it was working, they found it useful to share practice and resources.

PRE-SERVICE MATHEMATICS TEACHER A: We don't necessarily have a group. We had a Glassboard group but it went under a few weeks ago. No-one has yet been inspired to create another group. When it is was running I found it useful for support, lesson planning.

In the interview, the pre-service mathematics teachers were asked to explore exactly what is was that drove the group to establish the community – what were the things that they perceived to be useful from networking online through social media.

PRE-SERVICE MATHEMATICS TEACHER C: So it was good for support when we had a query about university work.

INTERVIEWER: So not just school-based stuff but university based stuff, so as a problem-solving tool.

PRE-SERVICE MATHEMATICS TEACHER A: We ran things past each other as some assignments were due in terms of referencing or how many things you linked to.

INTERVIEWER: To increase your ability to pass the assessment to a good standard that was something you worked towards?

PRE-SERVICE MATHEMATICS TEACHER A: Just for reassurance that everyone is doing it in the same way that you are or understood it in the same way you have....

In this discussion, themes emerged which are prevalent in the other groups: support, problem solving in school and university, assessment and reassurance. These are all issues and problems related to achieving the core enterprise of becoming a qualified teacher. This idea that academic work is more effective if one's work is similar to that of your peers – it indicates to one that they have interpreted the assessment correctly. Much of this is about managing stress and how collectively, the group is less stressed and better at resolving problems or establishing a 'standard' through dialogue. Wenger talks about how a community looks to establish a collective standard, ways, etc. This idea of a shared notion, a dialogic notion is not new. It is quite Vygostkian in many ways and fits with constructivist notions – that ideas and learning are constructed through 'conversation'. But more than this, it suggests that constructed learning is stronger, more successful, less stressful, more reassuring, time-efficient and better at solving problems – it seems very much like the way Bourdieu refers to how habitus enables one to go through life and face challenges. The only worry really is the idea from some of the placements' leadership in the science interviews that view collaboration as not desirable. In many ways, constructivist notions go against the 'market' or 'competitive' environment within which schools are increasingly operating. It does raise a question about if the pre-service teachers are using private social networking to face the challenge of becoming a qualified teacher in the face of schools that do not want them to use these constructivist methods to do so. This is really quite disruptive and very interesting if so.



One of the pre-service mathematics teachers was keen in the first interview to exist in social media based communities for support and was seeking alternative groups outside the pre-service mathematics teachers' community at the start of the course. In the interview, it became apparent that she was enhancing her employability prospects through existing in this group.

PRE-SERVICE MATHEMATICS TEACHER A: I tend to communicate with the cluster group more as we meet weekly and we have a WhatsApp group.

INTERVIEWER: So you have a WhatsApp group?

PRE-SERVICE MATHEMATICS TEACHER A: And we message.

INTERVIEWER: What do you talk about?

PRE-SERVICE MATHEMATICS TEACHER A: When we are meeting and things like that or share interview or application form experiences.

Thus the pre-service mathematics teachers are beginning to share more than school and university issues – now they are securing employment for the future.

One thing that seems to be variable from school to school is behaviour management policies. Each school is quite unique and the pre-service mathematics teachers see that each school has strengths and weaknesses at both formal and informal level. This is something that is discussed across subjects and is not linked to any particular subject.

PRE-SERVICE MATHEMATICS TEACHER B: The different behaviour policies in each school. How it works and our own behaviour strategies – count down and clapping.

PRE-SERVICE MATHEMATICS TEACHER A: Especially if someone has had a bad week and they come in with some examples and how they have dealt with it.

The first interview led to more of a focus on the community's ability to establish itself as a community through private social media and they said so, but they said that it still failed despite this extra effort. In the interview, they were asked directly if the first interview affected their networking as a group.

PRE-SERVICE MATHEMATICS TEACHER A: I think it did because that was when we set up the Glassboard group but it is unfortunate that it has folded.

PRE-SERVICE MATHEMATICS TEACHER B: We need to find another way to do the same thing.

PRE-SERVICE MATHEMATICS TEACHER C: I think we are looking for something that is a closed network which Glassboard was but it had its own difficulties such as having to upload documents one at a time which took a long time. So we need something like drop box but something that is a networking thing and it is just finding the right one.

Here we see the pre-service mathematics teachers focused on the need for a 'closed' network which is what the Facebook homepage is. However, with pre-service mathematics teachers not on Facebook or worried about privacy issues they were struggling to identify the right alternative to Facebook.

### **3<sup>rd</sup> Interview**

The pre-service mathematics teachers had spoken about the non-sustainability of Glassboard and their desire to try other providers to establish their community through social media: in this case DropBox.

PRE-SERVICE MATHEMATICS TEACHER A: As Glassboard was expiring, we made a DropBox account.

However, its immediate impact was less than successful.

PRE-SERVICE MATHEMATICS TEACHER B: We haven't used it much.

In the interview, the pre-service mathematics teachers were asked about what it was that drove them to set up the DropBox. What was it they saw they would get from this online community that they couldn't facilitate through regular physical contact?

Their answer drew from one of the key themes that has emerged from this research – the saving of time through the sharing of practice.

PRE-SERVICE MATHEMATICS TEACHER C: Glassboard went down and sharing resources is a good thing as if you are planning a lesson next week on a particular topic and not sure what to do, someone might have already done it and have some resources that would help you out. Drop Box is a place where we can do that.

This is referring to the pre-service mathematics teachers alone however. From the start, some of the pre-service mathematics teachers have wanted to be part of a community and have sought this outside of the group of pre-service mathematics teachers. However, existence of these communities seems to be very much word of mouth or Facebook requests to join.

PRE-SERVICE MATHEMATICS TEACHER B: There is a Face Book community for the PGCE pre-service teachers. I don't know if you two are on Face Book, we have a group for everybody across the PGCE and I find a lot of people put questions on there and people answer them. Such as how do I reference this or has someone got a reference for this kind of thing? We also share jokes on there, this was what my kids were like today, obviously not the actual pre-service teachers ....

PRE-SERVICE MATHEMATICS TEACHER C: I didn't know about that and I am on Face Book.

PRE-SERVICE MATHEMATICS TEACHER B: I got sent a request to join the group

The driver behind this group seems to have come from one of the university lecturers on the course.

PRE-SERVICE MATHEMATICS TEACHER B: One of the lecturers did mention about opening up a PGCE group and someone obviously took that and opened it and invited everyone they knew.

This demonstrates how the initiation, the validation and even the approval of using Facebook homepages can be driven by university staff. In this case the lecturer has led to the establishment of a community through private social media to which the pre-service mathematics teacher in this group has been

invited to and involved in. The clique that has emerged here could have been prevented by intervention at the start of the course about inclusion and good behaviour for online – the principles of which are part of the book, *Inspiring the Curriculum*. There is an awareness that there is pedagogy being taught in some units that isn't in others. This suggests that a clear outcome should be that a general instructional lecture about learning communities and good behaviour for online learning needs to be part of the PGCE to ensure inclusion and preventing the formation of cliques.

With the pre-service mathematics teacher who was keen to be part of pre-service mathematics teachers' community of practice through private social media interactions it was important to establish why Facebook rather than other social media such as Dropbox or Glassboard was attractive to them.

INTERVIEWER: What is it about a Face Book group that you find appealing?

PRE-SERVICE MATHEMATICS TEACHER B: As a lot of people are on it and using it. It is easy to access get notifications when people are doing things so you know when someone has posted something and you can see if it is going to be helpful to you or you can help someone as you can see straight away.

This 'speed' is very important – if there is something that is important, the pre-service mathematics teacher finds out immediately. They are not last to find out about a problem or solution – they can action on it rapidly and successfully.

Within the pre-service mathematics teachers, however, sharing of practice remained important as it identified that there is more than one way to teach. Yet, as the pre-service mathematics teachers found, there is often only one way of teaching in a school and this has quite major implications for training. If you are not exposed to contrasting styles of teaching either through placement or through interaction with your peers then you will learn only one way of teaching and your habitus is thus missing that development. In this exchange, the pre-service mathematics teachers demonstrate how the collective and constructivist notion of teaching developed through the mathematics teaching group, both physically and online, has helped them understand and cope with the difficulty of being in a school with a very fixed idea about teaching.

PRE-SERVICE MATHEMATICS TEACHER B: Initially, it did. I like using power points and being interactive. In this placement, when I started using Power Point and getting the kids to come up to the whiteboard. When I started observing, it wasn't anything like that. I had a meeting with the Head of Mathematics and he said this was how he wanted me to teach whilst I was in this placement.

INTERVIEWER: Did you share this with your group to find out if they had had similar experiences?

PRE-SERVICE MATHEMATICS TEACHER B: We talked about it last week. I don't think anyone is having it as quite as extreme as mine.

PRE-SERVICE MATHEMATICS TEACHER C: Some people are experiencing differences which we have to adapt to.

PRE-SERVICE MATHEMATICS TEACHER A: My experience is similar to yours but my mentor is really good. I didn't really ask him which method he would like me to teach. From the first day I did Power Point and he quite liked it. In schools every teacher has a different method of teaching, so I was lucky because my mentor accepted it really quickly.

In this exchange, you can see the constructed notion of teaching, 'every teacher has a different method of teaching', but the pre-service mathematics teacher sees herself as 'lucky' that she had a mentor with the same philosophy as that which the group of pre-service mathematics teachers have constructed. There is a tension between the notions of teaching within individual schools and those constructed within the community of pre-service mathematics teachers. They have to manage the power implications here and being part of a functioning group is important to this and the brokerage of ideas across schools is linked to this. On some teacher education courses, the number of pre-service teachers is very low or they have limited opportunities to construct their philosophy of teaching. The outcome would be that they could well have a non-constructivist notion of teaching which could be less resilient to change (habitus) and indeed be so stressful that after a while they leave the profession.

#### **4<sup>th</sup> Interview**

In this final interview, the pre-service mathematics teachers spoke about a collaborative project at a local school which they are doing and which required them to liaise electronically.

PRE-SERVICE MATHEMATICS TEACHER A: We have been working together, so that's what the communication has been about. It's been via email.

This means that the pre-service mathematics teachers' attempt to set up a private social media group through DropBox had been unsuccessful and so it transpired.

PRE-SERVICE MATHEMATICS TEACHER A: We got a Drop Box account but no-one seems to be using it, although everyone has access to it and email. It seems to be too late for anyone to do anything about it and set it up.

However, some of the pre-service mathematics teachers had set up a WhatsApp group, but the membership of this group was limited by notions of privacy.

PRE-SERVICE MATHEMATICS TEACHER B: We are talking about our RIT [L7 UNIT ASSESSMENT] project and the [NAMES SCHOOL] project. It is not with everyone in the Mathematics group, only those who felt comfortable exchanging their numbers.

Thus not just the work they are doing collaboratively is being discussed, but also the assessment which dictates whether they are awarded a post-graduate qualification over a professional qualification. This is a direct challenge to their ability to be a qualified teacher and is the core enterprise of the group. The pre-service mathematics teachers were directly asked about other incidents which made it into the group discussion. Here, they refer to an incident of behaviour.

INTERVIEWER: Can you give me an example where someone has had an incident on placement and then communicated it with other people in the group online?

PRE-SERVICE MATHEMATICS TEACHER B: In my cluster, there is a PGCE student who had problems with behaviour in a Year 10 class. We discussed it on WhatsApp and put forward ways of handling this.

This pre-service mathematics teacher was operating outside the mathematics group, but what it demonstrates is that there is a resource to be tapped into, an ability to get a constructivist notion of behaviour management base on pre-service mathematics teachers brokering ideas about different approaches to behaviour management based on their own access to different school communities and their approaches. This was the final interview and the mathematics group has clearly splintered into those who are interacting through private social media and supporting each other and those who are not.

PRE-SERVICE MATHEMATICS TEACHER A: I think it is helpful to have that if we need it. You [PRE-SERVICE MATHEMATICS TEACHER B] messaged the other day about teaching a particular topic and people offered resources to help with that. If we are ever stuck with a topic we have got people there to help us.

Thus whilst it seems that the mathematics group have not established a community within which all the pre-service mathematics teachers sit, one can see that they have appropriated other groups such as Facebook homepages and WhatsApp group to tap into other pre-service teachers or other pre-service mathematics teachers in general to get help. The last example is clearly subject related, 'particular topic', and yet the only place these pre-service mathematics teachers exist online is as part of other people's group and the smaller WhatsApp group.

One thing that stands out is that at the start of the first interview they said that 'some of the group' were not on Facebook. Yet at the end of this final interview it transpires that this was not the case.

When they were reflecting on what they would advise the next year's mathematics group to function better as a group it becomes clear that, like the science group, there was one person who was not on Facebook, not some.

PRE-SERVICE MATHEMATICS TEACHER A: Get them to set it up in the first week. Someone to take the lead and do that as after that it is less likely to happen. Also at first our sticking point was Facebook as one member of our group didn't want to use it that made us a bit stuck really as we didn't want to exclude them.

INTERVIEWER: What was that person's issue with Facebook?

PRE-SERVICE MATHEMATICS TEACHER A: It was privacy.

INTERVIEWER: Did they articulate what they were concerned about?

PRE-SERVICE MATHEMATICS TEACHER A: It was just a point blank "I don't use Facebook" and there was no negotiation on that.

PRE-SERVICE MATHEMATICS TEACHER C: No.

PRE-SERVICE MATHEMATICS TEACHER A: We could have gone ahead without him but it didn't feel the right thing to do at that time so that's why it didn't happen.

And so the whole group, for one person, struggled with Glassboard, Drop Box, email, WhatsApp, other group's Facebook homepages and other WhatsApp. They did not want to exclude them, but they wanted the support that communities provide through private social media interactions. An opening lecture as part of ITE about refusers, respecting the decision of refusers to not want to be part of the group and not receive support and yet not removing support from the whole group because of this one refuser, is important.

There seems to be types of pre-service teachers emerging:

lurkers: those who join groups, but don't always interact. However, they still learn a great deal and receive a lot of support from seeing others interact

refusers: who for reasons of privacy or technological difficulties simply do not join or value the reasons for joining. They are removing themselves from a source of support and indeed from a shared constructed understanding of assessments, teaching philosophies and participation in social events



## Appendix 7 PGCE Secondary Course Outline

This information is taken from the Course Information Form **CIF1415** and represents the course structure during the time of this study 2014-15

<b>Course Structure</b>				
All students on the Postgraduate Certificate in Education course will study 4 units.				
The following 3 units are common to all awards:				
<b>Unit Code</b>	<b>Level</b>	<b>Credits</b>	<b>Unit Name</b>	<b>Core or option</b>
EDC127-3	6	30	The Professional Teacher	C
EDC109-6	7	30	The Reflective Teacher	C
EDC110-6	7	30	The Research Informed Teacher	C
The 4 <sup>th</sup> unit is determined by the age phase and subject specification of the award. You will study one of the following:				
EDC128-3	6	30	The Subject Specialist (Primary Early Years)	C
	6	30	The Subject Specialist (Primary)	C
EDC133-3	6	30	The Subject Specialist (KS2-3 English)	C
EDC134-3	6	30	The Subject Specialist (KS2-3 Mathematics)	C
EDC135-3	6	30	The Subject Specialist (Secondary Computer Science and Information Technology)	C
EDC136-3	6	30	The Subject Specialist (Secondary Dance)	C
	6	30	The Subject Specialist (Secondary Design and Technology)	C
EDC138-3	6	30	The Subject Specialist (Secondary English)	C
EDC139-3	6	30	The Subject Specialist (Secondary Geography)	C
EDC140-3	6	30	The Subject Specialist (Secondary History)	C
EDC141-3	6	30	The Subject Specialist (Secondary Mathematics)	C
EDC142-3	6	30	The Subject Specialist (Secondary Modern Languages)	C
EDC144-3	6	30	The Subject Specialist (Secondary Religious Education)	C
EDC143-3	6	30	The Subject Specialist (Secondary Physical	C

			Education)	
EDC145-3	6	30	The Subject Specialist (Secondary Science with Biology)	C
EDC146-3	6	30	The Subject Specialist (Secondary Science with Chemistry)	C
EDC147-3	6	30	The Subject Specialist (Secondary Science with Physics)	C

### Why study this course

Develop as a highly qualified teacher with the knowledge and skills to lead learning and initiate change in educational settings.

### Course Summary – Educational Aims

Teaching is a challenging and rewarding profession. Effective teachers are able to draw from broad subject specific knowledge; secure understanding of theories about teaching and learning; and commitment to continuous improvement. This course aims to develop:

- your understanding of teaching and learning, with a particular emphasis on the phase and subject which you are training to teach;
- your application of subject knowledge and expertise to planning teaching and developing curricula;
- your skills of critical self-evaluation and improvement planning;

and through this development to enhance your independence, creativity and team-working skills, preparing you to influence and lead in educational settings.

You will be supported to demonstrate that you have satisfied the professional criteria which determine recommendation for Qualified Teacher Status (QTS) and, most significantly, to be able to explain and justify how you have met those criteria.

Underpinning the course design is a commitment to research informed and evidence based teaching. These principles are embedded in all aspects of the course and the teaching and assessment strategies provide continuous development of the knowledge and skills required. Throughout the course you will be encouraged to adopt an attitude of critical analysis, evaluating the impact of theory in the context of your teaching practice, and analysing evidence from your practical experience to inform your future actions.

### Entry requirements

#### Secondary and KS2-3 subjects

- You must possess a minimum 2:2 honours degree or equivalent in the subject for which you are applying to teach or a degree of which at least 50% is in that subject
- A levels in the subject and/or related subjects are desirable
- All applicants must have GCSE grade C (or equivalent) in English and mathematics
- Applicants whose first language is not English and who do not have GCSE grade C in English need to have IELTS with an average score of at least 6.0
- All applicants should have recent and relevant experience of working with children in a mainstream UK school in the phase for which they are applying
- All students will undergo a Disclosure and Barring Services (DBS) check
- All entrants must have passed the professional skills tests prior to entry

## Graduate Impact Statements

The course is designed to develop graduates who are able to:

- Work as independent, reflective, creative, innovative, collaborative and resilient practitioners, continuously developing expertise in subject and phase specific knowledge and in learning and teaching, based upon a sound knowledge and understanding of learner development and pedagogy.
- Commit to, and be accountable for, meeting the needs of all learners within a culturally diverse society, communicating very effectively with learners, colleagues, parents/carers, other professionals.
- Commit to life-long personal and professional development underpinned by critical engagement with practice based research, engaging in the development of curriculum and developing leadership and management skills.

## Additional Information

The NCTL sets out minimum requirements for the number of days of taught course and in placement. You will spend around 70% of your time in placement schools and will be expected to demonstrate the professional attributes of a teacher and commit fully to the life of the school throughout your placement experience.

## Learning and Teaching (URL for KIS link: LTURL)

Your development as a creative, innovative and reflective teacher will involve specific skills, a detailed knowledge of educational processes, an academic understanding of education and the application of professional attitudes and discipline in all areas of study. Your course consists of four units of work. These are:

- The Professional Teacher
- The Subject Specialist (your phase, your subject)
- The Reflective Teacher
- The Research Informed Teacher

The Professional Teacher unit is coordinated by a university tutor, with sessions held in a cluster base school and led by your cluster coordinator and/or school based tutors, providing you with current knowledge of the context in which you are working. Sessions will normally take the form of workshops and seminars, in order to ensure your active participation and collaboration.

The Subject Specialist unit is led by a tutor with expertise in the subject usually, but not exclusively, in university and, in your placement, supported by a mentor. University sessions are normally in the form of workshops in which tutors: model and analyse best practice; introduce and evaluate key theories and policies; explore aspects of subject knowledge in the context of teaching and help you to develop the skills required for teaching the subject. In your placement, your mentor will support you in the application of that learning to practice through: supported and collaborative planning and evaluation of teaching; weekly progress review and supported target setting; and by creating opportunities for subject knowledge

development.

The Reflective Teacher and Research Informed Teacher units are led by university tutors and supported by a team of tutors with expertise in teacher education. A lecture format will be used occasionally, where guest speakers offer particular areas of expertise or interest, or as a means of disseminating information efficiently. The greater emphasis, however, is on group work, peer support and tutorials, as a shared aim of these units is to help you to make clear connections between theoretical perspectives and your experience in practice.

When appropriate, notes and resources to support the taught sessions will be posted on the VLE. You will also be encouraged to develop and share your own resources and this may be through a wiki hosted by the VLE.

Your progress in all units will be enhanced by regular engagement with related literature. The course handbook and unit guides include an overview of taught sessions and directed reading to support the sessions.

The learning and teaching strategy also includes tasks to be undertaken in university and/or on placement. The tasks are designed to complement the teaching and to offer potential foci for your reflective writing, or sources of evidence of progress. Placement based tasks should be organised by negotiation with the mentor and/or professional tutor.

Tutorial meetings are included in the schedule of university sessions and are intended to support you to improve your assessed work and your development as a teacher.

Regular target setting and progress review is fundamental to your professional and intellectual development. You will have weekly meetings with your mentor to support this process and you should ensure that you maintain an awareness of your development targets in order to share them with the colleagues with whom you work. The extent to which you engage with the individual development planning assignment will determine the extent to which your development is personalized, and is, therefore, likely to influence the final outcome grade of your teaching practice.

Subject coordinators and cluster coordinators will visit you on placement to monitor your professional development. Subject coordinators will observe your practice and provide verbal and written feedback relating to your subject knowledge and pedagogy.

### **Developing your employability**

The course is framed by a commitment to help you to develop the characteristics of a University of Bedfordshire graduate teacher. You will be challenged to explore theories of teaching and learning and to

examine the implications of such theories for your own development. In doing this you will refine, form and reform your own principles, perspectives and values in relation to professional teaching practice. On completion of the course you will have the appropriate attitude, knowledge, skills and understanding to meet the needs of the children's and schools' workforce agenda.

Distinctive features of this course, through which you will develop these characteristics, include:

- Partnership provision
- Enhancements which improve personalisation and employability
- Reflective practice
- Frequent formative feedback
- Integration of performance and learning outcomes
- Webfolio
- Differentiated achievement outcomes

These features are outlined below:

### **Partnership provision**

The course has been developed, and is taught, by a team consisting of practising teachers, senior teachers, school leaders and university tutors. As a result, the course design satisfies the expectations and requirements of your future employers and you will benefit from the current and recent experience which they bring. Authentic partnership with schools underpins the success of the course, as confirmed by Ofsted 2011. Innovative developments include working with clusters of schools to provide a common ITE experience and professional development programme across the cluster. Most clusters are managed by a senior teaching professional and funded jointly by the University and the local authority. This is an emergent model of partnership which enables the University and local authority to engage directly in shaping the teacher education course and to provide employment opportunities for newly qualified teachers.

### **Enhancements which improve personalisation and employability**

The first aim of the Subject Specialist unit is to develop your subject knowledge and pedagogy with a specific focus on the phase and/or specialist subject curriculum. However, in order to support you in achieving your personal aspirations, and to enhance your record of knowledge and experience, the programme offers a range of additional opportunities such as: working with learners for whom English is an Additional Language; using the interactive white board to enhance learning; etc.

### **Reflective practice**

The course aims to develop you as an effective reflective practitioner. Reflective thinking is a multifaceted process that requires you to analyse classroom events and circumstances. By virtue of its complexity teaching requires constant and continual classroom observation, evaluation and subsequent action. However, to be an effective practitioner it is imperative to understand 'Why?', 'How?' and

'What if....?' in addition to the analysis of the observed events. This understanding comes through the consistent practice of reflective thinking and writing which is supported by the webfolio, assignments and profile review process. In essence, the continuous development of your skills of reflective analysis provides

you with key learning tools through which to evaluate your progress as a developing professional.

Reflective thinking is a learned process that requires time. The course encourages you to develop the skill of critical self-evaluation and to discover meaningful and creative problem-solving strategies to support your classroom practice. In doing so you are expected to synthesise the knowledge and understanding gained from your reading, learning experiences and teaching practice.

### **Frequent formative feedback**

The course team members share a pedagogic belief that all aspects of the course should present you with models of best teaching practice from which you are able to form your own pedagogic principles. One key feature of that model of practice is the emphasis placed on the role of formative assessment. That is, a belief that assessment tasks should be used as one of the tools by which to promote learning, rather than simply to measure what learning has taken place. In all units, therefore, support is provided in the form of frequent feedback about your progress against the assessment criteria, in order to recognise, respond to, and enhance the learning that has taken place. Support includes scheduled tutorial meetings, to allow you to assess your progress and identify specific targets for continual improvement, with opportunities to improve your work prior to final submission.

### **Integration of performance and learning outcomes**

All teacher education courses are required to provide support to achieve Qualified Teacher Status (QTS) by meeting the requirements of the professional standards (currently the Teachers' Standards 2012.) A defining principle of this course is the commitment to intellectual engagement with the standards, rather than superficial claims of performance against them. To support this, the qualitative descriptors are used to show how satisfactory, good and outstanding student teachers might present themselves. Your professional development record will be organised within the framework of Teachers' Standards and the assessment strategy, described in detail later in this document, ensures that your critical analysis of experiences from the course forms the basis of your evidence against those standards. In this way, your intellectual and performance development are intrinsically linked.

### **Webfolio**

The webfolio is the medium through which your reflective writing, other assessments and documentary evidence are managed. As such, it forms the central spine of the course, drawing the range of experiences and activities together in a coherent structure. The webfolio is a required element of the course and most of your assignments will be submitted by making the webfolio available to your tutor.

The webfolio is designed to help you allocate time and space to engage in critical self-reflection and self-evaluation of your practice, which could then be shared with others, helping you to identify areas of strength and areas for future development. The webfolio will also provide you with a flexible means by which you can gather and store information about your understanding, knowledge, values and beliefs. Its portability ensures that you will be able to continue to use it as a gateway for your professional development beyond the award of QTS.

You will share your webfolio with your mentor to aid professional dialogue and as part of the Profile Review process. It will also be used as an instrument to identify opportunities for deeper personalisation throughout the course.

### **Differentiated achievement outcomes**

The course is designed to support all students in developing the knowledge and skills which satisfy the requirements of level 7 (Master's level) qualifications. It is acknowledged, however, that some students will choose, or need, to direct their attention and effort towards other aspects of their professional development. For this reason, level 6 and level 7 assessment criteria are organised as a continuum.

There are two units which each offer 30 credits at either level 6 or level 7.

If you pass **both** the assignments for these units at level 7 you will be awarded a Postgraduate Certificate in Education with recommendation for QTS

If you pass both the assignments for these units at level 6 **or** either one of these assignments at level 6 and one at level 7, you will be awarded a Professional Graduate Certificate in Education with recommendation for QTS

**Department (s)**

Teacher Education

**Assessment (URL for KIS link: ASSURL)**

The assessment strategy is based upon the premise that critical evaluation of theoretical perspectives as they apply to your own teaching is an intrinsic element of best teaching practice. Throughout the course, therefore, you will continually be encouraged to explore what is known about teaching and learning, and to demonstrate independence and creativity in evaluating the relevance of that knowledge in your own context. Sound subject knowledge is a fundamental quality of an effective teacher and you will be expected to demonstrate a commitment to ongoing development of that knowledge throughout the course. Also key to the course is a focus on the development of research informed teaching, culminating in an extended systematic study of your own practice.

By embedding the professional requirements for Qualified Teacher Status within the academic requirements of a Post Graduate Certificate, the course supports you in developing the qualities which define the University of Bedfordshire graduate teacher: an independent, reflective, creative, innovative, collaborative and resilient professional who is committed to ongoing personal and professional development.

The assessment for this course seeks to support you in developing your understanding of the interplay between theoretical perspectives and practice based experience. You will be developing your skills of research and evaluation, critical thinking, creativity and independence. The themes for your reflective writing are developed from local and national priorities and, therefore, allow you to develop the evidence of your understanding of values and principles underpinning the Teachers' Standards as they apply to your working context. (Superficial statements of performance against the standards oppose the principles which underpin this course and are not accepted.) By building your reflections around these themes, you will generate rich evidence which can contribute to the assessment of your professional performance: the Profile Review Points. Hence, the assessment items are intrinsically connected and, in combination, allow you to demonstrate your achievement of all learning outcomes.

The Profile Review Point is the process by which the mentor reviews your progress in your teaching practice. The Teachers' Standards 2012 provide the framework by which this progress is judged and are

supplemented with descriptors which support you in understanding the qualities which define the level at which you meet the standards. The Teacher Standard descriptors are included in the Professional Teacher unit assessment information.

Formative use of assessment is embedded throughout the course and is a principle which we would expect you to adopt in your own teaching. You will be supported to become familiar with self- and peer-assessment approaches and to make effective use of feedback on both academic and practice-based aspects of the course, to identify targets for your ongoing development and plan actions to address them.

Your course consists of four units. These are:

- The Professional Teacher
- The Subject Specialist (your phase, your subject)
- The Reflective Teacher
- The Research Informed Teacher

**This PGCE requires you to pass all four units in order to be recommended for QTS.**

The webfolio is the medium through which you will manage the range of evidence accumulated during the course. You will be supported to develop a structured system which enables you to: organise your work to meet the requirements of the course; share your work with your tutor; receive regular feedback intended to guide you to improve; adapt your work in response to the feedback; maintain effective cross-referencing to related documents; and access course information with ease. The majority of your assessment work will be managed and presented by giving tutor access to your webfolio.

Engagement with published research is a fundamental aspect of the course and you will be supported in developing skills of critical analysis of the literature. Rigorous attention to referencing conventions is, therefore, essential and you will be required to adopt the Harvard system. You will be supported in developing your understanding of plagiarism and in the use of Turnitin as a means of ensuring that referencing requirements are satisfied.

The Teachers' Standards 2012 publication is available at

<https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-00066-2011>



## Appendix 8 Teachers' Standards



Department  
for Education

# Teachers' Standards

### PREAMBLE

Teachers make the education of their pupils their first concern, and are accountable for achieving the highest possible standards in work and conduct. Teachers act with honesty and integrity; have strong subject knowledge, keep their knowledge and skills up-to-date and are self-critical; forge positive professional relationships; and work with parents in the best interests of their pupils.

### PART ONE: TEACHING

A teacher must:

#### 1 Set high expectations which inspire, motivate and challenge pupils

- establish a safe and stimulating environment for pupils, rooted in mutual respect
- set goals that stretch and challenge pupils of all backgrounds, abilities and dispositions
- demonstrate consistently the positive attitudes, values and behaviour which are expected of pupils.

#### 2 Promote good progress and outcomes by pupils

- be accountable for pupils' attainment, progress and outcomes
- be aware of pupils' capabilities and their prior knowledge, and plan teaching to build on these
- guide pupils to reflect on the progress they have made and their emerging needs
- demonstrate knowledge and understanding of how pupils learn and how this impacts on teaching
- encourage pupils to take a responsible and conscientious attitude to their own work and study.

#### 3 Demonstrate good subject and curriculum knowledge

- have a secure knowledge of the relevant subject(s) and curriculum areas, foster and maintain pupils' interest in the subject, and address misunderstandings
- demonstrate a critical understanding of developments in the subject and curriculum areas, and promote the value of scholarship
- demonstrate an understanding of and take responsibility for promoting high standards of literacy, articulacy and the correct use of standard English, whatever the teacher's specialist subject
- if teaching early reading, demonstrate a clear understanding of systematic synthetic phonics
- if teaching early mathematics, demonstrate a clear understanding of appropriate teaching strategies.

#### 4 Plan and teach well structured lessons

- impart knowledge and develop understanding through effective use of lesson time
- promote a love of learning and children's intellectual curiosity
- set homework and plan other out-of-class activities to consolidate and extend the knowledge and understanding pupils have acquired
- reflect systematically on the effectiveness of lessons and approaches to teaching
- contribute to the design and provision of an engaging curriculum within the relevant subject area(s).

#### 5 Adapt teaching to respond to the strengths and needs of all pupils

- know when and how to differentiate appropriately, using approaches which enable pupils to be taught effectively
- have a secure understanding of how a range of factors can inhibit pupils' ability to learn, and how best to overcome these
- demonstrate an awareness of the physical, social and intellectual development of children, and know how to adapt teaching to support pupils' education at different stages of development
- have a clear understanding of the needs of all pupils, including those with special educational needs; those of high ability; those with English as an additional language; those with disabilities; and be able to use and evaluate distinctive teaching approaches to engage and support them.

#### 6 Make accurate and productive use of assessment

- know and understand how to assess the relevant subject and curriculum areas, including statutory assessment requirements
- make use of formative and summative assessment to secure pupils' progress
- use relevant data to monitor progress, set targets, and plan subsequent lessons
- give pupils regular feedback, both orally and through accurate marking, and encourage pupils to respond to the feedback.

#### 7 Manage behaviour effectively to ensure a good and safe learning environment

- have clear rules and routines for behaviour in classrooms, and take responsibility for promoting good and courteous behaviour both in classrooms and around the school, in accordance with the school's behaviour policy
- have high expectations of behaviour, and establish a framework for discipline with a range of strategies, using praise, sanctions and rewards consistently and fairly
- manage classes effectively, using approaches which are appropriate to pupils' needs in order to involve and motivate them
- maintain good relationships with pupils, exercise appropriate authority, and act decisively when necessary.

#### 8 Fulfil wider professional responsibilities

- make a positive contribution to the wider life and ethos of the school
- develop effective professional relationships with colleagues, knowing how and when to draw on advice and specialist support
- deploy support staff effectively
- take responsibility for improving teaching through appropriate professional development, responding to advice and feedback from colleagues
- communicate effectively with parents with regard to pupils' achievements and well-being.

### PART TWO: PERSONAL AND PROFESSIONAL CONDUCT

A teacher is expected to demonstrate consistently high standards of personal and professional conduct. The following statements define the behaviour and attitudes which set the required standard for conduct throughout a teacher's career.

- Teachers uphold public trust in the profession and maintain high standards of ethics and behaviour, within and outside school, by:
  - treating pupils with dignity, building relationships rooted in mutual respect, and at all times observing proper boundaries appropriate to a teacher's professional position
  - having regard for the need to safeguard pupils' well-being, in accordance with statutory provisions
  - showing tolerance of and respect for the rights of others
  - not undermining fundamental British values, including democracy, the rule of law, individual liberty and mutual respect, and tolerance of those with different faiths and beliefs
  - ensuring that personal beliefs are not expressed in ways which exploit pupils' vulnerability or might lead them to break the law.
- Teachers must have proper and professional regard for the ethos, policies and practices of the school in which they teach, and maintain high standards in their own attendance and punctuality.
- Teachers must have an understanding of, and always act within, the statutory frameworks which set out their professional duties and responsibilities.

The Teachers' Standards can be found on the GOV.UK website: <https://www.gov.uk/government/publications/teachers-standards>

